STEVEN UNIVERSE

ART & ORIGINS

WRITTEN BY
CHRIS MCDONNELL
FOREWORD BY REBECCA SUGAR
INTRODUCTION BY GENNDY TARTAKOVSKY































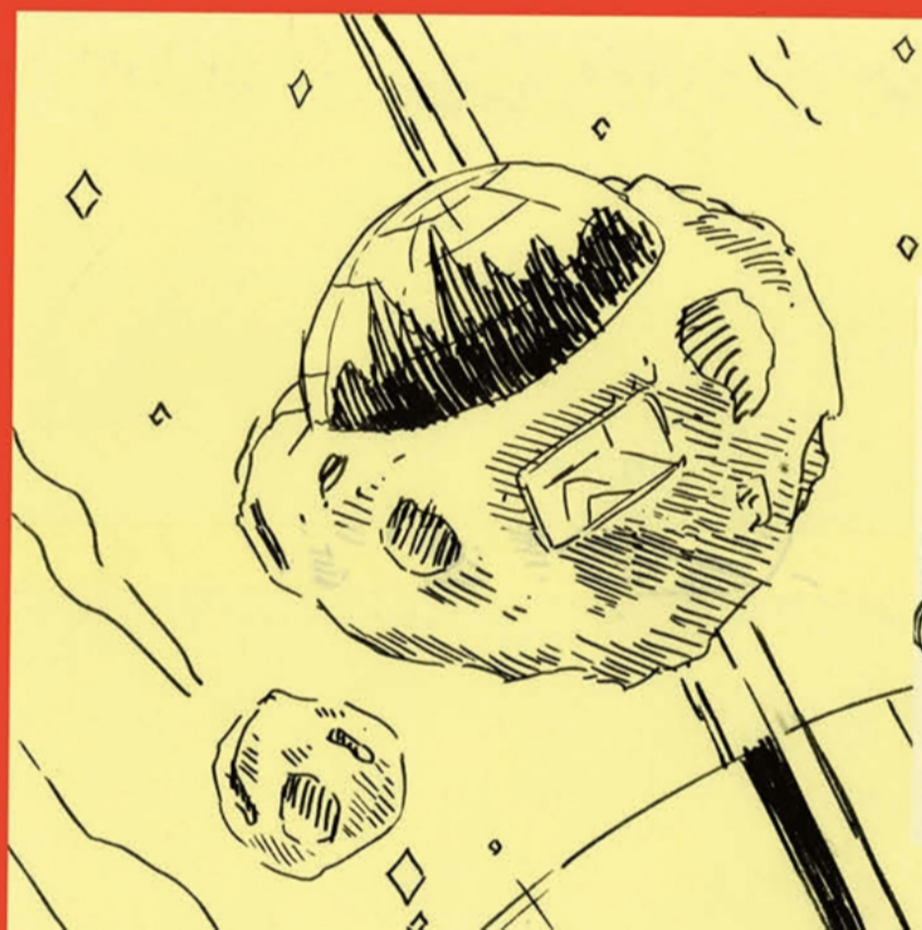



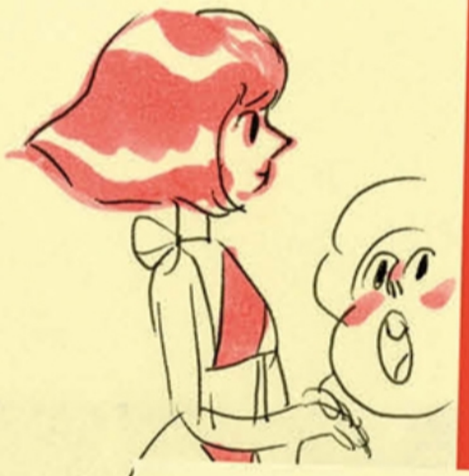










DEAN



















A CARTOON NETWORK ORIGINAL

STEVEN UNIVERSE™

ART & ORIGINS





Development concept art drawing of Beach City drawn by Steven Sugar and painted by Elle Michalka.

Previous page: One of the earliest drawings of Steven and the Crystal Gems by Rebecca.



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Scene	Panel
20	1

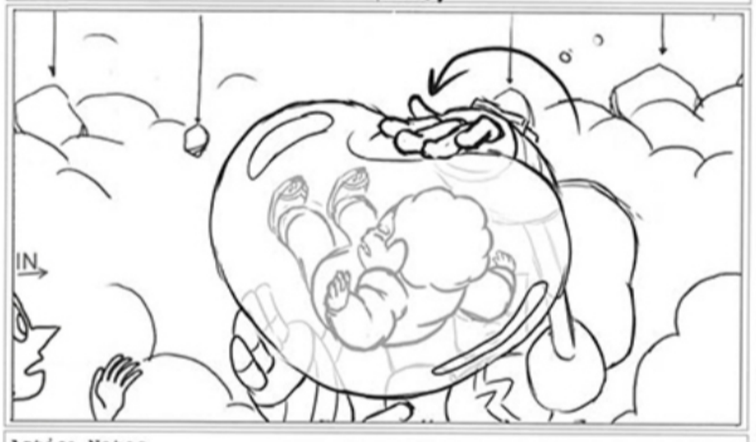


Slugging
1.00

Notes
camera shake though scene

OCT 2 2 2013

Scene	Panel
20	CONT 2



Action Notes
Pearl runs IN - West.
Steven disappears.
Ice rocks falling in BG.
GARNET TAPS BUBBLE

Slugging
0.04

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Scene	Panel
20	CONT 3



Dialog
PEARL: Garnet!!!

Action Notes
The dust clouds in BG are getting larger.
More ice rocks are falling.
BUBBLE WARPS AWAY

Slugging
1.04

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Opposite top: Beach City concept art by Kevin Dart. **Opposite bottom:** Storyboard panels by Lamar Abrams and Ian Jones-Quartey. **Right:** Promo art by Kat Morris.





Some of the earliest development drawings of Steven Universe drawn by Rebecca in preparation for the pilot pitch.



FOREWORD

A Dedication to the Crewniverse
By Rebecca Sugar

The crew makes the show!

The crew makes the show!

THE CREW MAKES THE SHOW!!!

Not everyone who has been, is, and will be on the crew weighed in for this book, but everyone weighs in on the show.

I wish I could talk to you right now, one-on-one, and hear what little thing stuck out to you, which pun you found hidden on a background, which specific character moment struck you because you'd never seen it in a cartoon before, which line became something you quote with friends, or which song got stuck in your head, so I could tell you exactly who drew it, who pitched it, who wrote it, or who sang it, and why it could have ONLY come from them and no one else!

I hoped this show would be able to celebrate all the specific details of all of our childhoods, all the little mannerisms we know in our friends, families, and selves that we hadn't seen reflected on TV before, and all the different media we'd grown up loving for different reasons. We took all that and lumped it together into a massive pastiche, which we chipped away at with our arguments and sculpted with our care into the show that *Steven Universe* became.

What you'll see in this book are small fractions of the process and excerpts from the flurry of activity that went on at the start of the show. It's been hard to look back because my heart aches when I think about the early days, working with my brother Steven, and my true love Ian, and with friends and heroes and strangers who would enter my life and change it forever with their beautiful ideas. My favorite memories are the silliest inside jokes we said we'd never "actually do"—weird gimmicks that stuck because we loved them so much (like ending episodes with a star iris or calling ourselves the "Crewniverse") —that ended up becoming an inexorable part of the show's DNA.

I'll warn you, we run a tight ship when it comes to what you see on TV, and if you don't want to see the seams, don't look further because this is SEAM CITY! You're about to see some early stuff that is totally raw and irrelevant to what the show became (for example, I don't at all consider the Gems "girls" or "goddesses"). But seeing as the show is a celebration of imperfection, where we reveal slowly the inner workings of the characters and their world, I feel like it's only right to do that with the show itself. After all, "You can't have a steak without mistakes."

Wait, which version of that line did we end up going with?

Oh forgive me, it was the one about pork chops!



Left: Drawings by Ian Jones-Quartey for the video game *Steven Universe: Attack the Light!*
Right: Drawings of proto-Crystal Gems in Rebecca's pilot pitch sketchbook.



Rebecca Sugar is the creator of Cartoon Network's Emmy-nominated series *Steven Universe*, an animated coming-of-age story told from the perspective of Steven, the "little brother" to a team of magical guardians of humanity—the Crystal Gems.

After graduating from the School of Visual Arts (SVA) with a BFA in animation, Sugar joined *Adventure Time* in 2009. During her time on the iconic series as a storyboard artist and writer, Sugar garnered both Emmy nominations and an Annie Award win, as well a deep fan base following the many songs she wrote for the show.

Most recently, Sugar was included in *Variety*'s Hollywood's New Leaders 2016: The Creatives list, where she was recognized alongside other notable artists such as Damien Chazelle, Jerrod Carmichael, and Donald Glover. A children's book adaptation of the Emmy-nominated *Steven Universe* episode "The Answer," also written by Sugar, was released September 6, 2016 and became a *New York Times* bestseller.



INTRODUCTION

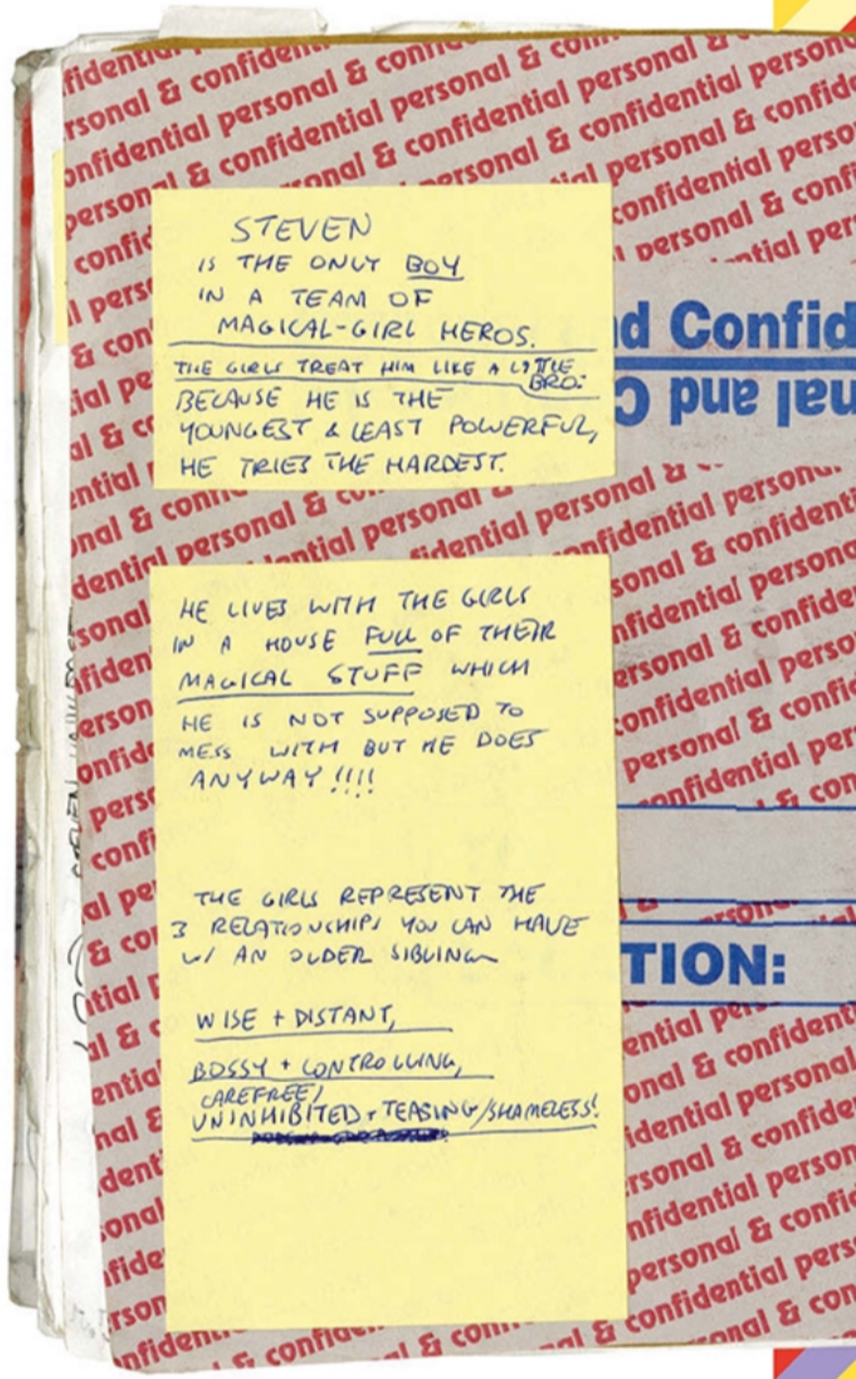
By Genndy Tartakovsky

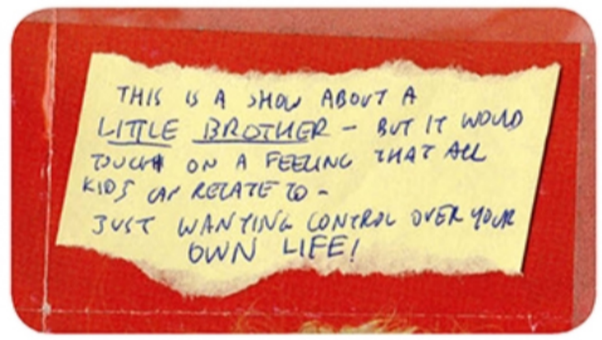
I have been in love with animation since I was ten. I was fortunate enough to work at Hanna-Barbera in the last years before they became part of Cartoon Network. One of my favorite things to do in the old Hanna-Barbera building was to snoop in all the file cabinets and look at models, storyboards, development artwork, etc. How is this relevant to today? Well, it made me quite a snoop! I'll admit that, to this day, if there are some drawings lying innocently around the Xerox machine I will check them out. This was how I first came to know of Rebecca Sugar's drawings.

I think the first drawings I saw were of Marceline. They were very organic, charming, and, at the same time, cartoony. I then followed up my snooping with more snooping on the Internet and found more of her drawings. The more I saw, the more I was impressed. I was working on *Sym-Bionic Titan* at the time, and I was in a dark place as production of that show had many challenges—that is another story. I left Cartoon Network soon after and found myself in need of help while I was working on *Hotel Transylvania*. I thought of Rebecca and decided to try my luck and see if she would help me out. She did and the experience was great! Rebecca was very collaborative and helpful, and I think we hit it off creatively.

During that time, Rebecca told me she had been developing an idea and wanted to show it to me. I was very excited to see what she would come up with. I was very fortunate to be one of the people to whom she showed some of the early sketches for *Steven Universe*. She pitched to me the idea, and we talked for a little while about story and keeping things simple—especially when you're trying to sell. Rebecca was very nice and thanked me. It wasn't until a few months later, I think, that she let me know that she was green-lit to make a pilot. I was very excited for her, and because I am a fan of animation, I offered to help with the pilot in any way. Rebecca took me up on my offer, and I timed the animation for the pilot. It was a fun idea and a very good pilot. The rest is history, as they say.

The greatest accomplishment any creator can achieve is a character or characters that stand the test of time. And it truly seems that *Steven Universe* is here to stay. I was away from Cartoon Network while Rebecca was working on the series, and I was always curious of how things were going, knowing the challenge that lay ahead for her. I recently returned to work at CN for a while and saw the results. Rebecca has built a family, and that is really the most important factor needed to make a successful TV series.





Opposite: A Steven drawing by original art director Kevin Dart.
Above: Some of Rebecca's early notes to herself framing big ideas about the series for future reference.



GENNDY NOTES

— BOIL IT DOWN

SHOULD HE JUST NOT HAVE POWERS? BUT IT COULD STILL WORK IF HE DID.

BROTHER + 3 GODDESS SISTERS

IT SHOULD BE **STEVEN** WHO IS MADE FUN OF.

SIMPLER

- PEOPLE DON'T HAVE TO DISLIKE THEM
- THEY DON'T HAVE TO BE POOR OR A GOVT ORG.

A HOUSE/TREASURE TROVE OF MAGICAL OBJECTS FOR STEVEN TO FIND,
STUFF ALL OVER THE PLACE

SO KEEP TEMPLE STUFF TO A MINIMUM?

HUMAN STORIES BUT W/ MAGICAL ELEMENTS

IT IS ABOUT STEVEN + FROM HIS P.O.V.

HE IS THE DIFFERENT ONE

GENERAL ADVICE

WHAT ARE THE EPISODES REALLY ABOUT?

USE THAT TO FIGURE OUT WHAT IS & ISN'T IMPORTANT.

REVERSE ENGINEER YOUR IDEA!

THE INTEREST IS HIM WITH THEM, THEY ARE POWERFUL

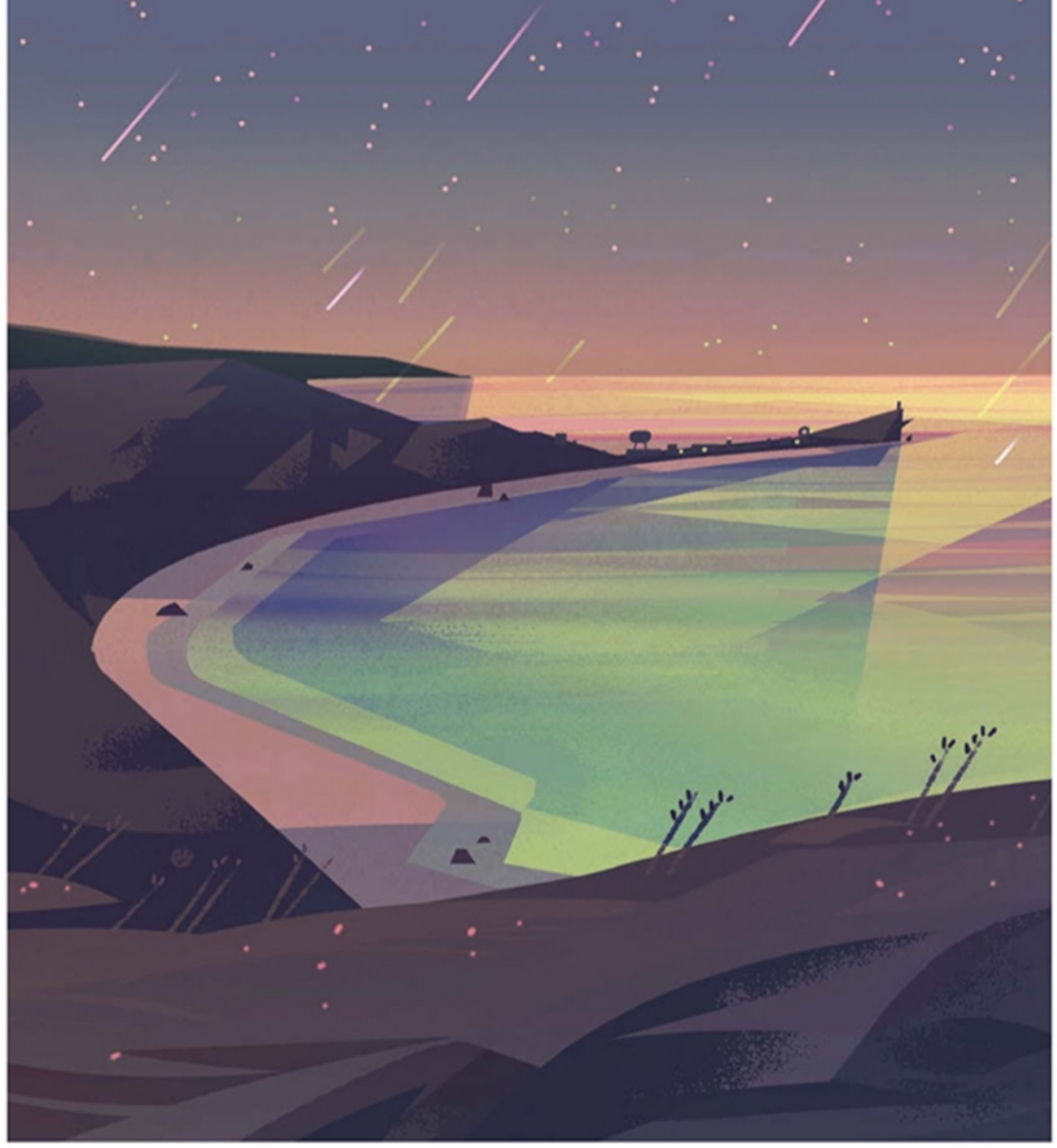
HE IS HUMAN.

WHAT HELPS THE CORE IDEA AND WHAT DOESN'T? IF IT DOESN'T HELP JUST GET RID OF IT

KEEP IT VERY SIMPLE.

Rebecca's notes, from her consultation with Genndy Tartakovsky, emphasizing the need for simplicity and clarity in a pilot episode to sell the series.

Artwork by Jasmin Lai.



I am still, to this day, an animation fan, though my excitement for animation has wavered a little through the years due to the fact that there just isn't as much 2-D animation being produced anymore. That is really what I was always a fan of. I remember sitting in a movie theater by myself—I was about fourteen—surrounded by a sea of screaming children and their parents watching *The Jungle Book*. As soon as the images came up and the artistry of the animation came on screen, I was mesmerized, and everything around me disappeared. I knew that I wanted to create animation, tell a story through pictures, caricature life with two-dimensional images, etc. I was bitten by the animation vampire and knew that I could never do anything else in my life. When I saw an early version of this book, and when I saw all the drawings, love, and inspiration that went into making this show, a little of that kid came back. I know that people, and especially fans of the show, will pore over every image as I did in that theater, many years ago.

The love affair continues. . . .



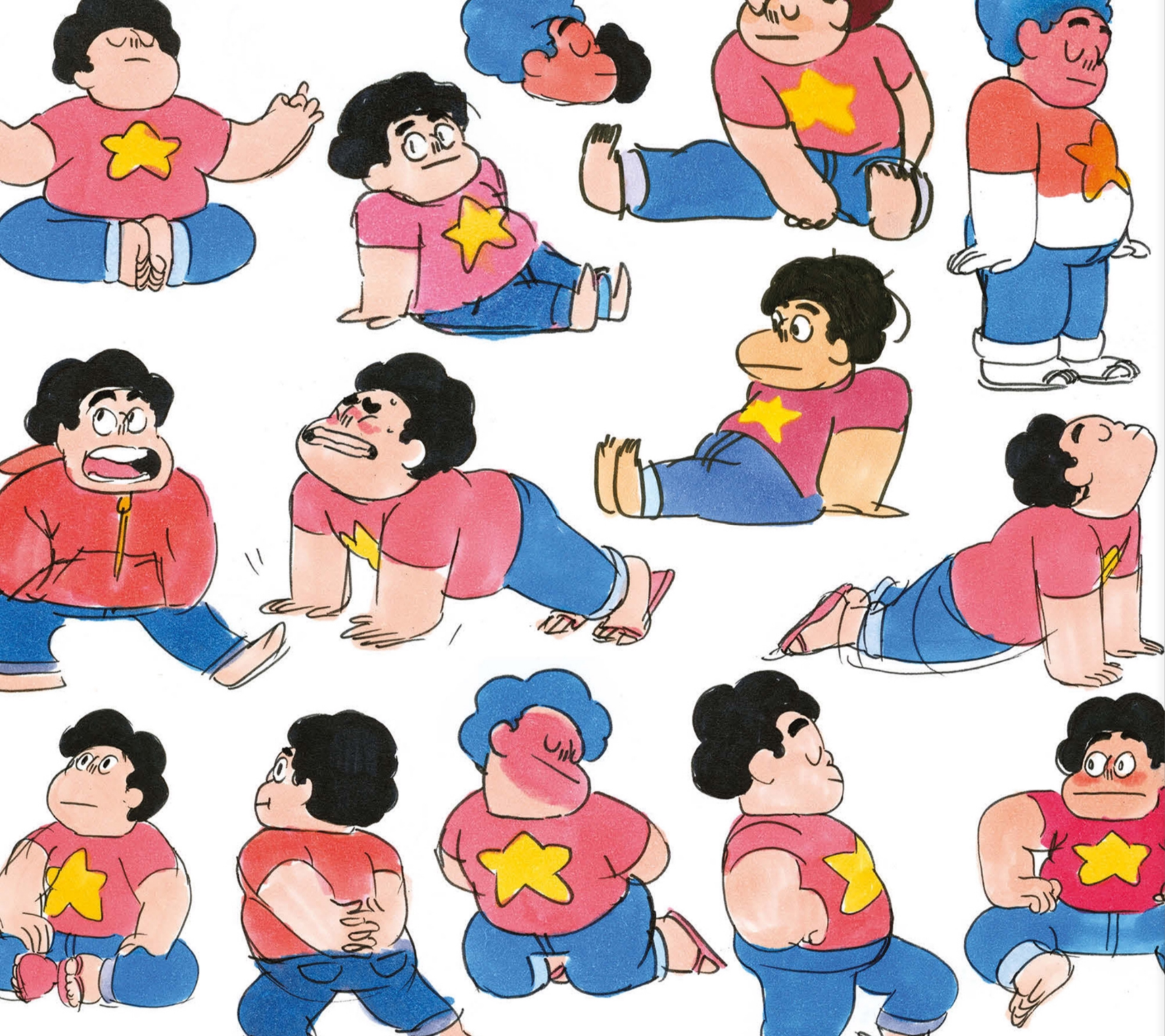
Genndy Tartakovsky is an award-winning animation visionary, director, writer, and producer best known for the hit Cartoon Network series *Dexter's Laboratory*, *Samurai Jack*, and *Star Wars: The Clone Wars*.

Tartakovsky began working at Hanna-Barbera and was directly involved in the creation of three of the studio's most prominent animated series in the late nineties and early 2000s. He then moved to Cartoon Network, where he created *Dexter's Laboratory*, *Samurai Jack*, and *Sym-Bionic Titan*, as well as produced and directed the beloved animated series *Star Wars: The Clone Wars*.

In 2012, Tartakovsky made his feature directorial debut with the Golden Globe–nominated *Hotel Transylvania* and most recently directed its sequel, *Hotel Transylvania 2*. He is back at the helm for the third installment of the monster franchise.

Tartakovsky has received an impressive thirteen Primetime Emmy Award nominations and has been awarded three Emmys for his work on *Star Wars: The Clone Wars* and *Samurai Jack*, both for Cartoon Network. He has been named one of *Variety*'s "50 to Watch" as a future leader in the entertainment industry; called "one of the industry's rising stars" by *People Magazine*; and tapped as one of the most creative people in entertainment when he was named on *Entertainment Weekly*'s "It List." He is also the recipient of the prestigious Winsor McCay Award in recognition for his outstanding career contributions to the art of animation.

Tartakovsky is now returning to his roots, bringing back the fan favorite *Samurai Jack* after a twelve-year hiatus. *Samurai Jack* originated from his desire to create the greatest action-adventure animated series ever. The result was a show that is cinematic in scope, incorporating action, comedy, and intricate artistry, and is truly unlike anything else on TV. The new season is currently in production for Adult Swim.



Right: Young siblings Rebecca and Steven Sugar.
Opposite: Series development drawings of Steven Universe by Rebecca.
Below: Tiny Steven drawing here and in all subsequent chapter heads by Kat Morris.



1: ORIGINS





Earth is under threat of obliteration. Deep-space Gem beings are planning to activate a massive geo-weapon that has been dormant in Earth's core for thousands of years, waiting like a tumor on the brink of metastasis. These Gems' light-manifested bodies can transform, fuse together, project holographic objects, wield magical weapons, and operate advanced technology, making them incredibly powerful and dangerous. It would appear that Earth's number is finally up.

But not if the Crystal Gems can help it.

Five thousand years ago, the breakaway group the Crystal Gems staged a successful rebellion against the Homeworld Gems' original colonization plans in an effort to save all life on planet Earth from the resource-draining Gem occupation. Although the Homeworld Gems retreated, they never forgave or forgot.

The Crystal Gems' revolutionary leader and moral guide, Rose Quartz, taught her followers to recognize the inherent value of all forms of life. For millennia, they protected Earth and learned about their adopted planet even as the ancient world of magic evolved into a modern human society. A cozy beach town replete with fast-food joints and amusements built up around the majestic oceanfront location of the Gem Temple. Then, in a mysterious and fateful decision, Rose Quartz, in love with Greg (a human), sacrificed her physical form so that their son Steven could be born. Rose Quartz would be survived by her three most loyal followers: Garnet, Amethyst, and Pearl. Though these battle-scarred intergalactic rebels never could fully understand Rose's decision, they continued to fight hard to hold on to Earth in spite of the incredible odds against them. The Crystal Gems are classic heroes.

But *Steven Universe* is about so much more than that.

Rebecca Sugar, series creator, and her dedicated crew have crafted a series with the hallmarks of an action-fantasy adventure, but with the emotional depth and thematic nuance of something greater. Steven is unique in the universe: He is a bridge between the Gem and human worlds. Steven's human nature surprises the Crystal Gems constantly and his powerful empathy inherited from Rose allows him to bridge divides and bring others together again and again. The adult world is confusing enough for any child, and Steven must navigate even more perplexing territory as he learns about his Gem powers and responsibilities. The Crystal Gems are learning, too, from Steven and from one another. They are learning what it is to be human, acceptance of Rose's incredible sacrifice, and what it is like to love and

be loved. At its core, *Steven Universe* is a story of love and family, and its roots trace all the way back to the beach.

Years before the *Steven Universe* crew was assembled, the Sugar family—Rob Sugar, Helen Rea, and children Rebecca and Steven—would take summer trips from their home in Silver Spring, Maryland, to the Delaware coast to visit Dewey Beach, Rehoboth Beach, and Bethany Beach, where they enjoyed playing cards, putting jigsaw puzzles together, riding bicycles, and writing and drawing.

Summer on a mid-Atlantic beach brings together people of all sorts. In peak summer season, these towns host the masses for funnel cake–fueled nights on the piers, treacherous fun-houses and rickety roller-coaster rides, and spectacle: the sunlight over the rolling Atlantic; the sky full of fanciful clouds; the neon flashing of arcades; and stores full of fudge, saltwater taffy, and airbrushed T-shirts. Weeks at the shore provide the opportunity for countless small impressions, and the Sugar kids observed and absorbed them.

Creative inspiration abounded. At home, Rob shared his love of golden age cartoon shorts, experimental animation, and laser discs full of Canadian, Russian, and Japanese animated features. At work, his graphic-design office was a great spot for the kids to draw with markers and play on the computers.

Rebecca Sugar [series creator]: Dad was always interested in animation and knew the ins and outs of how it was made. Art was never magic to me—I knew it was made by people, and I wanted to know who those people were. I suppose a big thing we learned from Dad was that cartoons aren't necessarily for kids. He would talk to us about how beautiful the Fleischer *Superman* cartoons are. We'd all be laughing at *Looney Tunes* together and talking about the parts we liked the best. I felt like that was part of becoming an adult—understanding and appreciating a very well-made cartoon.

Rob Sugar [Rebecca and Steven's dad] : We were also fascinated by the Disney release of *Beauty and the Beast* in unfinished form, which included storyboards and a rough animatic [early-stage, rough version of a film, made by playing back storyboard panels paired with the voice actors' dialog].

Steven and Rebecca learned form and function from Rob's graphic-design sensibilities, but they also learned about self-expression from their mother, Helen, a dedicated modern dancer and dance teacher.

Rebecca: I was inspired by her dancing. I would come to her dance class when I was young and draw in the corner. I even played music for her class once. But I was always too shy to dance. My grandmother was a dancer, too—she danced with Martha Graham's company. I felt like I broke the chain. I started to draw a lot of dancing to make up for it. I learned a lot about dance through Mom. We would always watch dance movies together, and she'd take me to dance performances and tell me what to pay attention to in terms of how they were moving. It really, really stuck with me.

Early in her teenage years, Rebecca started drawing comics. After laboring on a series of "embarrassing goth comics" as her initial foray, she decided to approach the discipline more seriously and began writing and drawing *The Ballad of Margo and Dread*, which was self-published with a photocopier and a stapler.

Rebecca: Ian [Jones-Quartey, former co-executive producer] has pointed out to me that *Steven Universe* is essentially *Margo and Dread*. That comic was about a happy-go-lucky yet sensitive kid helping a bunch of teenagers with their interpersonal problems. It never occurred to me that I was writing about my brother at the time!

While working on *Margo and Dread*, Rebecca was also studying painting at an art magnet Einstein High School in Kensington, Maryland, called the "Visual Art Center." Steven was accepted into the program soon after.







Above: Formative Rebecca and Steven Sugar experiences included painting and creating digital artwork at Rob Sugar's graphic-design office.
Opposite: Pages from Rebecca's college-era comics, *Pug Davis* and *Don't Cry For Me, I'm Already Dead*.







Steven Sugar [background designer]: The program was mostly geared toward fine art and painting, but all the fundamentals we learned there worked their way into our comics and personal work. The VAC also really encouraged continuing on to study art in college and pursuing careers in the arts, so by the time we were there, it was already clear that was the direction we were both headed in.

It was at the VAC that Rebecca met hard-core comic collector and enthusiast Frans Boukas. Together, they launched a self-publishing imprint, SugarBoukas comics, and got to work making zines. Their books included Frans's *Pumpkin Man*, Steven's *Rocky Albatross*, and Rebecca's series *Margo and Dread*, and later *Pug Davis*. Frans, Rebecca, and Steven began taking their books to an independent comics convention, the Small Press Expo (SPX), in nearby Bethesda, Maryland, where they would trade their comics with other creators. This was a formative experience, full of tables overflowing with exuberant comics from young artist collectives and independent creators of all sorts. Sprinkled throughout the show were seasoned professional artists and underground comics legends. It was an annual rush of inspiration, and the place where Rebecca met many of the people she would eventually collaborate with, including future Crewniverse member Lamar Abrams.

Between cons and expos, Frans, Steven, and Rebecca worked hard to inspire one another, bouncing comic ideas off one another whenever they had the chance.

Rebecca: When Steven was a high school senior, he did this comic called *Nightmare in Birdland*, and it really blew my mind. He did the whole thing in a weekend. It had all these birds in it, and I'd never seen Steven draw birds before in his life! I asked him why he chose birds, and he said, "I didn't know how to draw birds, but now I do!" That was a revelation to me. He built a project around learning to draw something he wanted to be able to draw, and it was so simple, and he'd done it so fast. I started doing all my projects that way. I started mixing technical things I'd want to improve on with personal things I needed to sort out. So for my thesis film for college, *Singles*, I wanted to study animating objects turning in perspective, but I also wanted to sort out my fear of being alone.

I remember staying up really late chatting with Steven, home from college, hashing out the comic I was working on after my film, trying to figure out what it was about. I wanted to study drawing women again. I had been avoiding drawing female characters, and I'd rejected all things feminine, in my work and in myself. I had been crediting myself as "R Sugar" for my comics, to hide my name. But I wanted to attack the whole thing; I wanted to face it. So I brought back Margo as a character and was trying to do a project with her. I hashed it out with Steven late into the night. I had no idea what I was writing about with this thing. Steven figured it out with me, that I was unpacking all these feelings about this relationship I'd left. It became my favorite way to do a project, just dive into it knowing there's something there you've got to figure out, like jumping into a pool with your eyes open—it might hurt a little, but you've got to see everything, and then you've got to swim. There's no way I'd write the way I write if I hadn't dug into projects with Steven in this way. I think *Steven Universe* is, in a lot of ways, me unpacking the way I unpack this stuff with Steven.

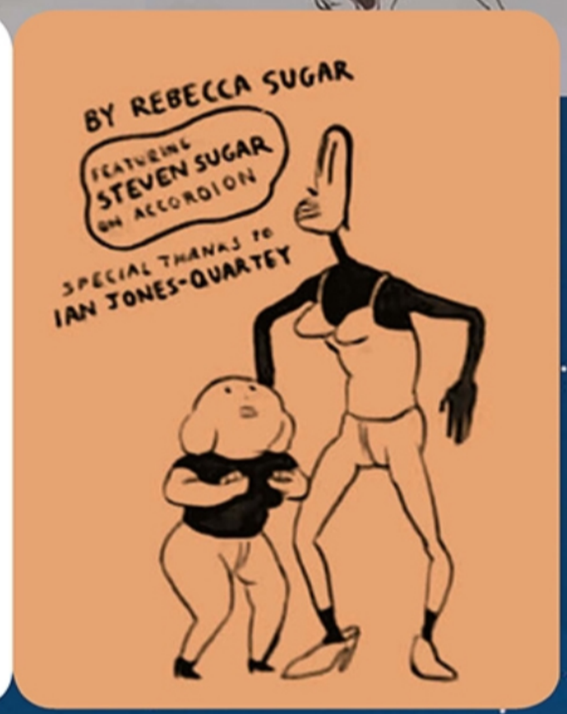
Whether the Sugar kids were aware of it or not, drawing from life and the imagination; studying film, animation, dance, and movement; writing and drawing comics; composing and playing music—these activities gave them a solid base to launch from if they cared to pursue animation production in the future.

Rebecca did pursue it. In New York City, Rebecca's animation studies at the School of Visual Arts (SVA) broadened her artistic vision and experience. Designing her own assignments to target areas that she knew she needed to study, Rebecca matured and progressed. Among many other animation exercises, Rebecca created short pieces such as *Johnny Noodleneck*, *Green Grassface*, and her senior thesis film, *Singles*.

(Continued on page 18)

Rebecca's College Work

Green Grassface is a dynamic dancing loop of two contrasting characters. Early black-and-white cartoons, such as those produced in New York by the Fleischer brothers' studio, often featured rhythmic bouncing movement and jazzy popular music. This short pays tribute to those musical rhythms and, at the same time, diverts from the Fleischer conventions of noodle-limbed bodies and bean-shaped heads. Rebecca's characters have an additional layer of anatomical awareness. Two feminine forms with contrasting body types (but both sporting high-hiked mom-jeans) twist and stretch, lifting off their heads or swimming through the air as though it is water before landing and once again submitting to traditional physics. This loop was animated on colored paper, a suggestion from Ian Jones-Quartey, and the music features Steven Sugar on accordion.





Singles: Rebecca's final student film is remarkable for its combination of a high-concept story and solid, expert cartooning, with an emphasis on anatomically complex characters. The story takes place primarily in the apartment compartment in the character's torso, which contains infinite copies of the hero in smaller scales. The character's loneliness drives him to face the void and leap into uncertainty, only to realize that the void offers nothing—and he becomes satisfied, at least temporarily, with a little human interaction and a slice of pasteurized cheese-food product. A further exercise in collaboration and pushing her work in experimental directions, it was one of three interconnected student films, the others being *CAT* by Peyton Harrison and *METROMORPHOSIS* by Mikhail Shraga. The film also showcases Rebecca's ability to effectively package a unique, high-concept idea by using universally relatable human feelings to anchor the stranger aspects—a model that *Steven Universe* would follow.



(Continued from page 15)

Rebecca also formed some important relationships while studying. Original *Steven Universe* crew members Ian Jones-Quartey, Danny Hynes (lead character designer), Kat Morris (supervising director), Paul Villeco (storyboard artist), and Aleth Romanillos (props and effects designer) were all at SVA together. Though not all in the same graduating class, Rebecca found that they were drawn together naturally. Being especially self-motivated students, they would find themselves together in the school studio working at all hours when no one else was there.

Collaboration thrived and continued to do so when Rebecca and Ian moved into a tiny studio apartment together featuring two animation desks jammed so close that the backs of their chairs were pressed up against each other. Ian was creating an independent web cartoon series called *nockFORCE* with Jim Gisriel that ultimately reached over sixty episodes produced, and Rebecca contributed design and animation work to it as part of their many extracurricular projects. Ian animated several scenes from Rebecca's short film *Singles* and drew a lot of the main characters' bodies, which Rebecca would add heads to.

Rebecca: That was a really interesting time because I was almost ready to give up on animation and I just wanted to do independent comics. All the technical aspects of animation were making me feel frustrated. I was sick of lifeless model sheets. I couldn't see any romance in a prop design. I didn't like the factory feeling of these blueprints. But Ian made me fall in love with the technical and organizational side of things. Ian is really good at seeing the beauty in the efficiency of television animation. He loves that part of it and describes it like a magical puzzle. I had never thought of it that way before.

At a panel discussion hosted at SVA, Rebecca met SVA alum Phil Rynda, who was sharing his experience as part of a new Cartoon Network (CN) show called *Adventure Time*. They had spoken a bit online, and he was shocked she was a college student. She gave him copies of *Pug Davis*, which he took back with him to Burbank. When *Adventure Time* needed new staff, Phil recommended Rebecca for a storyboard test.

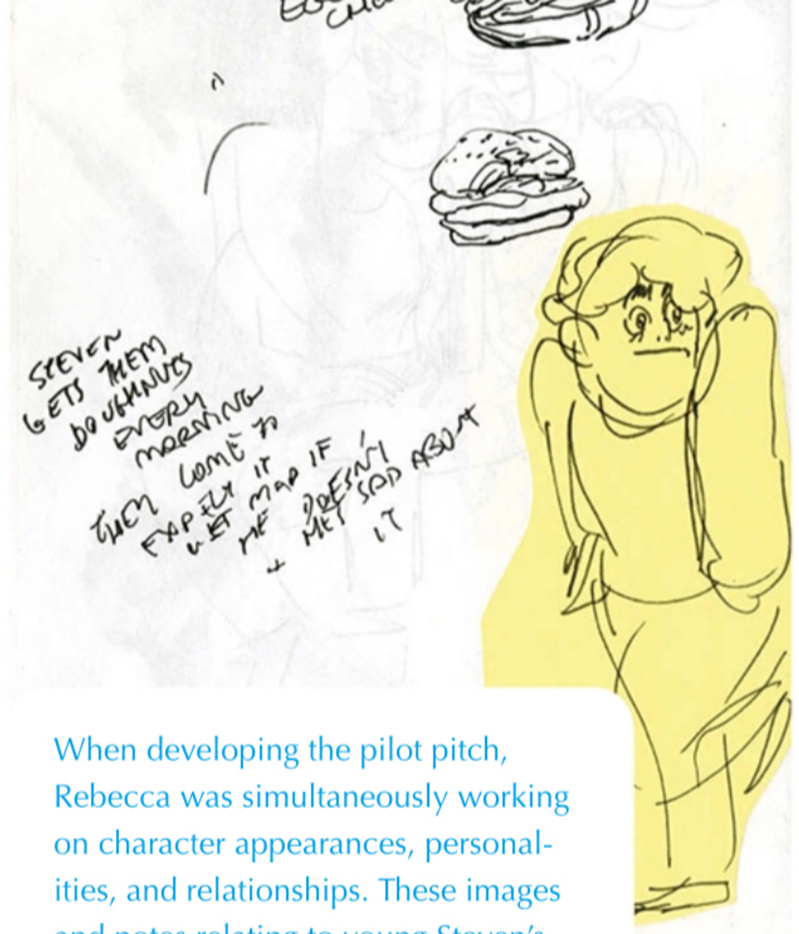
Cartoon Network was in the midst of hiring many indie cartoonists for its shows, ushering in a new era full of young, unique voices at the studio and developing that talent to be production-ready. Rebecca aced the storyboard test, and she was hired as a storyboard revisionist on *Adventure Time*.

In an unrelated and convenient turn of events, Kat had recently been hired to work on another CN series, *Regular Show*. Adjusting to a new life on the West Coast was easier with a friend, and so Rebecca and Kat moved into a Los Angeles–area apartment together.

Kat Morris [supervising director]: We were supporting each other in our new lives, so far away from the community we had come into adulthood with. Rebecca made tea for me every morning when I was sick and helped me work out my beginning storyboards on *Regular Show*. We shared the cartoons that we loved with each other. I remember drinking from a gallon of distilled water like it was champagne because LA water tasted so bad to us.

Also flowing freely in the apartment was a stream of "magical girl" anime. A genre of animated series and comic books originating from Japan, these types of stories revolve around groups of seemingly average friends who can transform into something more—usually magically inclined heroes. As Rebecca describes it, she and Kat enjoyed "a true ice-cream-on-the-couch, watching-girly-anime" experience, including past favorites such as *Sailor Moon* and *Revolutionary Girl Utena*, as well as newer discoveries like *Princess Tutu* and *Future Boy Conan*.

On the job at the Burbank, California–based Cartoon Network Studios, Rebecca impressed the producers, including *Adventure Time* creator Pendleton Ward, and was promoted to storyboard artist rapidly—within months of starting work on the first season. Many of her boards became anchor episodes in the series, with standout emotional



When developing the pilot pitch, Rebecca was simultaneously working on character appearances, personalities, and relationships. These images and notes relating to young Steven's attitude toward his three older and impressive guardians captures the awe and respect that he holds for them.







moments and memorable songs that she also wrote. Rebecca reveled in the talent that surrounded her; Adam Muto was an especially essential collaborator as her boarding partner for the majority of her story-boarding tenure. Rebecca's work on *Adventure Time* extended through its fifth season.

Rebecca: When I did my first storyboard for *Adventure Time*, "It Came from the Nightosphere," Pen gave me the option to write a song for the episode. I had never written a song professionally before, just as a hobby. I wrote a song for the episode that started out really bombastic and flashy, and Pen encouraged me to tear it down and make it this small, personal song and moment. He helped write the final with me; he wrote a bunch of the lyrics. Before I pitched it to the crew, I remember being up on the roof with Ian, just practicing singing it in front of someone. Ian was like "louder, just a little louder" because he could barely hear me. I write music the way I do now because of the way I was encouraged to write this song smaller and more personal, and because I had that encouragement from Pen, Adam [Muto], Pat [McHale], and Ian.

Ian Jones-Quartey [former co-executive producer]: *Adventure Time* was an incredible experience. I worked as a storyboard revisionist and eventually storyboard supervisor, so I worked on a lot of *Adventure Time* storyboards. Every single story-boarder brought something unique to the table. Rebecca's boards were rough—very often she would have a ton of incomplete drawings. But the rough drawings would have so much *feeling* to them. And the stories she worked on with Adam Muto and later Cole Sanchez often had a great balance of pathos and comedy.

Pendleton Ward taught me something really important: Jokes aren't limited to the "setup, punch line" format—there are no restrictions. Sometimes a joke is a funny drawing. Sometimes a joke is the interesting way someone says a mundane word. Sometimes a joke is just the awkward way someone sits down in a chair. Rebecca's episodes carried through this philosophy. So many of the jokes she wrote were things that were funny because you knew who the characters were and what they were doing. The song "Bacon Pancakes" is not just funny on its own. It's funny because Jake is singing it just before getting interrupted by Finn's ultra-dramatic Flame Princess escapade.

In 2011, Cartoon Network was seeking new series pilots to develop, asking in-house as well as outside talent for pitches.

Ian: Around that time, Rebecca was boarding on *Adventure Time*, and I was boarding on *Secret Mountain Fort Awesome*. Curtis Lelash [CN's then-vice president of comedy animation, current senior vice president of original series] asked if we had any pitch ideas. We both dug deep and started coming up with characters and stories.

Rebecca: I didn't have the idea for the show before that, although I'd always thought about making something with my brother Steven as a character. So with this pitch, I thought I'd try something like that, only because I could never not like Steven [*laughs*] . . . because if this was something I would be doing for years and years, I wanted it to be something I'd be making with Steven and about Steven. That was the start of it.

Rebecca pitched her *Steven* prototype. Both Rebecca's and Ian's respective pilot pitches were selected for production, so they began to develop their new projects while continuing to work full-time at the studio.

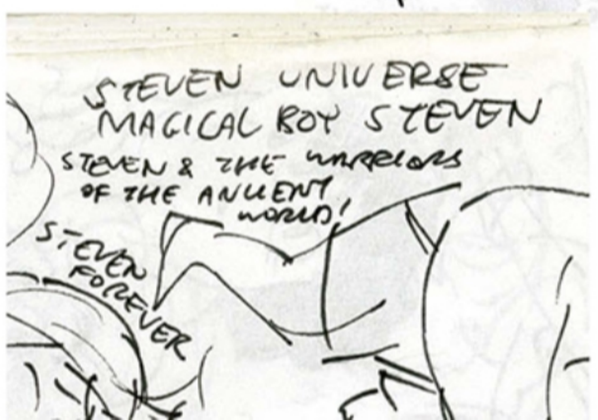
Ian: *Lakewood Plaza Turbo* was my pilot. At the time, CN's shorts program really felt like being thrown in the deep end and learning how to swim. There were stumbles along the way, but we got there. Rebecca and I have a long history of working on projects together. We were discussing ideas, developing characters, and critiquing each other's storyboards every day. It was a super-productive

(Continued on page 24)

Pilot Pitch Sketchbook



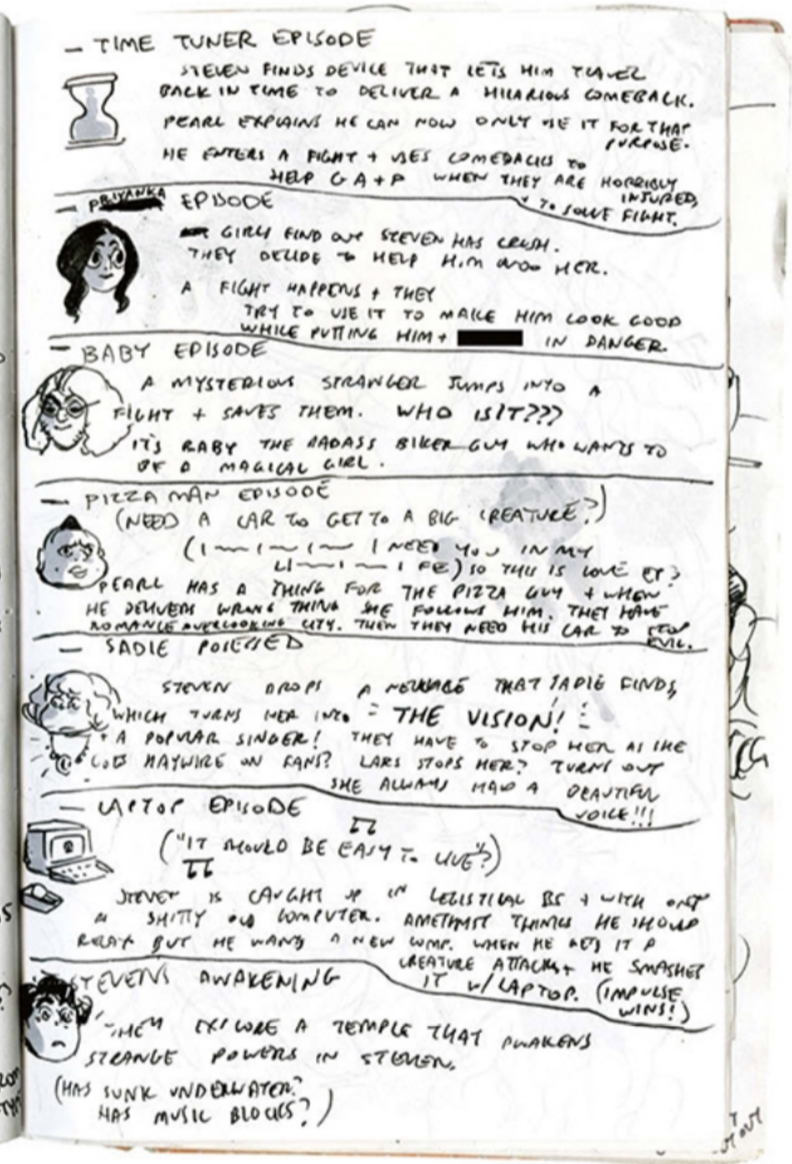




Preparing for her pilot pitch, Rebecca filled an entire handmade sketchbook full of the very first Steven and Crystal Gem drawings with notes about their world. The sketchbook itself then became the primary document that Rebecca used in the pitch to sell her short.







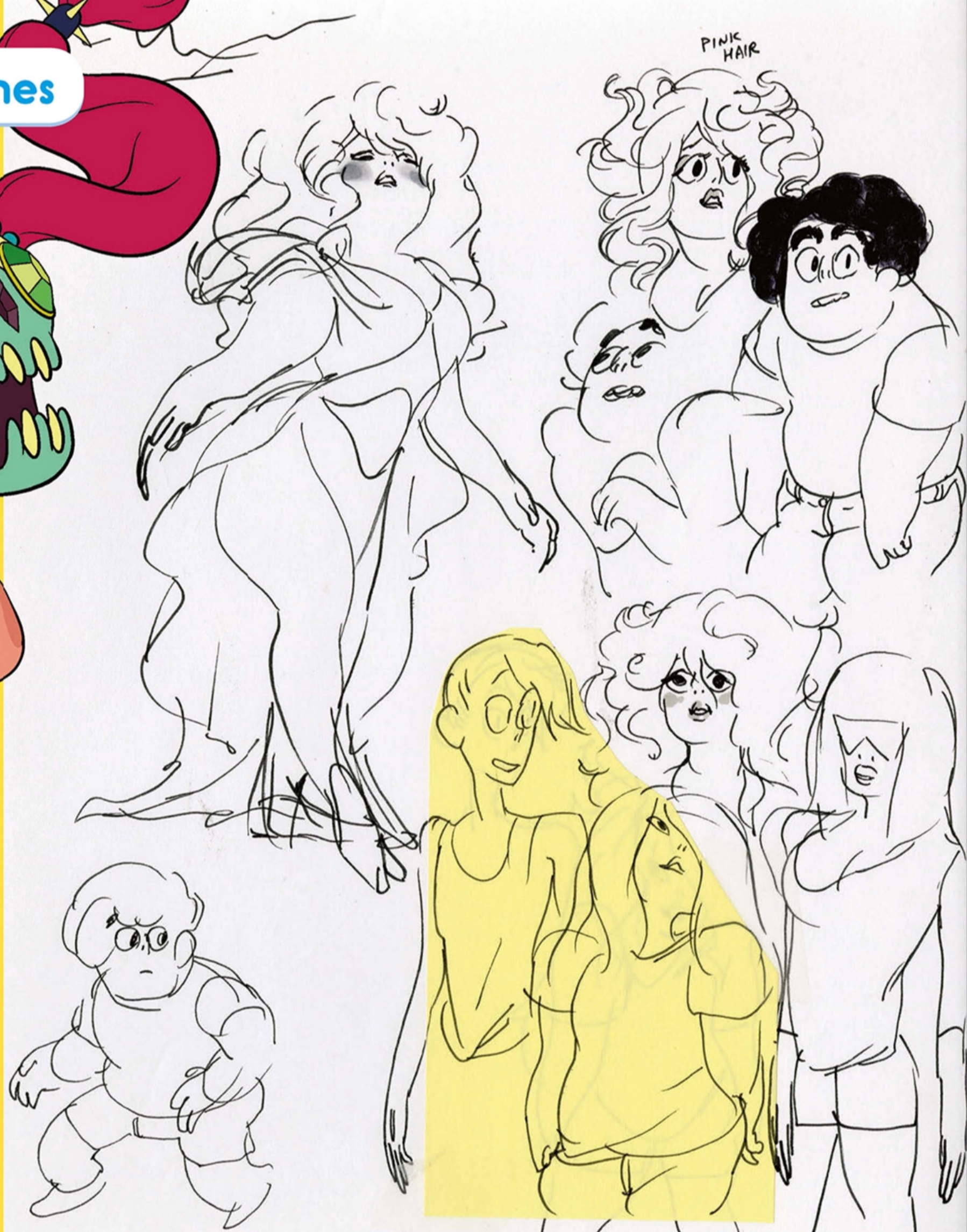




Above: Thinking ahead, Rebecca sketched out multiple episode ideas that could take place in the *Steven Universe* world.

Pilot Pitch Sketches





Music is always integral to Rebecca's animated work. For the *Steven* pilot, Rebecca knew that Steven would play and sing a silly song about himself and the Gems, which would become the series theme song. These early sketched pages include Rebecca's initial drafts of the lyrics and other early drawings of the characters.



OH! OH! OH!
THEY DON'T STOP
YEAH! YEAH! YEAH!
MAKIN SKULLS POP!
DON'T EVEN TRY SKULLS
THEY'LL COME OUT ON TOP
MAGICAL POWERS THAT WOULD MAKE YOUR JAW BONE DROP!

GARNET! AMETHYST! PEARL!

ALSO STEVEN PROVIDING EXCELLENT EMOTIONAL SUPPORT!
WE'LL DO IT TOGETHER CUZ

WE ~ ARE THE CRYSTAL GEMS
WE'LL TAKE YOU DOWN
FOR ANYTHING YOU MIGHT DO TO THIS TOWN!
STEVEN GARNET AMETHYST AND PEARL
WE WILL SAVE THIS WORLD! WE ALWAYS SAVE THE WORLD!
WE WILL SAVE THIS WORLD!



— TAUNT —
BUT THEY'RE DEAD!
THEY DON'T EVEN KNOW YOU'RE DOING THAT! (YOU DID THAT!)
YEAH BUT I KNOW!

"STEVEN GARNET AMETHYST AND PEARL?"



I HARDLY THINK YOUR NAME SHOULD COME FIRST WHEN WE DO ALL THE FIGHTING.
I HELP! STEVEN LET ME USE YOUR SHIRT!
I KILLED THAT ONE!
AW MAN. OK.
WHEN AM I GOING TO GET TO TRANSFORM AND HAVE A MAGICAL WEAPON AND STUFF?!
— 'HOLDS CUT
SOMEDAY!
MAYBE SOON IF YOU STOP GOOFING OFF SO MUCH!
WHAT! I WAS HELPING! HELPING MORALE! LOOK I'VE BEEN WORKING ON MY TAUNT. UNF!

I CAN'T BELIEVE THOSE SKULLS FOLLOWED US FROM THAT ISLAND SHRINE!
WELL MAYBE ITS CAUSE WE TOOK ALL THAT STUFF!
ZOW!
WELL ITS SAFER WITH US THAN ON THAT SKULL INFESTED ISLAND.

(Continued from page 19)

time. In the fall of 2011, Rebecca and I were moving into a new home, so we juggled finding a place and moving while finishing our storyboards!

Rebecca: After I had Steven as a character, the idea started branching out to the stuff that Steven and I used to like—the video games, comics, and animation we loved. I wanted to do something with similar themes, but also make it about the *fact* that we liked that stuff. The characters are really real, like us, but are participating in the kind of fantasy, lore-heavy worlds that we watched and liked and played. The kind of stuff that we used to draw when we were hanging out together.

This reversal of the typical dynamic in a fantasy-adventure concept is what makes *Steven Universe* stand out. The show isn't about an average person who gains magical powers and strength, and then battles foes and saves the world—though Steven does do these things. Instead, a significant portion of the series presents Steven and the Crystal Gems spending time around the house: cooking, playing, and being a family. The Crystal Gems—Garnet, Amethyst, Pearl, and Steven—carry on very human, loving, and real family relationships with one another that sustain them and are the backbone of the entire series. And these magical fantasy beings are fascinated with the humble Beach City reality.

Matt Burnett [writer]: I think that thesis—grounding the series in family and simple, everyday pleasures—really eliminated any impulse to inject cynicism or snarkiness into the series. There's nothing in the show that Steven would be dismissive of; everything was going to be exciting for him to experience. He would be excited to visit an ancient Gem temple, but he would be just as excited about trying some new food on the boardwalk.

From the pilot onward, this was an intentional feature: these fantastic beings undergoing the day-to-day highs and lows of family life. In the series, it's a moving experience to see the normally stoic Garnet grin, make a heart shape with her fingers, and tell young Steven, as she warps off to an adventure, "I love you."

With all this in mind for her potential series, Rebecca began filling sketchbooks with concept designs for Steven and the Crystal Gems and imagining the entire history of their world.

Rebecca: As I was developing the pilot, I was keeping the world-building close to the chest. I knew all the fusions [the Gems have the ability to combine into fused beings], and I had lists of everyone's combinations and a lot of the backstory. I had my plans for Rose [Steven's mother], and I knew the Gems in the pilot were feeling her absence, and that everyone's behavior was subtly colored by grief. But first and foremost, I wanted to make a funny show that kids would love. That had to come first. I wanted to introduce you to real cartoon characters, really funny cartoon characters, before expanding their world and watching them go through their emotional arcs. That felt, to me, more honest than a drama or an action show. Dramatic things don't only happen to cool, serious people. And life doesn't stop being ridiculous when a tragedy occurs. If anything, the ridiculousness of it stands out more!

Rebecca had to balance the massive history of the world she was creating, and her plan to roll it out methodically over many episodes, with an awareness that her primary goal was to make a successful pilot episode. The pilot would have to function as a proof of concept that an entire series could be built around these characters and personalities, and that it would be funny. Only on the strength of these things could the other high-concept science-fiction and fantasy trappings be hung.

In this "non-premise" type of pilot, the audience joins the characters in their already-in-progress world: What we see is a slice of life. This allowed Rebecca and her team to focus on showcasing the relationships among the four primary players in the house, as well as on the kind of specific humor







Early sketchbook drawings of the Crystal Gems and Steven by Rebecca.
Right: The Temple as depicted in the pilot.

and feeling the executives and eventual audiences could expect more of if the series were green-lit.

Rebecca: There's this theory of sublime art that I wanted to apply to the pilot. Beautiful art is something that is frameable, that you can hang on a wall and completely understand. That's very pleasing. Sublime art, however, makes you feel like there's something outside of what you are seeing that potentially has more importance and power than what you can see. It's upsetting and even scary to know that you're only being shown a small fraction of something larger that you're being denied, but it's also a different type of beauty that helps you understand your own failings, your own inability as a person to understand the fullness of what's going on. To me, that relates so much more to actual life than a simply beautiful piece of art. This was part of the goal in the pilot as well as the whole series: to know that there is so much more that you can't see and the way that knowledge frustrates and excites and confuses and scares you.

Time and resources allocated to the project were limited, so production needed to proceed quickly. Cartoon Network liked what they were seeing of the animatic, and before the finished animation was even completely back from the animation studio Rough Draft in South Korea, Rebecca was given the go-ahead to begin developing the series full-time in anticipation of a potential green light for production.

Lamar Abrams [storyboard artist] : I saw the animatic before the finished pilot, and I saw the character sketches Rebecca did while I was still living on the East Coast. I remember thinking, "Why hasn't anyone done anything like this before?" I was super excited for whatever was going to happen next!

Kat: Same! I remember watching the work print [an in-progress but almost complete version of an animated piece with many finalized elements in place] of the pilot, and Rebecca was like, "This is terrible—we have to redo all this," and I'm thinking, "How is this even real? I can't believe they're making this—I want to work on this." It was then that I pledged my undying loyalty.

As the initial spark that ignites something greater, the pilot had done its job. *Steven Universe* would debut in 2013, at which point Rebecca Sugar would become the first solo female series creator in Cartoon Network's twenty-one-year history. But first, the real work was about to begin: building the series from the ground up.

The Pilot



THREE MAGICAL GUARDIANS OF THE UNIVERSE — AND STEVEN!



CREATED BY REBECCA SUGAR

RS'12



Eat Donut Shop —

4-25-12-



STEVEN UNIVERSE

Mythology (If you're into that sort of thing)

The Crystal Gems were sent from another universe thousands of years ago to protect the human race! Their magic allows them to take the appearance of human teenagers, to pull powerful weapons from their universe into ours, to destroy and trap evil creatures, to collect and tame unstable magical objects and to generally bend the metaphysical rules of this world.

Steven Quartz is the first 2nd generation Crystal Gem. His mother, Rose Quartz, vanished like a phoenix when Steven inherited her gem. Garnet, Amethyst and Pearl adored Rose Quartz and so they've taken on the responsibility of raising her son. Sometimes Rose will visit Steven in his dreams and give him advice. When he wakes up roses have grown all around his sleeping body, which he finds very embarrassing.

Steven is a modern child, which is baffling to Garnet, Amethyst and Pearl. Thousands of years of knowledge can't help them understand why he wants to be "cool" or why he thinks words like "corn nuts" are funny.

The Gems live in a huge woman-shaped temple full of dangerous magical objects and creatures. Steven lives in an addition the Gems built to babyproof the temple, and it even has satellite TV and an N64. Whenever he gets the chance though he'll dart into some new unexplored room and uncover secrets from the Gem's past and probably make a mess of things. Sometimes they'll introduce a room to him on purpose to try and teach him a lesson or a little about his magical heritage.

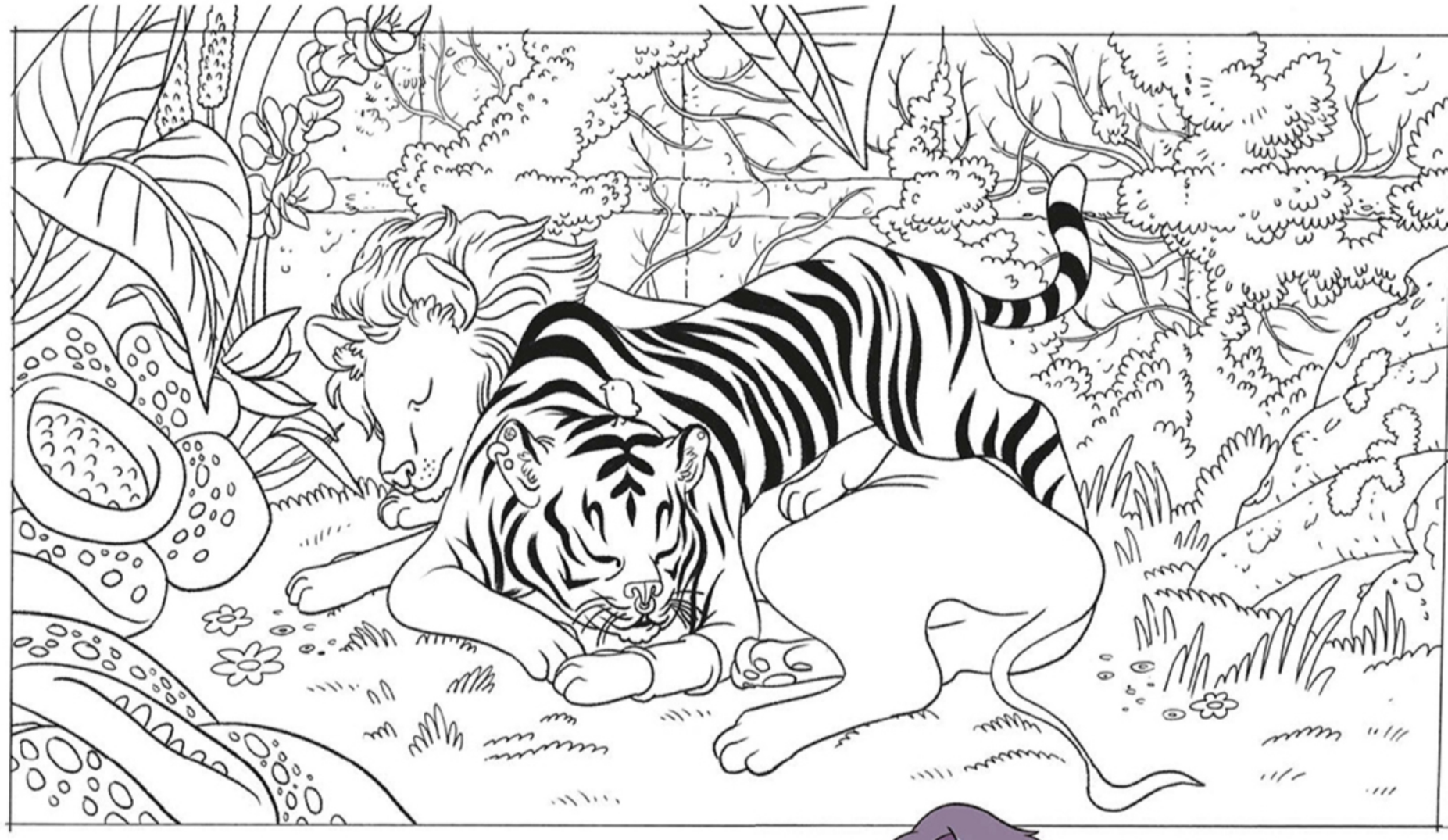
The show is from Steven's point of view, and from his point of view, Garnet, Amethyst, and Pearl are cool and awesome and they get to do all sorts of crazy stuff that he wants to do too. As far as he's concerned, the magic world is the adult world and he's ready for it. A total little brother he is loyal and sweet and dying to earn their respect. And even though the Gems overprotect and underestimate him, he always comes through in tight situations with a Steven-style solution that they never could have thought of without him!

Opposite: Cropped stills from the pilot episode, which was titled "The Time Thing," and promotional art by Rebecca. **Left:** Background art by Steven Sugar and related notes identifying the need for that shot. **Above:** A pilot-era summary of the proposed series's mythology that describes the big ideas of the series. Intentionally absent are the finer details and nuance of the character relationships and histories that were to come.

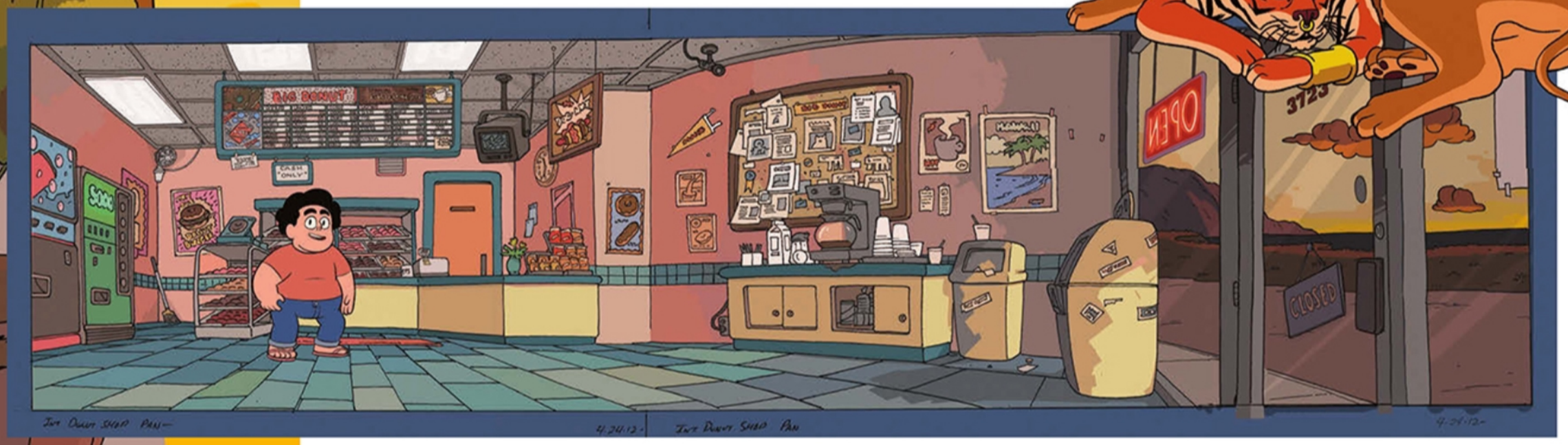
Pilot Background Art









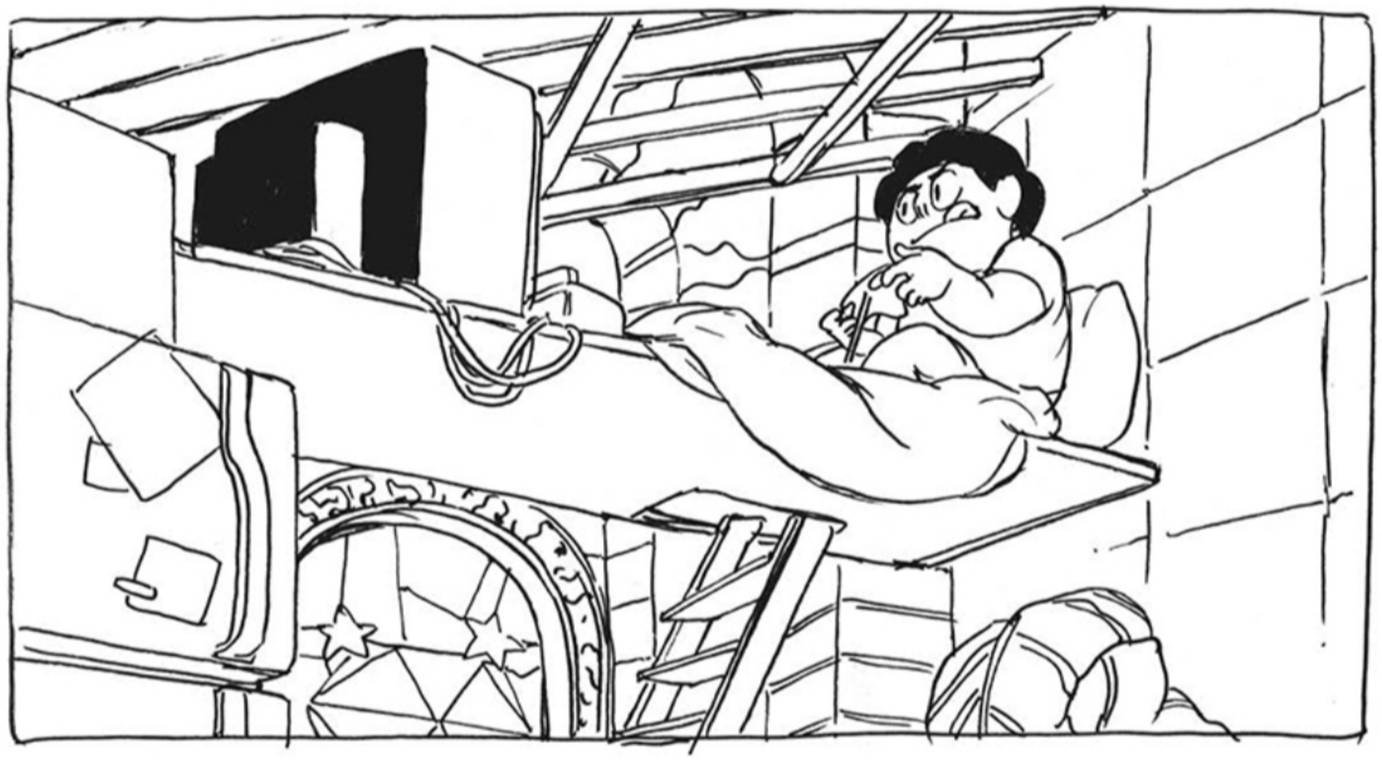


Left: Background line art by Thomas Herpich, painted by Steven Sugar in one of multiple color experiments made while trying to establish the look for the pilot. **Above and right:** The layout and special model designs for the brief shot of Amethyst sleeping on a pile of big cats during the pilot opening sequence. Background drawn by Chris Tsirgiotis, with cats drawn by Angie Wang. **Below:** The pan background of the Big Donut interior, drawn by Art Morales and painted by Steven Sugar.

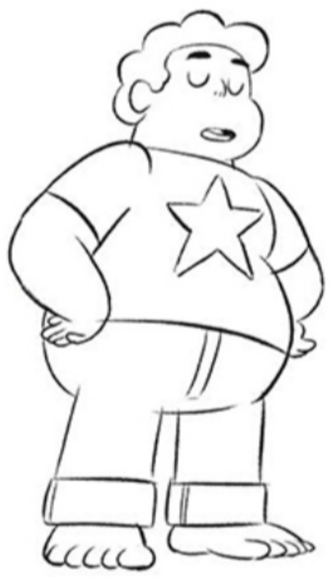
Pilot Steven













Steven and his beach house addition on the ancient Gem Temple are fleshed out in these drawings by Rebecca for the pilot episode.
Left: Two Steven drawings by Danny Hynes.



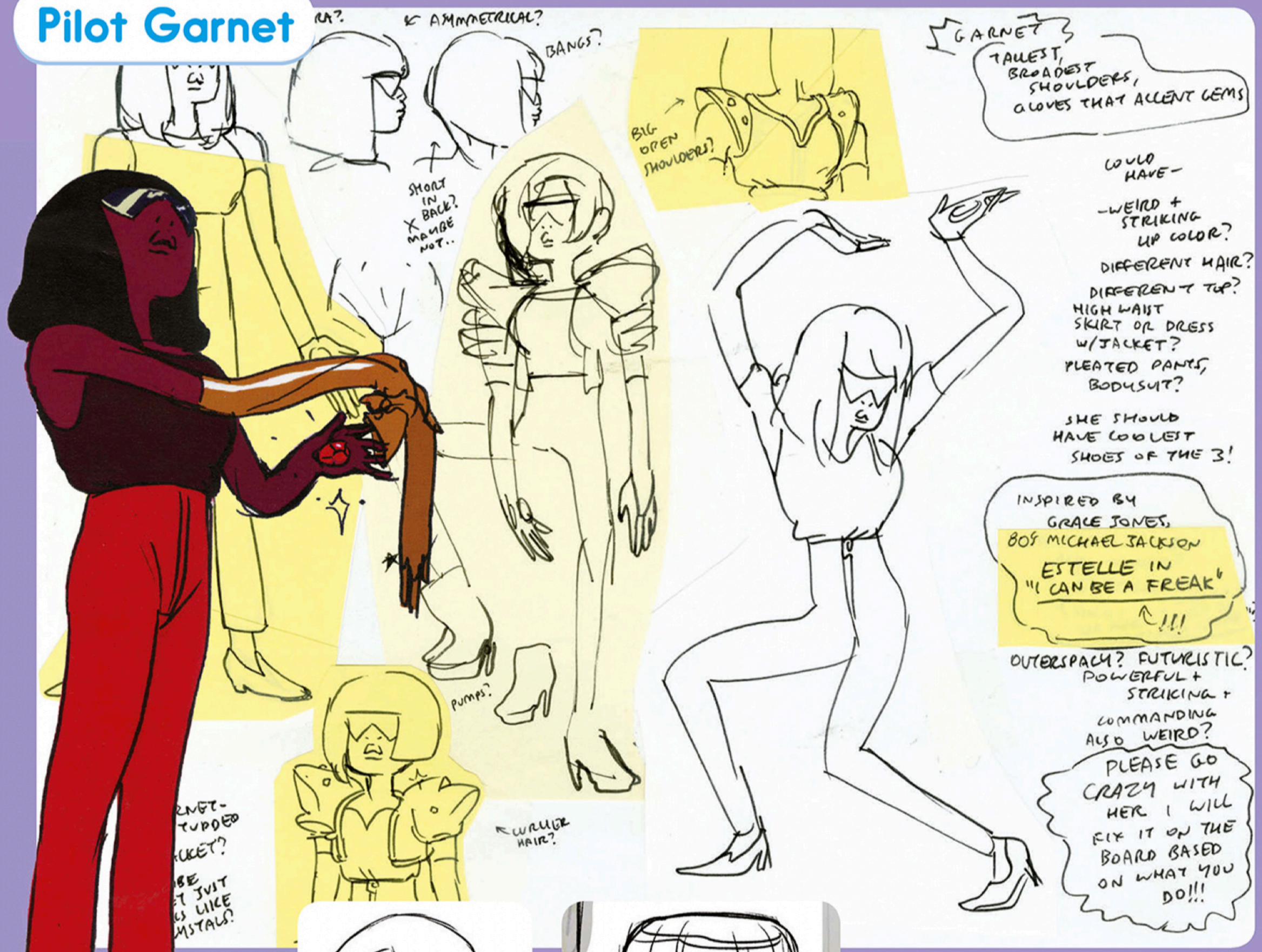




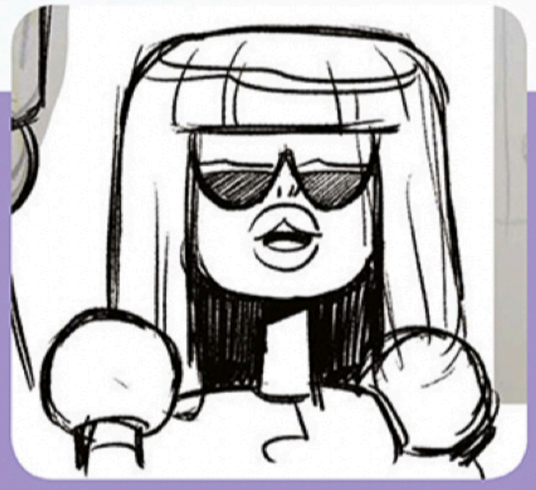




Pilot Garnet







Rebecca collected her drawings and notes about Garnet to hand off to her crew to continue the character design process.
Left: Two Garnet drawings by Danny Hynes.















Above left: Garnet drawings by Hellen Jo. **Left:** Early Garnet drawings by Ian Jones-Quartey. **Above right:** Garnet model designs by Rebecca and Phil Rynda.

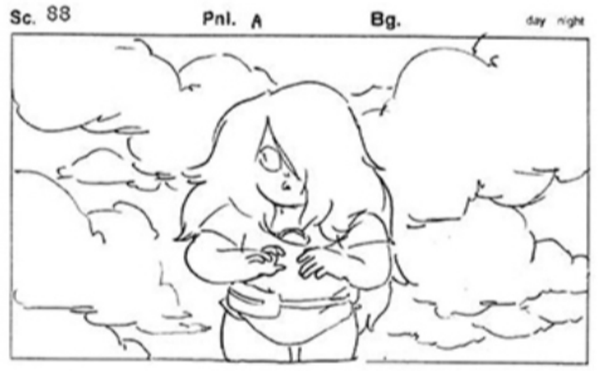
Pilot Amethyst

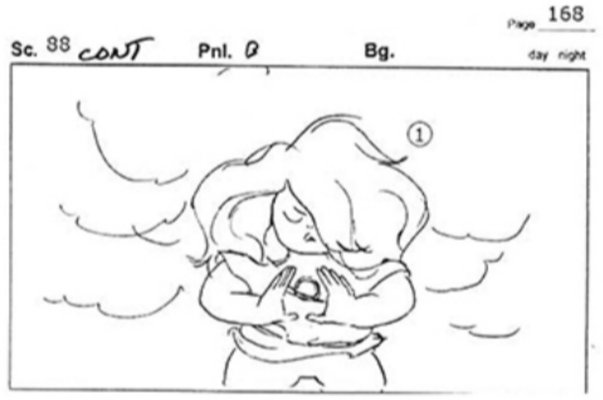


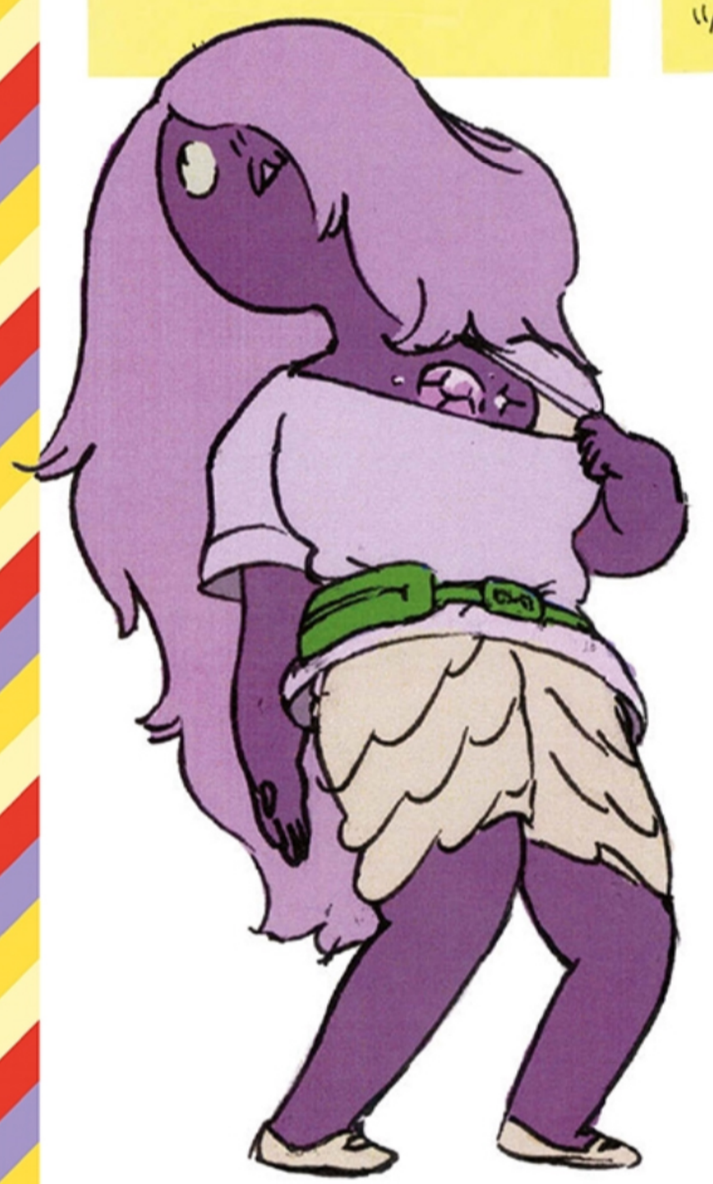


Below: Three drawings by Hellen Jo.











AMETHYST

WILD THEME
TEXTURE
ANIMAL THEME?

COMPACT & CURVY
LOOSE, BAGGY,
SOMETHING UNDER
A BAGGY TOP SO IT'S NOT
WEIRD WHEN IT'S EXPOSED?
OR MAYBE IT IS WEIRD, JUST A
STRAIGHT UP BRA?

BIG SWEATER?

ASYMMETRICAL?

HAS TO HAVE FANNY PACK
WE SHE USES IT IN PILOT -
BUT MAYBE THAT COULD BE COOL?

BAGGY SOCKS?

BOOTS - TALL OR SHORT?

THIGH HIGH SOCKS OR
SOCKS AT DIFFERENT HIGHTS?

NOT SURE EXACTLY HOW LONG
HAIR SHOULD BE?
TO BUTT, TO FEET?

IF HER OUTFIT COULD BE
LIKE POLAR OPPOSITE O
PEARLS/ COMPL

PEARL IS SMOOTH +
SO MAYBY V

← FUR, OR BOA?

↑ STRAIGHT UP ONE SHOULDER?

CONTEMPORARY?
BARBARIAN?

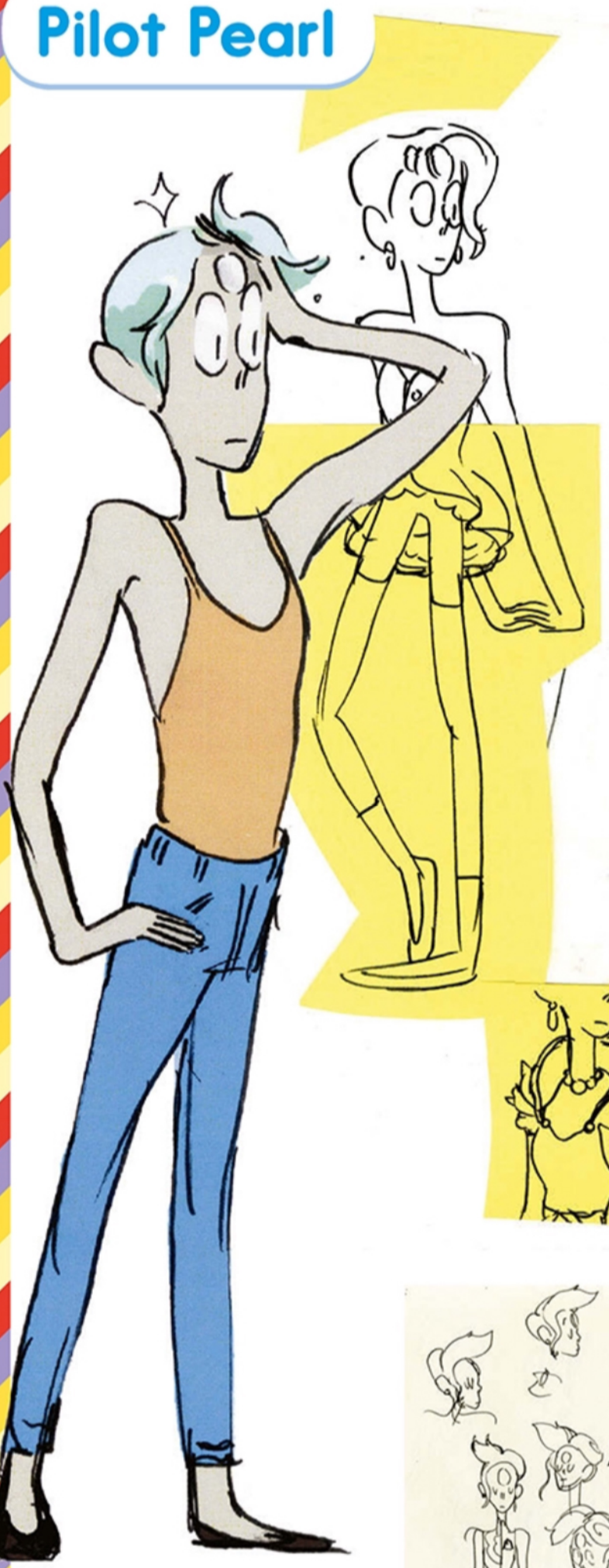
← PURPLE FURRY BOOTS?





Through many rounds of character design development, Amethyst managed to hold on to her fanny pack. Drawings by Rebecca.

Pilot Pearl













SHE GETS HUNG UPSIDE DOWN SO SHE CAN'T HAVE A SKIRT,

MAYBE AN OPEN SHIRTDRESS OR JACKET W SHORTS UNDER IT, VERY UTENA?

OR TIGHT PANTS?

STRAIGHTLACED, BUTTON UP, LADYLIKE ACCENTS, EARRINGS OR BOWS?

BIG PEARL IMAGERY, SMOOTH + ROUND STUFF?



REALLY FORMAL (IN CONTRAST TO AMETHYST?





Pearl's early design included her hair styled into bangs that obscured her forehead gem in order to disguise herself more easily as a human. Drawings by Rebecca. **Left:** Tuxedo Pearl drawn by Hellen Jo.

Sc. 86 CONT Pnl. C Bg. day night

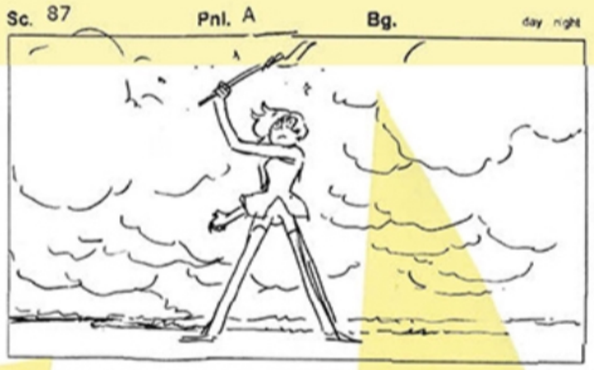


Dialog:

501/237



Sc. 87 Pnl. A Bg. day night



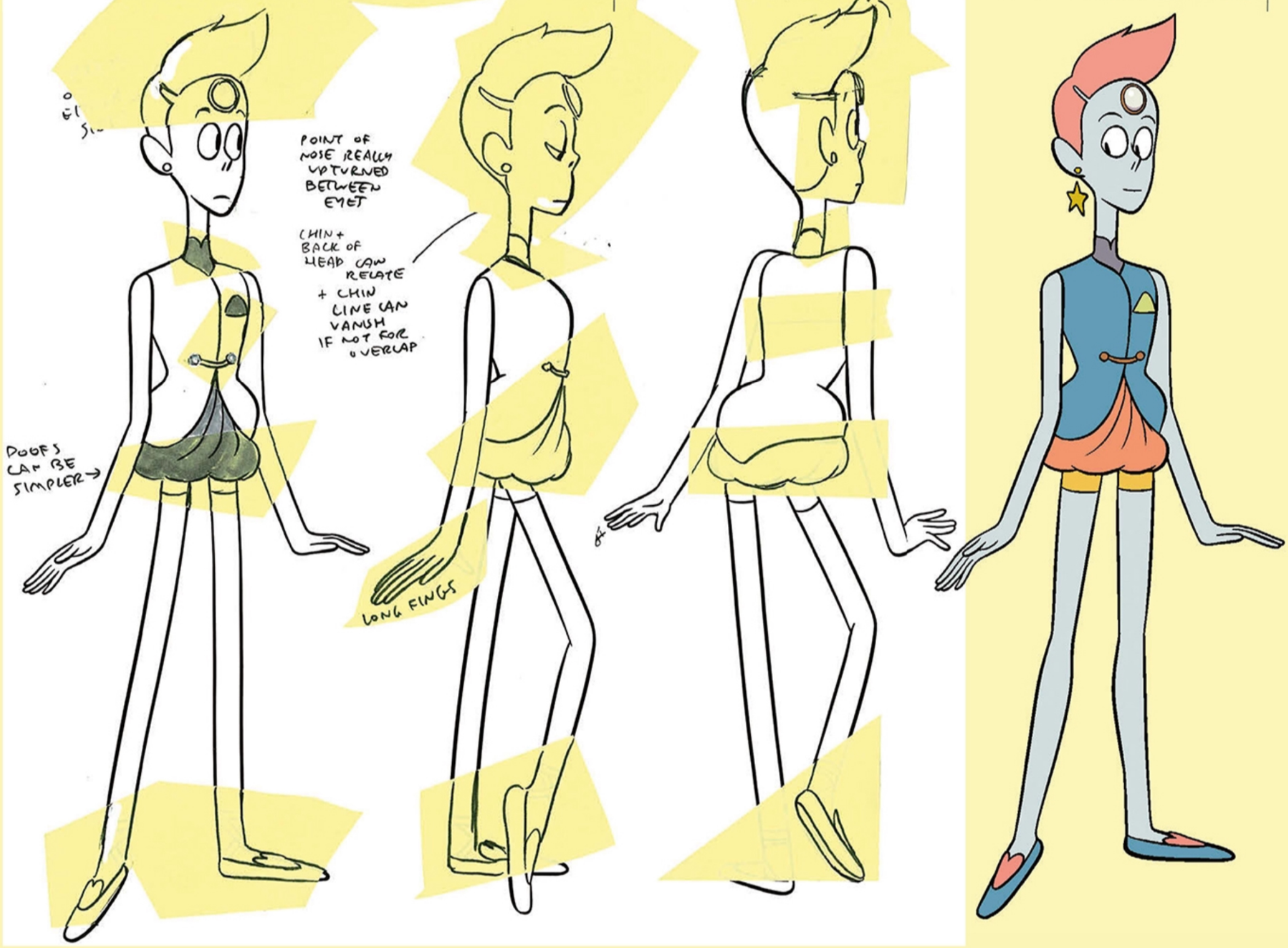
Dialog:

Sc. 87 CONT Pnl. B Bg. day night



EPISODE #

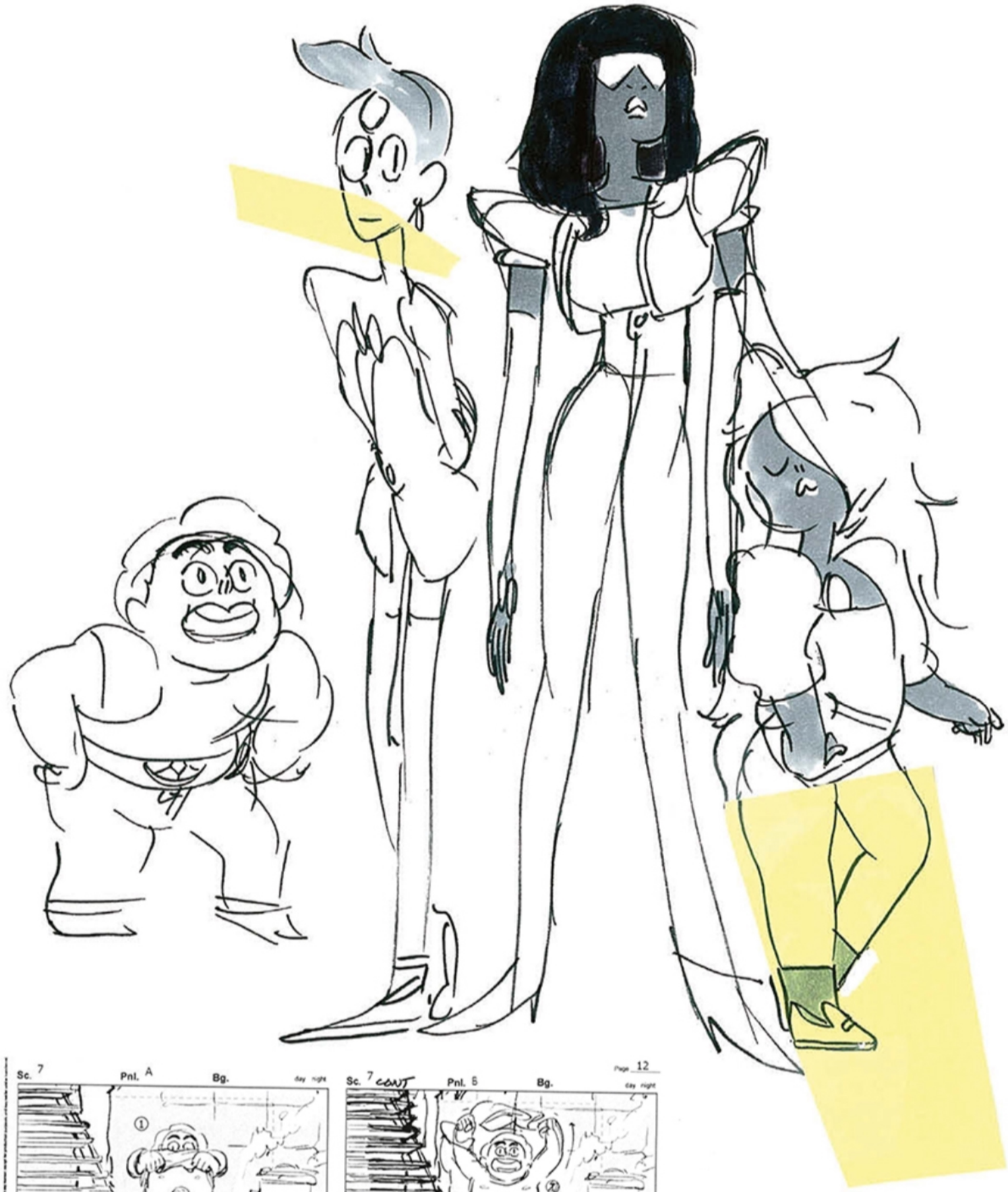
501/237

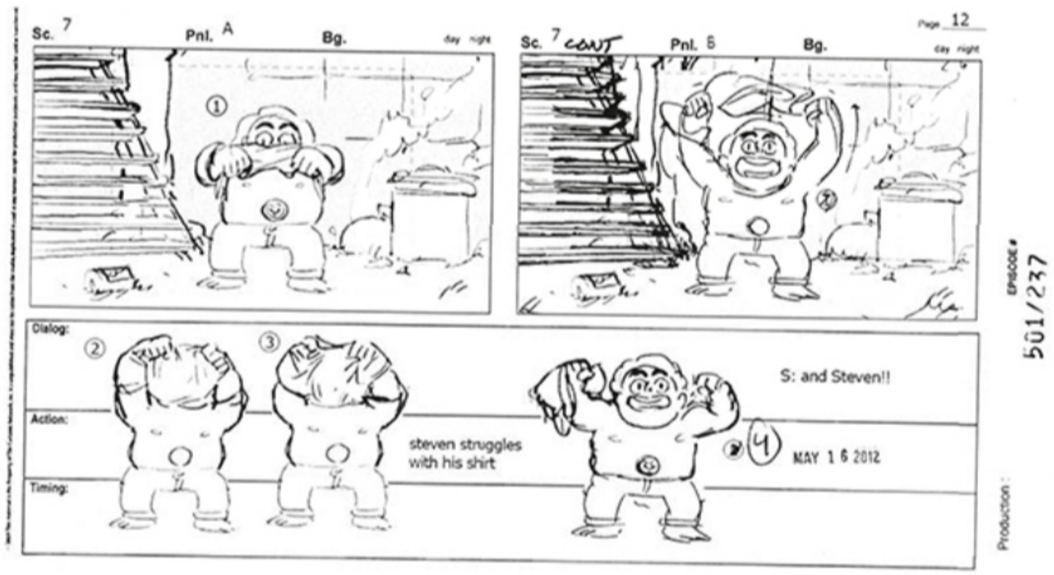


Costume Concepts



Opposite: Drawing inspiration from concepts by Rebecca, such as the one to the right, designer Angie Wang created sets of unique outfits for the Crystal Gems as possibilities for their final costume designs. A special pose model of the Crystal Gems arriving on the warp portal illustrates the final costumes used in the pilot. **Above:** A stylized series Garnet by Jasmin Lai illustrates what's to come.





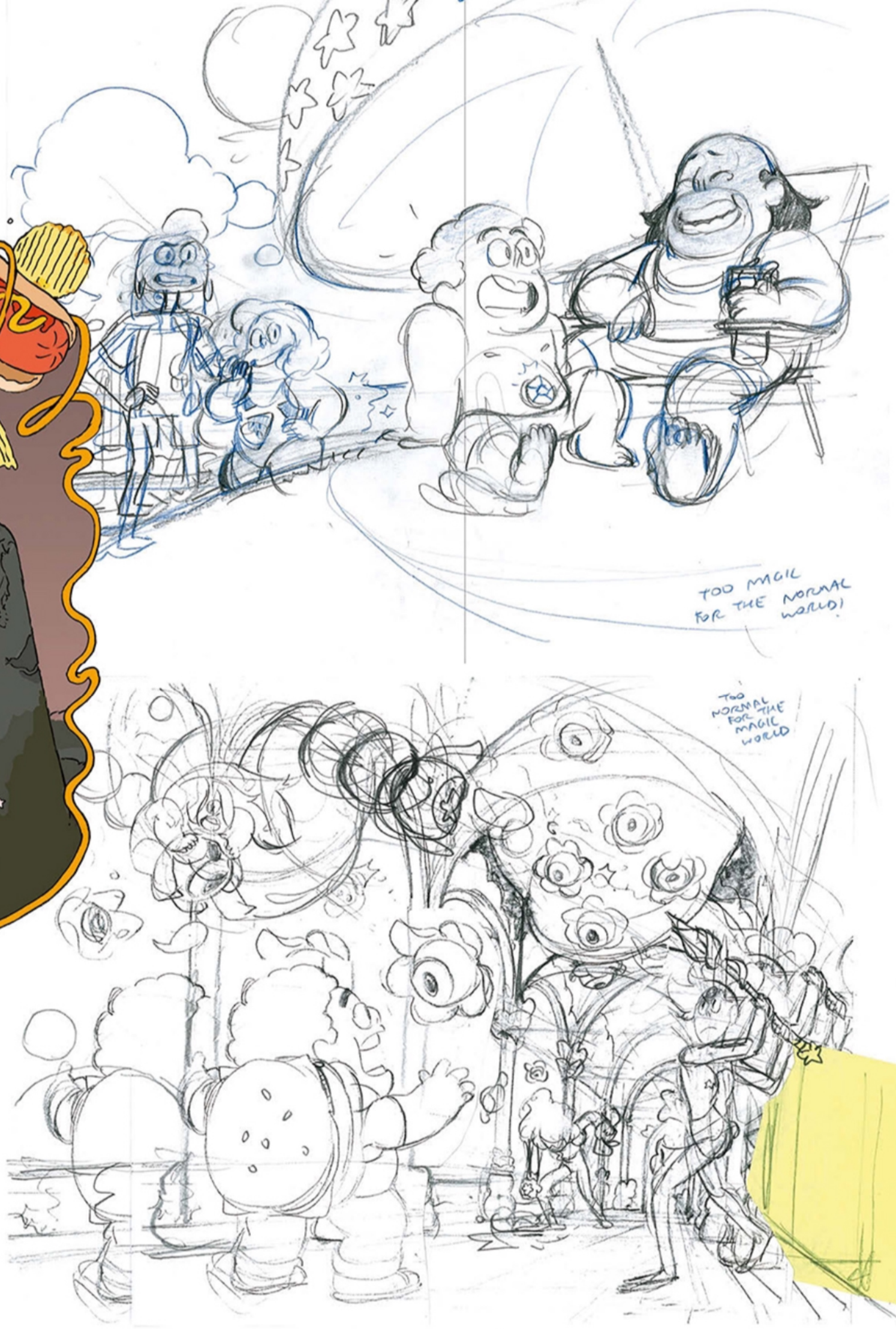

OVERSIZE ON TOP
SLOUCHY JUMPSUIT
SOCKS OVER PANTS
BATWING SHIRT
TERRY P.E. STYLE SHORTS
SLOUCHY BOOTS
BARE SHOULDERS
HOLEY TIGHTS
CROPPED T-SHIRT
SOCKS WITH FLAT
ROMPER WITH P.E. SHIRTS
SLOUCHY LEGWARMERS
THONG SANDALS
HALTER TOP, LAYERED TANK
HUARACHES
SKIN
SKIN
SKIN
BODYSUIT
STIFF UP TOP, FLOWY BOTTOM
NEHRU COLLAR
SUBTLE SHOULDERS
SOFT RUFFLES
LIKE A PEARL LINING IN A SHELL –
ASYMMETRY SUGGESTS SHELL
CUFFS
THIN LEGWARMERS
A BIT ABSTRACT BUT CONSIDER A LONG CLEAN PAIR OF COATTAIL?
BACK
GLOVES
SPATS

Promotional Art

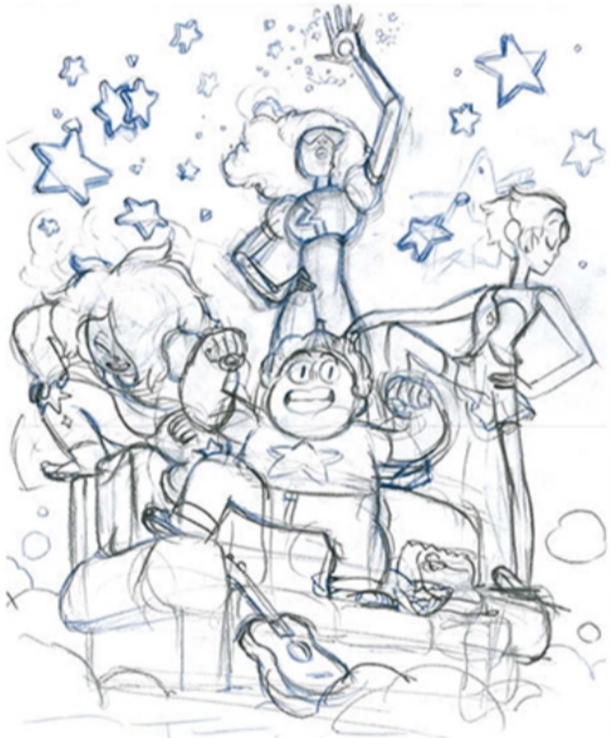








Opposite left: Promotional artwork by Rebecca, including a pilot–era design.
Opposite right: Rebecca's captions in the promo image roughs describe Steven's unique place in the universe: "Too magic for the normal world! Too normal for the magic world."
Far right: A series development–era poster drawn by Rebecca and Phil Rynda, painted by Ian Worrel.
Below: A selection of the many thumbnail compositions that Rebecca drew to find the favored balance of characters, shapes, space, and ideas. This image was to be the first look that many people had of the series, and Rebecca wanted to communicate the unusual flavor of the idea clearly.









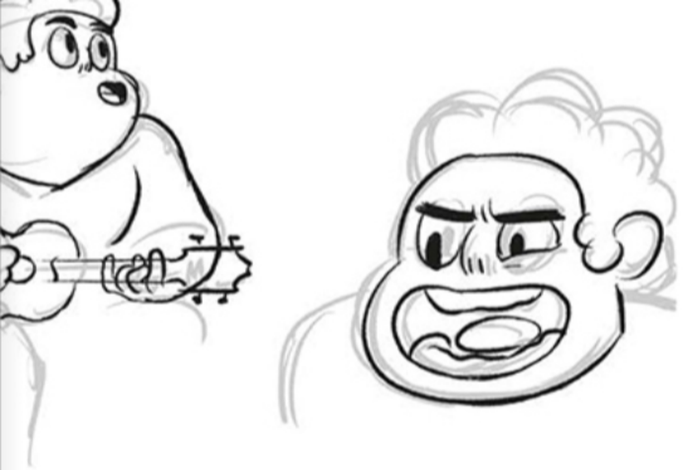












2: GREEN LIGHT & DEVELOPMENT



Danny Hynes drew hundreds of Stevens in preparation for the eventual task of tying down the final series design into an iconic standard model.

It was limbo. Already pulled from her post on *Adventure Time* in order to fully dedicate her time to *Steven Universe* development, Rebecca was in a precarious place of uncertainty about her own show's future. All signs were positive from the studio brass about the pilot, but before any green lights could be lit, Rebecca needed to shepherd a team through multiple executive pitch meetings and sell her guts out.

Rebecca had an ambitious set of goals to tackle for her pre-pitch development time: On top of working on additional storyboards, her self-initiated plan was to redesign the entire world to get it ready to be a show: characters, backgrounds—everything.

Rebecca Sugar [series creator]: I was seriously preparing just in case the series would be picked up. Because if I staffed up, I would need the world to be flexible enough and simple enough that when the staff came in, they could really define what it was. It was a really strange time, because on one hand, I was trying to tie things down, and on the other hand, I was trying to uproot things so that other people would be able to tie them down. I had been allowed to add so many ideas to *Adventure Time*, and I wanted to give that freedom to my future team. But I knew I had to have an idea of who the characters were at their core and why they worked well together, and I wanted them to be instantly recognizable as themselves. It was like trying to build a house that I knew people were going to end up living in and trying to figure out how to keep it roomy and build it solidly. I was trying not to get caught up thinking about furniture. We'd pick that stuff out together later.



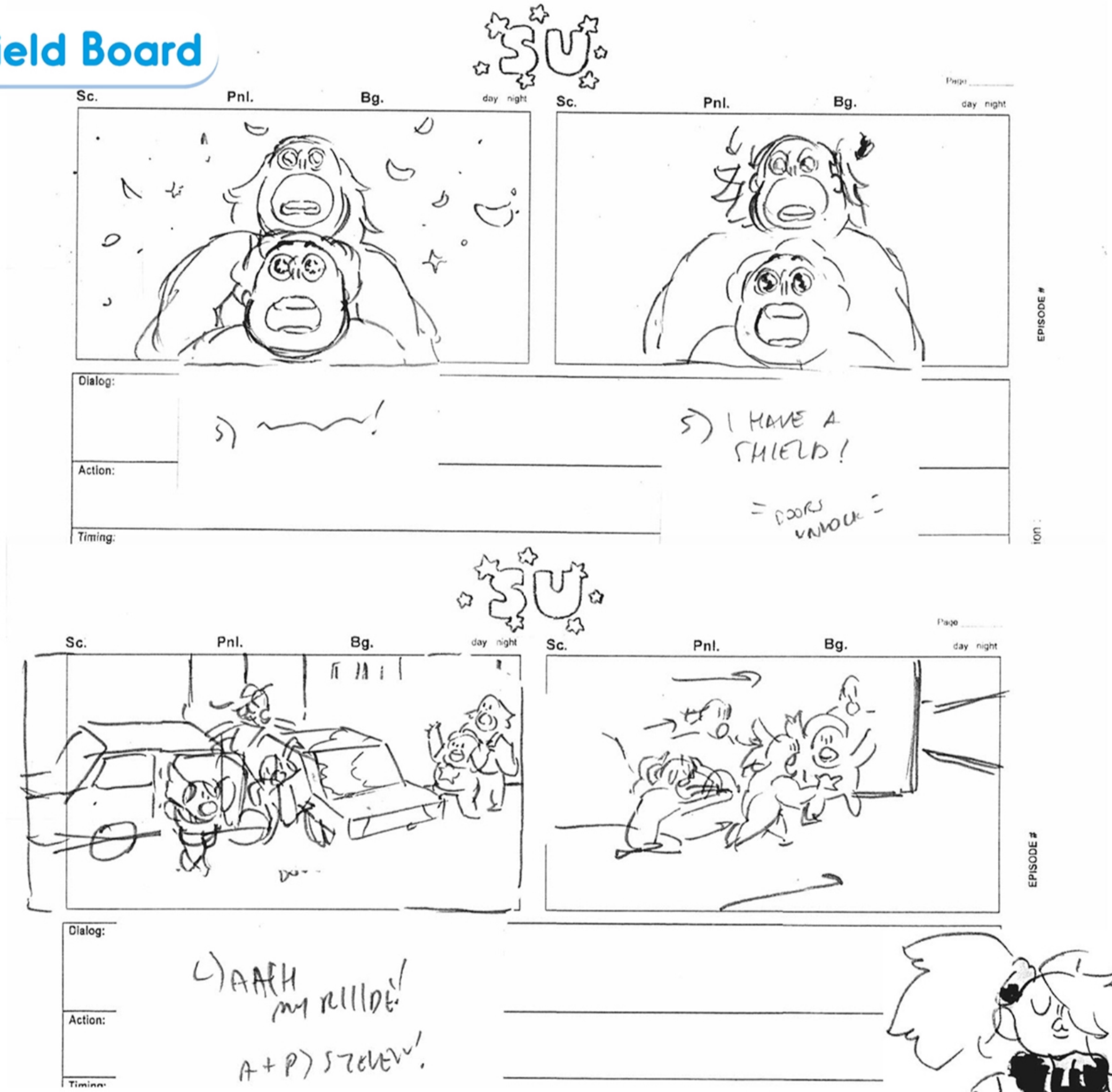
Ian Jones-Quartey [former co-executive producer] : The first board we did was the shield board, which is essentially the lost episode of the show. It's an episode revealing Steven's weapon to be a shield, similar to "Gem Glow" [S1E1]. It's an alternate version of the show that doesn't exist anywhere else.

Rebecca: Right, this was the first premise we worked on during development and the one that I pitched as part of the presentation. In it, the Gems would disguise themselves as humans to go out in public, and they would cover their gems. You can see remnants of this idea in those early drawings where Garnet has gloves and Pearl has bangs.

Ian: That different version of the show was where Steven's human and magic sides were not as integrated. Magic stuff was hidden and being kept from Steven. The Gems would drop him off with Greg for

(Continued on page 48)

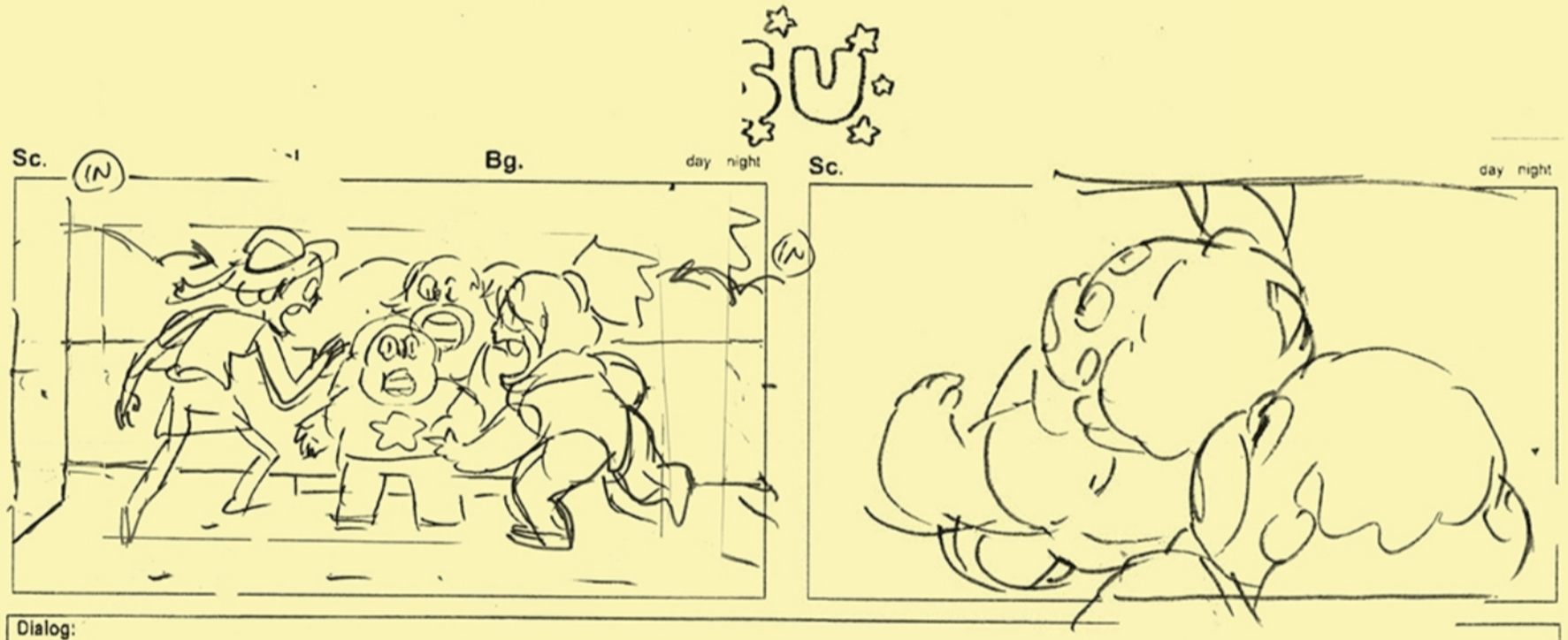
Shield Board

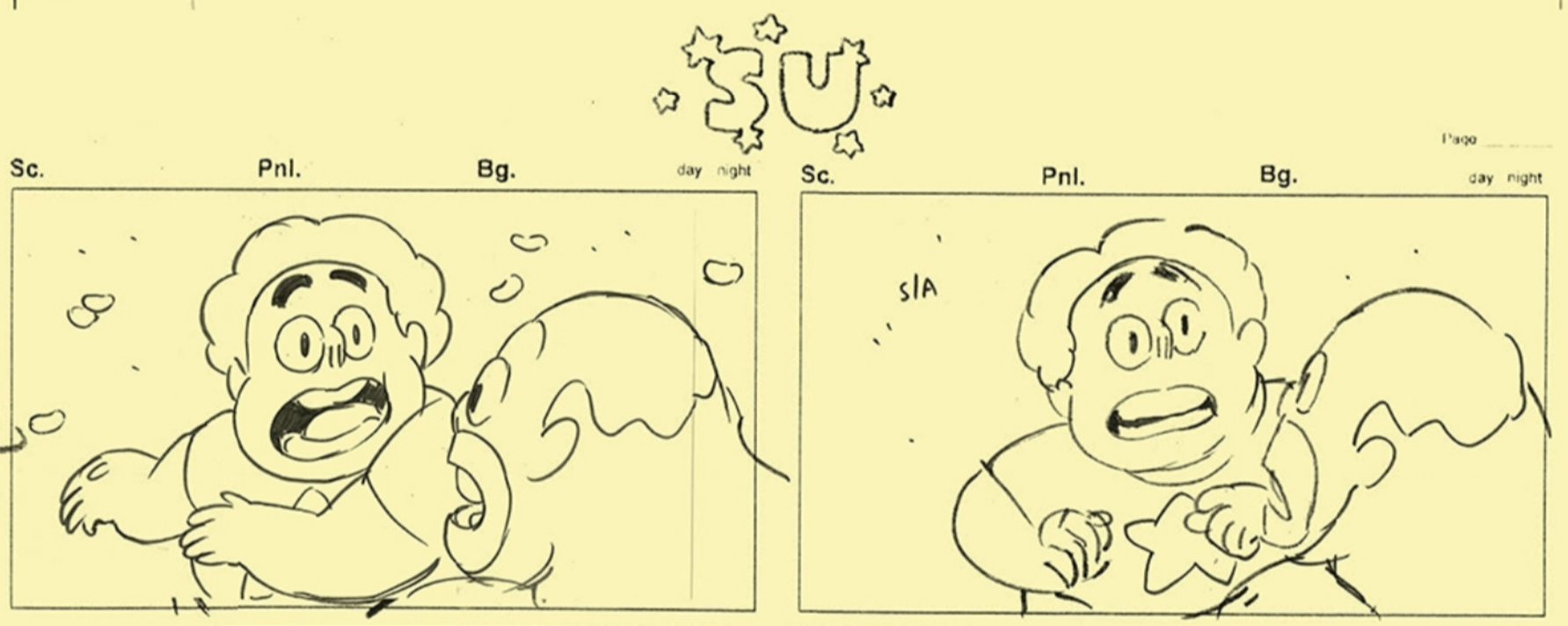




In the "lost" episode of *Steven Universe*, Pearl and Amethyst offer Steven advice on how he might summon his own magical weapon, Steven has a dream of a mysterious figure (Rose), Pearl and Amethyst diguise themselves as humans to drive Steven back to Greg's car wash, Greg and Steven bond, and Steven saves Greg and himself from being crushed by a car when he deploys his magical shield by accident.

Below: Drawings of Amethyst and Pearl's human diguises.







Concept Art



Two early concept drawings by Kevin Dart.



In a concept piece by Joe Johnston, Steven explores the inverted pyramid from the episode “Serious Steven” (S1E8).

(Continued from page 43)

long periods of time. A lot of things from that board came back in later episodes in the series.

Rebecca: Like Pearl driving a crummy early nineties car. (It's based on my old Toyota Corolla that I used to drive Steven around in all the time.) It was part of their disguise as humans! We finally worked this idea back into the show over one hundred episodes in, when Pearl drives Greg's nineties car to a rock show in "Last One Out of Beach City" [S4E6].

Ian: We took concepts from that lost episode and used them in future episodes for the series. Steven has a dream in the board that we kind of cannibalized a little for Rose's room, a dream about bouncing around in these fluffy clouds.

Rebecca: It's a beta. Beta *Steven Universe*. It had a song in it called "The Meatball Sub Song" that I performed when I was pitching the show development progress to the executives. Now it's the lost song from the lost episode, but the show might never have been picked up without it!

During this pre-show development period, Rebecca had the mandate to hire on a skeleton crew in order to prepare for one more do-or-die pitch meeting: a big executive art presentation that would determine the ultimate fate of *Steven*. An essential early position to fill, which would help shoulder some of the managerial burden, was the role of producer. The hardest-to-define position (because it encapsulates different responsibilities on every show), a producer supervises the crew and handles hiring, schedules, budgets, and all sorts of matters that come up daily in every production. It turned out, quite serendipitously, that Susan Strong was looking for a gig.

Jackie Buscarino [producer]: I was on a project that was ending and looking for work. I reached out to my former boss at Cartoon Network (I was previously a writer on *The Marvelous Misadventures of Flapjack*). She told me about Rebecca and the project. I was tickled because Rebecca, along with Pen Ward and Adam Muto, had created the character Susan Strong for *Adventure Time*, and I do the voice for her. Before I had my interview with Rebecca for the position, I remember thinking, "Weird. Susan Strong might produce *Steven Universe*."

It turned out to be a good fit; Jackie was hired as producer, joining the team at the end of September 2012. One of the freelancers from the pilot, a certain Steven Sugar, got an early call from Rebecca.

Steven Sugar [background designer]: I was interning at a game lab at MIT doing research-based video games. It was just winding down, and I had no idea what I was going to do next.

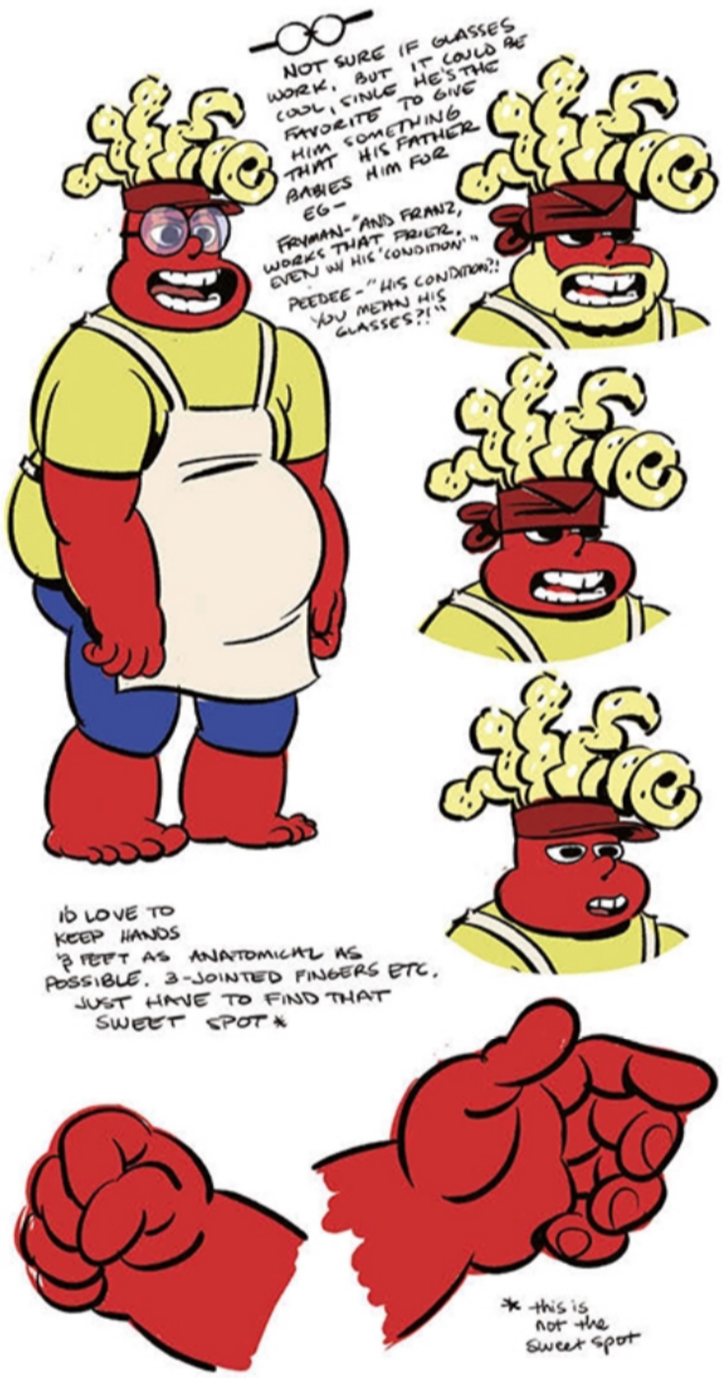
Steven was brought on to the crew as the background designer, the person who designs and draws the line-art layouts for the backgrounds before they are painted by other artists. He immediately set to work world-building, imagining the structures of Beach City and the environments of the Crystal Gems. Next, Rebecca needed to assemble the perfect writing team.

Steven: I remember Rebecca was telling me that for writers, CN had tried to pair her up with these guys, Ben [Levin] and Matt [Burnett], who had been working on *Level Up* and had a reputation as comedy writers. But she thought that was hilarious because she knew that Ben and Matt were even bigger fantasy nerds than she was [*laughs*]!

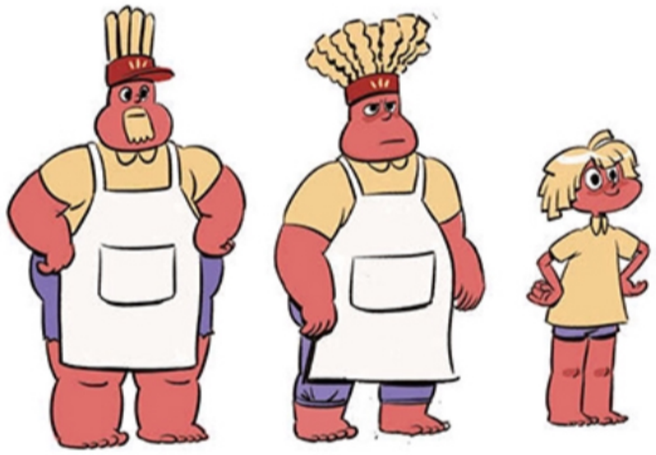
Rebecca: Yeah, I really lucked out!

Rebecca and Ben were mutual fans of each other's work during their college days. Rebecca saw Ben's animated film, *She She She She's a Bombshell* screened in her class at SVA by their mutual teacher Matt Sheridan, who was also teaching Ben and Matt at nearby NYU. Years later, Ben and Rebecca swapped fan letters back and forth. Ben was a fan of Rebecca's comic *Don't Cry For Me, I'm Already Dead*. Thus, when she saw his name on a list of suggested writers to interview for the job, it jumped





Fryman family character design exploration by Danny Hynes. Marker sketch by Rebecca.



out at her immediately. The writing team of Ben and Matt were welcomed aboard.

The pilot had introduced two primary locations: the Temple and the Big Donut. For the series, the rest of the town needed to be imagined, from the wide, bird's-eye view all the way down to what Steven's refrigerator should look like—what's stuck on it and with what sort of magnets? Then the town needed to be populated: Who lives there, what do they look like, what do they drive, where do they work, and what do they eat? Per Rebecca's redesign initiative, even the Big Donut and Temple needed to be refreshed.

Ian: At the time I was reading a lot of *Dr. Slump*, the Akira Toriyama comic. It has this great small-town feel. All of the recurring characters live and work together in a tight-knit environment. That inspired my idea where Steven's town would have this board-walk and there would be all these different shops and the characters would live above the shops. The boardwalk consolidated the human world for Steven and became a finite, specific place that we could come back to again and again.

Rebecca: It took us forever to come up with the name of the city, which is so silly—Beach City [*laughs*].

The team members found themselves temporarily housed in the so-called "black building" (the office tower behind the studio's main three-story corner building, where the production currently resides) at Cartoon Network Studios, in a space that was—as it happens—on the same floor as the nearly complete production of the CGI *Powerpuff Girls* special.

Rebecca: And that turned out to be a really important thing, because a lot of our colorists, as well as Kevin Dart—who became our first art director—were working on the *Powerpuff* special, and we were on the same floor. And Steven—

Ian: Steven made friends with them really quickly.

Rebecca: Jasmin Lai—who was recently the art director and who has been painting since very early on—and Tiffany Ford were there, too. When they had some downtime, they'd all be throwing a beach ball around or something—

Steven: I was doing concepts as Rebecca, Ian, Kat, Ben, and Matt were writing, so I would spend a lot of time, especially after hours, just hanging out at the studio with Tiffany and Jasmin.

Steven's affable personality definitely helped to recruit former *Powerpuff Girls* crew Kevin Dart, Elle Michalka, Tiffany Ford, and Jasmin Lai; all of them became integral contributors to the original *Steven Universe* production as soon as their work on the *Powerpuff* special wound down.

Matt Burnett [writer]: Steven Sugar's sense of humor has a very "charming young person with dad-joke-caliber comedic sensibilities" thing going on. His delivery tends to be understated and subtle. He'll just kind of slip out a pun, casually, as he is filling his coffee cup next to you.

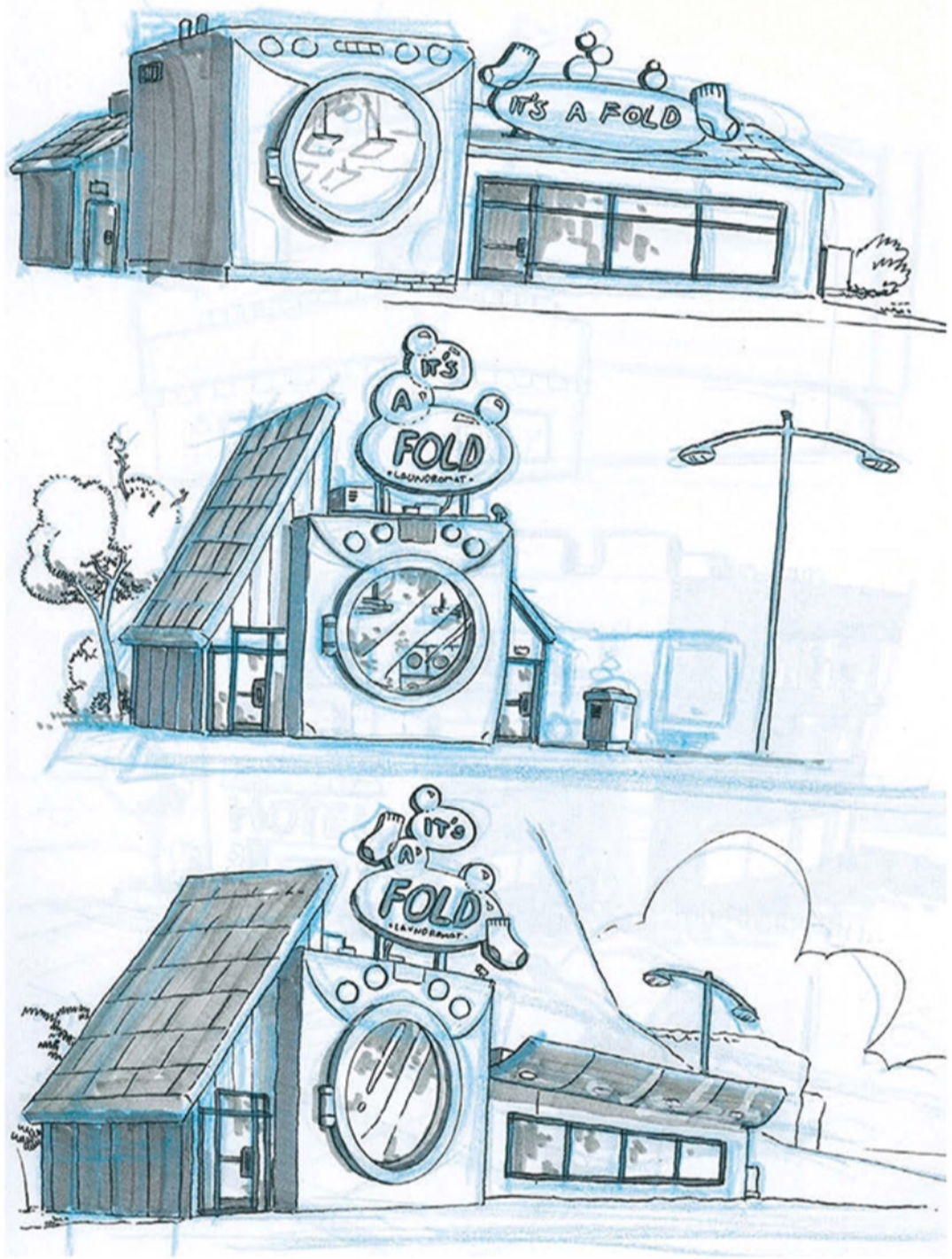
Development proceeded for about three months during this initial phase, while freelance artists contributed concept designs and empty positions were filled. In the character-design department, another East Coaster, Danny Hynes, was sending over concept designs as a freelance contributor.

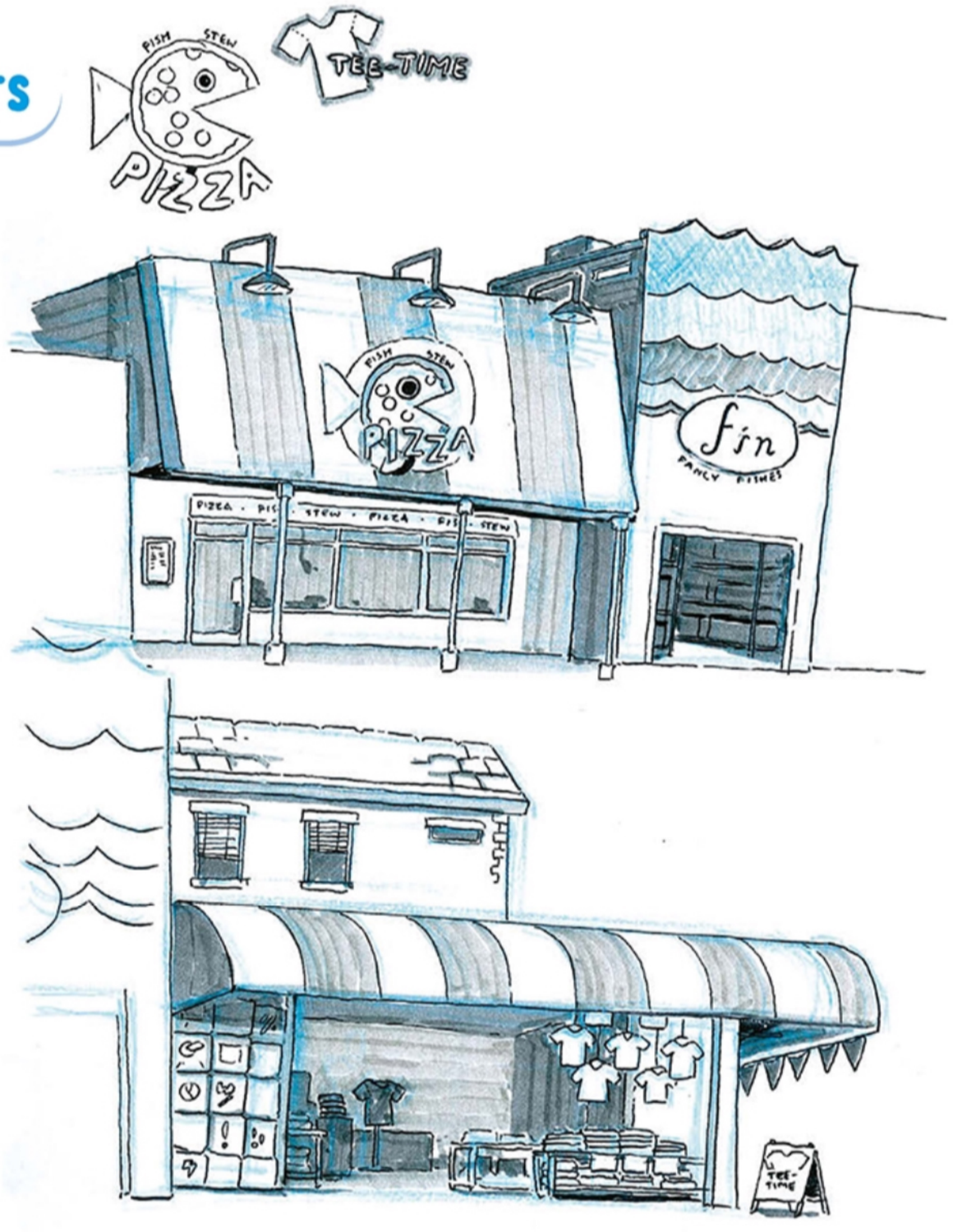
Danny Hynes [lead character designer]: I did as many drawings as I possibly could. They were hiring me to do some exploration. I also kind of felt the test aspect—that this could lead to a job. So I just kept filling up stacks and stacks of paper with Stevens and Gems. I also sent a bunch of digital things in: early ideas of townies, early ideas of monsters. Then I got hired on.

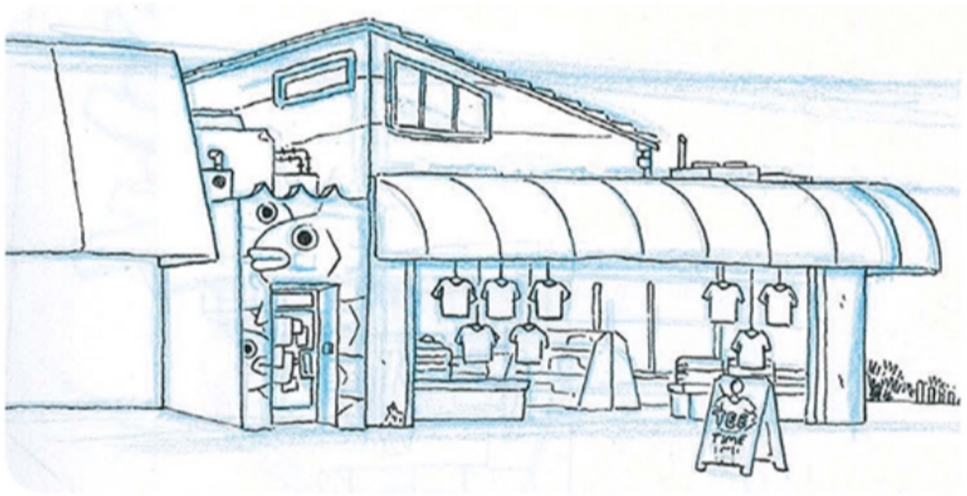
Ian: Danny has a special design sense. I met him on my first day at SVA, and we spent the next four years trying to form a unique visual language. We

(Continued on page 54)

Beach City Business Concepts



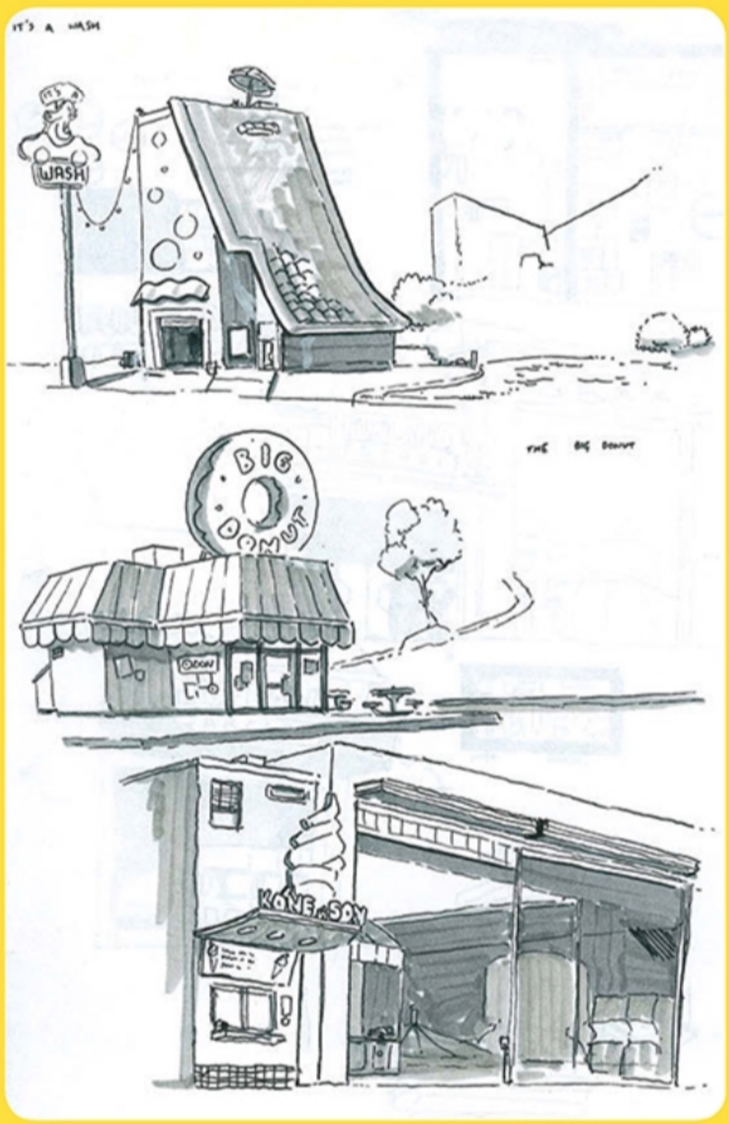


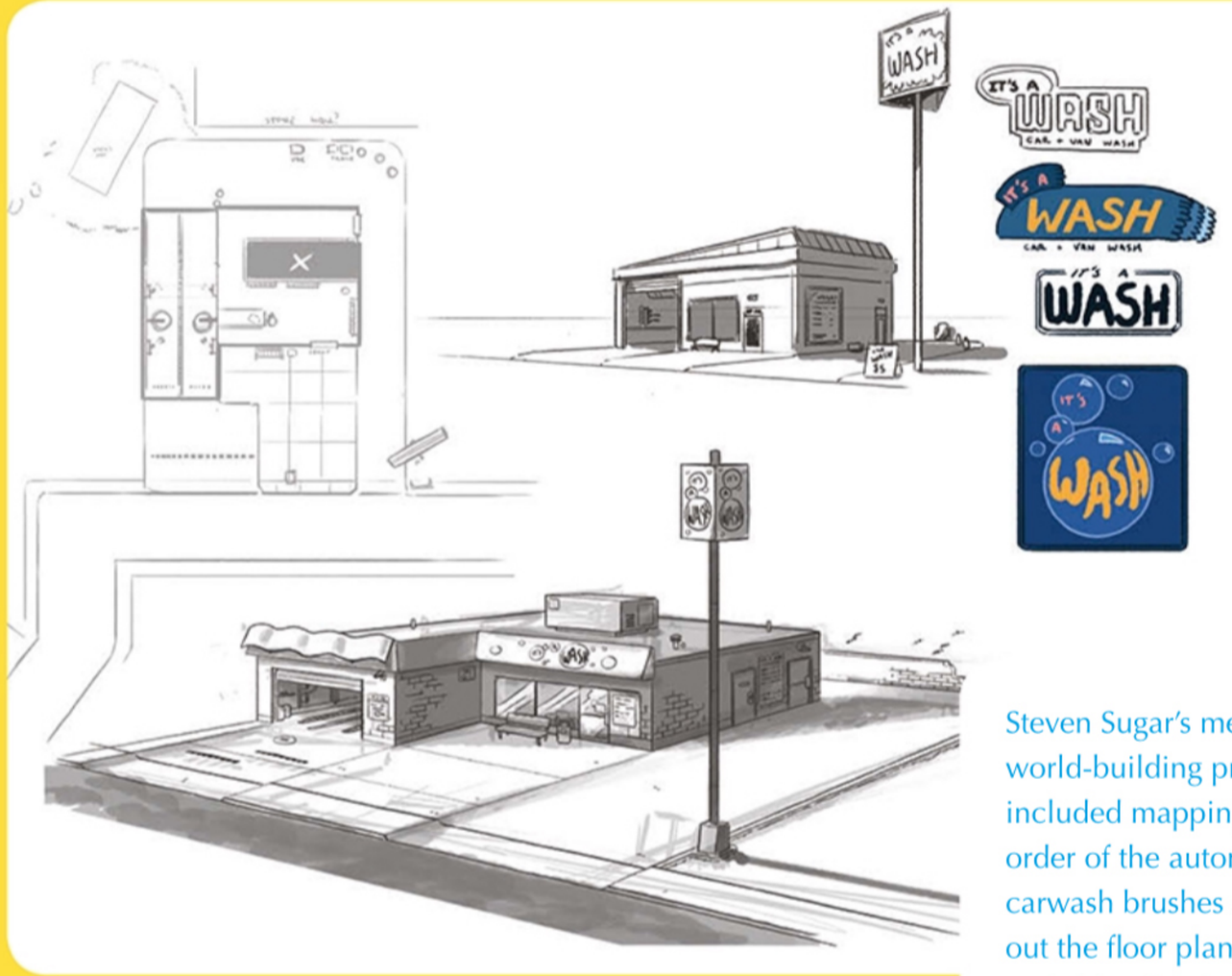


Steven Sugar's development drawings of proposed Beach City locations, including It's a Fold, Fish Stew Pizza, Big Donut, Beach Citywalk Fries, Kone 'n' Son, and Tee Time.









Steven Sugar's meticulous world-building process included mapping out the order of the automatic carwash brushes and laying out the floor plan of these early It's a Wash concepts.

Beach City Character Concepts

The design for the human population of Beach City, or "boardies," evolved during the early months of series development. **Left:** Character concepts by Danny Hynes. **Right:** Lineup of many familiar characters on their way to being figured out. By Rebecca Sugar and Danny Hynes. **Below:** Boardwalk regulars getting close to final designs, with color by Ian Jones-Quartey.






BEACH CITYWALK
FRIES

(Continued from page 49)

wanted all of the abstraction and flexibility of a cartoon, but with all of the dimensionality of a real object. We worked together professionally in New York for several years after leaving school, and Danny's sense of design got sharper and sharper over the years. He worked on my pilot, *Lakewood Plaza Turbo*, at right about the same time that *SU*'s pilot was going. When it came time to staff up for the *SU* show, he had exactly the right experience. In my mind, there was no question that Danny would be joining us.

Rebecca and Ian had recently moved to a home affectionately known as "the cabin." As artists were hired on to the show, many came to stay at the cabin while finding their own places and getting oriented to the LA area.

Ian: It's a creaky old wood cabin that was built in the 1910s. It's secluded, the view is inspiring, and it's the definition of "comfy." The cabin came with a fat orange Maine Coon cat that would just walk in the door and strut around like he owned the place. Rebecca nicknamed him Lion, and he moved in. At the time, Rebecca and I were really into the look of beach houses. It was something that we East Coasters were fascinated by because we had never lived in such a warm state. You can see this reflected in the show, with how detailed Steven's house is. The cabin was nowhere near the beach, but it's uphill from a busy highway, and with a little imagination, the distant cars and trucks sound like waves.

Rebecca and I saw the cabin as a potential halfway house for all of the artists who were moving out to work on the show. They would stay for a couple of weeks until they found a place and then move on. I remember Paul [Villeco], Danny, Raven [Molisee], and Lamar [Abrams] all had short stays, and we would invite the others over. It was kind of crazy sometimes, and we ate a lot of junk food. I also remember just sitting at the kitchen table with everyone. Rebecca would cook up a massive pot of spaghetti, and then we would sit around drawing and talking about cartoons. We were living *Steven* 24/7!

Jackie: That's the thing about the crew in general: I've worked on a lot of shows, and everyone on this crew just fit—right off the bat. Everyone was a sweet goofball.

The same spirit of excitement and collaboration lived at the studio during working hours.

Kat Morris [supervising director]: I loved how free-form those days were! I would spend some time boarding, then sit in with Matt and Ben and try to hammer out stories, then watch Steven play *The Legend of Zelda: Majora's Mask* over lunch, and just talk about what things could be.

Ben Levin [writer]: Oh, the days before everything got crazy busy, with Rebecca running from pitches to records to sound mixes to edit sessions. There was a time when we were able to watch anime during lunch! Those early days were great. We really had a few months there where we were able to just talk about the show all day and hash out what it was going to be.

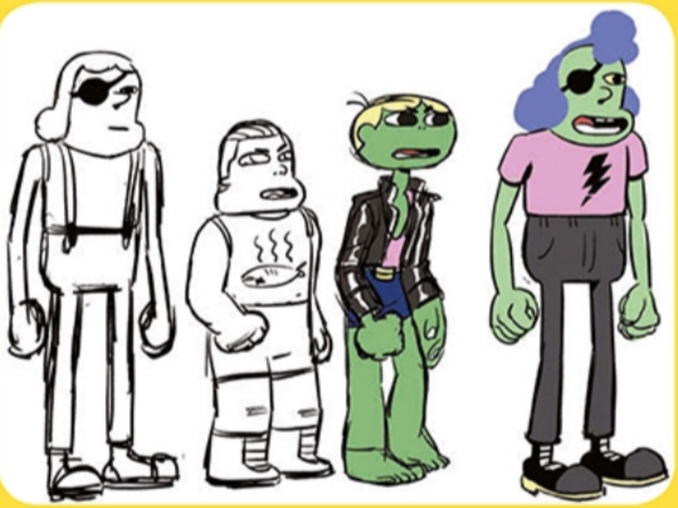
Ian: My favorite times were when we would just sit around and talk about story. I remember we spent a whole day trying to figure out the "Serious Steven" [S1E8] premise. We kept getting stuck on small details, like how the Temple in the episode worked. We would walk away and then get another great idea that wouldn't hold up logically. But then, suddenly, everything would click, and you got to watch a story come to life right before your eyes! I felt like a pioneer.

When a show's core concept revolves around aliens with fantastic designs and all sorts of corrupted Gem-shard monsters, the task of designing the cartoon humans of the world could seem daunting: What would be a design hook to make each character unique and interesting—not bland or generic? One creative way in which the Steven team avoided tired design was to look to food for inspiration. The design and characterization of Beach City





Opposite: Concept characters the Fishermanbros as inked by Danny Hynes based on Rebecca's sketches. **Opposite bottom:** A concept of "Janis" and "mailman" by Danny Hynes. **Below:** A lineup of four concepts for Sour Cream by Danny Hynes and some Sour Cream and Onion marker sketches by Rebecca.





residents such as Onion, Vidalia, Sour Cream, and the Fryman and Pizza families all evolved from food-centric brainstorming.

Ian: The Pizza twins were based on my cousins. The first was one who I had grown up with, who had a really fun and funny personality, quick with a joke or a smart comment.

Rebecca: The real Jenny.

Ian: Yeah, she became Jenny Pizza. I filled in the rest of the Pizzas with other characters from my family. I grew up as the "American son" in a huge Ghanaian family. That chemistry can make for funny situations, so why not include them? It was all very natural.

To get more unique and specific ideas for the backgrounds, Rebecca, Steven, and Ian took several trips to their favorite East Coast beach towns, including a trip to see what these places looked and felt like in the deserted, gray off-season of winter. Any real-life primary research could help.

Matt: Early on, we even kept a live webcam of the boardwalk in Ocean City, Maryland, up on the computer in the tiny room we were using as a writers' room.

Early concept development for some of the more fantastic Gem architecture was created by comics and entertainment concept artist Guy Davis, a childhood favorite of Rebecca and Steven's, whom they were honored to have on board.

Rebecca: We read a lot of Guy's comics growing up. We met up and we sat down one-on-one discussing the monster ideas. Then he came out to the cabin and we all went out on the deck and drew and jammed out on the Temple. A bunch of us were there . . . Ian, Steven, Ben and Matt, and [*Adventure Time* storyboard artist and character designer] Andy Ristaino. That was the day Guy came up with the idea that the Temple would have those dual faces.

Steven: We were brainstorming about what the show would be—various magical locations and just what the town would be like, who the boardies were going to be, that kind of stuff. For about three months, it was all just hypotheticals. Playing around with shops, designing the inside of the house, and making maps of the city.

As soon as production on the *Powerpuff* special wrapped, Kevin Dart was available to join the production team. Kevin took on the role of art director, a position that involves oversight on paint and color direction, as well as the type of shape language that is used throughout the show to create a cohesive look. His personal style still has a heavy influence on the show, even as four subsequent artists have filled the role of art director.

Steven: When we got Kevin Dart art directing, that took everything in a very different direction. Kevin is a genius; when I was a student, I had his work hanging up in my studio for inspiration, so it was amazing to get to work with him. He had all kinds of thoughts that were very far from the way I was thinking about stuff. That's one of my favorite things about working on the show. There are aspects to the shape language and aesthetics that I never would have come to without the ideas that Kevin, Elle, Jasmin, Amanda [Winterstein], and everyone else who has painted on the show have contributed.

Steven was methodically mapping out the city and continued to do so as the show unfolded.

Steven: I wanted Beach City to have a very specific layout so viewers can really think of it as a believable place that exists outside of what's seen on the show. The Gems' Temple and the water tower are generally used for orientation, and we try to be as consistent as possible with roads and shops and all that.

Rebecca: Preparing for our final art presentation was an interesting time, because with Guy Davis on board, and Danny and Steven, we were all

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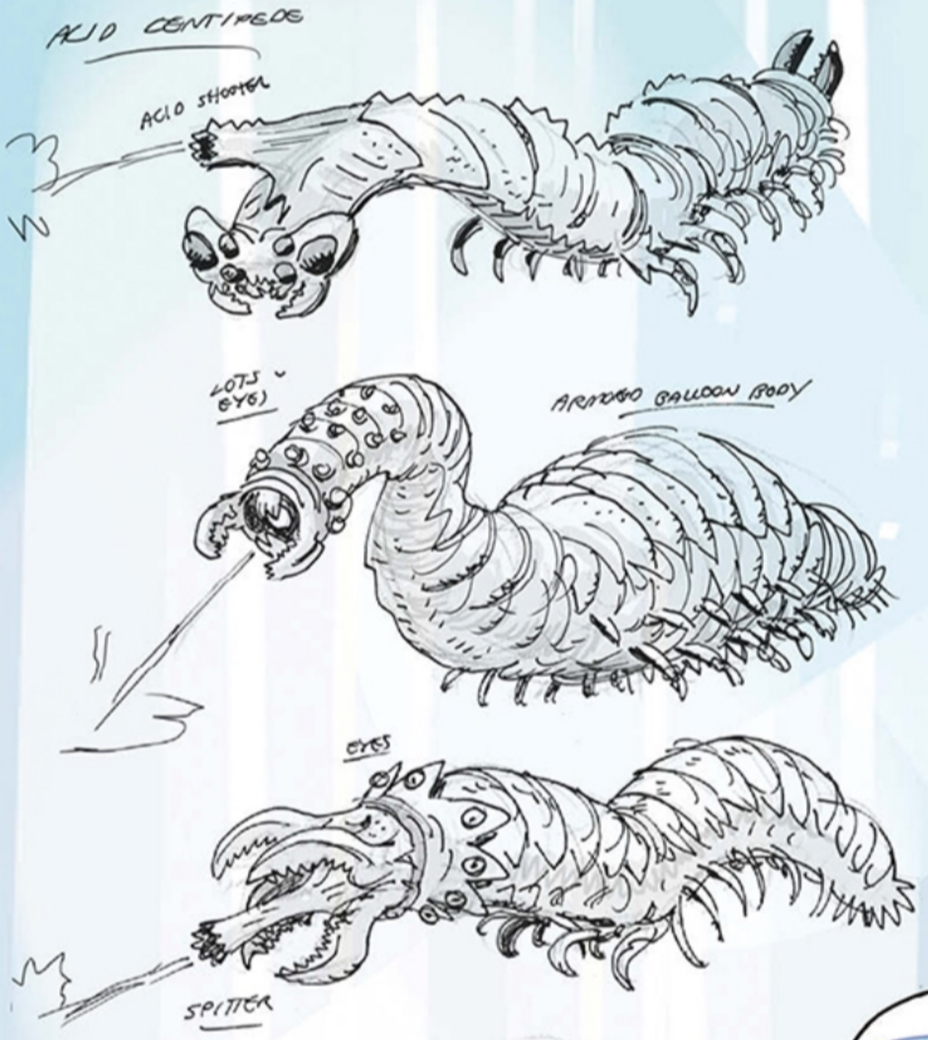
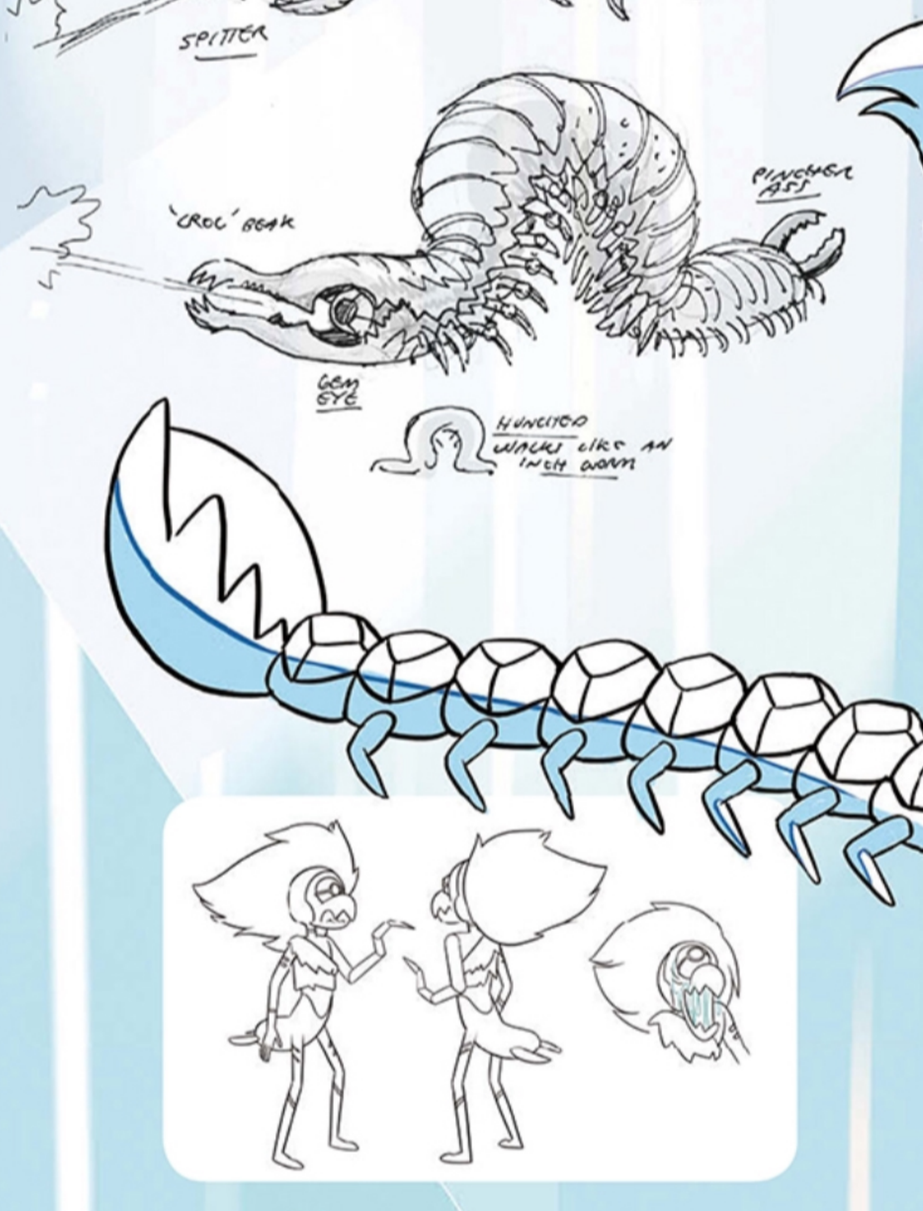
Creature Concepts









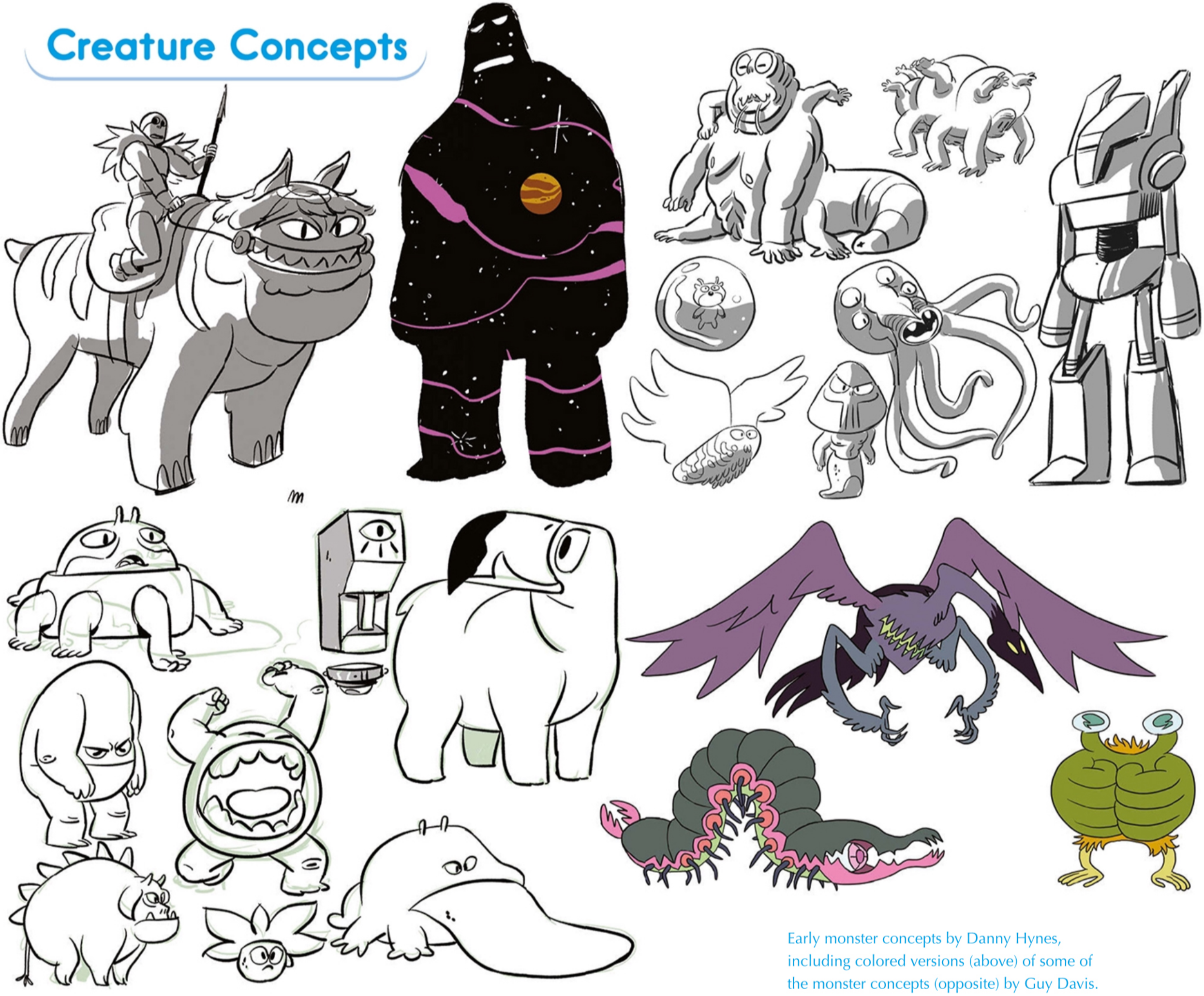




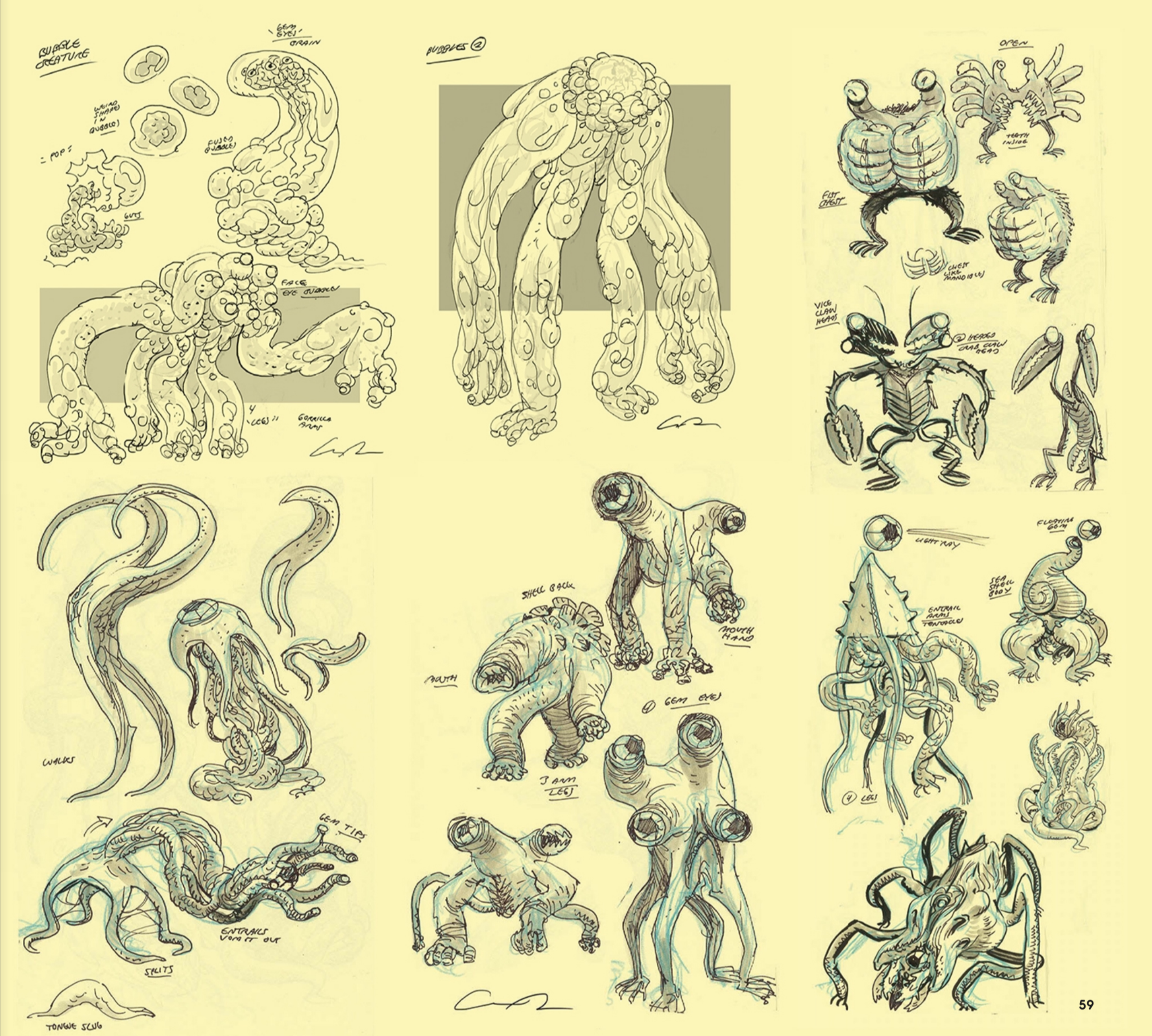


Opposite and top left: Concept art by Guy Davis and the Centipeetle monster designs it inspired. Model designs by Danny Hynes. **Bottom right:** Sketches of Centi by Rebecca. The half-mutant Gem's design was developed by Raven Molisee and Paul Villeco while boarding "Monster Reunion" (S3E14). **Top right:** Concept by Kevin Dart.

Creature Concepts



Early monster concepts by Danny Hynes, including colored versions (above) of some of the monster concepts (opposite) by Guy Davis.


BUBBLE CREATURE
GEM EYES
BRAIN
WEIRD SHAPES IN BUBBLES
POP
FUSED BUBBLES
GUTS
FACE
EYE BUBBLES
4 LEGS
GORRILLA ARMS
BUBBLES 2
OPEN
TEETH INSIDE
FIST CHEST
CHEST LIKE MANDIBLES
VICE CLAW HEADS
2 HEADED CRAB CLAW HEAD
WALKS
GEM TIPS
ENTRAILS VOMIT OUT
SPLITS
TONGUE SLUG
SHELL BACK
MOUTH
3 ARM LEGS
MOUTH HAND
4 GEM EYES
LIGHT RAY
FLOATING GEM
SEA SHELL BODY
ENTRAIL ARMS TENTACLES
4 LEGS

(Continued from page 55)





making very different artwork, which was exciting to me. I wanted to find something that could exist between all of this disparate art that could bridge it and be simpler but retain specific elements from each. We needed to create some proof of concept type artwork, some poster and key art that was the summation of development. The studio executives were not sure what the show was going to look like because they knew I was changing it from the pilot. I was determined to get everyone excited about a new aesthetic and I was working with Elle Michalka (who would later take over as art director) on a new direction for the BG paint. I wanted to make an action-comedy that was beautiful. Where the fact that it was pretty and glamorous and lush and gorgeous was something that would make it cool—and the more beautiful it was the cooler it was. When we did the final art presentation, we had these light-up stars, and stars incorporated into the logo. I loved stars as an icon for the show. They can look fun and poppy but also ancient and magical. They're a completely gender-neutral symbol of positivity. A gold star is the sticker you get when you've done a good job at school! I went overboard pitching the star imagery. It's positive! It's beautiful! It's patriotic! It's America! Everyone laughed at me at the presentation because I went so overboard. But I believe it. What a versatile symbol! It can mean almost anything and has meant everything. When we use it for Steven, it's cute. When we use it for the Crystal Gems, it's powerful, even violent. It's outer space. They're aliens. We're humans and we've been looking at stars for as long as we've existed. We've been drawing them forever. It's really interesting to me.

After the art presentation came initial board pitches for two new episodes, "Cheeseburger Backpack" (S1E3) and "Together Breakfast" (S1E4), as the shield board had been shelved. Rebecca's enthusiasm and the team's solid preparation sold it this time. The visual style and story of the characters had been clearly refined. *Steven Universe* was now officially in production. On a personal note, one last approval had also been secured.

Rebecca: All throughout development I kept asking Steven about the name. "You sure it's OK—you sure it's not weird?"

Steven: Yeah, I remember she asked a lot. Up until the moment when Rebecca finally said, "It's too late! It's too far along to change it now!" Yeah, I trusted her to not disgrace my name in a cartoon.

Above left: Rebecca, Ian, and Steven commemorate the first day of work on their new series. **Above:** A key illustration drawn by Ian Jones-Quartey that was part of the presentation that sold the show.



Right: One of the centerpiece images presented in the executive art meeting. Line art by Steven Sugar, painted by Elle Michalka. **Below:** Early Rebecca sketchbook drawings of the Temple.





Art Presentation

Months of development culminated in the final executive art presentation in which Rebecca and crew shared these refined images of Steven's world. On the strength of this meeting, the series was given a green light for an initial season. Collaborative drawings by Rebecca, Ian Jones-Quartey, Danny Hynes, Paul Villeco, and Steven Sugar. Painted by Elle Michalka.



Greg and Connie















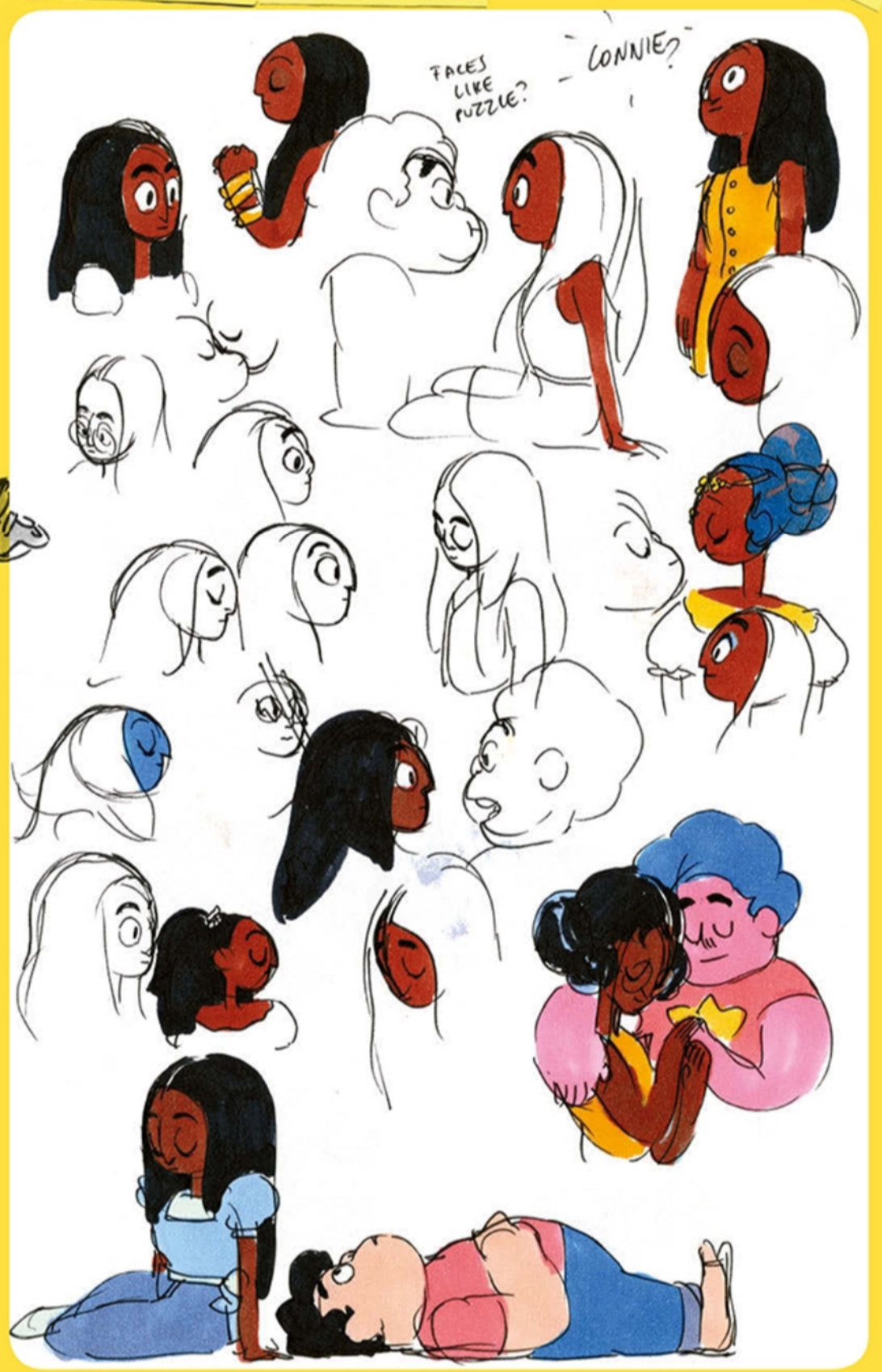




Greg drawings by Rebecca.



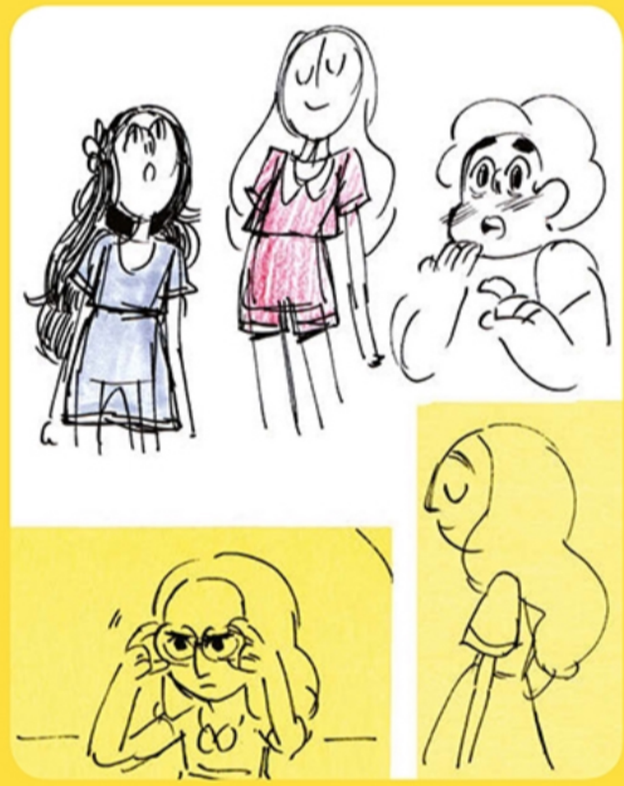




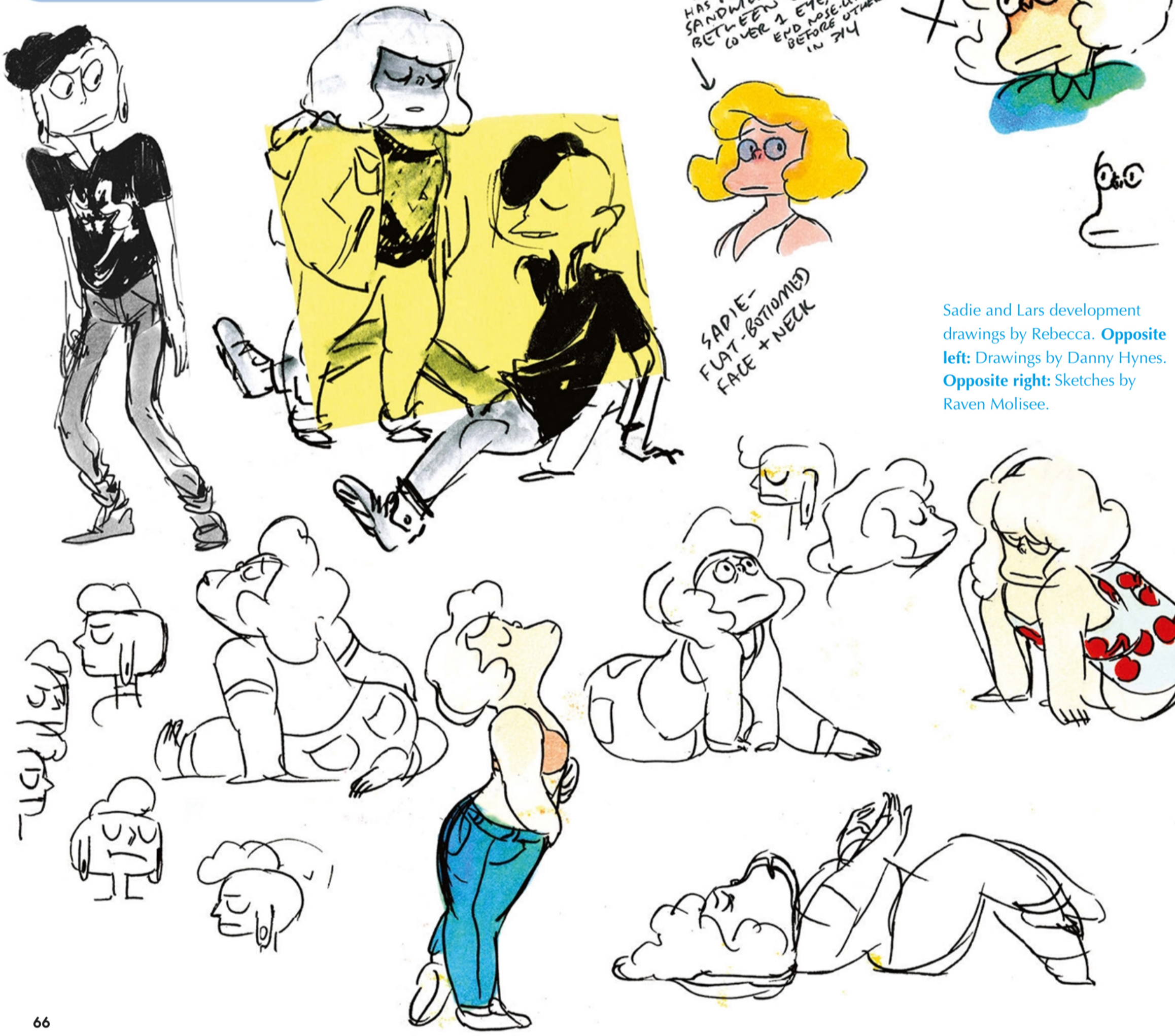


Top row, below, and far right: Connie drawings by Kat Morris. **Above and right:** Some of the earliest drawings of Connie by Rebecca.





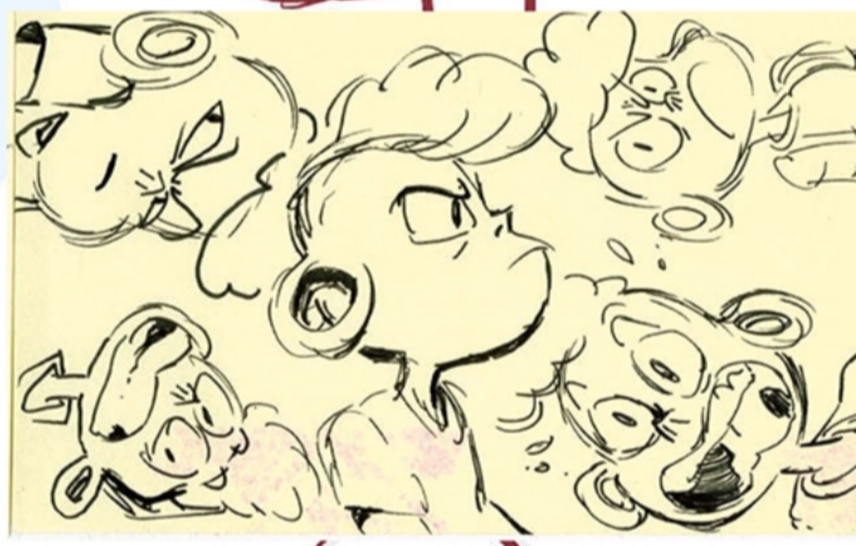
Sadie and Lars



Sadie and Lars development drawings by Rebecca. **Opposite left:** Drawings by Danny Hynes. **Opposite right:** Sketches by Raven Molisee.







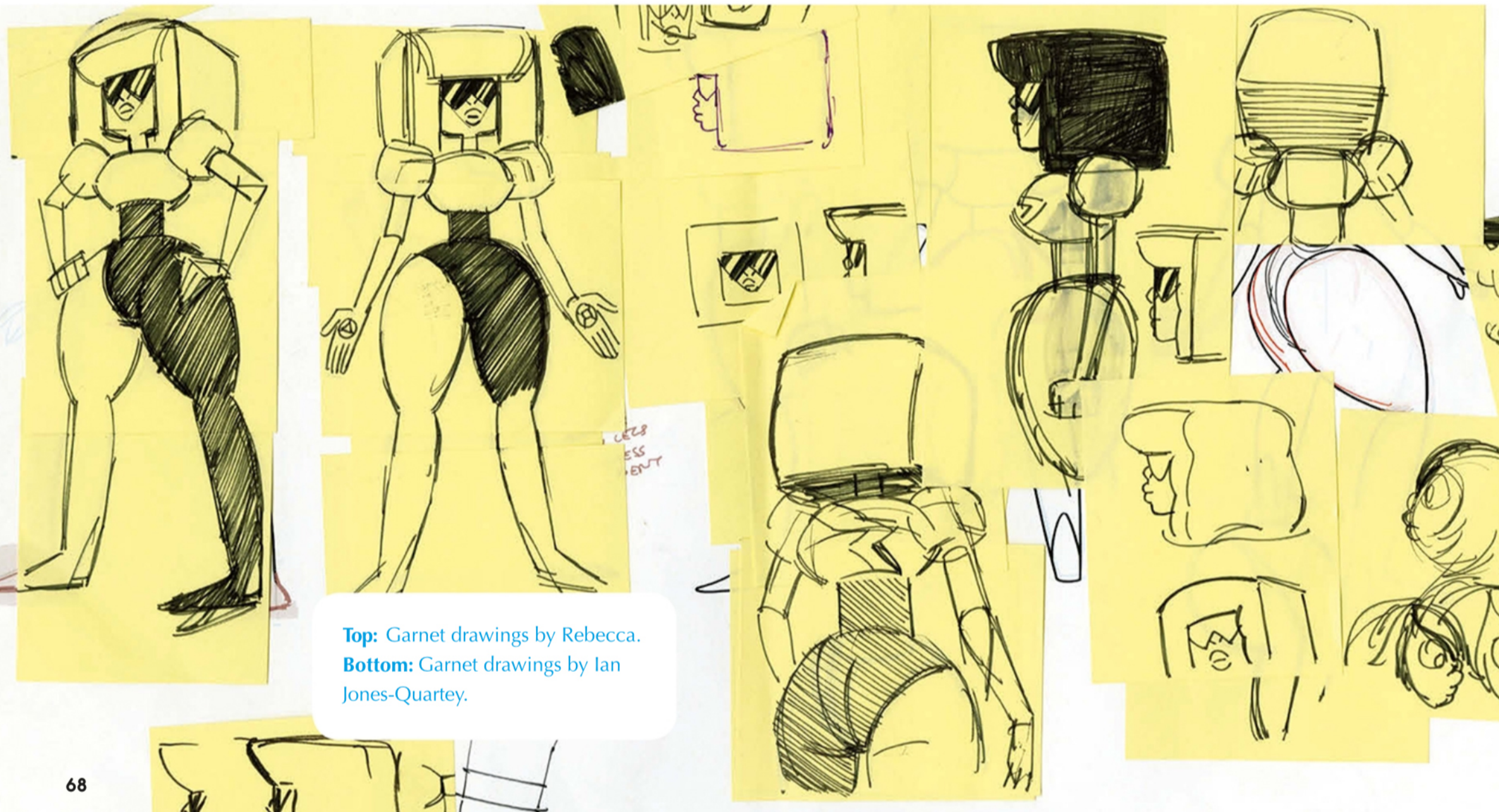




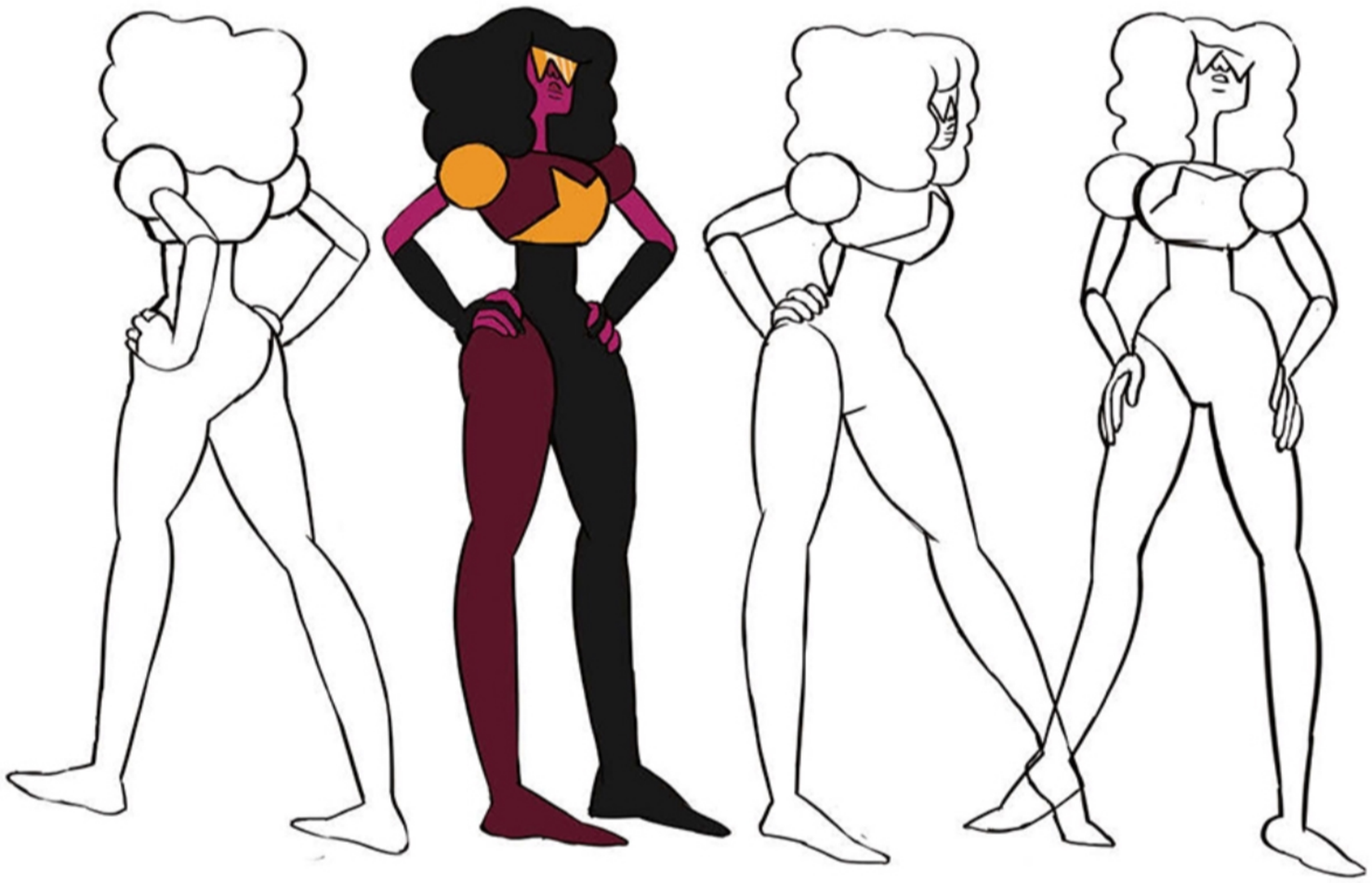


Garnet

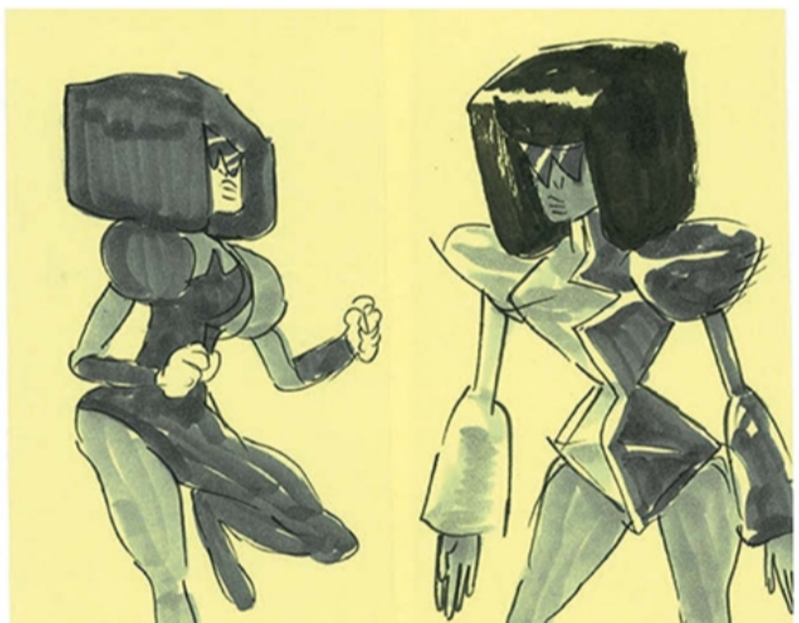




Top: Garnet drawings by Rebecca.
Bottom: Garnet drawings by Ian Jones-Quartey.

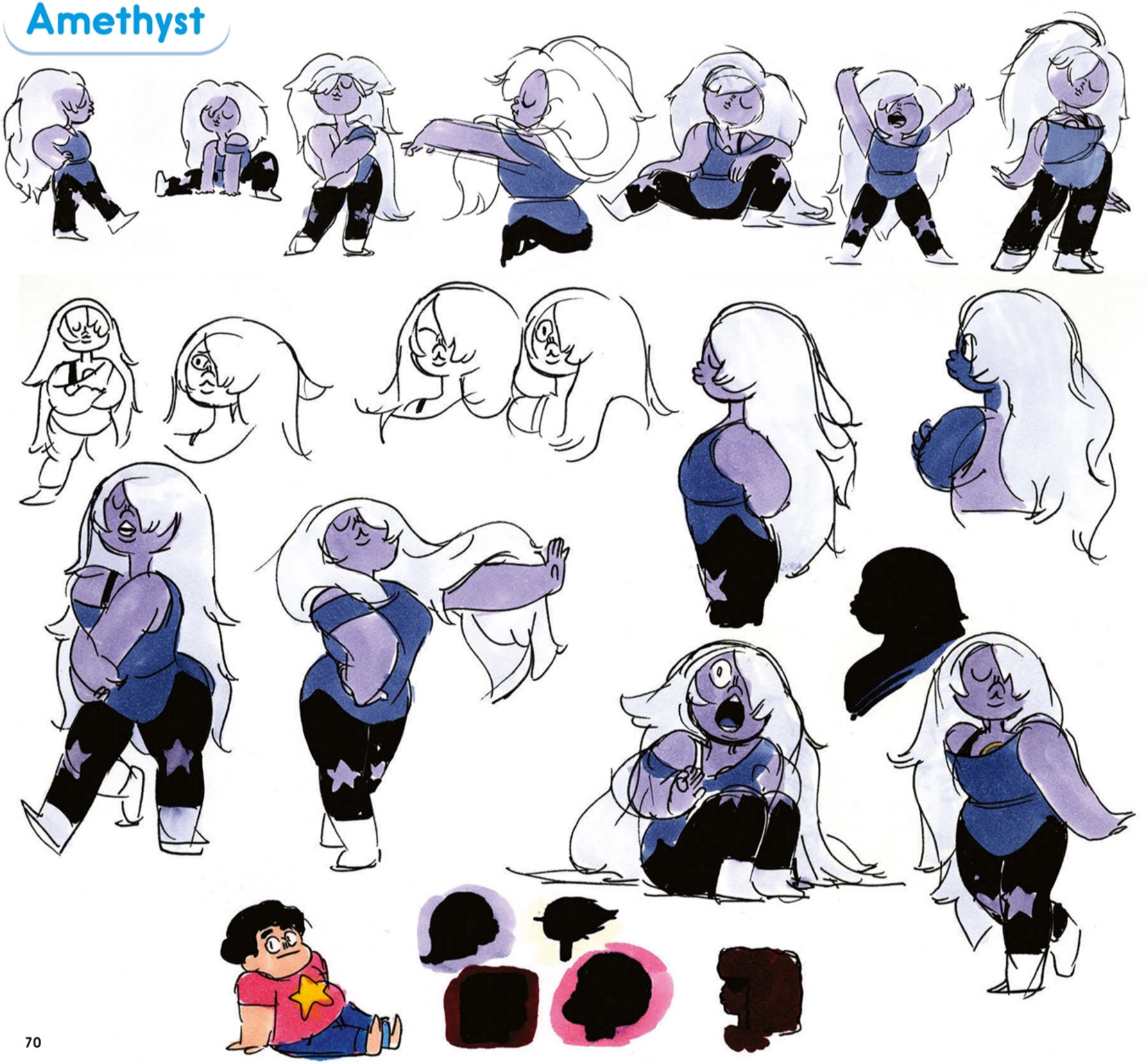






Far right: Garnet by Kevin Dart.
Right: Garnet by Colin Howard.
Above: Garnet by Rebecca.

Amethyst







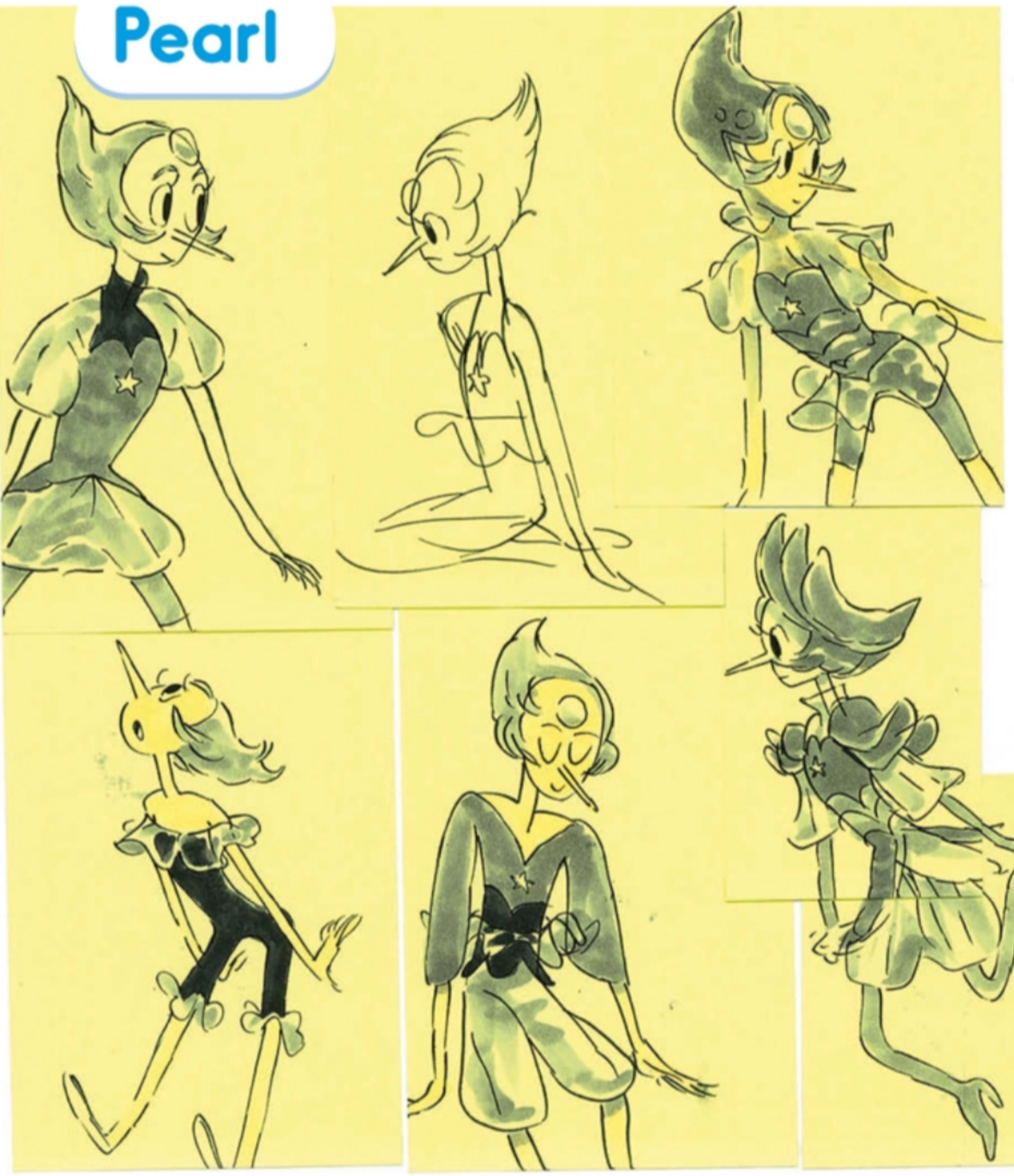


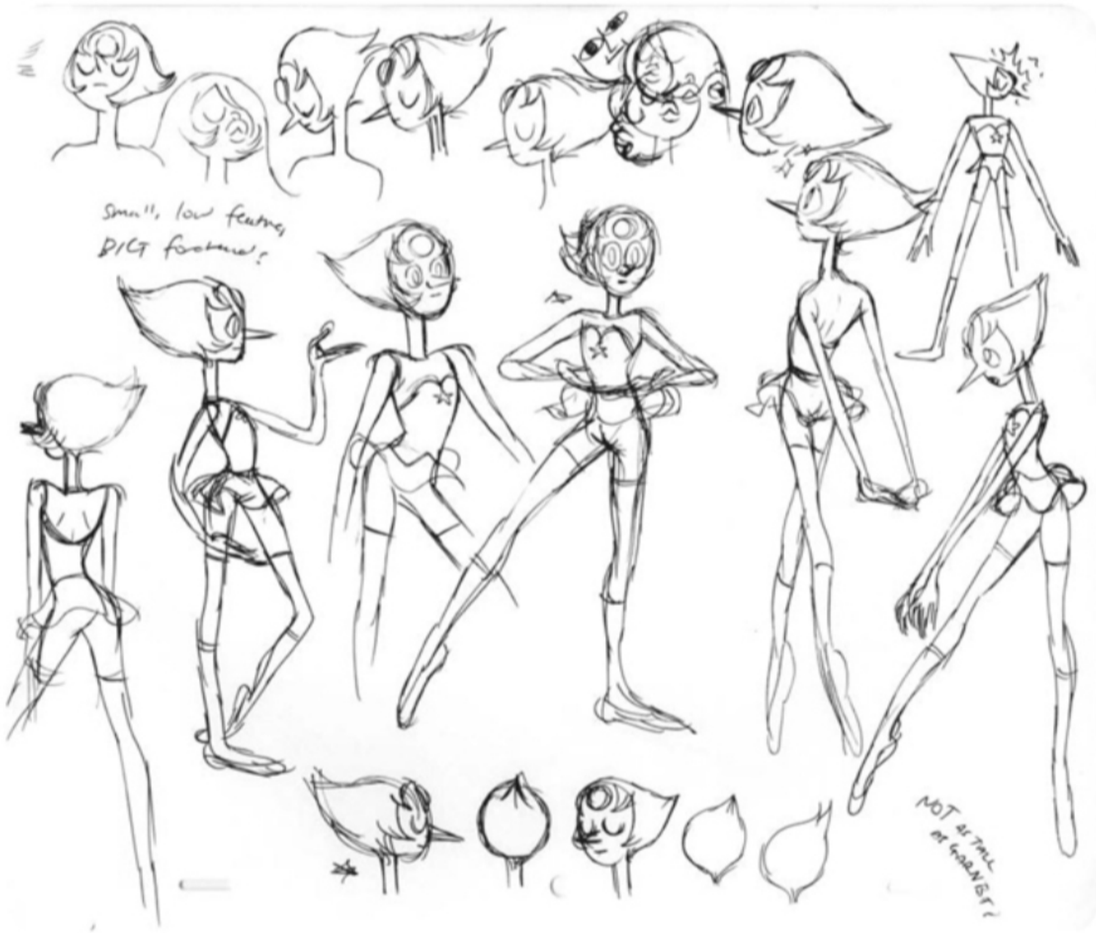


Opposite and below: Amethyst drawings by Rebecca. **Left:** Drawings by Colin Howard. **Above:** Board drawing by Joe Johnston from the episode "It Could've Been Great" (S2E24). **Above right:** Drawings by Danny Hynes.



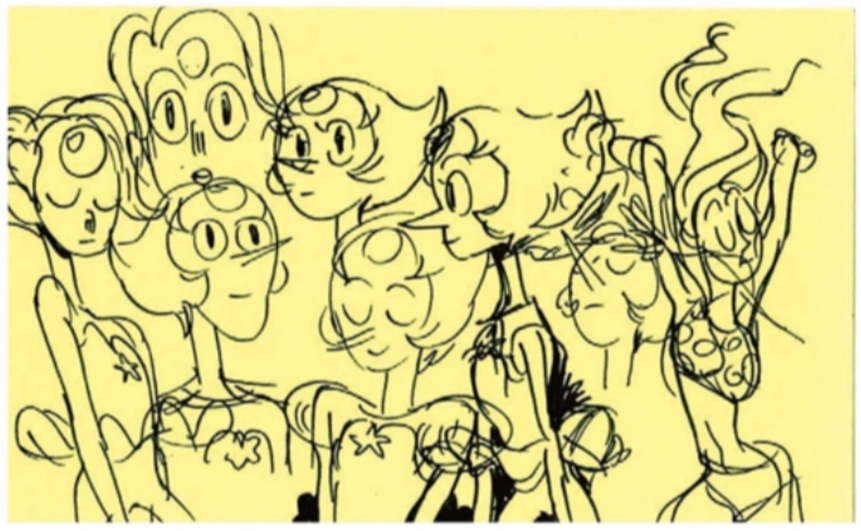
Pearl











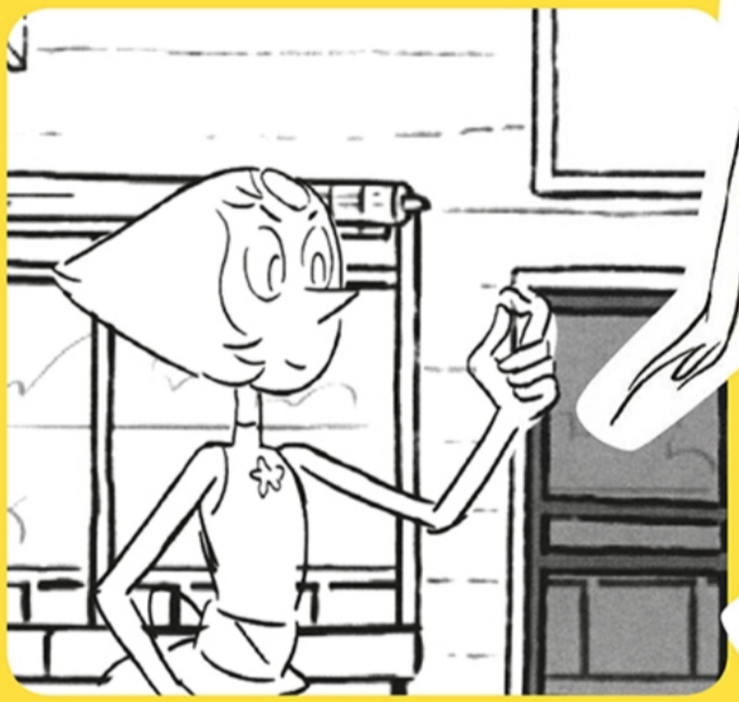








Opposite: Pearl drawings by Colin Howard. **Above and near right:** Sketches by Rebecca. **Top right:** Pre-model Pearl sketches by Raven Molisee. **Far right:** Pearl costume concepts by Kat Morris. **Below:** Storyboard drawing by Katie Mitroff.



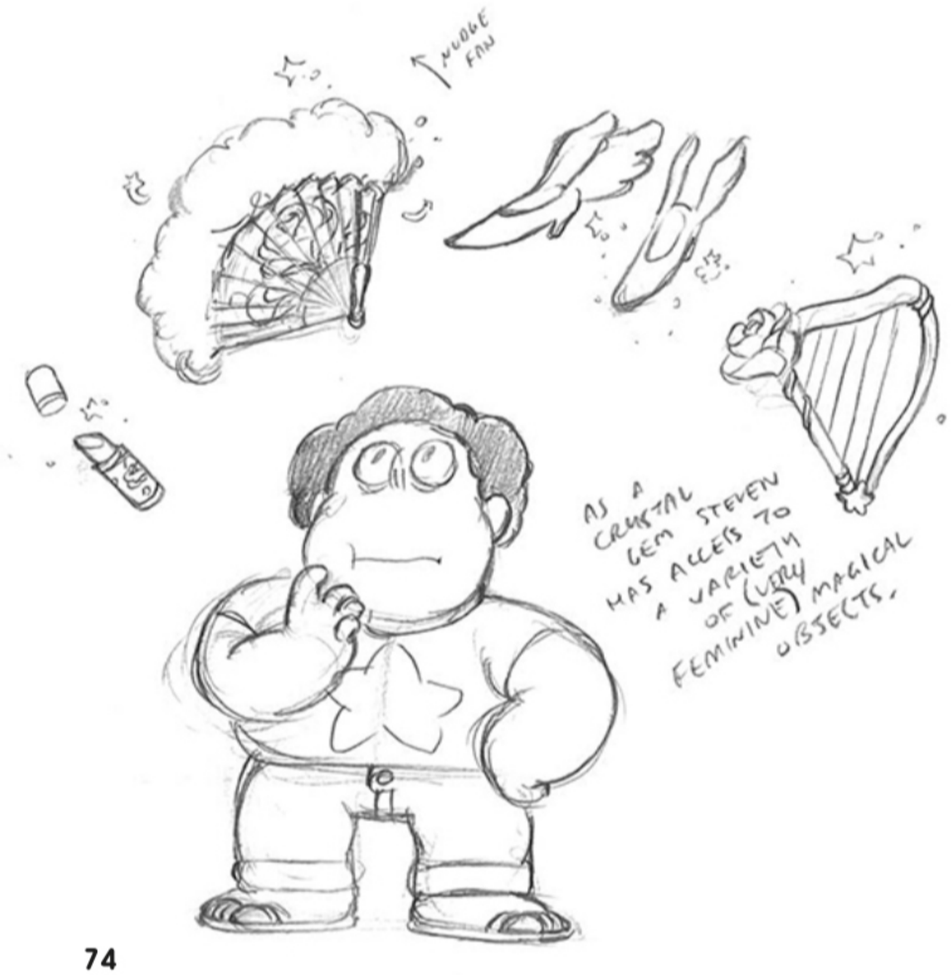


Steven

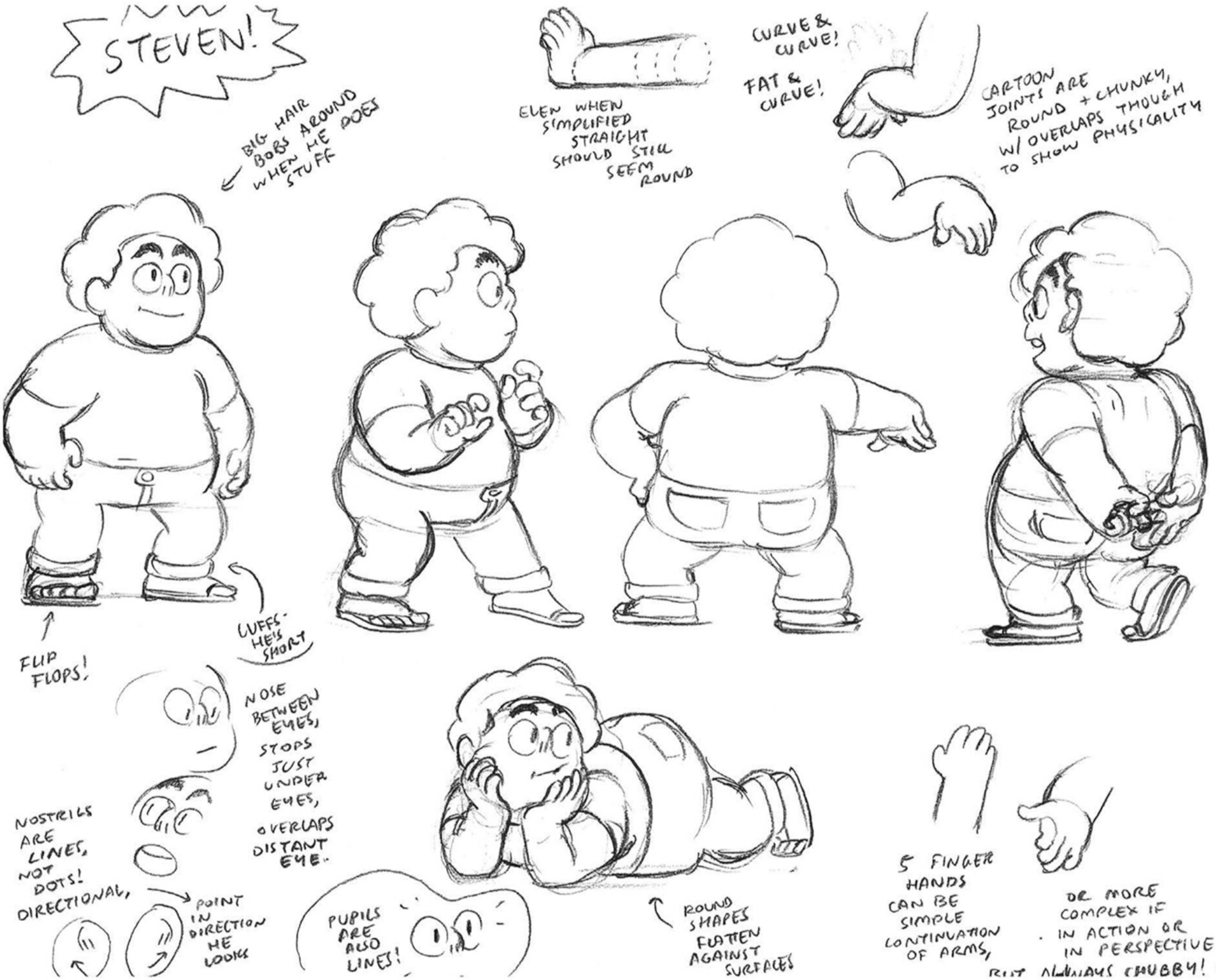


Steven development, design, and character theories drawn by Rebecca. **Above:** Drawing by Colin Howard.








STEVEN!
BIG HAIR BOBS AROUND WHEN HE DOES STUFF
ELEN WHEN SIMPLIFIED STRAIGHT SHOULD STILL SEEM ROUND
CURVE & CURVE!
FAT & CURVE!
CARTOON JOINTS ARE ROUND + CHUNKY, W/ OVERLAPS THOUGH TO SHOW PHYSICALITY
FLIP FLOPS!
CUFFS- HE'S SHORT
NOSE BETWEEN EYES, STOPS JUST UNDER EYES, OVERLAPS DISTANT EYE.
NOSTRILS ARE LINES, NOT DOTS! DIRECTIONAL,
POINT IN DIRECTION HE LOOKS
PUPILS ARE ALSO LINES!
ROUND SHAPES FLATTEN AGAINST SURFACES
5 FINGER HANDS CAN BE SIMPLE CONTINUATION OF ARMS,
OR MORE COMPLEX IF IN ACTION OR IN PERSPECTIVE
BUT ALWAYS CHUBBY!











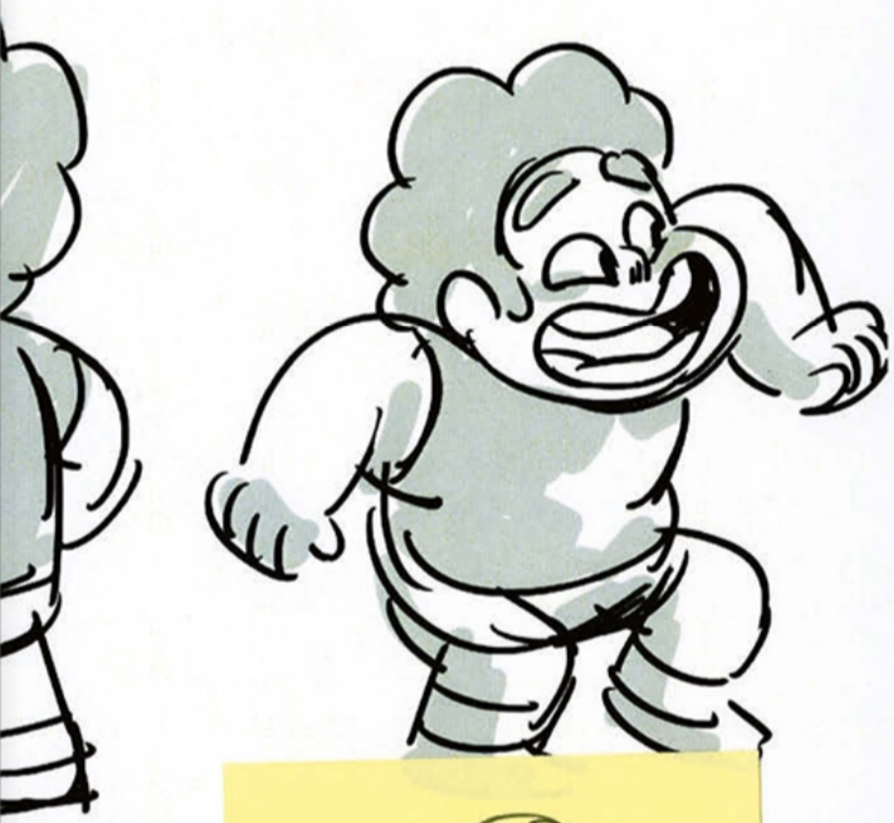






3: CHARACTER DESIGN

Left: Drawings by Danny Hynes.





Panic struck the conference room. Ian Jones-Quartey, lead character designer Danny Hynes, animation director Nick DeMayo, and several others were sitting around the table, working to break down a storyboard, when an incoming text buzzed Danny's phone.

Ian Jones-Quartey [former co-executive producer]: Danny's girlfriend—now wife—texted him with "I saw the *Steven Universe* pilot online. Is that supposed to be out?" We all fell out of our chairs! We had no idea this was going to happen! I ran out of the room to find Rebecca, and I think we both started hyperventilating! [*Laughs.*]

A unique situation developed in May 2013 when Cartoon Network uploaded the *Steven Universe* pilot short to the CN website and mobile platforms. Fans were quickly won. Online, people discussed the pilot with great anticipation for the series, eager to see an original show from Rebecca Sugar, whose work on *Adventure Time* they had loved. Cartoon Network knew that the pilot was an excellent way to generate hype in advance of the series debut in November 2013. But there was one problem: The series was going to be very different from the pilot. Led by Rebecca, the team had spent the preceding months refining the show's character and background designs to be sleeker, simplified forms with a different perspective from the pilot that early fans were now growing attached to. Now, deep into series production proper but before its grand debut, it was a jarring experience for the crew to see the pilot's proto-designs gone public.

Ian: On the bright side, we thought it was cool to see the positive reaction to the pilot, because we were really confident that the series was going to be one hundred times better.

However, when a poster featuring the new designs was released, there was a backlash.

Ian: Our then-tiny fan base was positively *outraged*! There were accusations that Rebecca was "selling out," rumors of Cartoon Network cutting the show's funding, that the show would look like early 2000s Flash animation, all kinds of stuff. People even tried to imply that the designs weren't actually Rebecca's work, and that Danny or I had purposefully "ruined" the designs. But from the inside, we had seen Rebecca fight so hard to get the show to this place, it was so surreal.

I don't consider the pilot designs to have been completely "done." I think they fit the world of the

(Continued on page 80)

Crew Zine





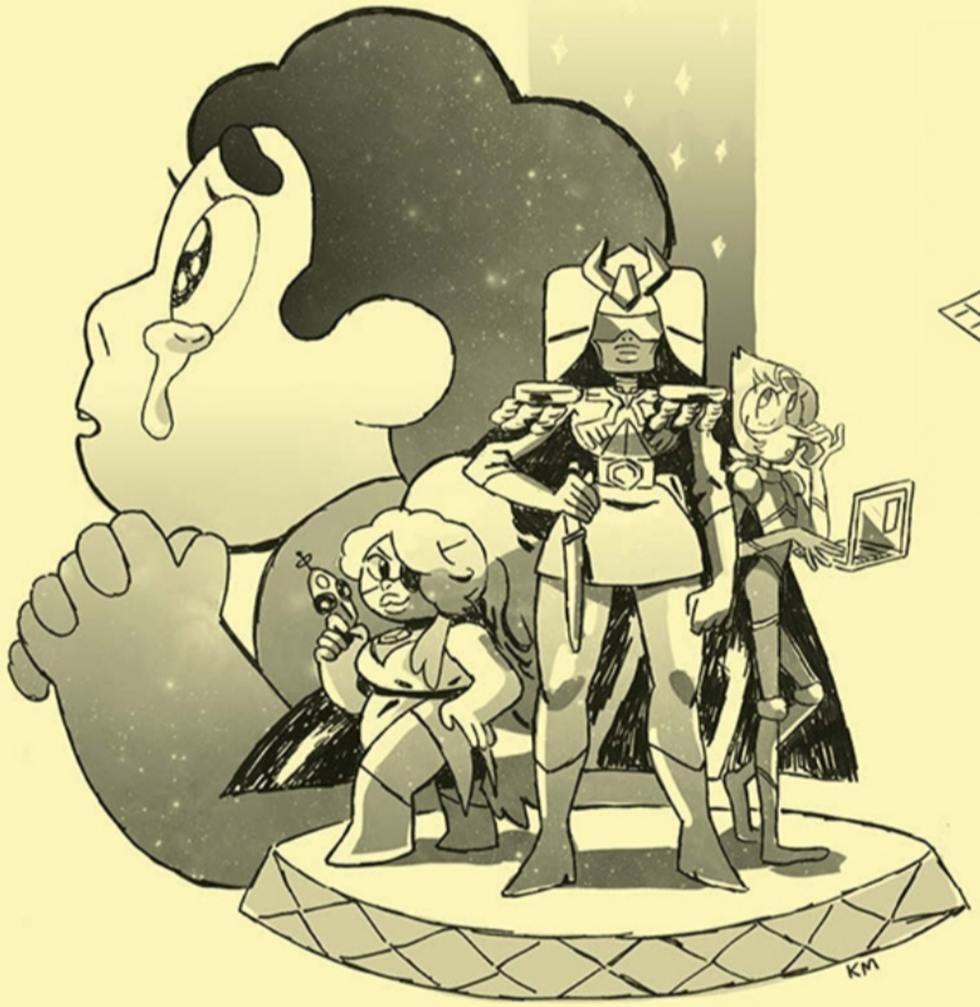




STEVEN UNIVERSE ZINE











The first *Steven Universe* zine is special to the crew because it was published before the show debuted, capturing an exciting and uncertain time. This unofficial, self-published labor of love includes these drawings and more. It was compiled and printed by Ian Jones-Quartey. **Opposite, clockwise from top left:** Colin Howard, Raven Molisee, Tiffany Ford, Ian Jones-Quartey, Rebecca Sugar. **Clockwise from top left:** Katie Mitroff, Matt Burnett, Steven Sugar, Ben Levin.

(Continued from page 77)

pilot quite well, but there are a lot of things about them that don't reflect the characters' personalities. There's a large amount of superfluous detail that gets in the way. A great design doesn't just look superficially "good"—it tells you something about the character at first glance. That's why Steven's and the Gems' show designs feel so elegant to me. They straddle the line so well; a drawing of Pearl can be beautiful or funny or both! I remember watching Rebecca figure out the designs, one by one, and being so blown away by the clever solutions she found.

Counter to the assumptions of some fans of the pilot, the new *Steven Universe* series look was the result of methodical design work instigated by Rebecca, not demanded by the network.

Rebecca Sugar [series creator]: I wanted the designs to have these visual benchmarks, especially for the people who were going to work on the show, so that even if they draw them differently, you'll still know it's that character. Like, if Pearl has her nose, it's Pearl. Her pointed-ness is part of her character: She has direction, she has an opinion, she has a point! I was trying to get them all to look like who they were, in a way that would then be flexible. It's not like if you draw her eyes a little too far apart or a little too close together it's not her; you still have these handles to grab on to where she'll always *be* her. Garnet will always be herself—she's a cube. Her mouth can go up or down, her glasses can bend like they're eyebrows, or they can stay still—the little things stop mattering because the big things are so decisive that you'll always know that it's them. I wanted you to be able to tell Kat's Garnet from Joe [Johnston]'s Garnet from Ian's Garnet—I really like Ian's Pearls. Sometimes they look like Brendon Small from the show *Home Movies* [*laughs*]. Every artist draws the characters differently.

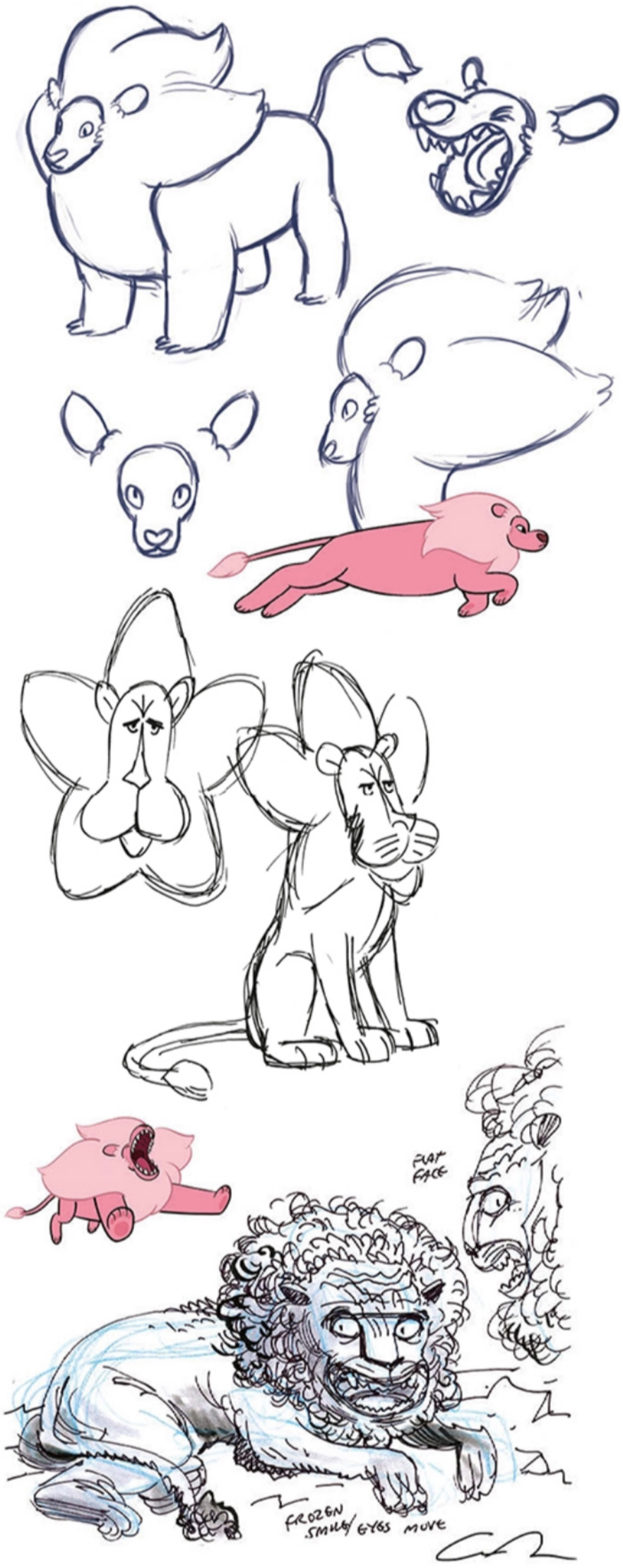
This design quest was informed by ideas Rebecca had encountered in college, where she'd studied Bauhaus, an iconic art school in Germany that operated from 1919 to 1933. It was there, beginning in 1922, that abstract painter and teacher Wassily Kandinsky began testing his theory with his colleagues and students that there are objectively harmonious pairings of the three primary colors (red, yellow, and blue) and three basic shapes (the square, the triangle, and the circle), and thus proof of a universal aesthetic.

Rebecca: I've learned a lot since the start of the show. But when I started it, I really believed that there was a right way—that there was an objectively good, "best way" of drawing. And there is this Bauhaus theory of design, which was a test: There's a cube, a cone, and a sphere. And you would have to know, intuitively, which one would be red, yellow, and blue. And the implication was that if you didn't have that intuition, then you were just truly not a designer. I learned it back in college, and I loved it—because I got it right [*laughs*]! The cone is yellow because it's sharp and directional, and the cube is red because it's strong and grounded, and the sphere is blue because it's fluid and loose. I loved this idea that there is just a "best way" of drawing, and that certain things just make more sense, and I was going to design these characters and they were all just going to make so much sense and be so correct. And so Garnet is a cube, Amethyst is a sphere, and Pearl is a cone because Garnet is solid, Pearl is pointed, and Amethyst is fluid.

Since then, I've realized that there is no objectively "best" drawing that exists. It isn't real. There are so many ways to do so many things. And so many of them are good. It's not a matter of figuring out the best way to draw that nobody's figured out, like we're going to crack some code—people have found so many solutions already on how to describe things that exist in the world. And you can find new solutions—there are infinite ways to draw something and so many of those ways will make sense and feel right.

Ian: Steven's design was like that. We went around the block. And then we were like, "How do we just make a cute little cartoon character?"

Rebecca: And then we arrived at a heart shape. So



Opposite top: Steven's Lion concept art by Aleth Romanillos. **Bottom:** Guy Davis Lion concept art.



it's cube, cone, sphere, and then Steven is a heart. That's how he got his big cute cheek.

Steven's magical lion sidekick, Lion, was also designed with a primary shape in mind. Early concepts designed by Rebecca, Guy Davis, Andy Ristaino (freelance character designer), and others played with a star-shaped mane. Aleth Romanillos, who subsequently became a character designer, was one of the storyboard artists assigned to Lion's premier episode, "Steven's Lion" (S1E10).

Aleth Romanillos [character designer]: Rebecca already had this idea that she wanted Lion's mane to be a star. In a design meeting, we were looking at some of her sketches, and someone called out the heart shape in the way she drew his head. That felt like it worked nicely in relation to Steven's design.

The refined design goals were also partly driven by a search for truly iconic designs.

Danny Hynes [lead character designer]: By the time I got here to work, there were multiple storyboards, and the characters had all been drawn in different iterations by lots of different people. And they're all kind of correct. But there wasn't any one, solid standard. So that was my first big challenge: making that standard. And that's driven a lot of the rules that we use here. The idea is that we want to make character-design icons. Like a Mickey Mouse. Mickey's head is just three circles, and a mask, and the eyes and the nose—and if you have those pieces, it doesn't really matter how you draw them; you can draw it like a hot-rod rat, and it's always going to be Mickey Mouse. We're always trying to boil the character designs down to that—those simplest elements—so that it almost feels more like editing than drawing, sometimes. A lot of care will go into, say, deciding how much detail is on a character's jeans. But all of that is with the aim of creating icons. Steven is just this head with a cheek, and these big saucer eyes, and the five lumps. And once you get that, you've basically got him.

Aleth: The importance of communication through design is the biggest takeaway I've learned from Danny. I try not to get so wrapped up in overdesigning. Most of the time, the character is pretty much there in the board, but I am also trying to keep only the ideas that are important to the character. I find that I spend the most time redoing the curve of one line because I'm constantly thinking, "Is this communicating the feeling of this character or just overcomplicating it?"

Danny: I think that if you have correctly edited down your designs to a place where the only lines you're using are lines that communicate something that you need communicated, then it helps the story. Because there's no extra thing. Ideally, there's nothing to distract you, unless it's going to tell you something. Obviously, on a show that's made for television, where we have only two weeks to design for each episode, that's not always possible. But that's always what we aim for.

Rather than employ a stylized, "flat" cartoon style—one that would resist rotation in space—Steven Universe's designers work to create characters with realistic, solid-seeming volume and depth to them.

Danny: It's the gold standard for us. We wanted to create something that was going to feel like a classic cartoon, like forties Walt Disney, or Osamu Tezuka, or Akira Toriyama, or Harvey Kurtzman.

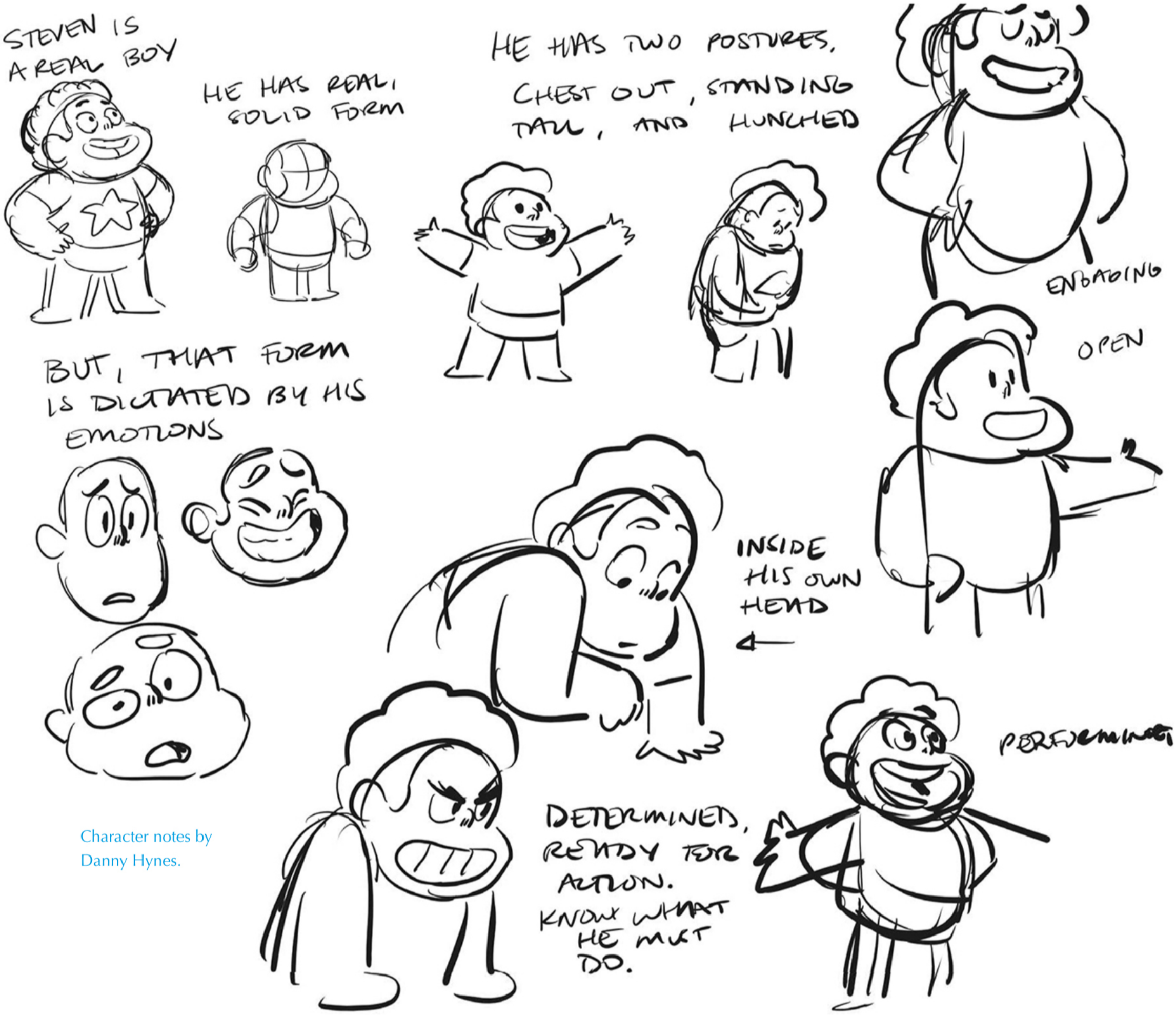
Ian: We had the lofty goal of doing Disney, seventies anime, and Hanna-Barbera—all in the same art style—and Danny knew just how to push for that.

Rebecca: The point of the simpler models is that they allow for flexibility and inconsistency, which is what we want. We want the artists to be able to push the characters in different directions freely without being distracted by tracking the superfluous details of an over-complex design.

Key to codifying the appearance of each character

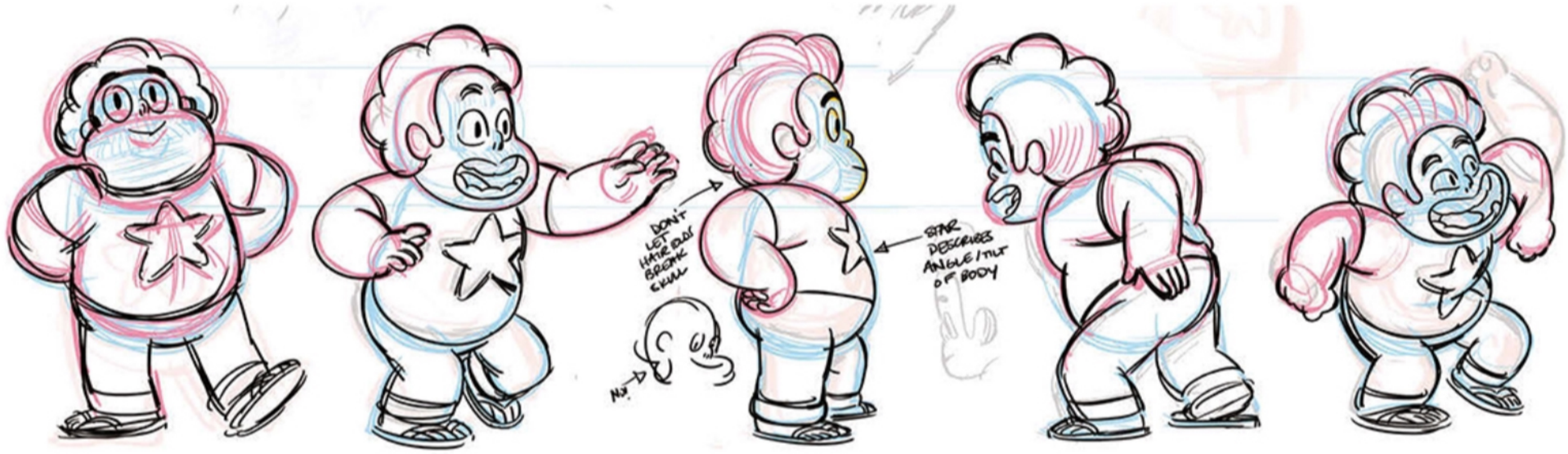
(Continued on page 84)

Design Evolution

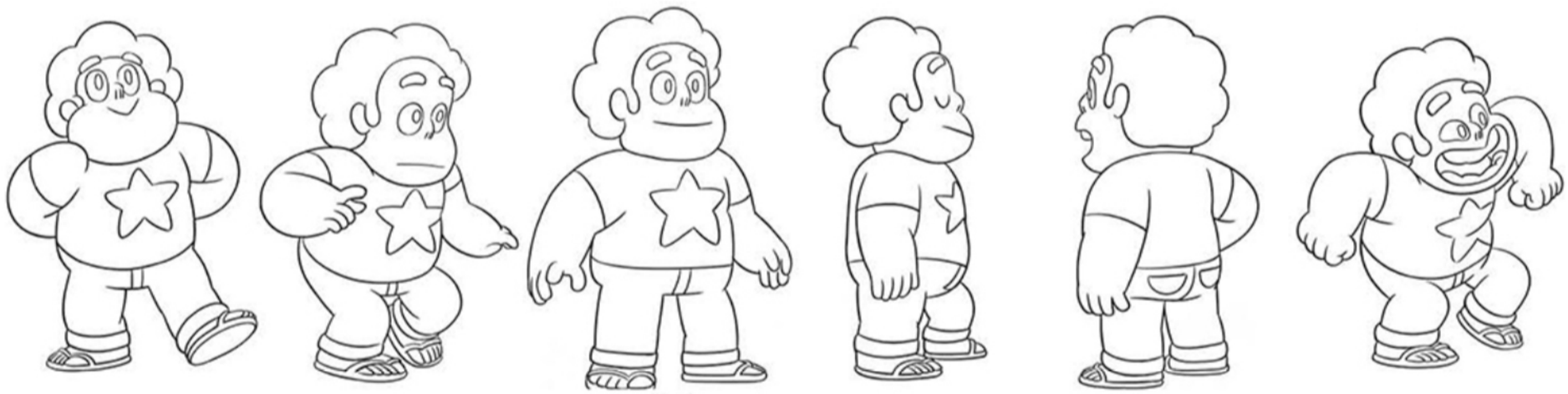


Character notes by Danny Hynes.

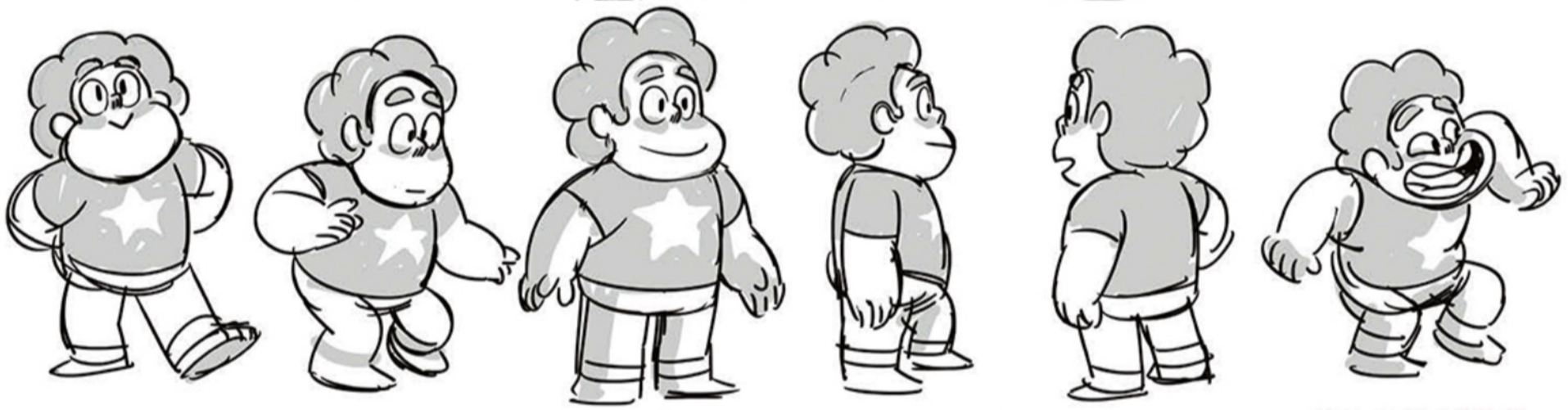
The underdrawing reveals the attempt to build Steven from dimensional shapes.



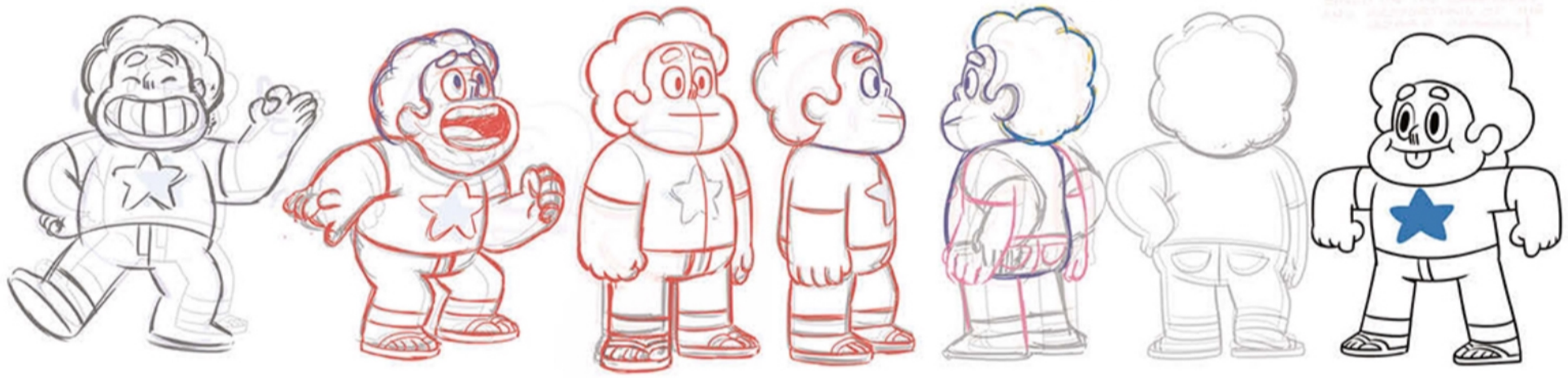
A clean-up pass produces a workable turnaround model.



A looser draw-over adjusts features and reclaims some energy and attitude that the previous pass had lost.



Later, a newer model sheet for Steven is developed, continuing to push the designs to simpler, refined forms.



(Continued from page 81)

are model sheets. Model sheets are created by the character-design team and sent to the overseas animation studio to use as reference. These models generally show characters in neutral poses from several rotated angles that provide an overall look at the designs. The terms "on-model" and "off-model" describe a drawing's accuracy compared to these visual guides. *Steven Universe* follows in the footsteps of classic theatrical shorts (especially from Fleischer, Terrytoons, and Warner Bros), by allowing each storyboard artist the flexibility to push individual takes on the characters to wild or personal extremes, rather than requiring that all drawings should remain strictly "on-model."

Ian: In fact, Danny's insistence that he create pose sheets is a specific thing that ties back to classic Warner Bros or Disney cartoons, where the model sheets were made up of a variety of active poses that you might find the characters in, as opposed to a robotic turnaround.

Rebecca: Our pose sheets tend to include a drawing to show how far away the character can be pushed. The Steven model sheet is a perfect example of this. There's all these Stevens in a row and then there's one Steven on the end, an Ian drawing of Steven that looks nothing like the rest of them. But it's still him. He's shorter, his proportions are different, his face is different, but that's not a mistake. That's the range.

Danny: We give the animation production studios explicit instructions to never just take the model and draw new expressions on it. The models are built to be worked with and moved around.

Beyond character-design model sheets, props and special effects need to be designed for the animation production studio's reference.

Angie Wang [prop designer]: The prop designer draws everything that the characters pick up or hold or move, like jars of mayo or cars or board games, or things like smoke or explosions or butterfly light effects. My job is pretty simple: I come into work, I look at what needs to be designed (say: a wrench, a gurney, a duffel bag, a sandwich, and some stars), and I draw the line art for them in the show style.

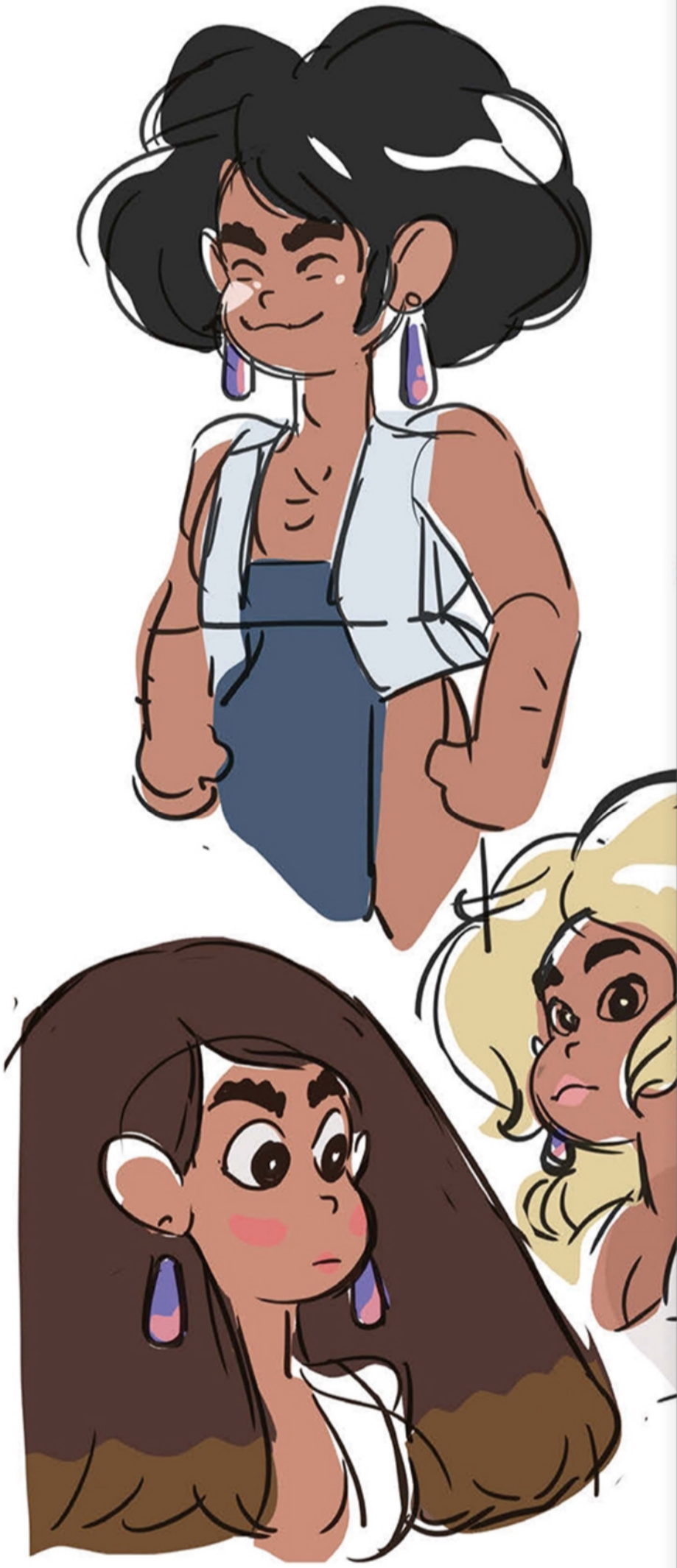
For prop design, Rebecca had told me that she was looking for specificity. That is, she would prefer Apple Sidra brand soda rather than a generic brand, or a real wrench rather than a cartoon wrench. Utz, not just cheese balls. A 1988 Volvo, not a cartoon car. I pull a lot of props from my own personal memories—and so do the storyboarders—and I like to think it makes the world of *Steven Universe* more solid and real.

A background with solid academic art skills, as well as an open mind and a collaborative nature, is an asset in this position.

Angie: You have to be able to hold an object inside your mind and look at it from every angle. You'd probably benefit from some technical-drawing skills if you want to do this job, as well as concept-art skills—like, for video games and such. My job is pretty much just technical drawing with imagination and heart.

It helps being without ego, but also having the willingness to take initiative to come up with a cool idea. By "being without ego," I mean that you have to be willing to do revisions and understand that you don't necessarily have the whole picture—that there are things the lead designer and/or art director and/or Rebecca might be seeing in your work that you're not. Sometimes, when I go back and look at my first-season, first-draft designs, I see how "off" they were in ways that I wasn't aware of back then—but that our lead designer, Danny, could see. But you also have to take initiative if you have a great idea. Often, something's in the storyboard, and I go, "Hmm, I want to punch this up," or I have an idea that could enrich the show's environment, and often, Rebecca and Danny are thrilled with the results. Take initiative, but be flexible.

After the props and effects are designed, colorists add show-appropriate color layers to the files, and



ZUMANS

Rebecca's concept drawings of the zumans kept in the human zoo. **Right:** Pearl concept by Kevin Dart.



the model packs are ready to go. Soon, animators on the other side of the globe will breathe life into these saucer-eyed, two-dimensional beings. Their faces, intentionally designed to be iconic, will carry emotion and humor directly to the brains of millions of viewers, as a cartoon is an ideal vector for transmitting ideas. Cartoons' abstraction of reality allows viewers to empathize with characters, or even in some ways to *become* them—the simple, idealized features reflecting the self on an unconscious, universal level.

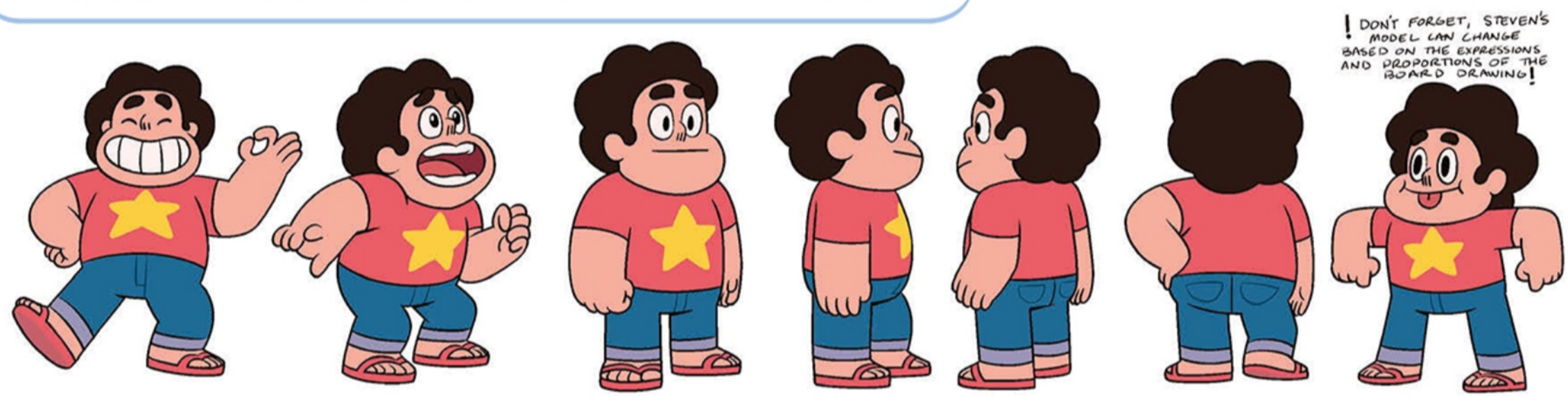
Lamar Abrams [storyboard artist]: People let their guard down when they watch cartoons. Some people come at them thinking, "This'll just be fun and entertaining . . . nothing heavy will happen!" So maybe they're put in a place to be a bit more receptive to what goes on on-screen. If a cartoon can challenge your perceptions or the way you think about anything, then that's a good cartoon.

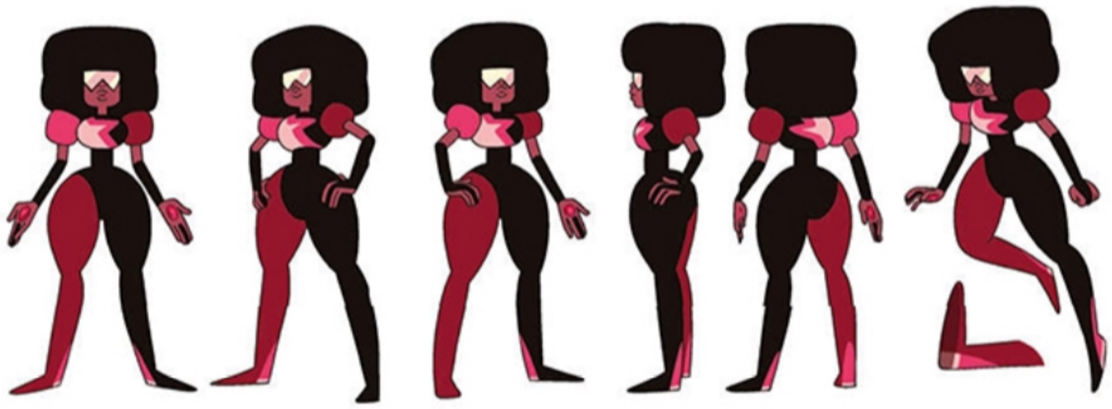
Matt Burnett [writer]: Cartoons are a couple of steps removed from the real world, both in terms of the visuals and the worlds they are usually set in, so they let you talk about some very real things in a way that takes you out of preachy, lecturing territory and into pop entertainment. A police officer in your classroom showing you a briefcase of drugs and telling you not to take them or you'll die? That's super weird and scary, and there is no way I took away the right message from that. A cavalcade of my favorite cartoon characters teaching a cartoon kid that drugs are bad? Still super weird, but in a way where I'd sit and watch and actually pay attention.

Jeff Liu [storyboard artist]: Cartoons are fun to watch because they get viewers to engage with their imaginations. I think it also requires an open mind to empathize with a character that's, visually, just an illusion. If a cartoon can excite viewers' imaginations while encouraging them to understand fictional characters' struggles, hopefully there may be something helpful for the audience to take into their lives. Cartoons can make sensitivity fun!



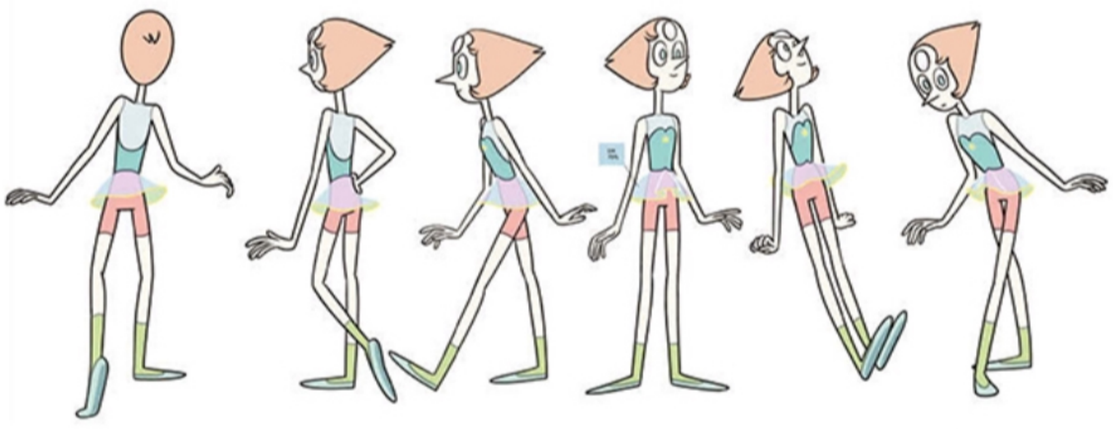
Main, Palette, and Distance Models











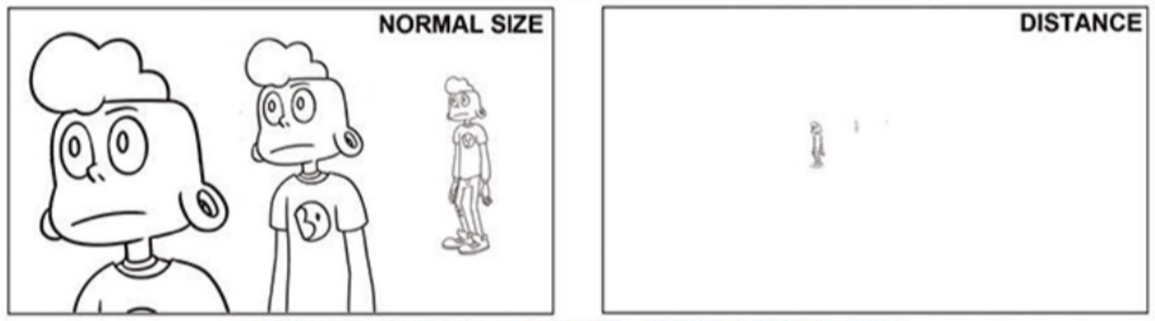


Above: Main models show the basic design for each character from all sides so the animation production team can reference them while drawing. Notably, these guides are flexible (see top right image).
Right: Color stylists design palette models that show colors to be used for different scenes, such as these Connie models for sunset and night.



DISTANCE CHARACTER GUIDELINES

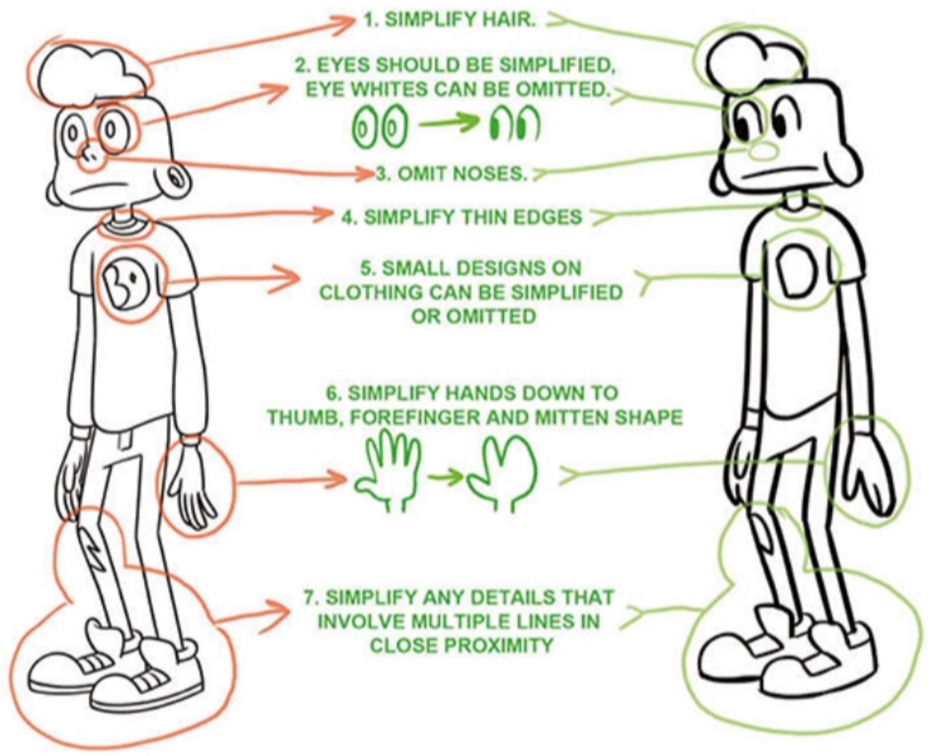
when a character is drawn at 1/5th the height of the screen or smaller, details of their character models should be dropped so there are less lines and details drawn at a smaller size:



EXAMPLES FOR SIZING ONLY - INK LINE NOT FINAL
only refer to inking guide for ink line reference

DETAIL DRAWING GUIDE:

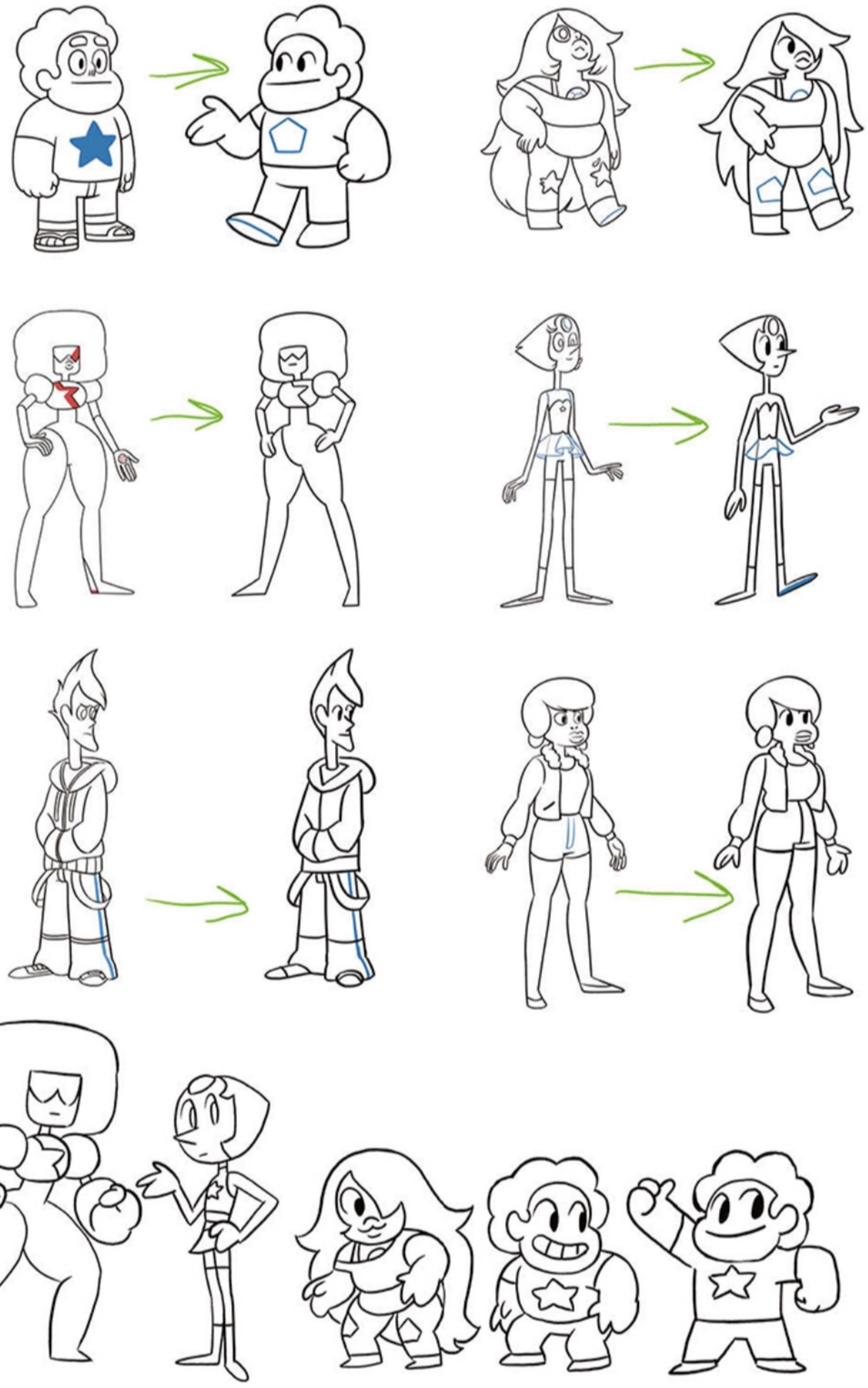
MAINTAIN COLOR AND PROPORTION WHEN DRAWING CHARACTERS IN DISTANCE!



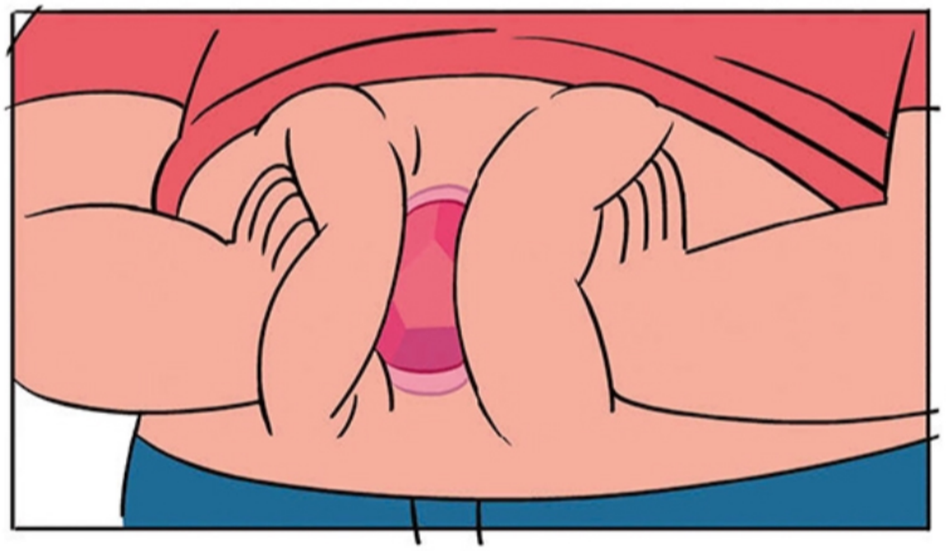
Above: These distance character guidelines illustrate simpler low-detail versions of characters for use when characters are composed very small in a scene to create the sense that they are far away. Drawn by Ian Jones-Quartey. **Right:** Similar principles were used when designing the main characters for use in the video game *Steven Universe: Attack the Light!* In this case, the simplification was both functional, as video game characters tend to be presented full body and small relative to the screen, as well as a stylistic reference to classic video-game character design, which required simplicity to be readable when broken down into 8-bit or 16-bit graphics. Designed by Ian Jones-Quartey.

DISTANCE CHARACTER EXAMPLES:

(not final line- follow for drawing style only)



Special Pose Models





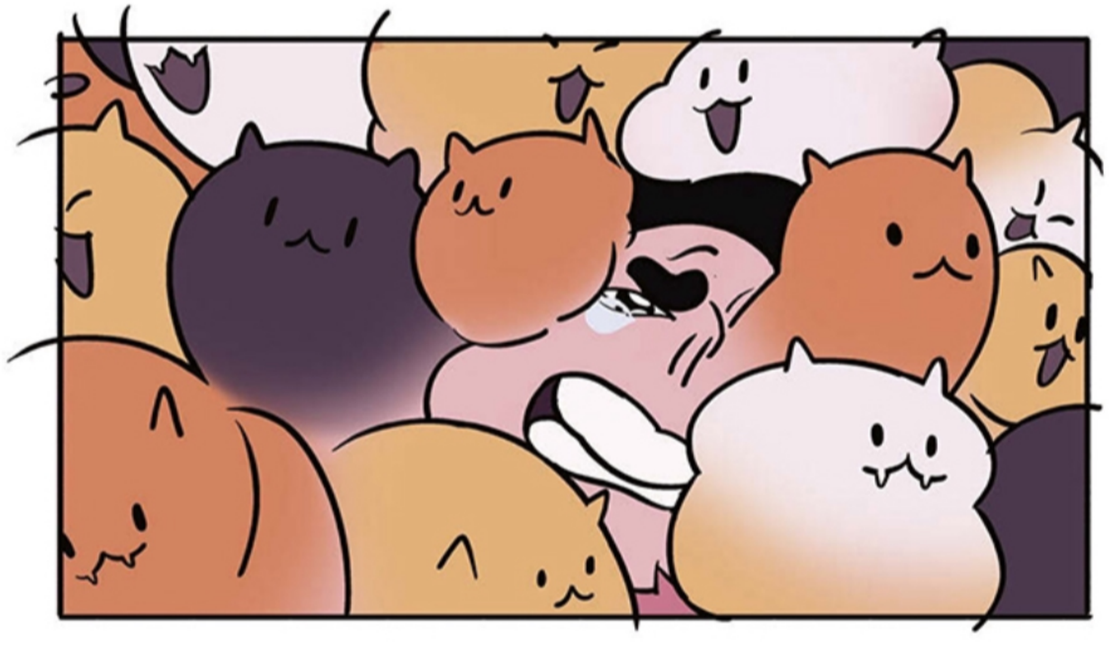








Episodes like “Cat Fingers” (S1E6) require many special pose models to illustrate exactly how the crew would like the very specific progressive mutations of Steven’s body to look.



Special pose models illustrate unique designs for the animation studios to reference. These include extreme expressions, transformations, and mutations of established characters, as well as additional new designs.

Props and Effects

















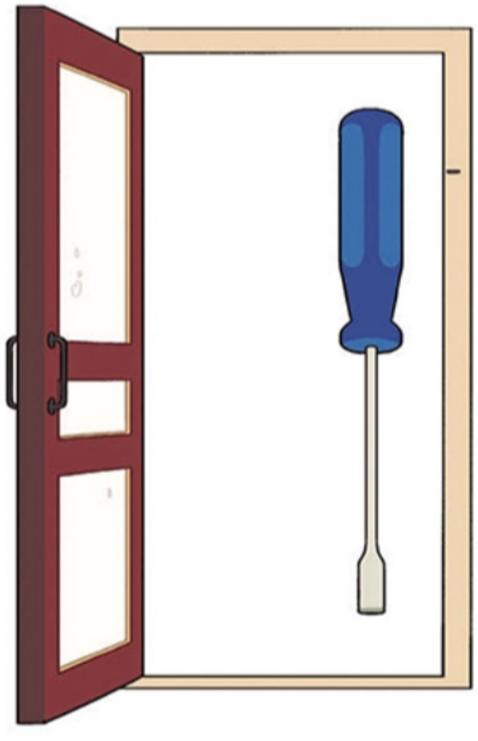


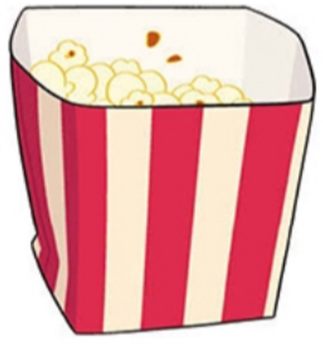










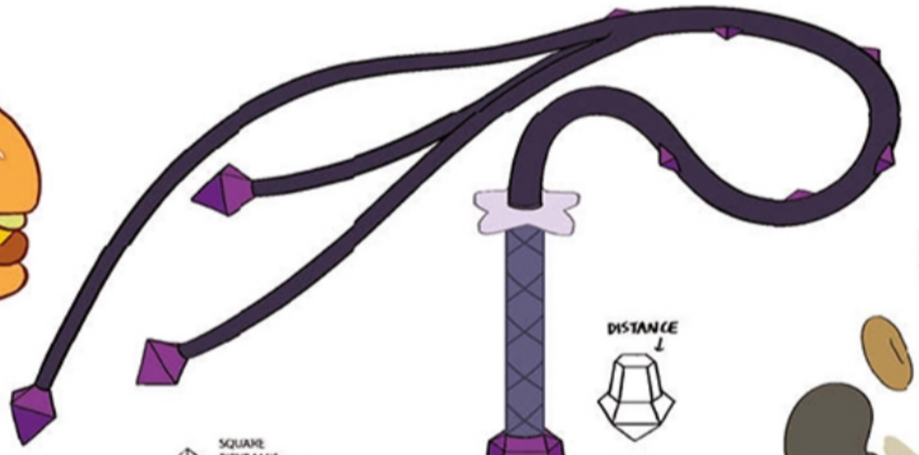




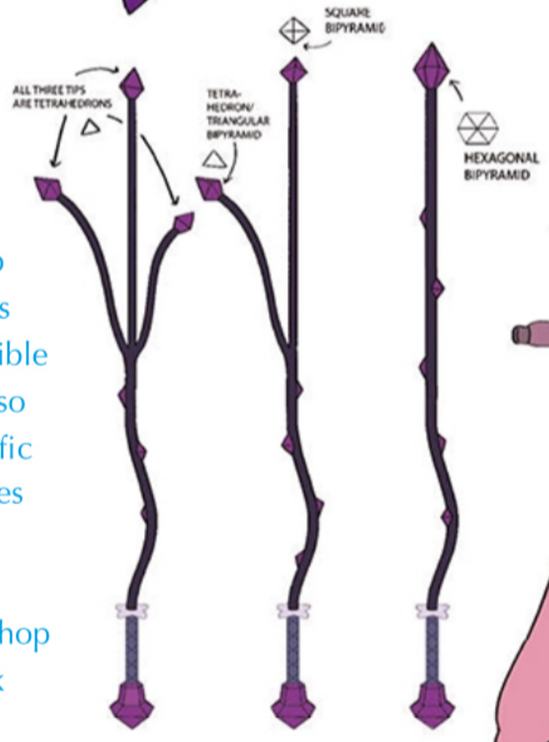


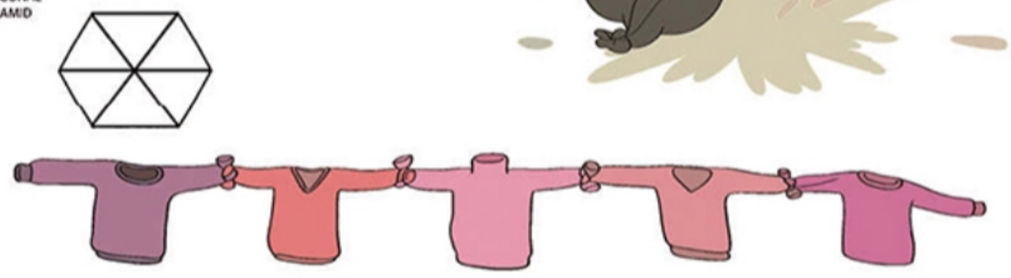


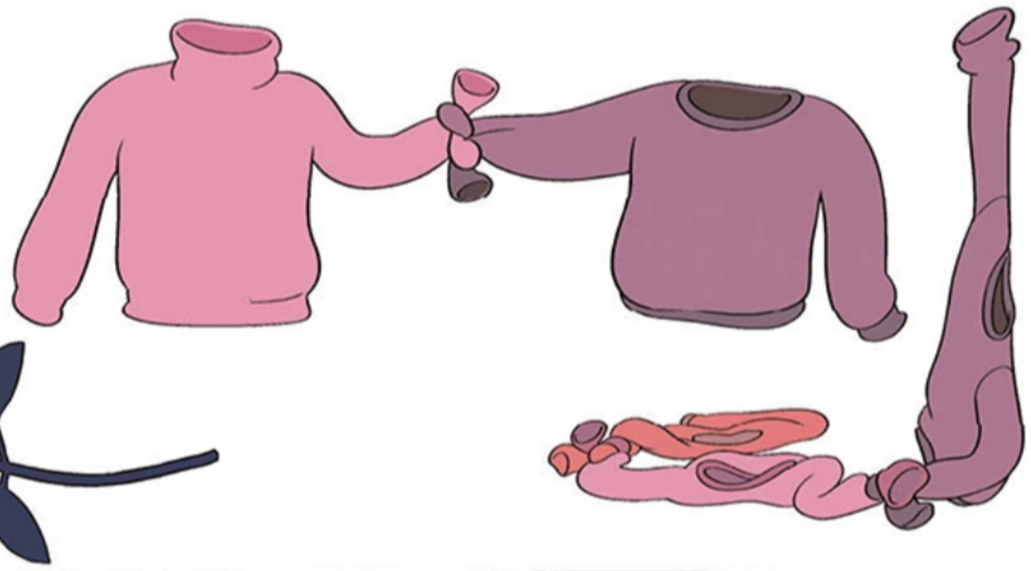






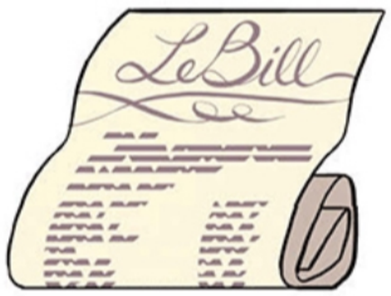








This small selection of prop and effects designs includes items as simple as an indelible marker or a screwdriver. Also shown here are more specific designs, such as how a series of sweaters tied together should stretch or bunch up and exactly what a donut-shop trash explosion should look like. **Left:** A wrestling flyer prop by Lily DeMayo (age seven), daughter of Nick, animation director.







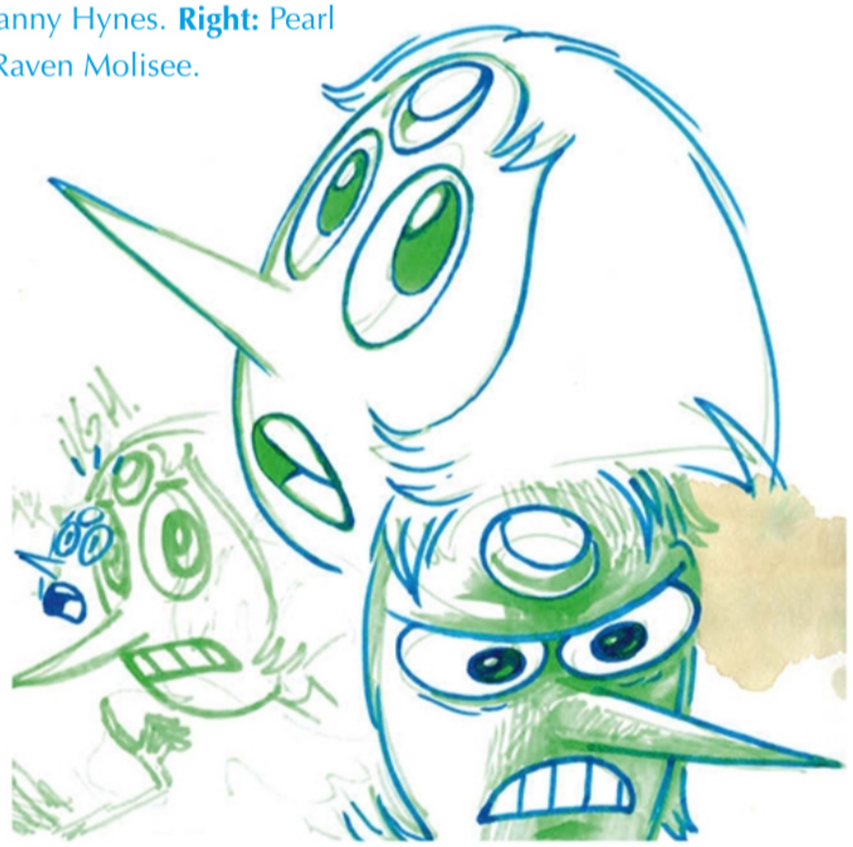
DX
70%

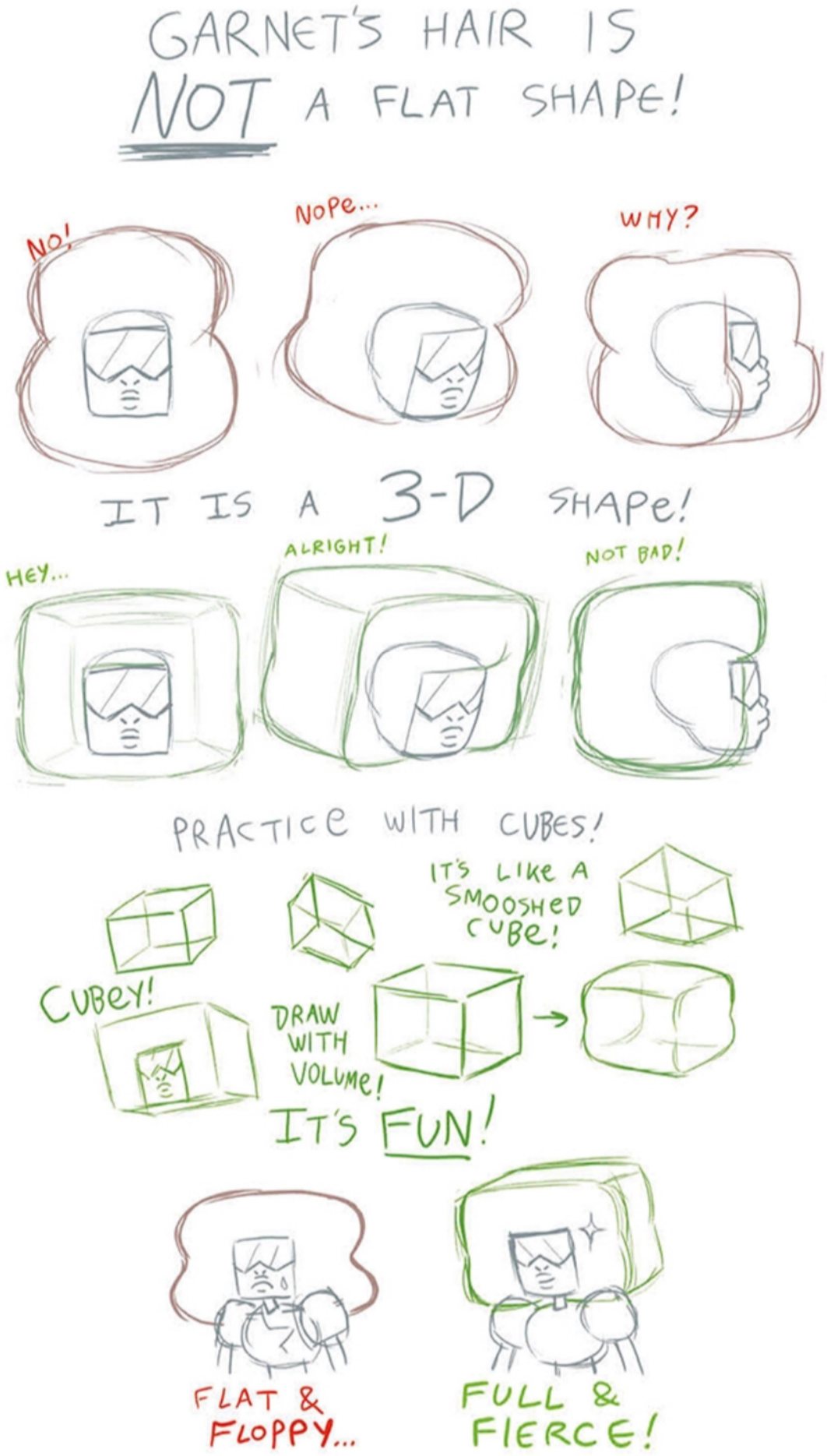




Character Drawing Guides

A variety of guides for use among the crew and the animation production studios. **Below left, right:** Guides by Ian Jones-Quartey. **Below middle:** Guide by Danny Hynes. **Right:** Pearl marker sketches by Raven Molisee.





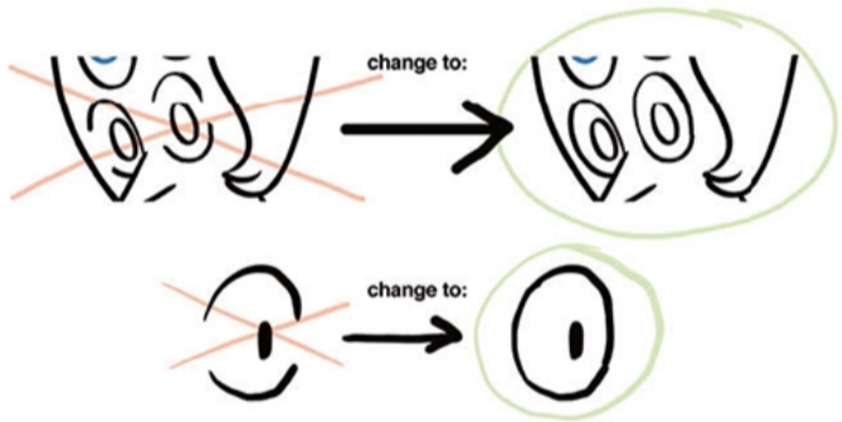
MORE DO'S AND DONT'S:

Straight-on views for Garnet, Amethyst and Pearl:



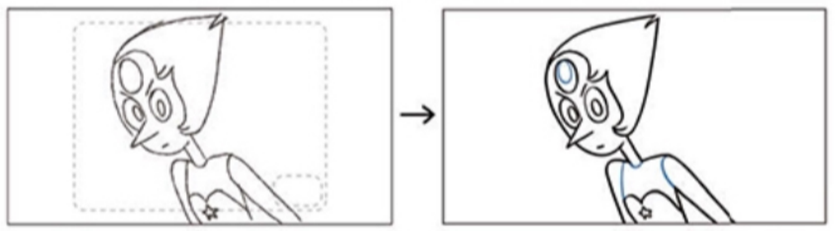
MORE DO'S AND DONT'S:

Please connect eye lines so there are no gaps:



Please follow board and add eyebrows when needed.

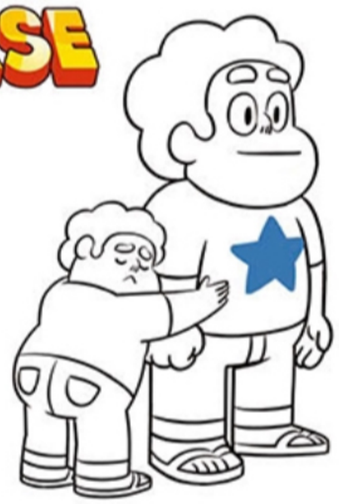
EVEN IF THERE ARE NO EYEBROWS ON MODEL!



Eyebrows can pop on for expressions with no inbetweens if need be.

THE MANY FACES OF STEVEN UNIVERSE

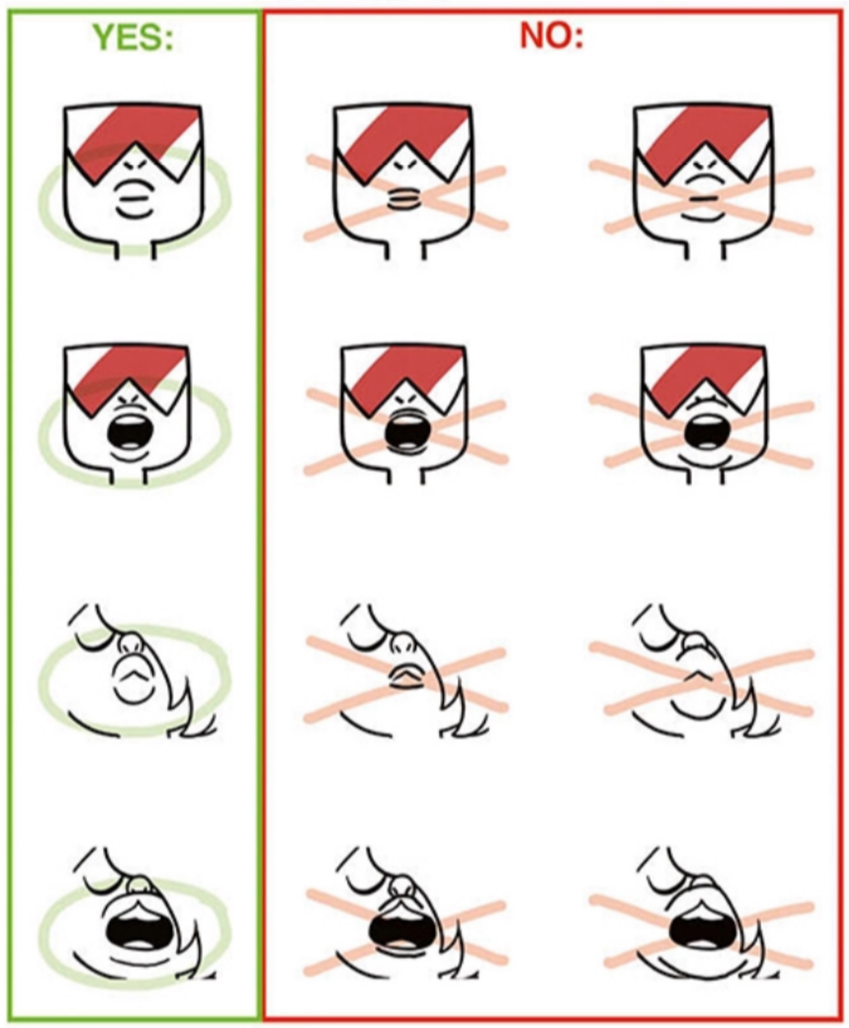


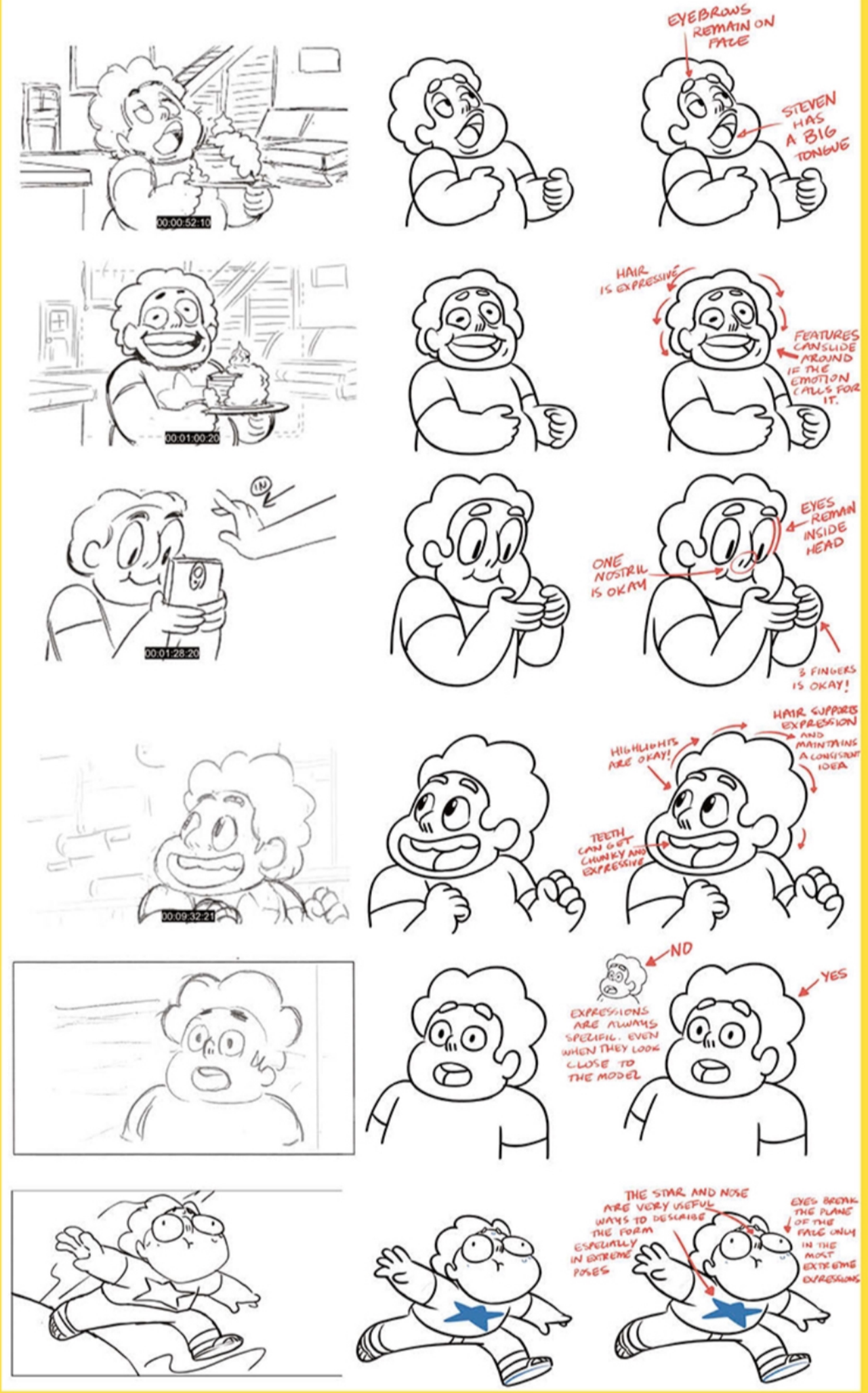


A GUIDE TO DRAWING STEVEN FROM THE BOARDS

MORE DO'S AND DONT'S:

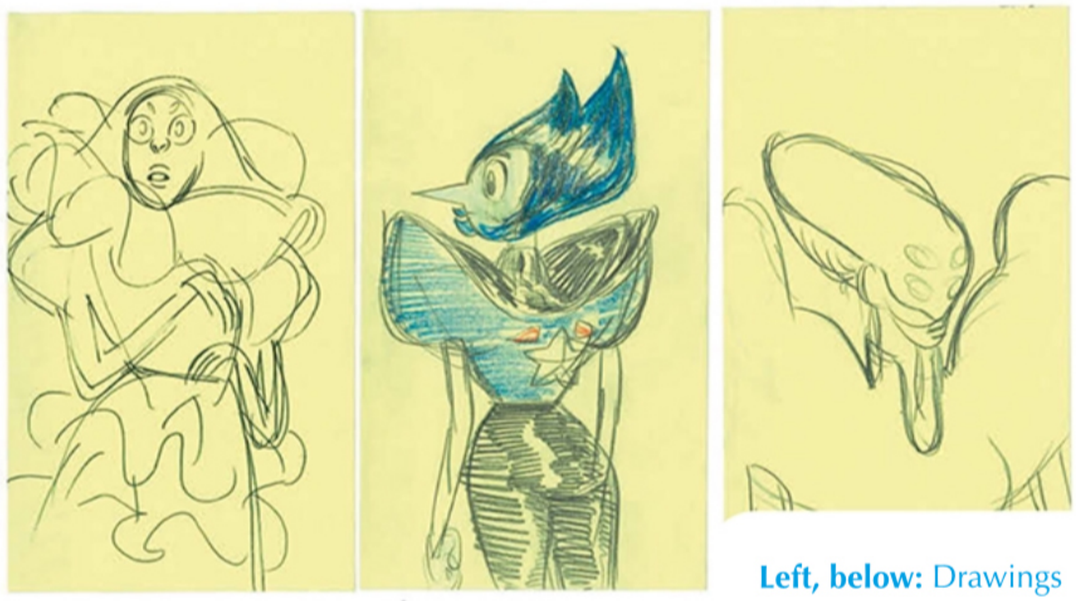
Guidelines on drawing lips applying to GARNET and AMETHYST:

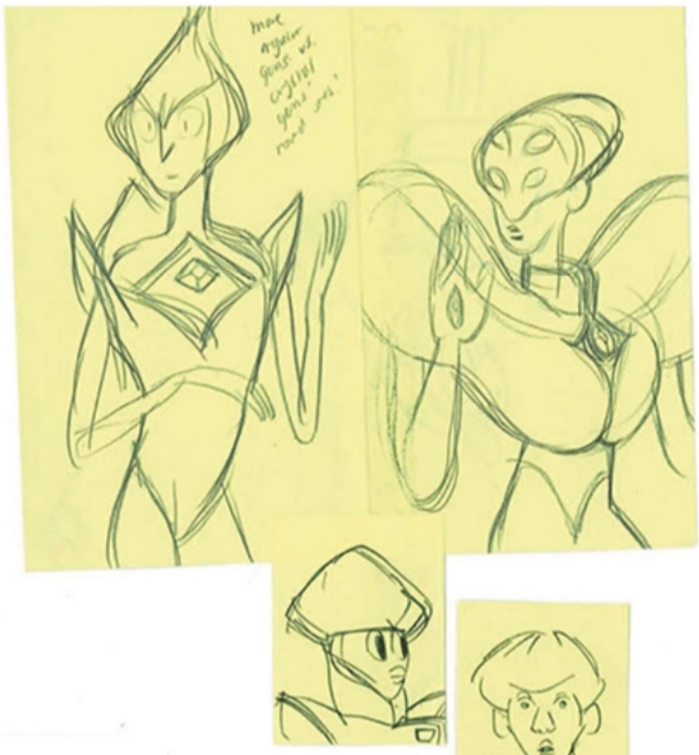




Above: Guide by Ian Jones-Quartey.
Right: Guide by Danny Hynes.

Homeworld Gem Concepts







Left, below: Drawings by Colin Howard. **Right:** Drawings by Rebecca.







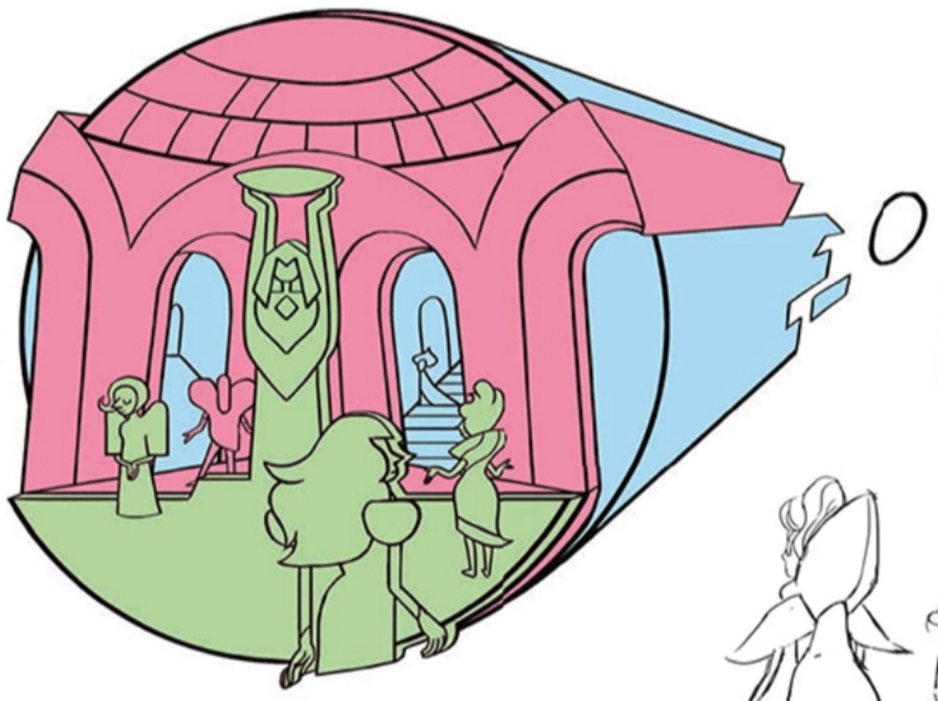


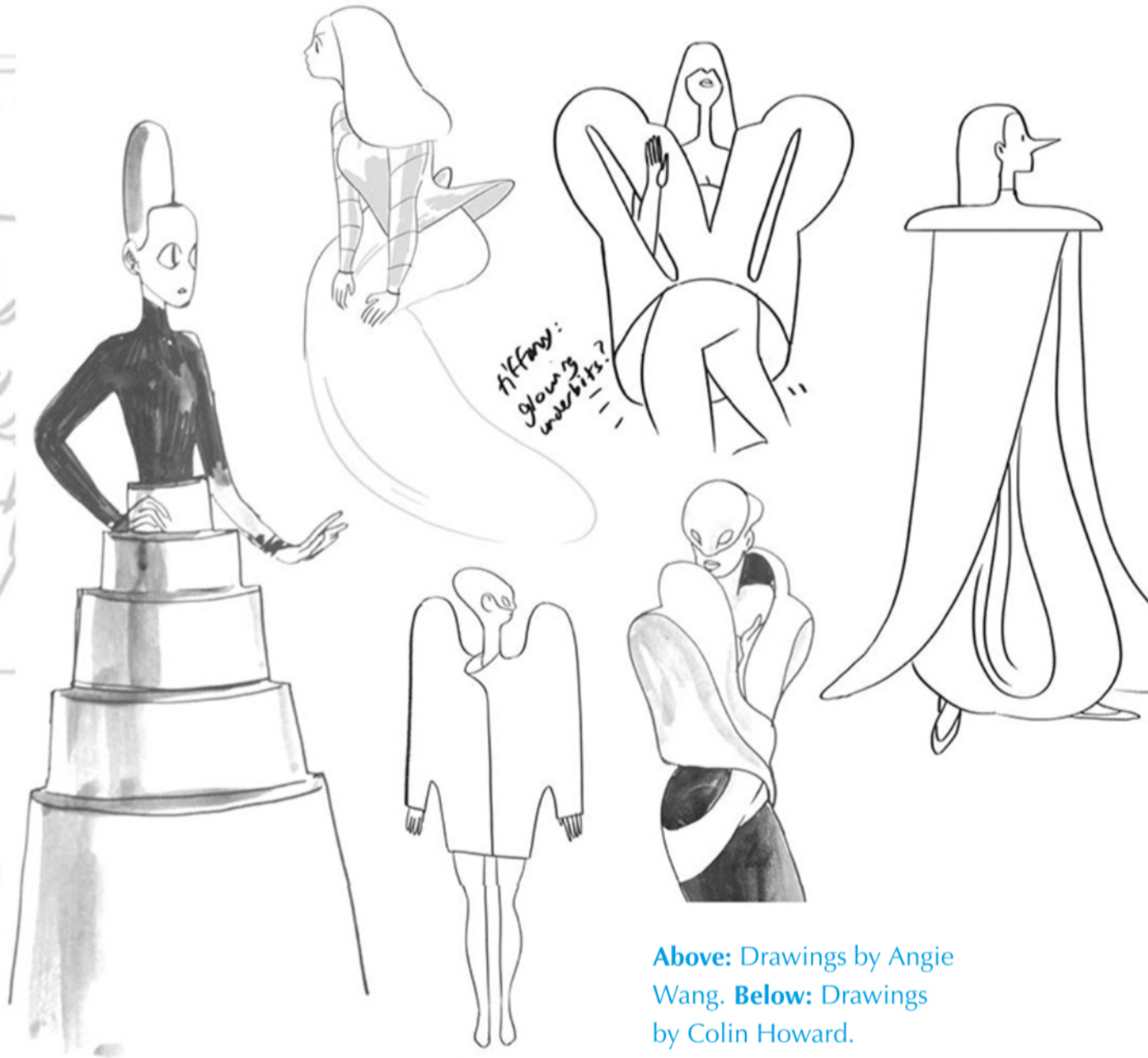






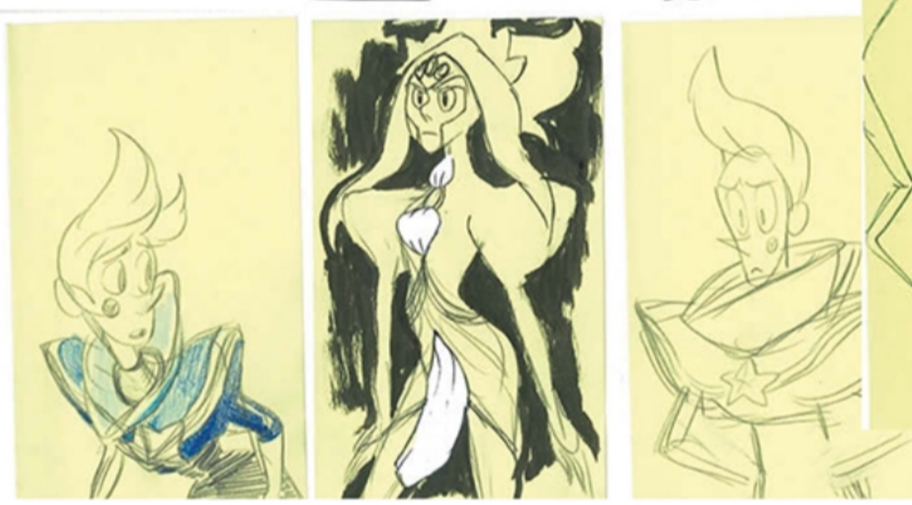


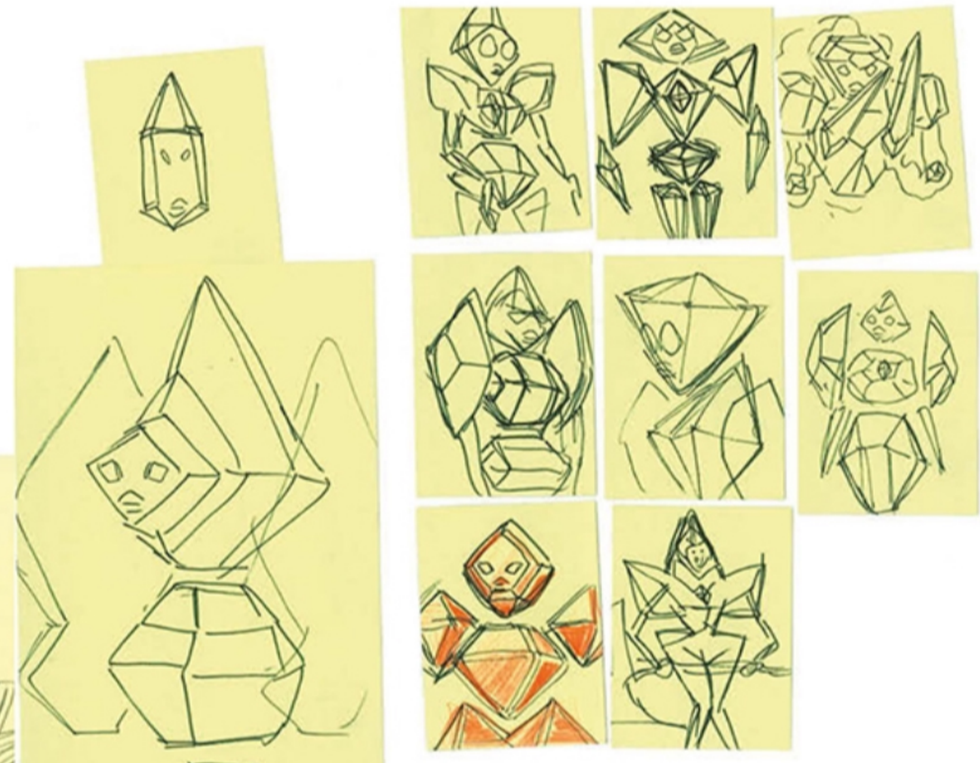




Above: Drawings by Angie Wang. **Below:** Drawings by Colin Howard.







Though Rebecca had been sketching Homeworld Gem concepts since the pilot, the need to formally design some concrete characters instigated many of these drawings for "Cheeseburger Backpack" (S1E3), for the scene in which Pearl tells Steven some Gem history and projects a hologram vision to show how Gems previously used the ruin in which they are standing.

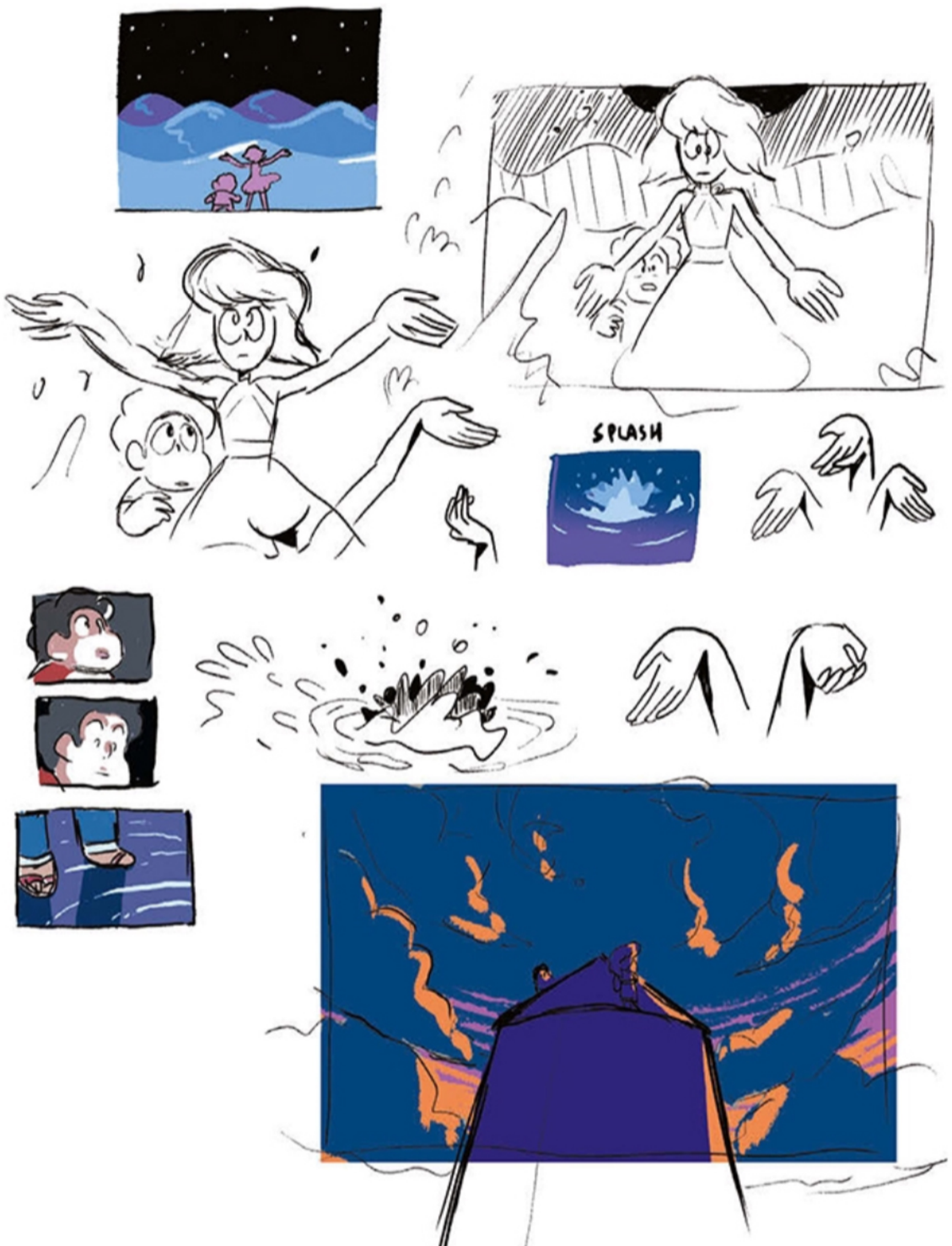
Lapis Lazuli



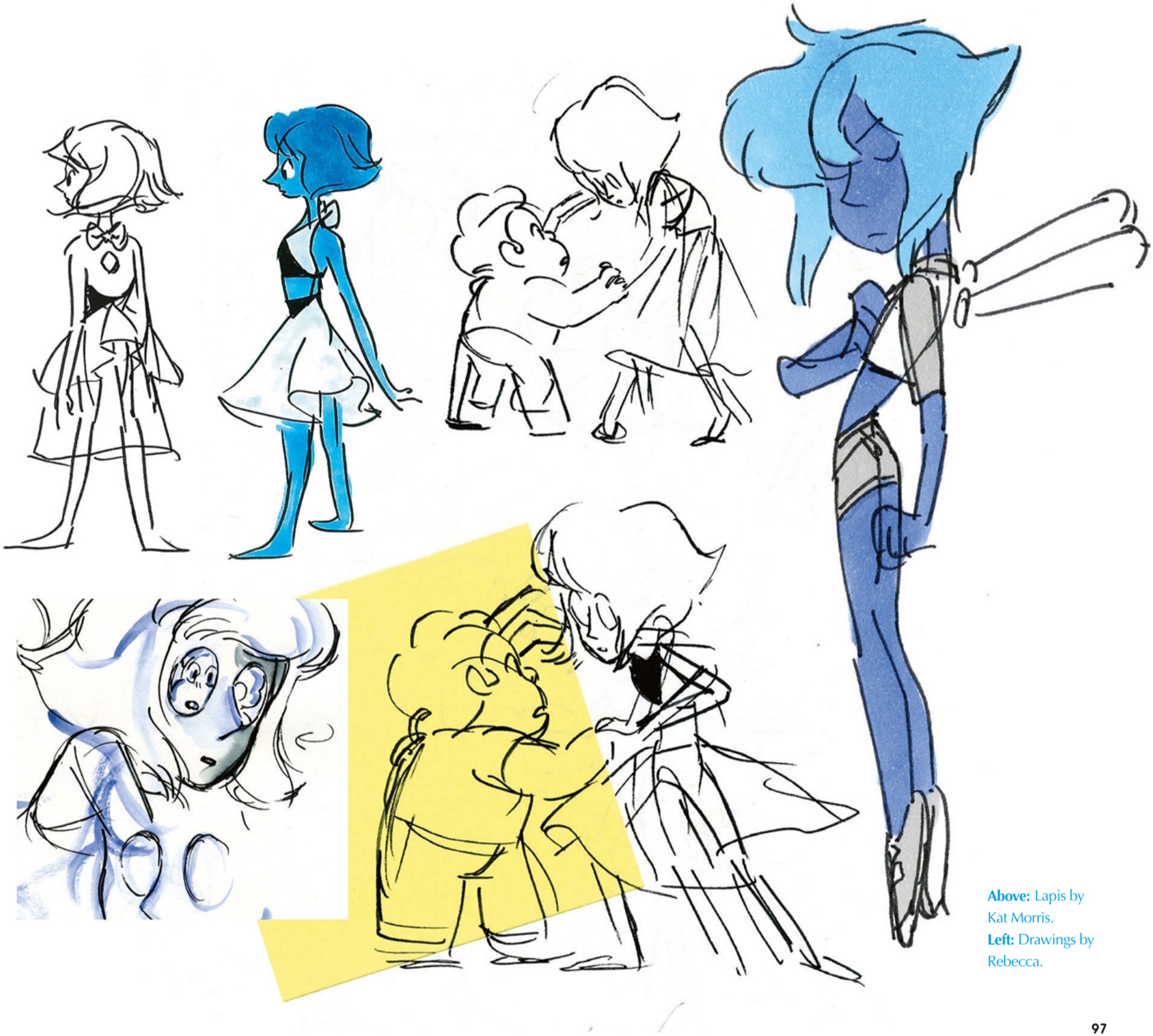


Left: Lapis in "Alone at Sea" (S3E15), storyboarded by Kat Morris and Hilary Florido.
Right: Lapis by Lauren Zuke.
Below: Drawings by Lamar Abrams.









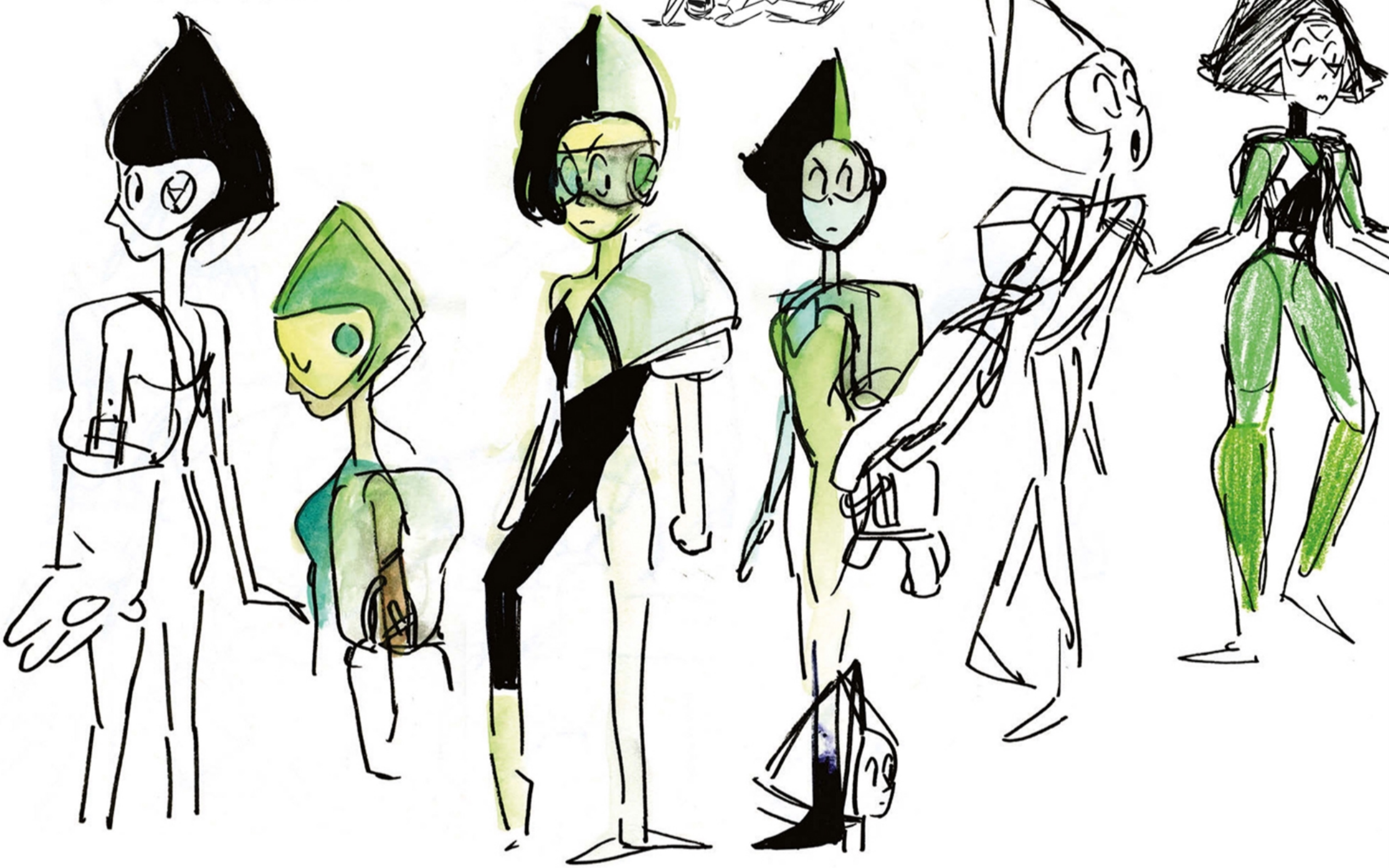
Above: Lapis by Kat Morris.
Left: Drawings by Rebecca.

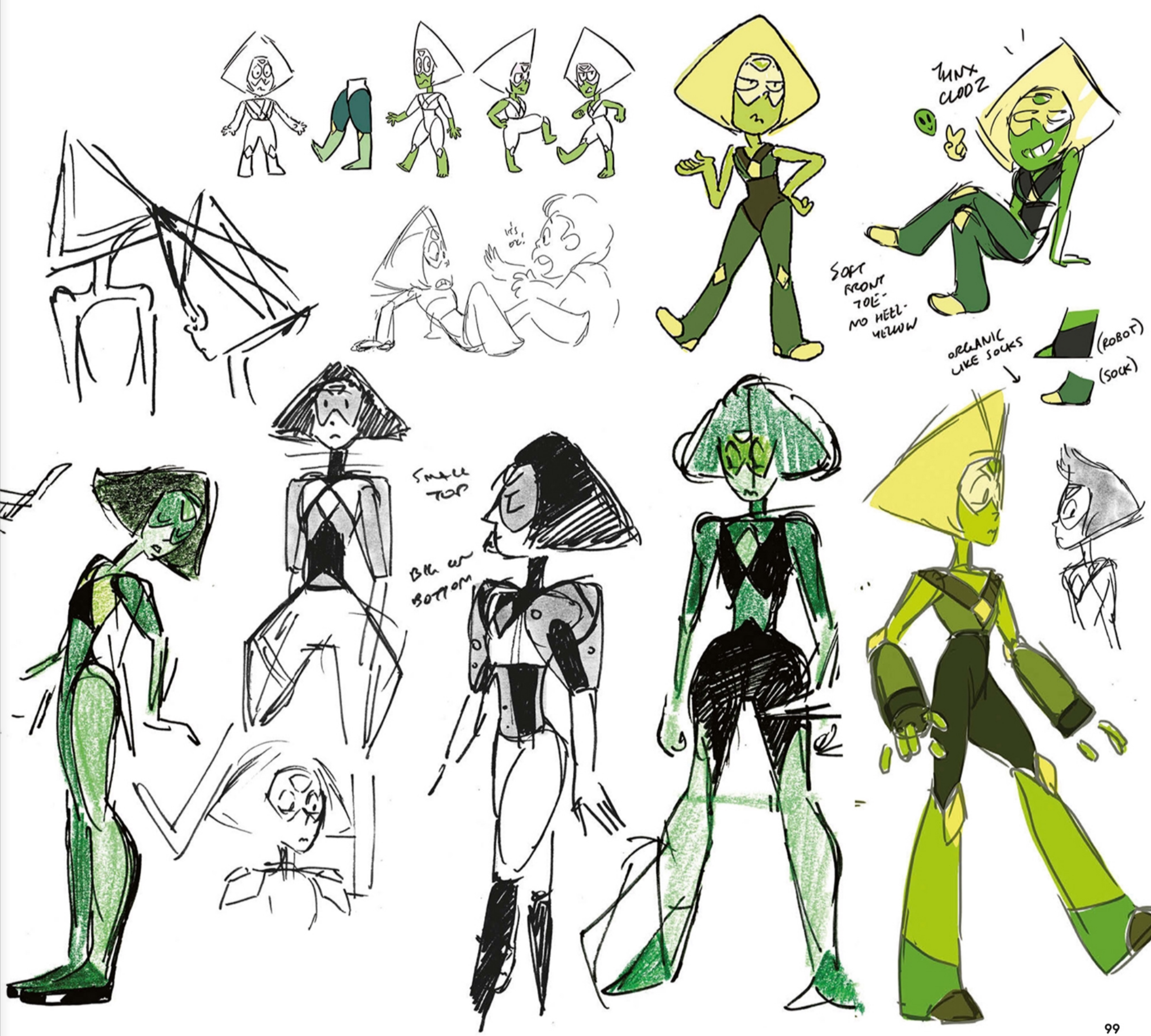
Peridot





Peridot transforms from villain to lovable goofball over a series of episodes. **Left:** Drawings of the fully formed Peridot by Lauren Zuke. **Opposite top:** The sketchbook page on which Rebecca figured out how to draw Peridot's hair shape, and drawings of small Peridot by Jeff Liu, Colin Howard, Lauren Zuke, and Rebecca. **Below:** Rebecca's designs from her sketchbooks evolve.




THNX CLODZ
SOFT FRONT TOE- NO HEEL- YELLOW
ORGANIC LIKE SOCKS
(ROBOT)
(SOCK)
SMALL TOP
BIG ON BOTTOM

Jasper



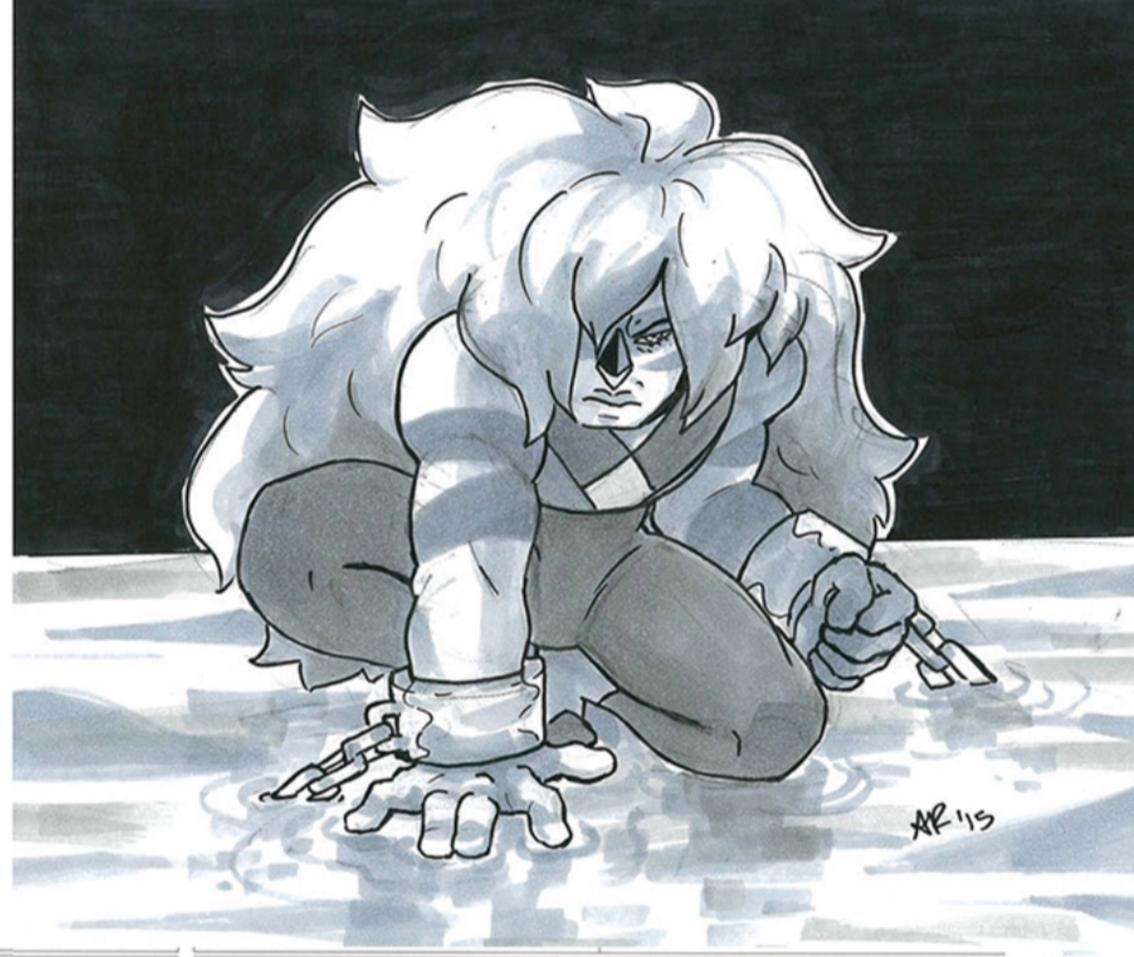




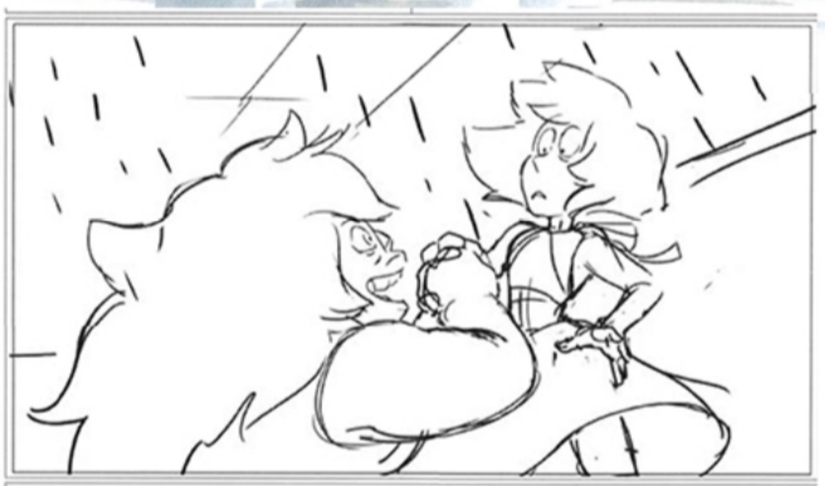












Opposite: Jasper development drawings by Rebecca illustrate that Jasper, Peridot, and Lapis Lazuli were all planned together. **Above, right:** Storyboard drawings by Rebecca. **Top right:** Promo drawing by Amber Cragg. **Below:** Drawing by Lauren Zuke. **Bottom right:** Special pose model drawings by Paul Villeco and Danny Hynes (top), and Joe Johnston and Danny Hynes (bottom).







Bismuth



Bismuth concepts by Rebecca.



1031-099 "Bismuth Part 01"

Scene	Panel
061	CONT 4



Dialog
GARNET: this is

1031-099 "Bismuth Part 01"

Pag

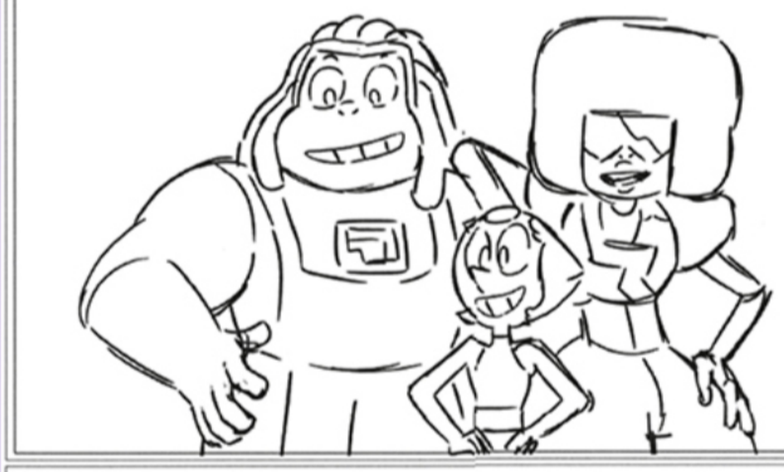
Scene	Panel
061	CONT



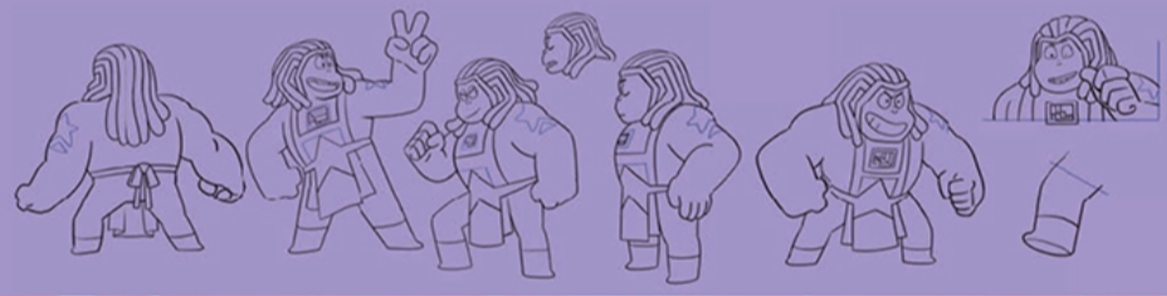
Dialog
GARNET: Bismuth!

1031-099 "Bismuth Part 01"

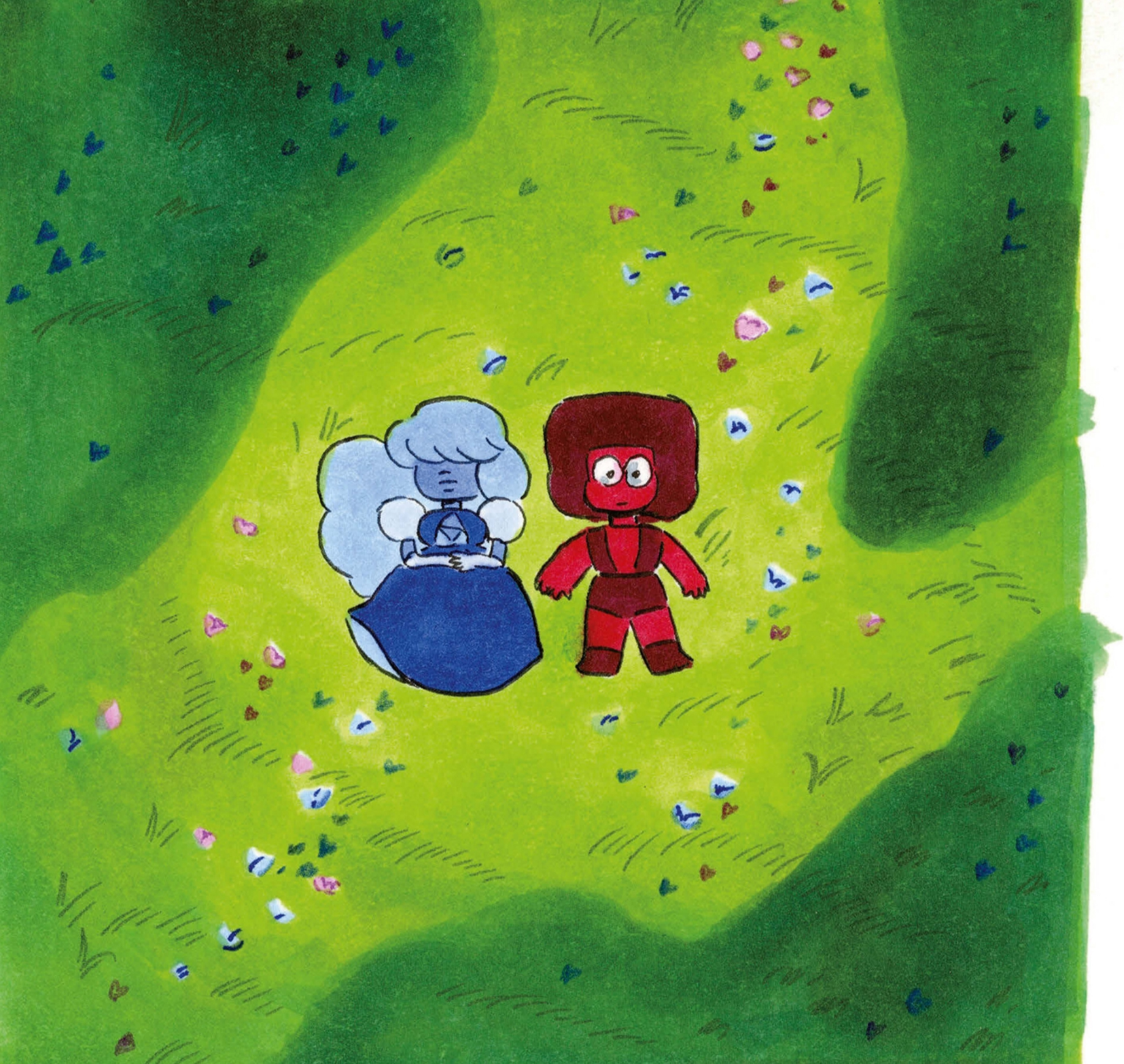
Scene	Panel
061	CONT



Dialog
GARNET: She's one of the original Crystal Gems.







Opposite: Detail of a promotional drawing by Katie Mitroff.

4: WRITING & STORYBOARDING



Storyboarding and the Writing Process

There exists an artifact with the power to reveal infinite *Steven Universe* wisdom, to gift the one who holds it with godlike vision that extends thousands of years into the past, and thousands of years into the future. It is incredibly spoiler-y. It is Rebecca's chart. Across several horizontal printouts lined up and taped together is one glorious network of twenty thousand years of Gem Homeworld and Earth history. Branching out in multicolored lines, significant events are tagged in the chronology. It's one visualization of the established structure—a skeleton of sorts—that needs to be fleshed out before coming to life. Too revealing to publish here without heavy redaction, the chart is just one of the items lying about the studio that demonstrates the meticulous world-building afoot and all of the fertile storytelling opportunities that come with it.

Matt Burnett [writer]: There is a destination for the overall show story, but we've really been improvising the route we're taking to get there. Some of the storylines we've set up definitely still have a payoff coming, but I don't think of those as an absolute finale. Just like all the smaller season-long storylines we've done, they will just set up a new dynamic that evolves the show and characters.

Kat Morris [supervising director]: One thing that impresses me about the writing on this show is the "burn it down and start again" mentality. It's scary that we're constantly writing ourselves into corners, but the creativity and flexibility of our writers sees us through—always to bigger and better things.

Ben Levin [writer]: I remember when we had only twenty-six episodes, and we weren't sure if we would get any after that. We came up with the idea of introducing a new Gem, Lapis, and having her steal the ocean. This was a big reveal. Steven was going to realize that the Gems are more than a team of heroes; they're a race of beings from space. At one point, this gigantic reveal was going to happen at episode thirteen. I think we were feeling like, "We gotta get to this part of the story—we have only twenty-six episodes!" But then cooler heads prevailed, and we realized that would be way too rushed and wouldn't feel earned. So we just gambled on getting more episodes to get to tell more of the story, and what came at episode thirteen was a story about Steven turning into an old Jewish man. By that, I mean the episode "So Many Birthdays" [S1E13].

Pinned to the eight-foot-tall foam-core panels leaning against the walls of the *Steven Universe*



Lion the cat sits upon Rebecca's chart of the *Steven Universe* universe, unaware of its power.

conference room are columns of paper cards, and written on each card is an episode title.

Joe Johnston [supervising director]: It's been a blur, but I look around this conference room, and there are things that have been in this room for years [*laughs*] that haven't moved, like that board with all the episodes on it—that thing is three and a half years old right now.

The columns of episode cards serve as a map for the crew as they sit around the table in the center of the room, discussing the plan for an upcoming slate of episodes. The arrangement (and rearrangement) of episode cards helps them to visualize the overall pace of the plot, and to optimize the texture and pacing of each season by strategically balancing lighter and heavier material.

Ben: Writing a season of *Steven Universe* is like putting together a jigsaw puzzle—an emotional, geology-themed jigsaw puzzle. We'll know what the puzzle is *supposed* to look like because we'll have an idea for a cool finale or a big story arc that we want to write. But then we'll also have all of these other random story ideas lying around, and it's not quite clear how everything fits together. So we talk a whole bunch and ask ourselves, "What do we need to know about this character to make this cool episode idea make sense?" Slowly, the season begins to take shape, and as the episodes are boarded, more questions come up and characters are expanded and we say, "That should be an episode!" And then, finally, the puzzle is complete.

We try to balance the focus between the members of the main cast, with Steven always as the major focal point. We also try to keep a balance between the magical Gem mythos episodes and the hometown boardie episodes. Steven is half-human and half-Gem, and from the start, it was important to Rebecca that Steven think the human side of his life is just as fascinating as the magical Gem side of his life.

For some people, the main takeaway from the show is the Gem mythology, but I don't think those stories would be half as interesting if they weren't presented through the viewpoint of this very charming character. Same goes for the drama in the show. I think it's incredible that I get to work on a show that isn't afraid to be sincere and vulnerable. But if every episode were an emotional revelation, the show would feel repetitive and cloying. I think it's important to have the emotional levity to balance out the emotional gravity. It's important to have a little Ronaldo to balance out Pearl sobbing on top of a hill. . . . I'm just trying to throw a plug in for Ronaldo.

Kat: Ronaldo is Ben and Matt's self-insert character.

Matt: As much as the artist in me wants to describe it as something else, it's really just math. It's balancing an equation, where one side is the season finale, and the *x*'s and *y*'s are the episodes we need for that solution to make sense. What are we going to talk about in "Ocean Gem" [S1E26]? That the monsters we've seen are other Gems, that Lapis's gem is cracked, that she survived some kind of war, that Steven can magically heal her gem, that Gems are originally from somewhere else in space. We had to be sure we set all that up in the episodes before, so we're not giving you the questions in the same episode we're giving the answers. "Steven the Sword Fighter" [S1E16] explains how Gems' bodies are projections and can be changed—their stones are their true selves. "Monster Buddies" [S1E23] shows the monsters in a different light; we learn that they are corrupted Gems—their projected bodies were changed somehow. "An Indirect Kiss" [S1E24] explains what a cracked gem means and introduces Steven's healing abilities. "Serious Steven" [S1E8] is set in a huge battlefield, and there are other little hints of a big conflict in the past. All those episodes add up to a foundation that allows the finale to pay off a lot of stuff and still have the room to be its own little story.

Adorning the walls, coating the table, and filling boxes in the corners of the room are Post-it notes and sheets of paper covered in drawings: the product of many meetings packed with doodling artists. Many





Sticky notes play a giant role in the production process. **Above:** Drawing by Amber Cragg. **Below:** Drawings by Kat Morris.





of these drawings are from individual storyboard pitch meetings, or the less frequent but very important story retreats, where big season-wide ideas are hashed out. One of the climactic moments of season two was the reveal and disarming of the Cluster—the artificial mega-fusion that the Homeworld Gems had manufactured from thousands of corrupted Gem shards. The Cluster was created entirely from this story-meeting process.

Ben: I think it's pretty important for a storyboard-driven show [an animated show largely written by storyboard artists based on a writer's outline, as opposed to a script-driven animated show in which a writer's script defines much more of the action and dialog before the storyboard artists get to work] to have at least a day where everyone involved in the writing process can get together and talk story. The way production works, we have to be writing up new premises and outlines for episodes while the storyboard teams are writing and boarding their episodes. After every storyboard pitch, we all talk out our thoughts on that specific episode, but we're never just in a room, solely talking about what we should do next.

So at the beginning of a season, we'll get together, pitch story ideas we've been talking about for future episodes, see what everyone thinks, and just talk about the characters and what we all want to see happen.

Rebecca Sugar [series creator]: I remember that the Kindergarten came out of the first big writers' meeting. Everything about Amethyst's character clicked into place.

Ian Jones-Quartey [former co-executive producer] : That was one of those weird moments where it explained everything. It was like, "Oh right, that's why we wrote her like that."

Ben: And then we'll also play writing games and write stupid, silly stories in three minutes.

One game that the writers have found to be fruitful is a riff on the surrealist "exquisite corpse" method, in which players contribute a paragraph of a story or a slice of a drawing without seeing the whole sequence, in order to create unexpected results. In the *Steven Universe* writers' variation, everyone draws a small scenario at the top of a sheet with characters from the show, then passes the sheet to the next person. Looking at the drawing on the sheet in front of them, each crew member then writes a few sentences describing the first act of a story inspired by that drawing. The sheets are passed on again and again until each one has a picture and three-act story. The majority of results are funny, bizarre, and unusable, but they sometimes do inspire episodes—"Island Adventure" (S1E30), for one.

Ben: In the notes from that writers' meeting, there's an episode idea that's just: "Lars and Sadie make out—even though they're not together." Clearly, this was something we all wanted to happen. Steven and Connie represent a more innocent type of love, so Sadie and Lars are where we get to explore all of that angsty teenage emotional-rollercoaster stuff.

The episode "Onion Friend" [S2E13] started out as one of those exquisite corpse stories called "Onion World." I think this one was drawn by Lamar [Abrams, storyboard artist], or at least championed by him. This is the actual text of it:

> Onion World—Steven runs into Sour Cream on his way home from the grocery store and suddenly realizes Onion and Sour Cream are related! He goes to their house and sees Grandma Shallot shrug off Onion's crazy behavior (throwing plates and stuff). Then Onion steals Grandma Shallot's purse. Steven chases him down, but it turns out he was just bringing it to Yellowtail to collect money for her. Grandma Shallot just says he's a boy with a lot of energy. Steven plays video games with Sour Cream and Onion.

This idea got merged with another idea about showing Amethyst's friendship with Vidalia, so the Grandma Shallot character disappeared and a lot of

(Continued on page 110)

Writing Games

Writing games are a creative group exercise that can hatch seeds for episodes in unexpected ways. Sometimes, they are simply a silly, bonding crew activity.

Usable story ideas occasionally grow and are harvested from these games. The two games on this page contain elements that were combined into "Future Boy Zoltron" (S4E5).



ACT 1:

While Steven is at Funland, he witnesses a surprise meeting between Mr. Smiley and an unknown tattooed man. Steven is too far away to hear their conversation but he can see that Mr. Smiley is simultaneously ashamed yet tremulously thrilled at meeting this man. Mr. Smiley eventually runs away from the conversation, clearly evading the man's pleas, and the man seems sincerely sad. Steven vows to get to the bottom of it. What if the Tattooed Man knows a 'dangerous' secret from Smiley's past!?!?

After a brief and cryptic conversation w/ Mr. Smiley Steven goes home. ~~Steven follows the man for a day~~ He munches on his funnel cake, deep in confusion. The next day, on the Boardwalk, Steven sees the man again buying something.

He follows him throughout the day, until he finally reaches his home & sees a picture of Mr. Smiley + him together



THEN WERE BOTH ON STAGE - A COMEDY DUO CALLED "TWO SMILING FACES"! THEY DID THE STAND UP CIRCUIT IN THE 80'S! TWO CLEAN COMICS TAKING ON THE WORLD - STEVEN CAN'T BELIEVE IT, AND RUSHES TO REUNITE THEM. NOW THEY ARE TWO SAD FACES, BUT THEY DON'T HAVE TO BE - THEY CAN MAKE EACH OTHER LAUGH AGAIN! [redacted] ALSO [redacted] THEY WERE CLEARLY LOVERS AND STEVEN REMINDS THEM THAT LOVE & LAUGHTER CONQUER ALL!!!



"THE BEACH CITY WITCH PROJECT"

Connie brings some books about magic and the occult to Steven's house. ~~Steven reads an~~ Steven gets an idea to set up a forture telling tent at funland with Garnet using her future vision! They set up their booth.

ONCE The booth is set up, Boardies START coming to HAVe Their futures told... But GARNET is Blunt with humans and [redacted] Keeps SCARING People with haunting AND SAD PREDICTIONS ABOUT Their fate. She's working people into a PANIC.

STEVEN TRIES TO GET GARNET TO BE A LITTLE SOFTER WHEN TALKING TO PEOPLE BUT GARNET SAYS 'YOU CAN'T PUT TRIGGER WARNINGS ON THIS KIND OF REALNESS.' STEVEN IS AT A LOSS. THERE'S NOTHING TO DO BUT CLOSE DOWN THE BUSSINESS. THERE'S NO FUTURE IN FORTUNE TELLING WHEN GARNET'S FUTURE IS [redacted] BEING A BADASS ALL THE TIME.

GARNET! PEACE OUT!

Ideas that flirt with major character development and backstory mysteries are handled with gravity when writing the series proper. But the writing games will often wade right into consequential story territory with abandon, as nothing is off-limits.



ACT 1

GREG HAPPENS upon A kiss between STEVEN & CONNIE, GREG STARTS OUT TO GIVE them 'the talk!' They START ASKING UNCOMFORTABLE (AND MAGIC) QUESTIONS. SO OVER-WHELMED, GREG [redacted] GIVES UP AND TELLS THEM ABOUT HOW the GEMS INTRODUCED him TO FUSIONS...

YOUNG GREG HAPPENS UPON A DANCE BETWEEN PEARL AND AMETHYST; THEY START TO GLOW, AND SOMETHING ALMOST HAPPENS, BUT GREG MAKES NOISE AND SURPRISES THEM. ROSE AND GARNET RETURN FROM A MISSION, AND GIVE GREG "THE TALK". (P) AND (A) ARE PRACTICING FUSION BECAUSE (A) IS STILL LEARNING HOW TO COMBINE W/ OTHER GEMS. GREG STARTS ASKING UNCOMFORTABLE QUESTIONS...

Rose joins the conversation. Greg says that he wishes he could fuse. It was so beautiful seeing Pearl and Amethyst synchronize together. Rose laughs. Maybe there are other ways for grey to synchronize... (with Rose??? ... make A BABY)



A NEW QUARTZ

Garnet is the newest member of the Crystal Gems. She is getting used to her new existence as a permanent fusion of Ruby and Sapphire. She's thankful that she is safe from Homeworld persecution, living under Rose's protection. Rose is fascinated by Garnet's fusion made of love, rather than Homeworld's usual purpose of fighting. Her curiosity gets the better of her and she asks Garnet. "Will you fuse with me?"

Pearl watches from the shadows.

GARNET HESITATES. HER RELATIONSHIP AS A FUSED RUBY AND SAPPHIRE IS STILL SO NEW, SHE DOESN'T WANT TO MESS THAT UP. GARNET TELLS ROSE SHE'S GOING TO NEED SOME TIME (ROSE IS TOTALLY CHILL WITH THAT) PEARL IS SUPER RELEVANT AT FIRST UNTIL GARNET TELLS ROSE TO CHECK IN WITH HER NEXT WEEK TO SEE HOW SHE FEELS ABOUT IT THEN. PEARL THINKS THAT'S SUPER SHADY.

Pearl is mad. Why would she want to fuse with Rose? Rose is AWESOME. She confronts Garnet. Garnet admits she's scared. Pearl suggests maybe if she and Rose were fused too it would be easier. Garnet doesn't fully understand that logic but Pearl is being pushy about it. Garnet agrees and they all fuse, Rose, Pearl and Garnet. They make "A NEW QUARTZ".

But it's totally weird and they unfuse immediately. Maybe it Pearl was not just chilled out this wouldn't have been so uncomfortable. Oh well, maybe they'll try again someday.??

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other things changed, but you can still see the heart of the story there.

Matt: The experience of a traditional writers' room, where everyone is in on breaking episodes from the beginning, is one of the things I really wish we could have, but as a board-driven show, the production flow just doesn't make it possible. I think the writers' retreats we've peppered throughout the show's lifetime have been particularly important lately, because as episodes have taken on a stronger continuity, improvisation or reimagining at the storyboard stage gets harder to pull off. Other episodes down the line may require that an earlier episode stick to the outline tighter to hit specific story beats. The retreats have allowed the board artists to give their thoughts at an earlier stage on longer story arcs, so we can adjust before locking things down from a macro, season perspective. They've also inspired us to keep making fun, unique episodes that work outside of the ongoing story.

Rebecca: It was in one of the big writers' meetings that Raven [Molisee] came up with the idea of Steven being able to fuse with humans, which ended up becoming Stevonnie. So many ideas from these meetings became massive parts of the show, but there were plenty of ideas we joked about at length that didn't get used. There was an idea that we kicked around for a while about a whole continent on Earth that had been elevated by Gem technology ages ago. The thought was that people still lived up there, and it would be perfectly normal to see the whole place float by every few years. We called it "Airstralia."

Writers' meetings have also included "Design a Gem" and "Design Gem Technology" drawing games in which artists improvise new characters and concepts, untethered from any episode-specific concerns.

Steven's powers and the Gems' Homeworld technology are revealed to Steven and the audience at a measured pace, which makes each new element feel natural and exciting. Although Steven's powers slowly add up as the series progresses, the crew has intentionally resisted turning the series into a superhero show: one that would star Steven as a magical, superstrong, power-jumping, sword-fighting, transforming boy with healing saliva who constantly battles evildoers and saves the planet with the help of his magical sidekick, Lion. Steven even has his own mind-controlled imagination room in the Temple (akin to the Holodeck from the *Star Trek* franchise), which could be tempting to overuse as a plot device.

Matt: There is definitely a version of this show where Steven is a super-powered action hero who is constantly saving Earth from certain doom, but it wouldn't be made by this particular crew. I really believe that the best TV, the best art, is made by people who are trying to entertain only themselves, and the show is a reflection of what entertains us as a crew.

There is also something to be said for exercising restraint and building up anticipation for the big, crazy adventure episodes. The audience knows to expect them at this point, so it's all about teasing it and giving them all the pieces so that when a big climactic episode comes along, it resonates on an emotional level as well as being a big spectacle.

Hilary Florido [storyboard artist]: So much of the action and magical stuff in *Steven* is a visual representation of different types of narrative climaxes. Be they small or large, they're used to support discoveries, struggles, or new personal insights for the characters. Of course, as an artist, it's a fun challenge to map out and board the thing, but if the physicality isn't saying something about the story, you lose the drama. You won't care as much about the aftermath of the fight or the consequences of what having magic means.

Ben: Steven has one foot in the human world and one foot in the Gem world, but to make sure the show doesn't go into Gem overdrive, we've found ways to let Steven's powers, and the stakes of the show, ebb and flow. It's definitely been a challenge to figure out how to introduce important characters, like Yellow Diamond, without suddenly catapulting the show into an all-out mega space war. It's important that we don't





Lamar Abrams studies of Buck, Jenny, Sour Cream, and Steven created while preparing to storyboard the episode "Lars and the Cool Kids" (S1E14).

lose touch with Beach City, because then we'd lose touch with that human side of Steven.

With Steven's powers, we always make sure there's some trade-off. Rose's room could be the ultimate hangout spot, but every time he goes in there, it turns out like an episode of *The Twilight Zone*. Steven's healing powers are based on emotion, so they aren't always reliable. And we specifically wrote that Steven can't breathe inside Lion's mane to make sure he couldn't just hide out in there if something bad was happening.

But above all, the thing that Rebecca has maintained from the start is that Steven should be as excited about everyday human things as he is about magic Gem things. So that always keeps the story in check.

Once a big-picture plan has been established after a story meeting, writers Matt and Ben head back to their office to write episode outlines. The outlines follow a three-act structure. Some outlines plug into the larger storyline, and some spring from simply playing in the Beach City sandbox.

Matt: Ben's and my positions are writing, but it's almost technical, given the nature of this show, where we are trying to organize so many stories and feelings and themes into eleven-minute structures. Early on and even still, now—now we have a strong direction on where we're going, but early on, Rebecca would just come in and say, "I had an idea, where Steven . . ."—and I'm going to use an example we haven't turned into an episode—"I want Steven to be in a giant mushroom forest." [*Laughs.*] And we're like, "All right, that's not . . . a story . . ." [*laughs*]. What would a story in the mushroom forest be?

Rebecca: We definitely could never crack the mushroom forest thing. I just like mushroom logs, aesthetically. . . .

Another episode's origin was similarly sparse, and inspired by a doodle: "Cat Fingers" (S1E6).

Rebecca: I drew Steven with cat fingers. And one of the cat fingers was eating a grape. And then that became, like, "Let's figure out how to do this thing that's really creepy." That grape thing . . . that's so awful! [*Laughs.*]

Matt: We were like, "Wow, it goes through his fingers. . . ." But, yeah. . . .

Ian: "Ocean Gem" [S1E26] is one that worked out. We had the visual idea of a tower of water stretching into space very early.

Kat: It sounds like dream interpretation.

Rebecca: For me, a lot of times it *is* that. There's this visual that's really cool, or it's an idea like, "Garnet's going to fight and sing at the same time," and it's like, "How do we make that make sense?" I remember with "Mindful Education" [S4E4], I had just tried mindful meditation, something that I knew Matt and Ian did, and I was thinking, "Can we literally just do eleven minutes of Steven leading children in mindful meditation?" No story, just Steven facing the camera, saying "All right, sit down, breathe, try this with me." And Ben and Matt said, "OK, well, we have to bring kids there. How can we make a story about meditation exciting? How can we get kids invested in a way that will make them want to see meditation work for the characters?"

Joe: And the fun part is that now we're so far into the show that when these kinds of ideas come up, we can be like, "Oh, well, maybe we can put that here," and that's the kind of place where "Mindful" has fallen. It came at a good time, where Steven is dealing with all this baggage. We couldn't have done that episode earlier in the show.

Rebecca has often quipped, "The series doesn't actually start until season two." Essentially, the first twenty-six shorts serve as an introduction to the personalities and relationships of Steven, Greg, the Crystal Gems, and their friends and neighbors.

Ben: The thing I remember about writing in the

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"Design a Gem" and "Design Gem Technology"



Starite -

Left alone to watch over a small forested planet on the deep fringes of the Gempire. Has imbued the local vegetation with magic, turning it into plant minions that help with upkeep of magic. Silent, all knowing



CRUNCHROCK

EVERY TIME CRUNCHROCK DIES SHE BUILDS HER BODY BACK STRONGER - NOW SHE'S SO BIG HER GEM IS BEING CRUSHED BY HER OWN BODY AND THE PRESSURE IS HARDENING HER INTO A MORE POWERFUL MIND!



JARBICYTE

Carries a giant Gem device that carries shards of broken Gems which she searches for using her special eye-Gem which can locate Gem shards. Once the Gem jar is full, Jarbicyte pulls on the string at the bottom to shoot a powerful ~~Echo~~ beam using the power of the broken gems.

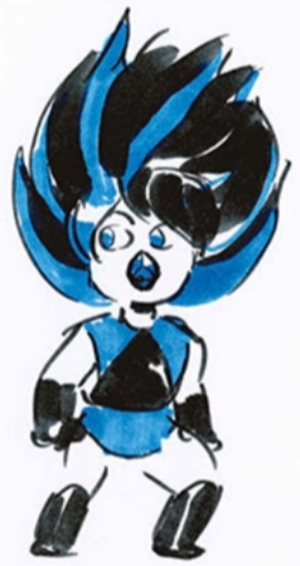
BUDGERITE

A HYBRID BIRD GEM, BUDGERITE TRAVELS BY HITCHIKING ON THE SHOULDERS OF PASSING INDIVIDUALS.

SHE SUBSISTS ON SEED AND LAYS QUARTERLY EGGS.

HER POWERS INCLUDE SHORT, POWERFUL & CHAOTIC BURSTS OF FLIGHT, AND EAR-SPLITTING SONIC SQUAWKS.

HER QUARTERLY EGGS ALSO HAVE THE POWER TO CAUSES A VICTIM TO UNRAVEL PSYCHICALLY.



The Earth Beetle!

Steven learns to control his healing ~~powers~~ and manages to heal the Earth (and Heaven?) Beetle who turn out to be very tiny Gems.

She is very quiet but very quick and very observant.



★ CHAZUSKI

~~SHE WAS BEEN~~

SHE CRASH LANDED ON EARTH WHEN DINOSAURS WERE STILL HERE. NOTHING WAS GOING ON SO SHE SLEPT.

HER GEM WAS IN A POLAR ICE CAP THAT MELTED DUE TO GLOBAL WARMING. SHE DOESN'T HAVE ANY FRIENDS OR ENEMIES.

- SHE HAS ICE ROCK POWERS!
- SHE ...





GERALDINE

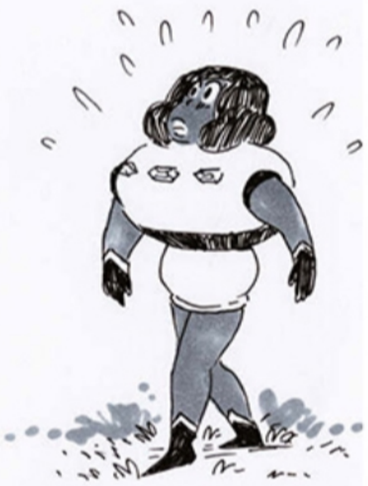
She's blind and unfortunately has a really annoying frog voice. So when Geraldine calls for help no other Gems want to go lead her around.

She goes to a lot of open mics and tries to sing.

She shoots knives out of her eyes. Not daggers like the phrase goes.

CONCRETE

- BASHFUL
- SUPER AGILE BUT NOT AS STRONG AS SHE LOOKS
- HAS A WICKED SHOE COLLECTION
- CAN'T READ :(







Steven accidentally eats the pizzow. He finds it in Amethyst's junk pile and thinks it's leftovers. The Gems go on a quest to a magical gem Stream and make Steven drink it so it washes the pizzow out of his body. (The pizzow also makes his stomach hurt, it was used to trick humans. Owiwich.)



PIZZOW

FINGER TIPLER

Grants the ~~wearer~~ wearer the ability to extend their fingertips to an infinite length.

Steven uses it to grow his fingers through the atmosphere to grab some rocks off the surface of the moon.





TRi-PHOSFOCLES

- A GEM WORLD VISUALIZER / PROJECTOR
- PUT IT NEXT TO YOU TO SHOW YOUR THOUGHTS
- STEVEN USES IT TO SPY ON LARS' DREAMS





GEMINATOR REX

- I HAVE NO IDEA!
- A HELMET THAT MAKES YOU CRAZY!
- CREATES A SUPER AGGRESSIVE TRAINING WORLD FOR THE WEARER
- USED TO TRAIN GEM SLAVES FOR COMBAT
- DRIVES WEARER BERZERK
- EVENTUALLY ERODES BRAIN
- STEVEN ~~PUTS~~ PUTS IT ON AND BECOMES THE BEST FIGHTER... THEN HE OVER USES IT AND BECOMES MINDLESS :(

Corrupted Gem collar

a collar for controlling corrupted Gems on the battle field



The Spyzer Visor

This obviously lets you see a gem's power level. But! it also lets you see how sad someone is. With this information you can fight them physically AND emotionally.



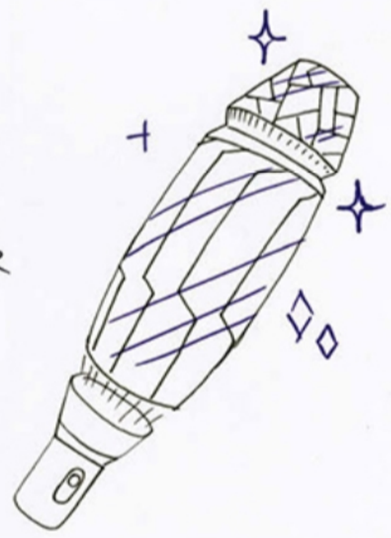
INSIDE VIEW



"SHATTER WAND"

A light is cast thru the Bottom AND CONVERTED INTO A POWERFUL RAY THAT CAN SHATTER GEMS ON CONTACT.

SPREADS EVERYWHERE AND



GEM DISINTEGRATOR

A device used to execute accused criminal Gems.

Once placed inside, the Gems are magically pulverized into dust and float in a beautiful but morbid way out of the top.



The "Design a Gem" and "Design Gem Technology" writers games are more "exquisite corpse" variations, in which one artist draws a character or magical object and another describes their characteristics.

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black building was that Rebecca had all these ideas, and this world, and it was about taking an individual idea of the world-building and saying, "OK, what's the episode that can help explain this, piece by piece, without having to do that one framing episode where a voice-over says, 'A long time ago . . .' where you do that long scroll to explain everything?"

Rebecca: Right, we would tick each idea off, one thing per episode.

Ian: "Lion 2: The Movie" [S1E17], that was the one where we realized, "Oh! It's too many things!" There are a ton of new things introduced in that episode: Lion can warp, there's a secret room, there's a robot monster, there's a sword—and so on! I feel so proud about how that one came out, but I also remember feeling like, "Huh, something about this is underwhelming." It was because there are so many things added in one episode; each piece is really exciting, but there wasn't enough time to appreciate each new idea. There's maybe five episodes' worth of ideas in just one show!

Rebecca: That one sets up a lot of things, things we haven't even paid off yet. [*Laughs.*] Early on, we knew we had to do parents, fusion, shape-shifting, sword fighting, that they can poof and come back in different forms—you had to get all the ingredients, and then, once you knew all of that, we started to introduce the robonoids, and what Homeworld technology is, and the fact that the Crystal Gems had been isolated on Earth—that was the next hurdle. My favorite thing was when we were watching the work print for "Marble Madness" [S1E44], when the Gems were entering the Kindergarten with the robonoid. Ben and Matt were there and they were joking, "What even is this show?" Every single thing on screen had been set up in previous episodes. Peridot, robonoids, the Kindergarten—if you came in blind, you'd be so confused. [*Laughs.*] That's the point where you've become completely indoctrinated into the secret club of Steven. You're just living in this place and it makes sense to you, because you've spent time there. You've gained an understanding. I love that. I want kids to feel really smart.

Joe: I remember you guys talking about that very early on. Letting people figure stuff out.

Matt: "I knew it!" is always better than "I didn't see that coming." It's a much more rewarding experience to be right.

The *Steven Universe* audience has the chance to figure things out—and many do—theorizing about elements not yet revealed but hinted at in previous episodes.

Rebecca: The fact that Garnet was secretly a fusion was my favorite for a while because it's always been set up—even in the pilot, there are hints about it.

Ian: We were so obvious with our clues. The fans figured it out, but then they got bored of the idea, and then they thought, "No, that can't be right. . . ."

Matt: They talked themselves out of it.

Rebecca: Some of the fanbase was really against it because they thought it might mean Garnet would stop existing—she'd be gone and then there'd be two new characters. The part that was a secret was why they wanted to be together. And it's so simple! They're in love! We put so many clues in—in "Fusion Cuisine" [S1E32], when the fusion of all three Crystal Gems, Alexandrite, is separating, you can see the outline of Ruby and Sapphire holding on to each other for one single frame before fusing back into the outline of Garnet.

Matt and Ian: Which got caught!

Ian: In the pilot, Garnet is standing on big red and blue gems.

Joe: When "Arcade Mania" [S1E11] aired and you see Garnet's third eye, at that point I thought, "OK, the cat's out of the bag; people are just going to know."







Drawings from the sketchbook of Lamar Abrams.

Rebecca: I thought that as soon as you saw Ruby in the cell in "JailBreak" [S1E52], that everyone would just be like, "There it is."

Ian: One of the things that I remember—this was before the show even got picked up—it was after the pilot; Rebecca gave a description of the Gems living in this messy house, and you go in their rooms, and you would see things that were hugely important to the fate of the series just strewn about on the floor. And you would be able to look at old episodes and think, "Oh my god, that thing that they really need was just right there all the time." And I remember thinking that was a really cool idea—just being really open and transparent about the clues that are there.

The success of the slow rollout has everything to do with perspective: As Steven discovers more about the Crystal Gems' history, his mother and father, and his own powers, it is always from his point of view. The audience's understanding of the complicated world always develops with Steven. It is the coming-of-age story every child goes through as the world they understand becomes more dangerous and complex.

Rebecca: To me, the interesting part is that Steven believes he's having this really fun comedy child-adventure, until he realizes that the world isn't actually like that, and then it starts to change. I always had this plan that the Gem world is like the adult world. In Steven's headspace, there are these adults all around him that are going through stuff that he can't understand, and as he's turning that corner and growing up, he's starting to realize what it is. And everything's from Steven's point of view. We don't break perspective. You never see things that Steven isn't seeing himself or isn't aware of. And if we break it—there's just a little bit of wiggle room—it's only when he has just left the room or something, and the scene goes on—

Ian: Yeah, just before he enters or just after he leaves—

Rebecca: And it's very rare, and it's really hard for us to do because it's so off-limits. For example, in "JailBreak" [S1E52], Garnet is fighting Jasper, and Steven is not there—*but* you see him watching the fight on a screen, so you know he's aware of what's happening. You don't necessarily know why he can hear her singing, but there's a little emotional flexibility where it's like, "Steven knows she's winning, so this is allowed." But there will never be the scene that I think people would like, where it cuts to Yellow Diamond on Homeworld, Mr. Burns–ing her fingers [*laughs*]—it cannot happen.

Matt: The reasoning behind it is that it functions as a perfect safety valve for both the audience and us. It'd be easy to overload people with information with this show, but the perspective keeps us focused on the one thing the episode should be about: the emotional arc our characters are going through.

Ben: When your protagonist is learning along with the audience, they can ask the questions the audience wants to ask, and it ensures that you don't overload the audience with details. If the first episode of *Steven Universe* was the Crystal Gems just laying down a five-minute info-dump on Steven about the Crystal Gem rebellion, corrupted Gems, and his mother, the rest of the episode would probably just be Steven sitting on the porch with his head in his hands, saying, "I'm so confused. . . ." And I think the audience would've felt the same way.

Steven's perspective also reflects the age of our audience. Many of the characters around Steven are dealing with complex issues and emotions. Kids watching the show may be familiar with them, or they may have seen someone in their lives encountering them. By funneling everything through Steven's perspective, we can talk about those complexities in a way that makes sense to kids. The biggest example of this was "Onion Friend" [S2E13]. We wanted to do this story about Amethyst reconnecting with her old friend Vidalia by going out for a night on the town. The problem was that it never really made sense for Steven to be tagging along with them or to experience that story. So we

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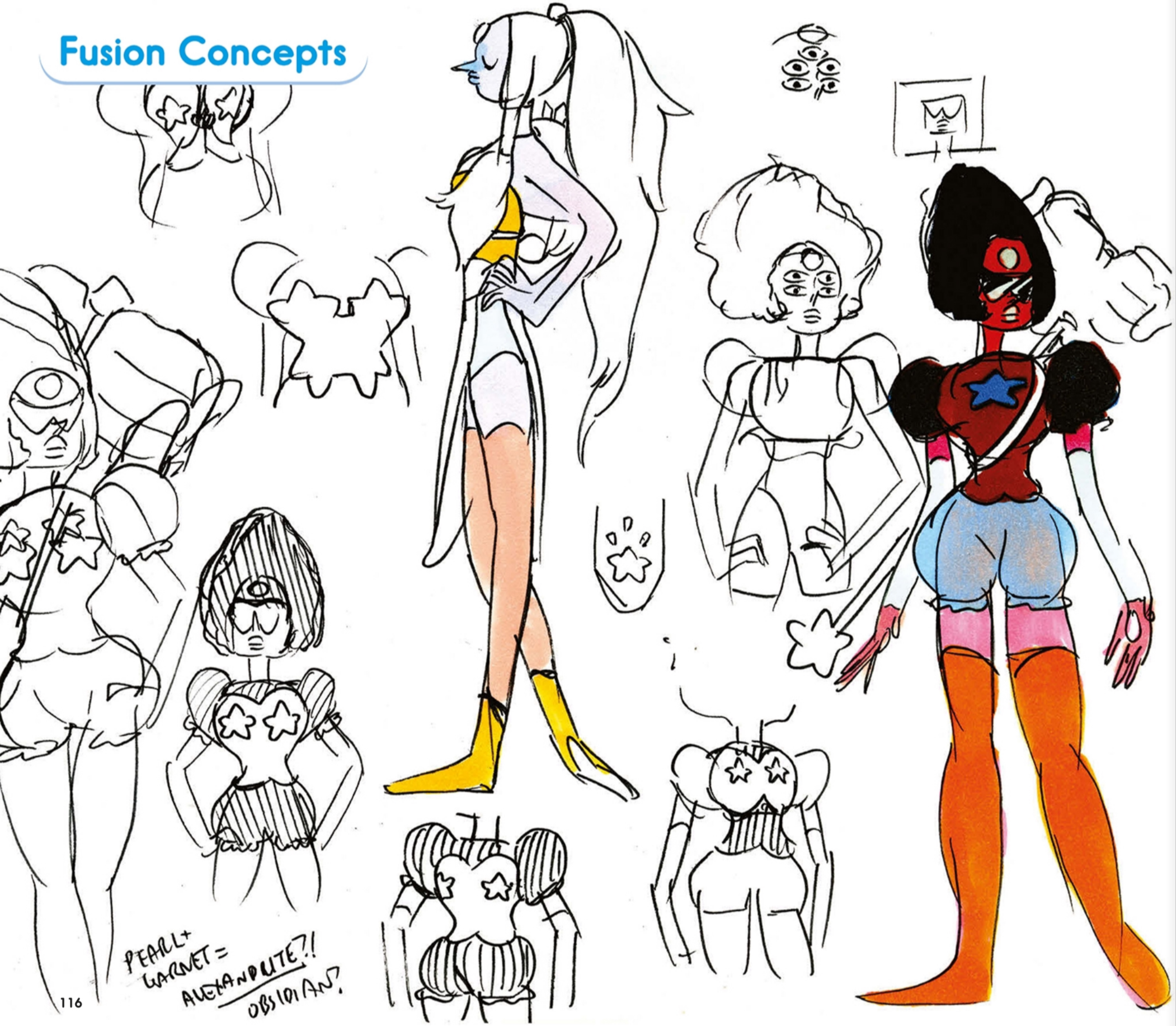
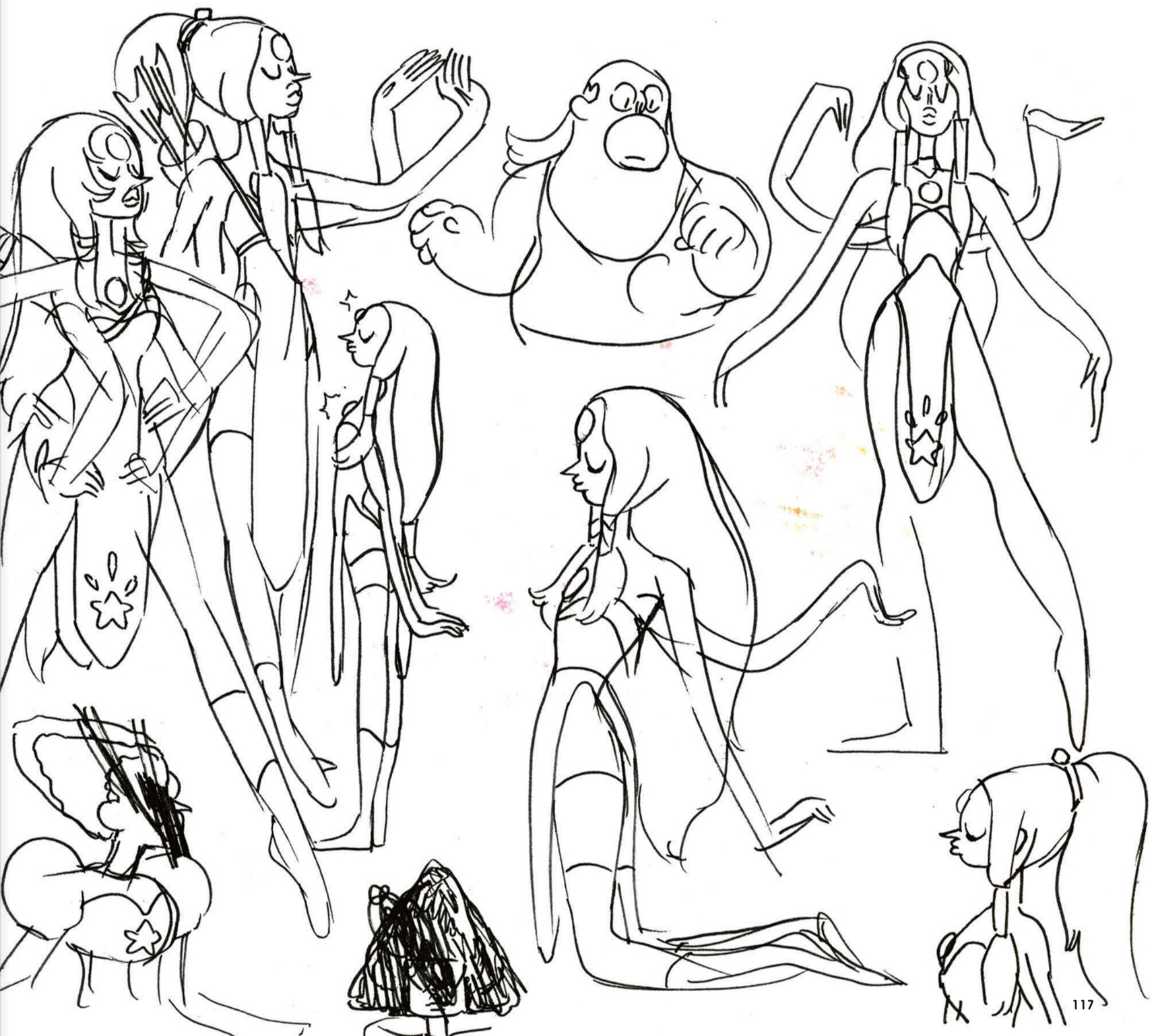
Fusion Concepts





(Continued from page 115)

came up with the idea to have Steven and Amethyst be invited over for dinner, and for Steven to have to play with Onion while the grown-ups talked. I think that happens to every kid. You get dragged over to some stranger's house so your parents can reminisce about college, and meanwhile, you're stuck in the basement playing with some kids you don't know. Anyway, I think that really made the episode a lot more real, relatable, and fun—while retaining the essence of the original idea.

The storyboards for each eleven-minute episode of *Steven Universe* are usually drawn by a two-person team. The two artists each shoulder half of the dialog-writing and drawing, preparing the episode's planned action in the form of comic-strip-like panels. Panels can appear deceptively simple; take two characters simply standing there in a scene, talking to each other, for example. However, many decisions have been made to create such a scene: how the background looks; what shot composition best communicates the mood and frames the action; the characters' staging, gestures, and expressions.

To some extent, the animation storyboard artist on a board-driven show like *Steven Universe* is performing the equivalent jobs of a live-action cinematographer, set designer, actor, writer, and director all at once, simply by making these decisions while drawing the panels of the storyboard.

The first pass is the thumbnail storyboard. Drawn in a loose, small version, with just enough visual information to communicate the ideas, thumbnails are created after the artists discuss their episode with their partner, select their sections to draw, and sketch ideas while thinking about the outline. Here, the board artists draw from personal experience to create the specific character mannerisms and dialog. Rebecca, for example, describes the quintessential *Steven Universe* feeling as that of hanging out with her kid brother, Steven, after school.

Lamar Abrams [storyboard artist]: Whenever I write Steven interacting with an adult or new Gem, I try to think of how I felt meeting adults I looked up to as a kid. It's a great feeling to be able to talk to an adult and they talk back to you like you're on their level. It's really empowering.

Matt: The one thing about being a kid I pull from is the feeling that everything you're doing is the most important thing in the world and all you care about when you're doing it. Kids can latch on to the most minor, innocuous thing and decide, "This is what I am going to be obsessed about for the rest of my life." I like how stories begin with Steven focused on one idea ("I made my finger a cat!" "I want to be like Lonely Blade!" "Let's build a spaceship!") and build off that, blowing that one idea out in as many ways as possible.

Lauren Zuke [storyboard artist]: I pull from the experience of getting bullied. And how I'd hope to handle that in the future. As a kid, you just accept that a bunch of people want to beat the crap out of you. You're young, and you don't know any better. It makes you feel bad. But as you get older, you learn what drives people, what your boundaries are. So I think of how I'd want kids to learn to respect themselves, and it takes a lot of hurting to learn that. I'm hoping what we say in the show makes those growing pains easier. Oh, and I scraped my knee once—I pull from that, too.

Amber Cragg [storyboard revisionist]: When I come into work, I feel like Steven does around the Gems; I'm surrounded by people I'm incredibly inspired by who have experienced so much more than I have, and through working on the show, I've learned so much and changed a lot as a person—like Steven, ha!

Kat: I spent a lot of time with my older sister growing up, so I really connect with the feeling of needing to catch up with adults and prove I'm an equal. A lot of my childhood was spent wishing I could just be an adult already. It took me a long time to learn that it was OK to be who I am in the moment; once I stopped acting like who I thought





Baseball themes relating to the episode "Hit the Diamond" (S3E5). **Top:** Drawing by Rebecca. **Bottom:** Drawing by Lauren Zuke.

I was supposed to be, my whole existence opened up. So I relate a lot to Steven in the moments where he's amazed by his peers, but also when he finds out that the adults in his life are just as confused and scared as he is, and when he feels misled by both their sheltering and his own idealism. I also relate to reacting to that by trying to buckle down, be optimistic, and find your own footing, which is something I think Steven becomes better and better at throughout the show.

Once the thumbnail board is complete, the storyboard artists pitch it to the whole crew, where feedback could result in significant revisions or very few changes at all. The artists know that any critique will come from colleagues who have only the best intentions for the show at heart. Thanks to a managerial approach that developed naturally, as an extension of Rebecca's personal philosophies, the creative atmosphere on *Steven Universe* is decidedly collaborative, passionate, and supportive; every crew member's voice is valued, and each is encouraged to express themselves freely. There are, however, times when ideas can clash. . . .

Rebecca: Often we're not coming from the same place, but we're trying to find some sort of bridge, and the bridge is what you see, it's what you hear, it's the whole thing, it's the act of trying to understand someone else's point of view. The show is a manifestation of that.

Kat: I'm always telling myself, "Be like water." On *Steven*, we are all making the show together. It's very rare for Rebecca to come down and say, "I don't like this; I want it to be this." I don't think she's ever said that. It's an ongoing conversation. Everybody in the story department is protective of their own ideas, and it's hard for them to come around to other people's ideas. You constantly have these two rocks, and I just want to be like water that is flowing between them and never rigid—which is difficult. And I don't always succeed [*laughs*]. But I think that is the most valuable lesson I'm continuously learning on this show.

Rebecca: It's often that I'm trying to find the "third thing." There will be a third thing that has something cool from both the things—at least that's my goal.

Ian: Or it's not even one of those three things, but it's a better, fourth thing.

Kat: Yeah, when the struggle of it caused you to go somewhere else that you wouldn't have otherwise.

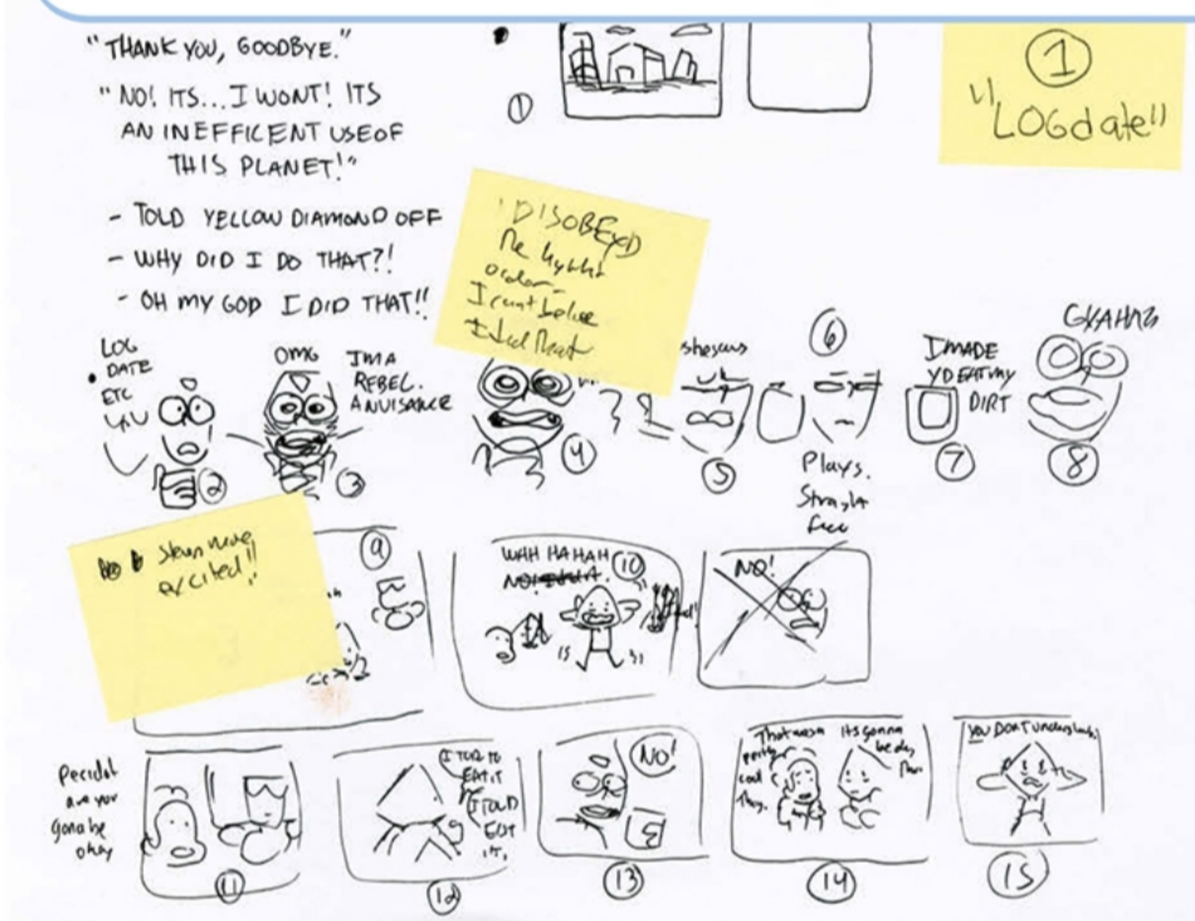
Joe: Originally, "Story for Steven" [S1E48] was going to be the first episode where the audience met Rose, instead of "Lion 3: Straight to Video" [S1E35]. I was adamantly against this because it meant that Rose's first introduction would have come through a flashback and not through Steven's perspective. The entire show is told from his perspective, and for the audience to be introduced to Rose—arguably the second most important character on the show—in a way that was outside of Steven's POV felt wrong. When Jeff [Liu, storyboard artist] and I were given the outline for "Story for Steven," I made a vigorous case for switching the episodes so that "Lion 3" would come when it did. This was the only moment on the show where I had ever had to argue for something, and I ended up not having to argue that hard.

Rebecca: I was really moved by Joe and Jeff's insistence on doing "Lion 3" first. They were absolutely right. But the outline was not approved yet, so we were living very dangerously by swapping it earlier in the schedule and handing it out first. And they changed a lot in the episode, especially the ending, which was originally supposed to be Greg filming Rose giving her speech to Steven. They changed it to Rose filming Greg because she loved him so much, which was brilliant. So simple, and everything the show is about. Rose is fascinated by human life and human beings and in love with this person. It was so much stronger this way.

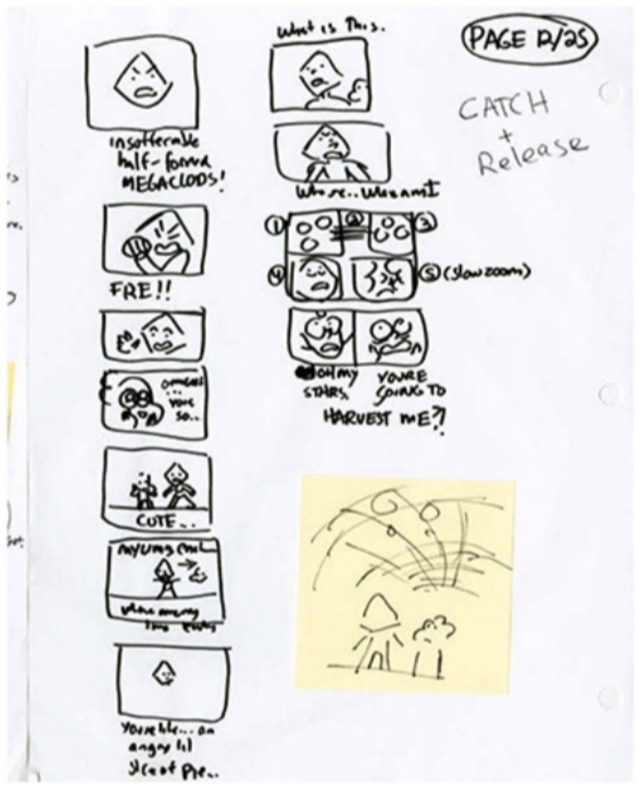
Matt: As Kat said, I'm almost always like the water. I really trust Rebecca's vision of the show, so I look to her for the direction we are moving in, and I'll

(Continued on page 124)

Pre-Thumbnail Storyboard Exploration







ACT 1

- ~~Peridot is excited.~~
- Her and garnet are close- how did they get there.

- PERIDOT doesn't want recorder anymore.

Life is experiences.
Sometimes sad, sometimes happy.
But we're living it together.
Something there's no right or wrong, there's just.. being.

ACT 2.

- First run in V. with Garnet. She doesn't like her here- shes always fused.

- Second Run in. doesn't understand Garnet. CONFUSION

SHARING EXPERIENCES + EMOTIONAL OPENNESS

LOG DATE

END.

- STEVEN GIVES RECORDER BACK.

ACT 3

- Third run in - sees opal. Garnet explains- sharing the experience.

G: USHOULDSHARE

"They're both fusions. So they want to share it. lessen the load. or make things brighter.

You don't understand.. you can't fuse.
→ I can!!
They try to fuse.

G+P TRY TO FUSE: FAIL

GARNET is bored with Peridot. "Sharing experiences, blah." Sort of deal.

"Do you.. want to make a recording with me.

G+P: SHARE ANOTHER WAY.

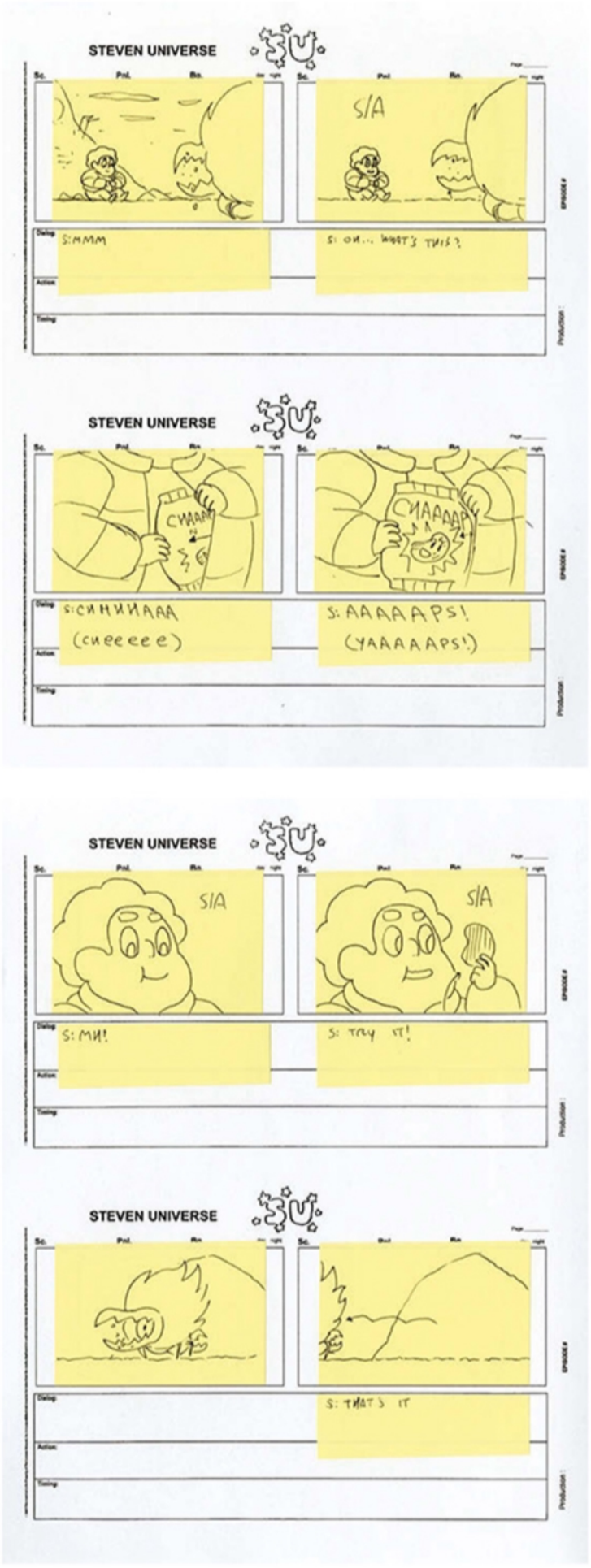
Opposite: Examples of Lauren Zuke's initial notes made as part of her storyboarding process.
Right: Thumbnail sketches made by Lamar Abrams in preparation for producing his rough storyboard.
Below: Ruby and Sapphire drawings by Joe Johnston made in preparation for storyboarding his section of the episode "JailBreak" (S1E52).



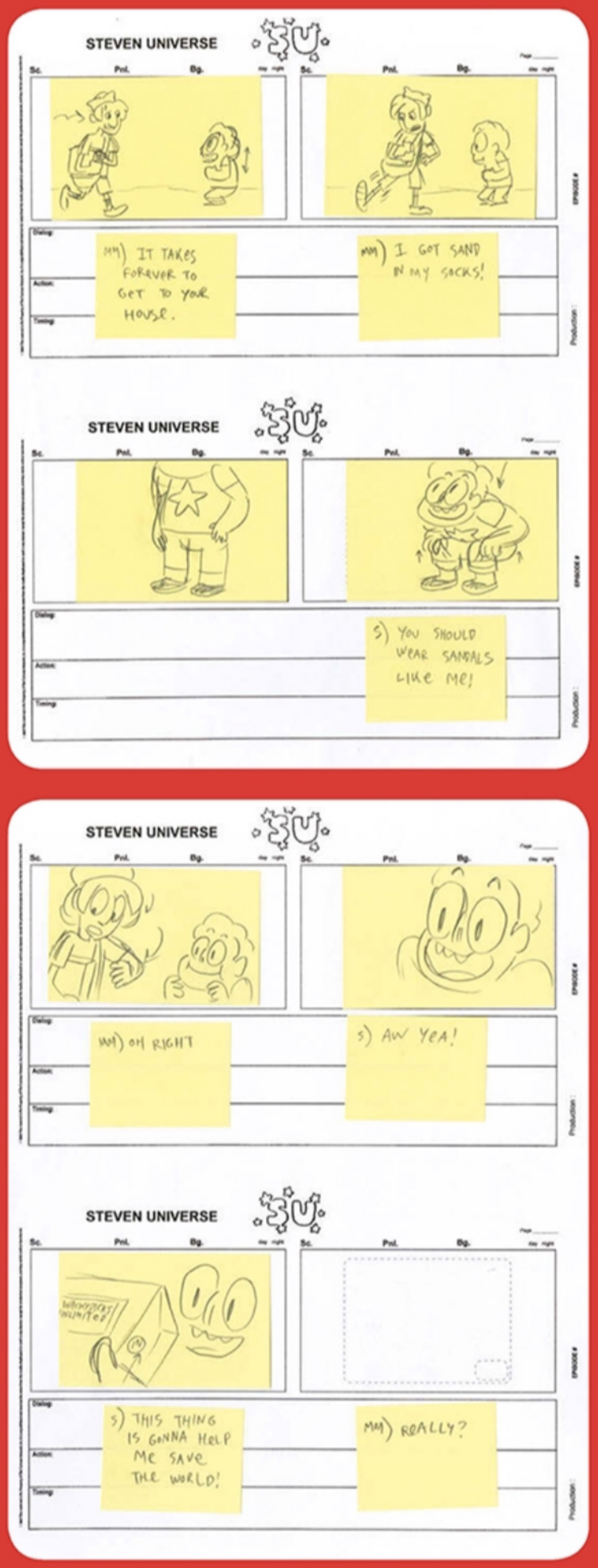


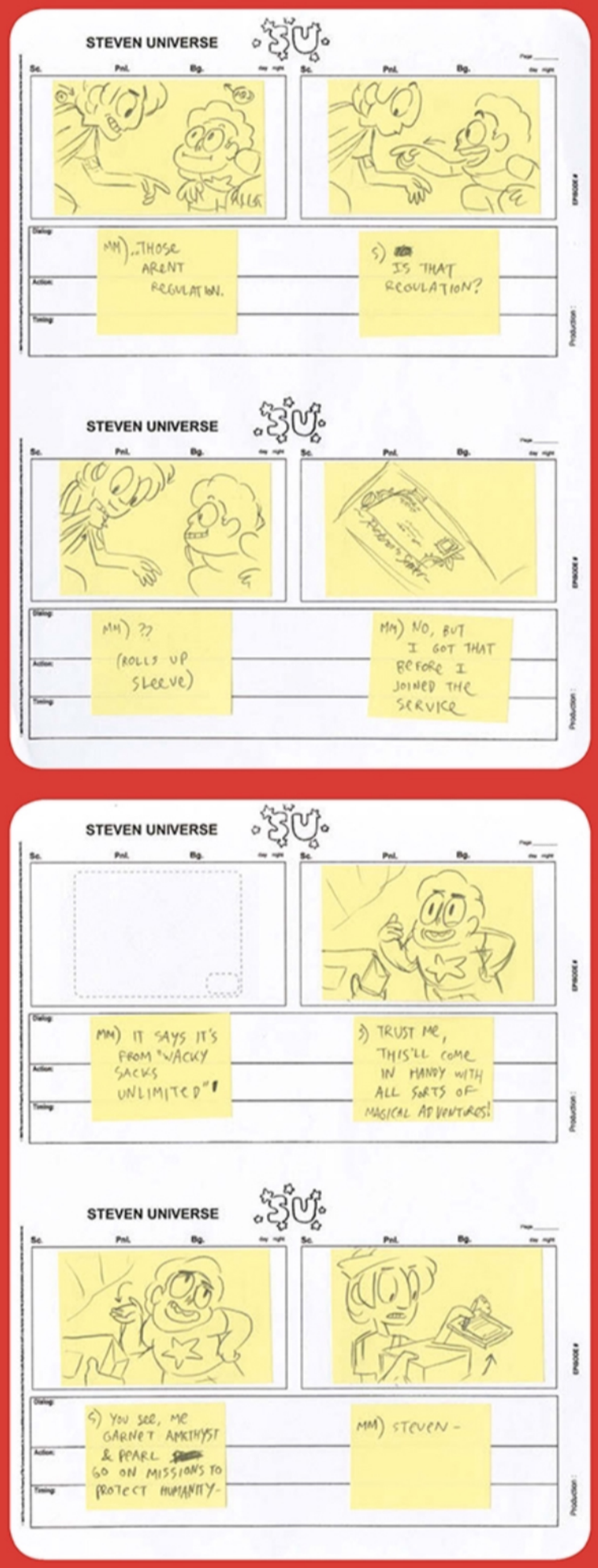
Thumbnail Storyboards

The thumbnail board is the first complete visual representation of an episode that a storyboard artist draws and pitches to the crew for feedback. **Below:** A section of "Monster Buddies" (S1E23), by Lamar Abrams.



An early thumbnail board by Ian Jones-Quartey for “Cheeseburger Backpack” (S1E3), which also introduces Jamie the mailman.







(Continued from page 119)

pitch in that direction rather than fight too hard for some idea I'm clinging to. For the episode "Gem Drill" [S3E2], I remember initially pitching a much more action-heavy version of it, but Rebecca wanted it to be a more cerebral story, so I switched gears to try to make that version work. Same with the episode "Message Received" [S2E25]. In the outline, I wrote this big slapstick chase between the Gems and Peridot, when Peridot takes off with the Diamond communicator, that I was really, really proud of. I could see it so clearly in my head. But it wound up boarded differently, and in the context of the episode, the scene accomplished what it needed to, so I had to let my version go. There was no point to push the board artists for dozens of new drawings when the story was already clear and working.

I'll be a rock when I have to in order to preserve some of the show's secrets. I've flipped out over some winking hints or references put in episodes that I felt tipped our hand a little early. For example, there was initially more attention paid to the portraits of the Diamonds in the Gems' first visit to the Moon Base, but a few people and I were very against it.

Kat: The two rules I fight to protect are, one, Garnet never asks questions, and two, we can see and hear only what Steven would be able to see and hear. Occasionally, someone will try to bend these rules to the point of breaking, and it becomes a big discussion. We all have specific ways we want to write episodes, but I think part of the appeal of *Steven Universe* is that we follow through with the things we set up for ourselves. Rules are important because they limit you—they force you to be creative and think past what you would normally do. Sometimes, you don't get what you want, but if you work at it, you'll find something better.

After getting feedback from the rest of the team, the storyboard artists return to their offices to draw a revised board incorporating any notes to fix problems and strengthen other aspects. These drawings are adapted from the thumbnail boards to full-size panels drawn digitally with storyboard software using a stylus pen on a monitor/drawing tablet combination that replicates the process of drawing with pencil and paper. The software eliminates the need to perform such time-wasting, noncreative tasks as hand-numbering panels and scanning completed pages.

The tightened up thumbnail storyboards are pitched to the crew once more and refined again as needed. When the storyboards are eventually approved, the result is a story that will flow as the characters interact in a natural way that's true to their personalities. But how does each individual artist work with the themes that Rebecca established when they are so intrinsically tied to her own personal experiences?

Matt: The secret is that no one is special. The secret is that everyone's experiences are universal, and certain volume knobs are turned up and turned down. To feel like, "Oh, I don't fit in"—I mean, I felt that. But the degree to which I felt that is different from other people's experiences.

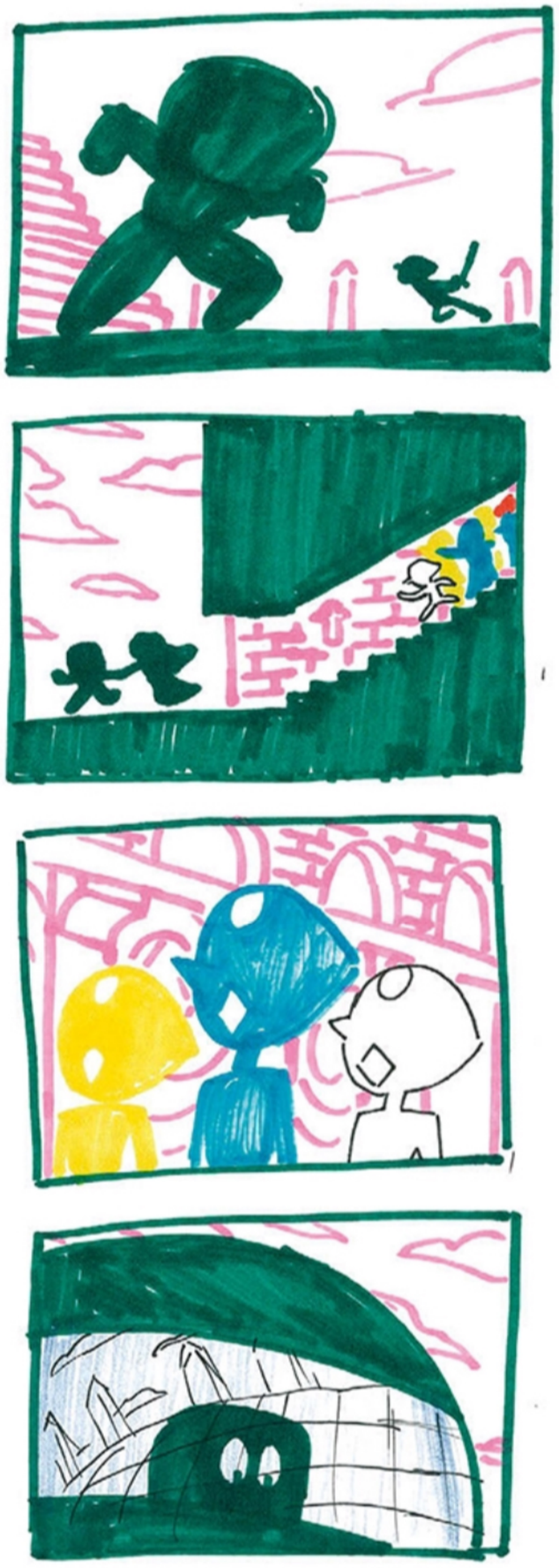
Rebecca: You could say "everyone is special" if you want to be less glass-half-empty about it. [*Laughs*.]

Matt: That's the way you deal with it, when someone brings something personal to the show. You can always find an "in," in your own way. You don't necessarily need to be like, "Ooh, I need to cram in my specific thing about it." It's more like, "OK, I know how that feels. So this is a story about that." So when you start reducing and reducing experiences to just feelings, it's like, "This is a story where Steven feels like he's just not good enough." That's a story that everyone understands, and that's the power of the show: It takes a lot of complex themes and issues, and it runs them through the filter of the fantasy world and these characters. So it becomes universal, and it goes out as this message that anyone can connect to.

Themes and Character Development

Wherever *Steven Universe*'s plot goes, it is always powered by the series' primary themes: love and





Ian Jones-Quartey's thumbnail concept drawings of the stylized sequence of Ruby meeting Sapphire in "The Answer" (S2E22).

family. Rebecca and her crew invest a lot of personal, emotional energy into creating each episode, so the way the core themes have emerged and developed over the seasons could be said to reflect the crew's own evolution as people and artists.

Rebecca: It happened really naturally. Family was bound to be the hugest theme because it's about Steven, who is my family. And love was bound to be important because I was working on it with Ian, with whom I'm in love. These were the things that were keeping me together through the whole show. So they became something that I needed more and more. When the show started, my motivation was, "I'm going to do a great job and be this great role model, and Steven is going to see me do this great job and think I'm great!" [*Laughs.*] And then, as I'm working on the show, I start to kind of melt down, because this is really hard to do—and it happens to all the characters; they start to really lose it. And then Steven is just there for them in the show, which is literally what was happening with us in the studio, too.

One of the most powerful explorations of the series' themes happens through the concept of fusion, or the merging of two or more Gems into a single being that shares a body and a consciousness, without losing the individual Gems' identities—a delightful sci-fi facet of the series, with rich metaphoric possibilities. In Homeworld Gem society, the only acceptable usage of fusion is among Gems of the same kind; for example, five rubies fusing to create a mega-ruby with multiplied strength to perform their role as bodyguards. When a task is done, the fusion separates, as its practical function is complete. Any other usage of fusion is frowned upon, looked on as a perversion or even a crime. On Earth, however, the Crystal Gems have shed the oppressively conservative views of Homeworld.

Garnet's duality is a surprise only revealed many episodes into the series. In "The Answer" (S2E22), Garnet tells Steven the story of her own birth through fusion: 5,750 years ago on Earth, common bodyguard Ruby, in a heroic effort to save rare, aristocratic Sapphire from a Crystal Gem attack, lunges at her and they unexpectedly fuse. As surprised as those around her (including Rose Quartz and Pearl, her attackers), the fusion separates. Escaping the now-hostile court, as Blue Diamond vows to shatter them for their deviance, Ruby and Sapphire take refuge on Earth's surface, where they realize their mutual attraction is a new and powerful reason to live in a now-uncertain future. They sing a duet, "Something Entirely New," and fuse once more into Garnet.

> Where did we go?
> What did we do?
> I think we made something
> Entirely new
> And it wasn't quite me
> And it wasn't quite you
> I think it was someone
> Entirely new

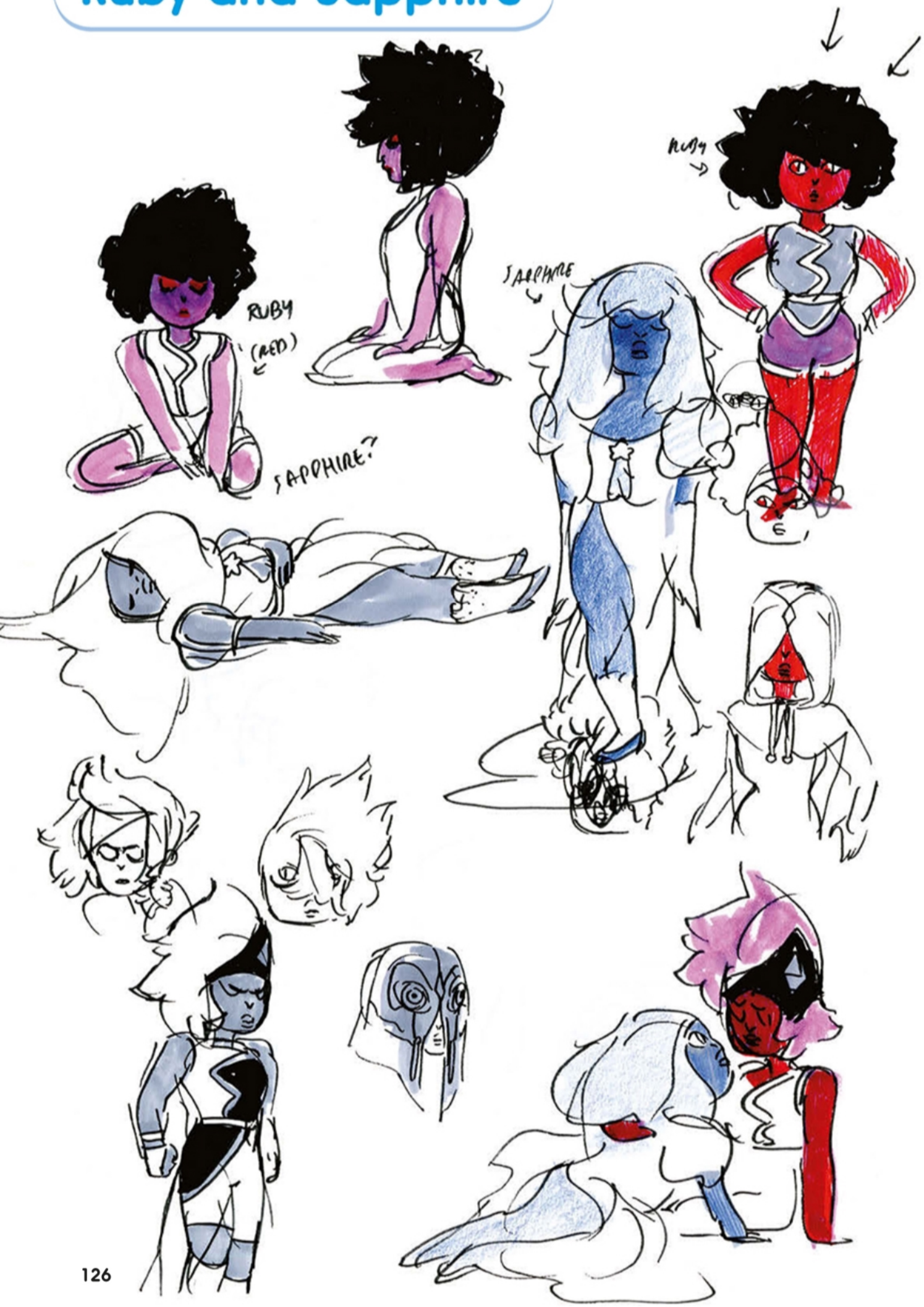
"No more questions. Don't ever question this. You already are the answer," says Rose Quartz when she finds them again, elated with their expression of love.

Rebecca: Garnet is, in a lot of ways, Ian and me, because we were running the show together and we were literally never apart. We'd spend all day working on the show together; we'd go home and spend all night together because we live together. It was incredibly difficult but also incredibly rewarding, and then that became a lot of what we started to do with Garnet. The way she talks about her parts is related to the constant communication, openness, and balance between being emotional and being rational that was necessary for us. I mean, there was just no other way for our relationship to survive when we were working on this show. We learned a lot.

Ian: It's funny, because all the Ruby and Sapphire stories are kind of about two people who love each other very much who are forced to work together [*laughs*] and are never ever apart—

(Continued on page 128)

Ruby and Sapphire









Development drawings by Rebecca.
Opposite bottom right: The definitive sketch that the storyboard artists referenced when drawing Ruby and Sapphire's debut episode.



Rebecca: In cartoons, when you want to have two characters who are "meant for each other," I think it's hilarious that they're often identical looking—two of the same animal, for example, except one is "normal" and the other has a bow and eyelashes! Everyone can understand these two ought to be together! I wanted to make a couple that would be the complete opposite of that but just as iconic. When you see them together, you realize they're a perfect match, and their relationship makes total sense to you because you've been getting to know it in the form of Garnet for fifty-two episodes.

(Continued from page 125)

Rebecca: And they manage to keep a bunch of people together who are also going through a really, really hard time.

Ian: Exactly.

Steven: I remember there were early ideas where Ruby and Sapphire were always fused together because they were coping with the trauma of Rose dying. But the way it turned out is so much more truthful to something real and relatable—they just want to be together.

Rebecca: Yeah, it turned into something real.

Using fusion as a metaphor for relationships, *Steven Universe* is notable for its portrayal of positive relationships that grant strength that rises to a heroic level. Conversely, the show offers examples of negative relationships that can hurt, cloud judgment, and change someone into something that they don't want to be.

Rebecca: Fusion can represent all sorts of relationships. Garnet is a romantic relationship. Smoky Quartz is a sibling relationship. Malachite is a toxic relationship. It's exciting to me to have a way to make relationships into characters. It's exciting to be able to show kids the compelling, kinetic power of a really positive relationship. In addition to relationships, the series also portrays a variety of LGBTQIA+ identities, body shapes, and hues of skin in a colorful, sci-fi-magic display of diversity.

Kat: I like that the exploration of those concepts comes about organically, rather than being overly calculated. It helps that it's built into the show, though; I feel like we're often just being true to the characters by having them wear things or act in a way that might be defying standards. I'm thankful that my coworkers are supportive of that kind of thing.

Lamar: I love that Steven seems to take everything at face value. When he meets a new character, whether it's a new Gem or fusion or whatever, there's just acceptance. He's not looking for a hidden meaning or for there to be something else to what he's seeing. I really appreciate that. I think it's important to see characters accept the things around them for what they are.

Matt: The show is, I think, very aspirational in its exploration of gender—it presents the world the way it probably *should* work. Within the show, we have characters who have prejudices, but Steven sees past that and helps others to see past that, too. I think doing stories that specifically tackle these issues is important, but I love that we can, at times, offer stories that just include and celebrate a diverse cast of characters doing cool stuff and having amazing adventures. It normalizes the many ways a person can be without ignoring them and who they are.

Lauren: When a Gem fuses with another Gem, they are still themselves, but also someone else. When discussing gender expression and identity as it relates to fusion, the metaphor I'm going for is that for some people—not all, of course—finding and accepting their gender is not a transformation with a defined end point, but an experience and a journey. That's what fusion is to me, at least.

Personally, I'm happy to not have to think, "I'm writing a character based on my queer experiences." [*Laughs*.] That would be so hard! I'm just writing from my perspective, and I happen to be queer. I think that's what makes the show feel natural when it comes to that. It's a fine line between defining something so that people are aware it exists, which is so important, but also letting it breathe, so it's not forever contained in a box labeled "queer media."

Fusion can also mean different things in different contexts. Even though Garnet is an almost permanently fused being based on two individuals' love, she and the other Crystal Gems still routinely fuse into all sorts of combinations to use their multiplied strengths when needed. Jasper, a huge, high-ranking Quartz soldier, mocks the Crystal Gems' use of fusion to fight her, implying that they know only one





Rebecca and Joe Johnston's concept drawings of Malachite (top), the fusion of Jasper and Lapis Lazuli; Sardonyx (left), the fusion of Garnet and Pearl; and Alexandrite (above), the fusion of Garnet, Amethyst, and Pearl all together.

trick and are too weak to face her as themselves. In "JailBreak" (S1E52), Jasper herself is temporarily defeated through forced fusion—imprisoned in a joint body, Malachite—with Lapis Lazuli, who has to use all of her energy to hold their unsavory fusion together on the bottom of the ocean. In "Earthlings" (S3E23), when faced with battling Smoky Quartz, the fusion of Steven and Amethyst, Jasper elects to fuse with a corrupted Gem creature to match their might. Instead of catching victory, Jasper contracts the beast's corruption, which spreads through her body like a disease.

The most compelling instances of fusion happen off the field of battle. In "Alone Together" (S1E37), Steven, who is half-Gem and half-human, surprises the Crystal Gems when he accidentally fuses with his human friend Connie, into a being called Stevonnie, while they are dancing together on the beach.

Rebecca: One of my goals with "Alone Together" was to show the importance of consent. I wanted to find a fun, engaging metaphor to show how great it is to respect and feel respected by your partner, and how to stay comfortable with each other while you're navigating something new. That's part of the reason why Kevin is the negative force in that episode: Kevin is encroaching on Stevonnie's personal space and making Stevonnie extremely uncomfortable by not listening to them. I really wanted to put the audience in Stevonnie's shoes and make it clear how awful that is. Don't become Kevin! Become Stevonnie! Respect yourself. Respect each other.

In an earlier episode, "Giant Woman" (S1E12), it was implied that the Gems thought Steven would be able to fuse one day, but fusion with a human was not what they imagined. "A Gem fusing with a human being . . . it's impossible! Or, at the very least, inappropriate," says Pearl, perhaps revealing some of her own prejudice against human and Gem relationships. Garnet, however, is extremely supportive, and explains to Stevonnie, "You are not two people, and you are not one person. You are an experience. Make sure you're a good experience. Now go have fun!"

Stevonnie, a tall, confident young person, draws the attention of teenage girls and boys alike. Their fusion represents Steven and Connie's close friendship, and perhaps mutual attraction, but the show team is protective of their relationship, determined to keep it "pure." "The pure love of children" is a slogan often heard in story meetings, inspired by the example of the eleven-year-old protagonists Conan and Lana in *Future Boy Conan*, a favorite during Rebecca and Ian's days living together in Brooklyn. In this animated series, Conan and Lana's "pure" love grows into a romantic yet still innocent one.

Ian: Steven and Connie love each other in a pure, non-adult way.

Rebecca: It's that eternal love that could withstand anything.

Characters grow; relationships change. Steven's world evolves as he learns, and the simple ideals that he stands by are challenged.

Jeff Liu [storyboard artist]: At the start of the show, Steven knows and understands very little about the Crystal Gems. He simply looks up to them as his perfectly capable guardians. As the show progresses, Steven realizes that beneath the polished surface, Garnet, Amethyst, and Pearl all have serious flaws as well. The dynamic between them changes in that Steven's admiration becomes more complex. Rather than admiring the Crystal Gems for being perfect, he admires them because he understands their vulnerabilities, too. In accepting their flaws, and in accepting his own, he begins to mature into a stronger hero.

Matt: Testing Steven's optimism is such a major part of the later seasons of the show. The world can be complex. But complexity isn't a bad thing. It's just a level of information you have to process. It's up to you what you want to focus on and champion. What Steven will choose to take away from the complexities of the world he uncovers will be the ultimate question for the show to answer.

(Continued on page 134)

"Island Adventure" Storyboards

Storyboard by Raven Molisee.

Scene 141 | Panel 2

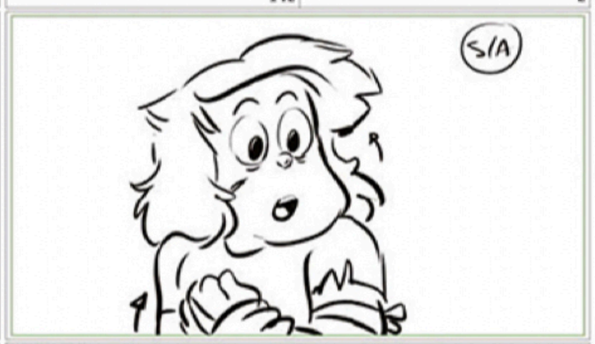


Dialogue
Lars: What if I never get back home?

Scene 142 | Panel 1



Scene 142 | Panel 2



Dialogue
Sadie: Oh! You're just really home sick!

Action Notes
Sadie up (hopeful)

Scene 142 | Panel 3



Dialogue
Lars (o/s): "UH!"

Action Notes
Sadie jumps back a little

Scene 143 | Panel 1



Dialogue
Lars: "Whadja THINK--?"

Action Notes
Lars with really angry/annoyed expression

Scene 144 | Panel 1



Action Notes
-SP- Sadie flinching

Scene 144 | Panel 2



Action Notes
Smiles meekly at Lars

Scene 145 | Panel 1



Action Notes
Lars looking at Sadie with equal mix of anger and fear

Scene 145 | Panel 2



Action Notes
He shys away for a second, realizing what he's doing

Scene 145 | Panel 3



Dialogue
Sadie (o/s): No, "I'ts ok..!"

Action Notes
Lars sits and looks at the ground for a second

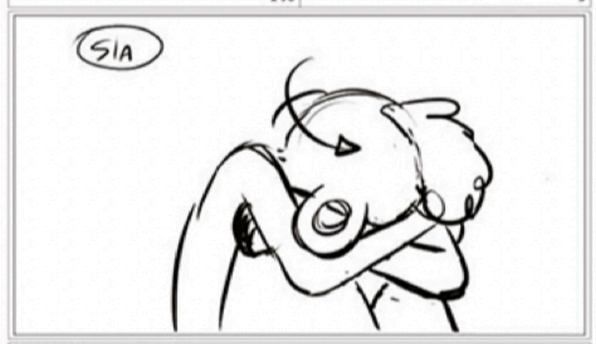
Scene 145 | Panel 4



Dialogue
Lars: (Breaks down crying softly)

Action Notes
Then breaks down a little after Sadie's affirmation

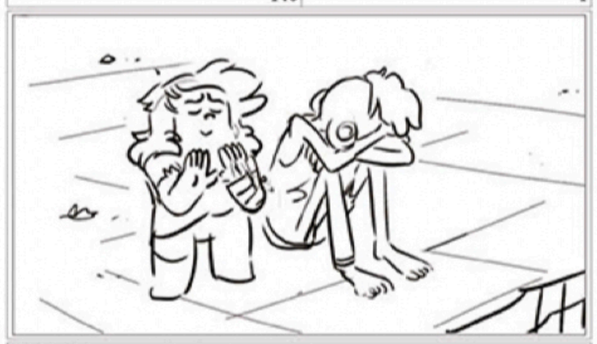
Scene 145 | Panel 5



Dialogue
Lars: (cries softly to self)

Action Notes
hides his head in his arms

Scene 146 | Panel 1



Dialogue
Sadie: We're

Action Notes
-SP-

Scene 146 | Panel 2



Dialogue
Sadie: ok!

Action Notes
Sadie sets her hand forward with dialogue

Scene 146 | Panel 3



Dialogue
Sadie: Steven said the Gems--

Action Notes
Sadie sits down next to Lars - puts her arm around Lars back.

Scene 146 | Panel 4



Dialogue
Sadie (cont'd): could be coming for us any day!

Action Notes
Sadie pulls Lars close.

Scene 146 | Panel 5



Dialogue
Sadie: And, you know, until then--

Scene 147 | Panel 1



Action Notes
-SP-

Scene 147 | Panel 2



Dialogue
Sadie: I got your back!

Action Notes
Sadie moves West - lifts her right arm IN.

Scene 147 | Panel 3



Action Notes
Sadie feels something and reacts.

Scene 147 | Panel 4



Action Notes
Sadie looks O/S - South.

Scene 148 | Panel 1



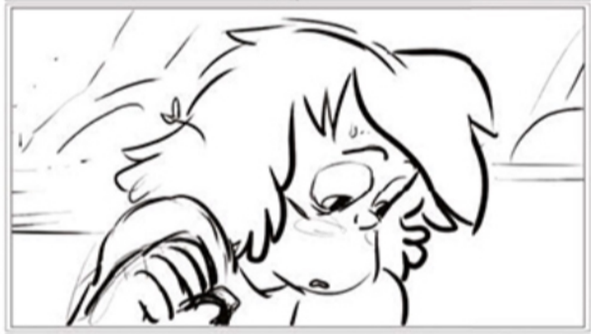
Dialogue
Lars (o/s): Sadie...

Action Notes
Lars tenderly picks at Sadie's wounded hand.
Cycle poses

Scene 148 | Panel 2



Scene 149 | Panel 1

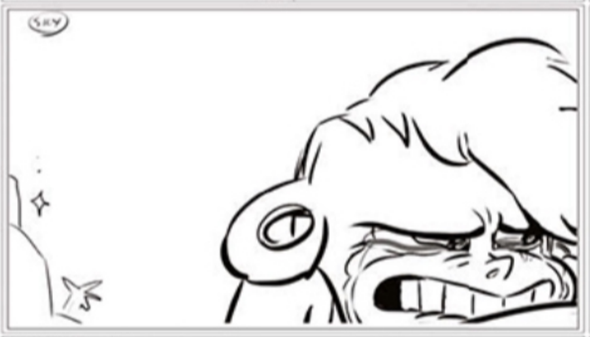


Scene 149 | Panel 2



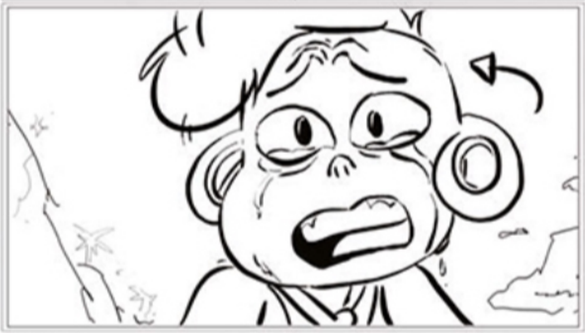
Action Notes
Sadie looks up at O/S Lars - East.

Scene 150 | Panel 1



Action Notes
Lars with tears, red eyes and biting lip

Scene 150 | Panel 2



Dialogue
Lars: D-do you ever get lonely?

Action Notes
Lars looks at O/S Sadie - West. Questioning and lost look on his face.

Scene 150 | Panel 3



Dialogue
Lars: Even when you're around people?

Action Notes
Lars squints with dialogue, squeaking, just barely able to get it out. Tears roll down his cheeks

Scene 151 | Panel 1



Action Notes
Sadie looking on with concern

Scene 151 | Panel 2



Action Notes
Head up and nods earnestly--cycle poses 2-3-2-3-2-3

Scene 151 | Panel 3



Action Notes
Cycle poses 2-3-2-3 Then settles for a second

Scene 151 | Panel 4



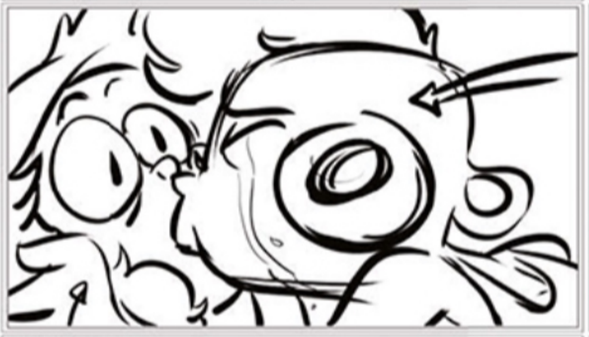
Action Notes
Lars lurches IN - East.

"Island Adventure" Storyboards

Scene 151 | Panel 5



Scene 151 | Panel 6



Action Notes
Lars kisses Sadie - grabs her head with his left hand.

Scene 151 | Panel 7



Action Notes
Lars pulls Sadie's head closer.

Scene 152 | Panel 1



Action Notes
Sadie with mouth and hands on Sadie/ Sadie in shock

Scene 152 | Panel 2



Action Notes
Sadie lifts her right hand as Lars pulls her up and starts making out with her

Scene 152 | Panel 3



Action Notes
Lars pushes into kiss, Sadie still in shock

Scene 152 | Panel 4



Action Notes
Suddenly Sadie wraps her hands around Lars and starts getting into it

Scene 152 | Panel 5



Action Notes
Lars and Sadie kissing intensely, Sadie's hands rapidly movin(over Lars' back.

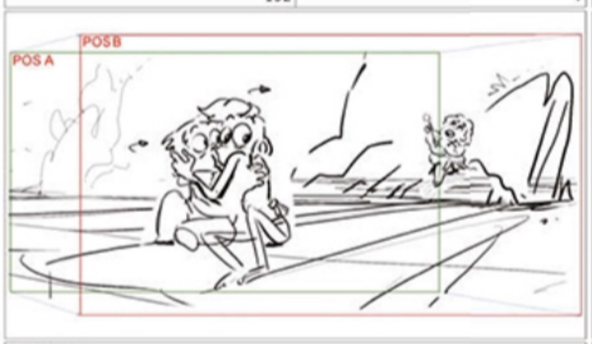
Scene 152 | Panel 6



Dialogue
STEVEN (os): <Starts to sing>

Action Notes
Lars and Sadie kissing intensely, Sadie's hands rapidly moving over Lars'

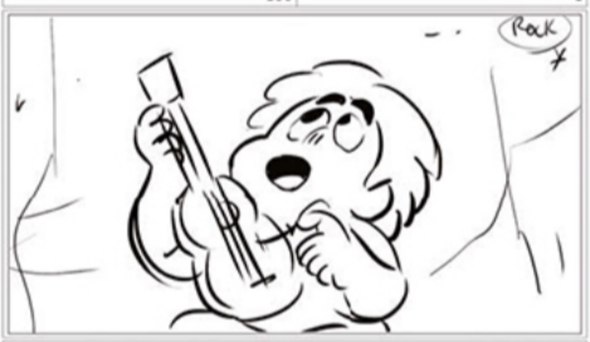
Scene 152 | Panel 7



Dialogue
Steven <singing> "Just be"

Action Notes
Lars and Sadie look - East.

Scene 153 | Panel 1



Scene 153 | Panel 2



Dialogue
Lars and Sadie (o/s): Steven!!

Action Notes
Steven stops playing - reacts - looks O/S FG - West.

Scene 154 | Panel 1



Dialogue
Lars: How long have you been watching us?

Scene 154 | Panel 2



Dialogue
Sadie: Don't you know what privacy

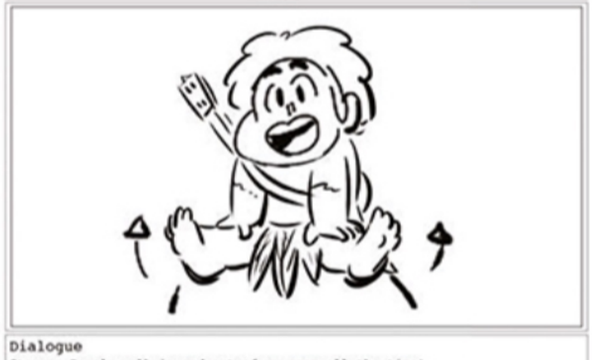
Scene 155 | Panel 1



Dialogue
Sadie (o/s): is??

Notes
Does the Uki need to be H.U. to previous? (or can be ignored?)

Scene 155 | Panel 2



Dialogue
Steven: People walk in and out of my room all the time!

Action Notes
Steven kicks his legs up.

Drawings from Lamar Abrams's sketchbook.

(Continued from page 129)

Lamar: I feel like there's this idea that kids have to become unhappy or bitter as they get older. It's like experiences are supposed to change you into an adult who has a clear view of the world. Steven deals with the world in a way that is comfortable for him, and as long as he can adjust to new information and process it, he'll be just fine.

Ben: Lamar is a living example of maintaining a sunny outlook on life.

Amber: I think what's so incredible about Steven is his ability to bring things back around to the positive. When things get rough for him and the Gems, he reacts accordingly, he gets scared, he gets angry, he gets hurt. But after everything, he has the power to learn, understand, and communicate to others that there's life to be lived after something bad.

Living with an absence in his life has always been Steven's reality. Though he never met her (because she gave up her physical form so that he could exist), Steven's mother, Rose Quartz, still evolves as a character as Steven and the audience learn more about her, piece by piece. Initially, Rose Quartz is an idealized mother figure—a loving, protective being full of empathy and compassion for all living things; a healer of the injured; a righteous warrior; a goddess of virtues. In an emotional scene from "Lion 3: Straight to Video" (S1E35), Steven sees her in motion and hears her voice for the first time on an old videotape that she recorded for him to find in the future.

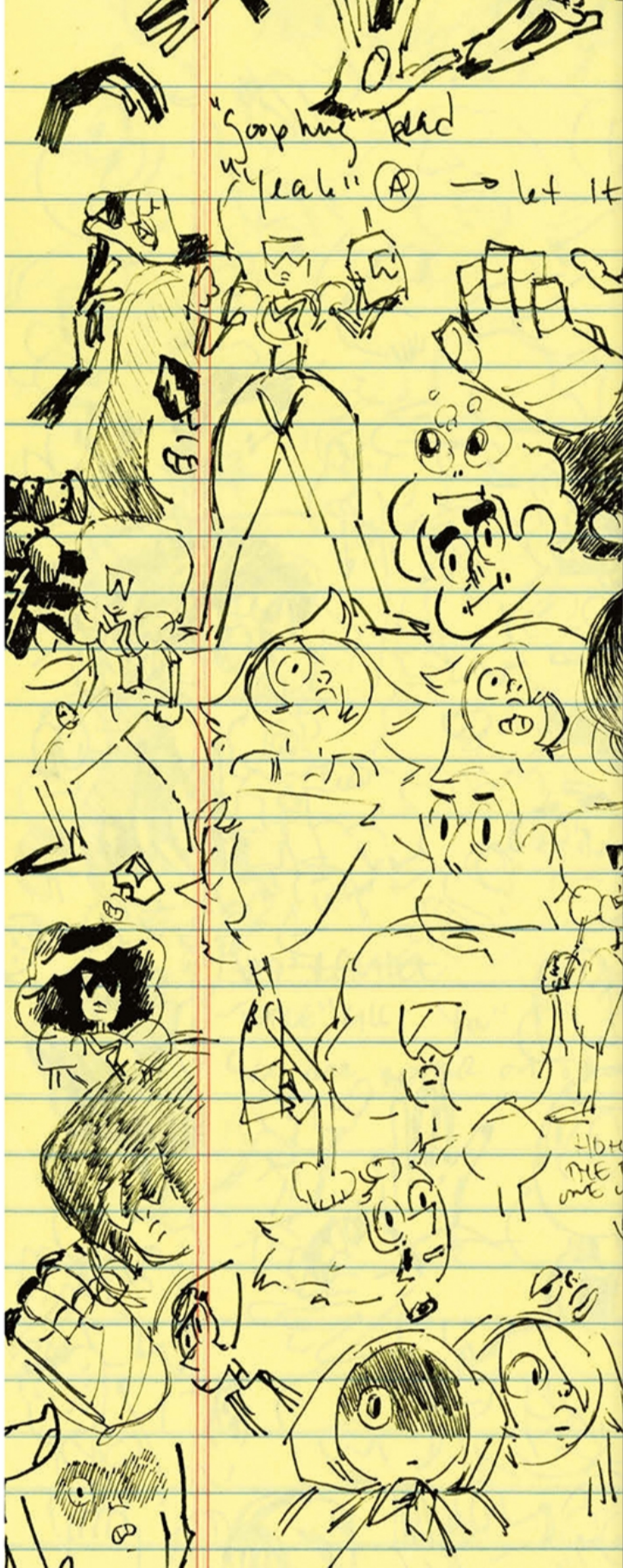
> Isn't it remarkable, Steven? This world is full of so many possibilities. Each living thing has an entirely unique experience. The sights they see, the sounds they hear. The lives they live . . . are so complicated. And so simple! I can't wait for you to join them. Steven, we can't both exist. I'm going to become half of you. And I need you to know that every moment you love being yourself . . . that's me . . . loving you and loving being you . . . because you're going to be something extraordinary . . . you're going to be a human being.

Rose's absence is also the source of bubbling angst, longing, and perhaps even buried resentment among the Crystal Gems.

Matt: To me, there are two Roses. The perfect goddess Rose that other people paint a picture of in the first couple seasons, and the actual Rose, who was as flawed as anyone. I love that when you see Rose in flashbacks, she is goofy and funny and even laughs like Steven does. You'd assume he got all that from Greg, but a lot of it is from her. Revealing that the Gems, all of them, are way more human than they think is central to the show, and Rose is a great way to explore that. Creating this idealized memory of someone and gradually pulling it back and showing that "Hey, this person actually wasn't perfect all the time" poses such an important thing people need to wrestle with. Do her flaws change how the characters and audience feel about her? Or do you learn to accept the complexities and contradictions that every human exhibits over the course of his or her life?

Lauren: Rose is complicated. She's not this perfect thing Steven or the other Gems expect her to be. I think an important lesson for Steven is to find himself and not rely on Rose's image as guidance for everything, because everything within the show has a moral grayness. To say Rose Quartz encapsulates all that is good and powerful about a mother character would take away so much depth of what humanity actually can be—hurtful people, conflicted people, people who can't or don't want to be healed—which I don't think Rose ever got to learn. Maybe Steven can learn that. To me, Rose is an example of what happens if you admire an *idea* of a person.

Hilary: I've always seen Rose as a parent. We write the show through Steven's point of view, so early on, he and the audience see her the same way that all young kids see adults. She was powerful; she knew what to do and how to make it right. Kids grow up, though. Eventually, you learn—spoiler alert—that parents are just people, too. Rose's title of being





Kat Morris's notepad gets thoroughly doodled upon during the many different creative meetings that make up the weekly schedule for *Steven Universe* production.

"Steven's mom" or "the leader of a rebellion" never negates the fact that she was always her own person with her own struggles. The trick is: Steven and the audience can only come to know this with time, knowledge, and sympathy.

Each of the Gems also has been changed by life on Earth; they've spent thousands of years protecting it and living among its humans. As earthlings, the storyboard artists and writers use their own lives to imagine Earth's influence.

Lauren: We're all from Earth—I think—so that's how the Gems end up so . . . Earthy. But Peridot is definitely the most self-indulgent character I've ever written. So I channel her from . . . me.

Twitter, "shipping" [imagining romantic relationships among fictional characters for personal enjoyment], obsession with television—anything is fair game. I am able to draw directly from what I am into currently to make a lifelike character, like someone who is really plucked from their planet and thrown into our current world. I want Peridot to show that you can be hyperactive, obsessive, anxious, struggle with social situations, and have weird rituals and ideas, but in the end, still be loved and have the capability to love if you are honest and open. That's something I learned here, on . . . Earth.

Ian: For Peridot, something that I was trying to champion in the writers' room for a long time before she even existed, was that I love when alien characters in media are like, [in a monotone voice] "Yes, I will try some of your disgusting human food, Earthling." I wanted a straight-up corny alien in the show.

Rebecca: A lot of Peridot for me comes from my interactions with friends when I was growing up as a Jewish kid. A lot of kids I knew had no problem telling me, "I think everything you believe is wrong," but it didn't mean they weren't perfectly sweet kids, or that we couldn't be friends. We'd just been raised differently, and we believed different things.

With Peridot, I loved the idea of her starting as this wacky Saturday-morning cartoon villain, at odds with everything the Crystal Gems believe in, but as you come to understand her better, she gains more dimension. She isn't maniacal, or arrogant, she's actually very humble. She believes she exists to serve Yellow Diamond, she wants to do a good job, and she's frustrated that the Crystal Gems are disrupting what she believes to be a system that makes sense and benefits everyone. But she slowly starts to realize why that system failed Pearl, Amethyst, and Garnet, and as she begins to respect their integrity, she starts to consider a world where they could coexist. That's her big pitch to Yellow Diamond: Wouldn't it actually make *more* sense to coexist with different life forms and benefit from their differing points of view? But how do you get someone there who's been in a bubble where they've never had to hear a contrasting opinion?

Ian: And that's where Peridot's catch phrase "CLODS!" came from. We were talking about how to change someone's mind. For example, Carl Sagan was a great example of how to express one's feelings on the wonders of the universe and existence in such a positive way. When he describes evolution, it's almost spiritual. Contrast that to a holier-than-thou braniac yelling, "Evolution is real, you CLOD!" [*Laughs*] That became a catchphrase of mine for a while.

Rebecca: Yes! Ian used to say that all the time, and I would laugh my head off.

Lauren: And of course there's Lapis. We're starting to see how living on Earth is affecting her. She's gaining Earth habits through Peridot, like watching TV and creating art, but also has her own spin on it, because she's Lapis. She's the introvert to Peridot's extrovert. I write her from the experience of when I want to sit inside and not do anything but focus on myself and process—and I want to show that that's OK, too! So both of them are different versions of the Earth experience.

To me, no single person is just Lapis, Peridot, Pearl, Garnet, or Amethyst. We see a bit of ourselves

(Continued on page 140)

Smoky Quartz







Above: Drawing by Lauren Zuke. **Below, left:** Drawings by Rebecca. **Far left top:** Drawings by Danny Hynes. **Far left bottom:** Drawing by Joe Johnston.



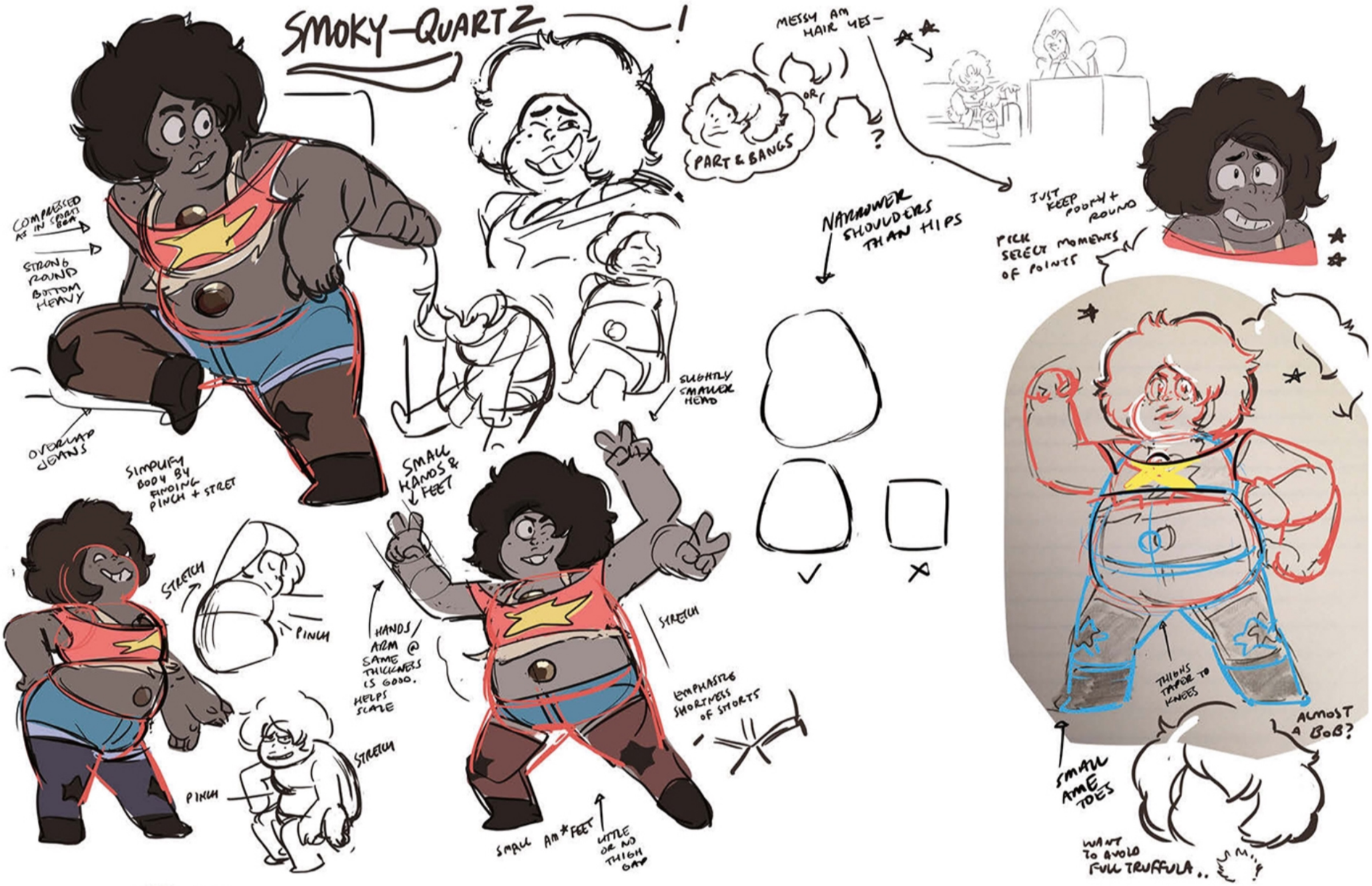














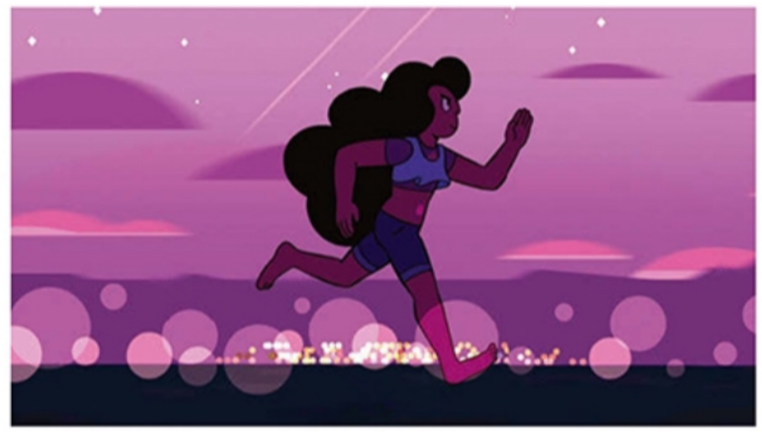


Above: Smoky's design gets refined. Drawing by Rebecca and draw-over lines and notes by Danny Hynes. **Left:** Smoky Quartz sketches by Kat Morris.

Stevonnie

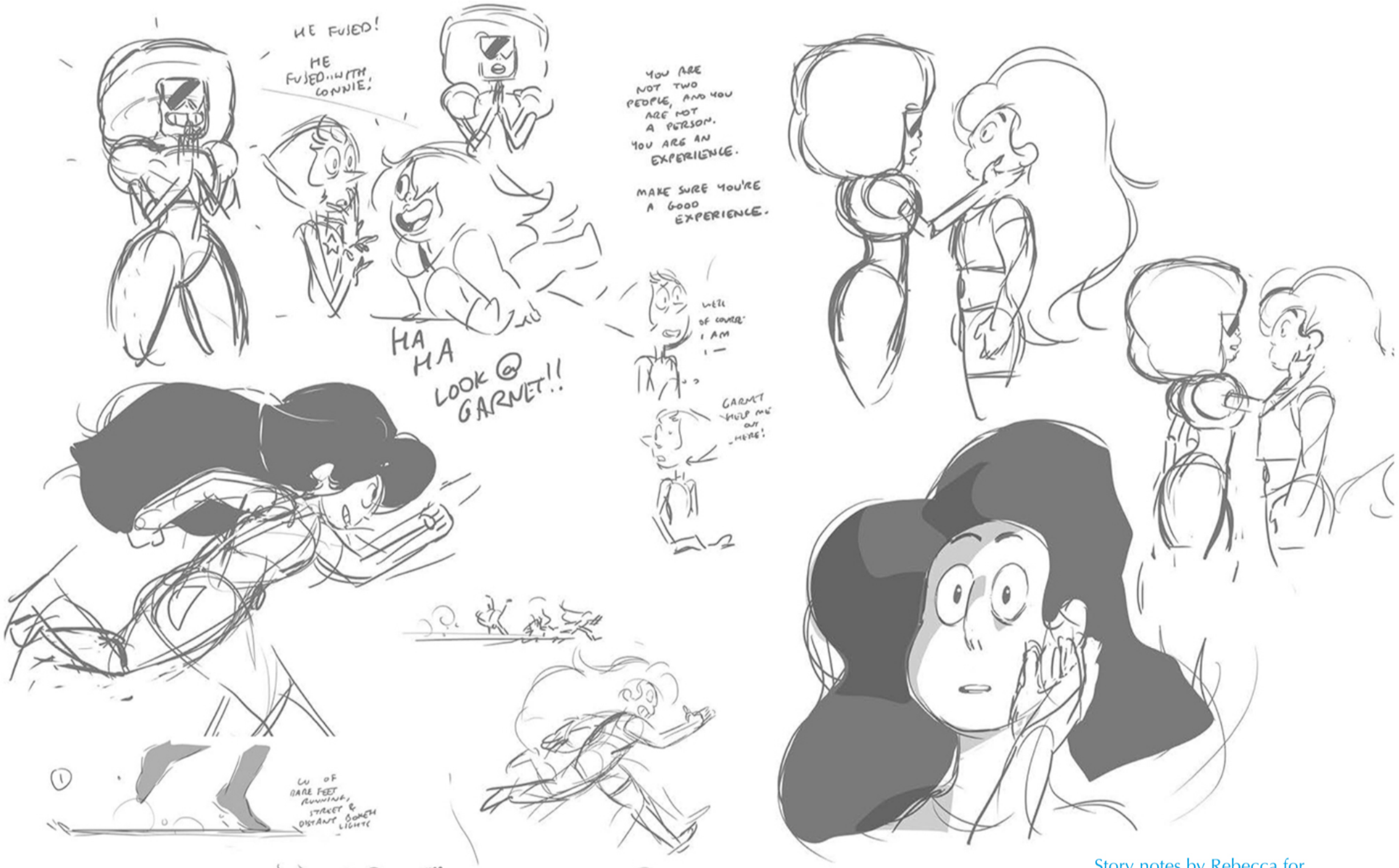








Development drawings
of Stevonnie by Rebecca.



Story notes by Rebecca for Stevonnie's debut in "Alone Together" (S1E37).



(Continued from page 135)

in all of them, because all of them are channeled from so many different people. That's what makes them feel so real, I think.

Oh. But Michaela Dietz [Amethyst's voice actor]? She's literally real-life Amethyst.

Matt: Pearl and Amethyst are very much their voice actors, to me. Deedee Magno Hall [Pearl's voice actor] and Michaela, at least comedically, embody their characters completely. It's very easy to figure out Pearl lines when you imagine Deedee saying them like a very excited mom. I always picture Lapis as a sullen, angsty teenager, taken to a comedic extreme, but it usually gets walked back to something more grounded. The line in "Same Old World" [S3E3] when Steven is sad that he sees her only when things are bad and she responds, "That's just the way things are with me." That line is hilarious to me. So dramatic! Knock it off, Lapis.

Lauren: Ha! I love that line—that's the fun part of Lapis: having fun with how intense she is while also respecting it. Every day's a Monday for Lapis.

Kat: At the risk of revealing my deep-rooted narcissism, I actually write all the characters as though they're different parts of myself. So when it comes to finding a character's voice, I consider what I would feel or say, then look at it from the part of myself that shares the viewpoint of that character. I can be a perfectionist like Pearl, rude like Amethyst, or quiet but commanding like Garnet—no one is any one thing! I guess this style might be limiting, but that's my approach.

Hilary: Kat, I'm glad you're keeping it real—i.e., honest—because I do a very similar thing. I also look at different facets of myself for inspiration. Write what you know. This is probably why I'm weakest at dialog for Garnet. I just don't have that level of coolness.

After I put down a line, usually I end up doing a mental double check by thinking of the voice actor saying it. The characters and their respective voices feel so married to each other at this point, just imagining the line delivered can let you know if it'll work or not.

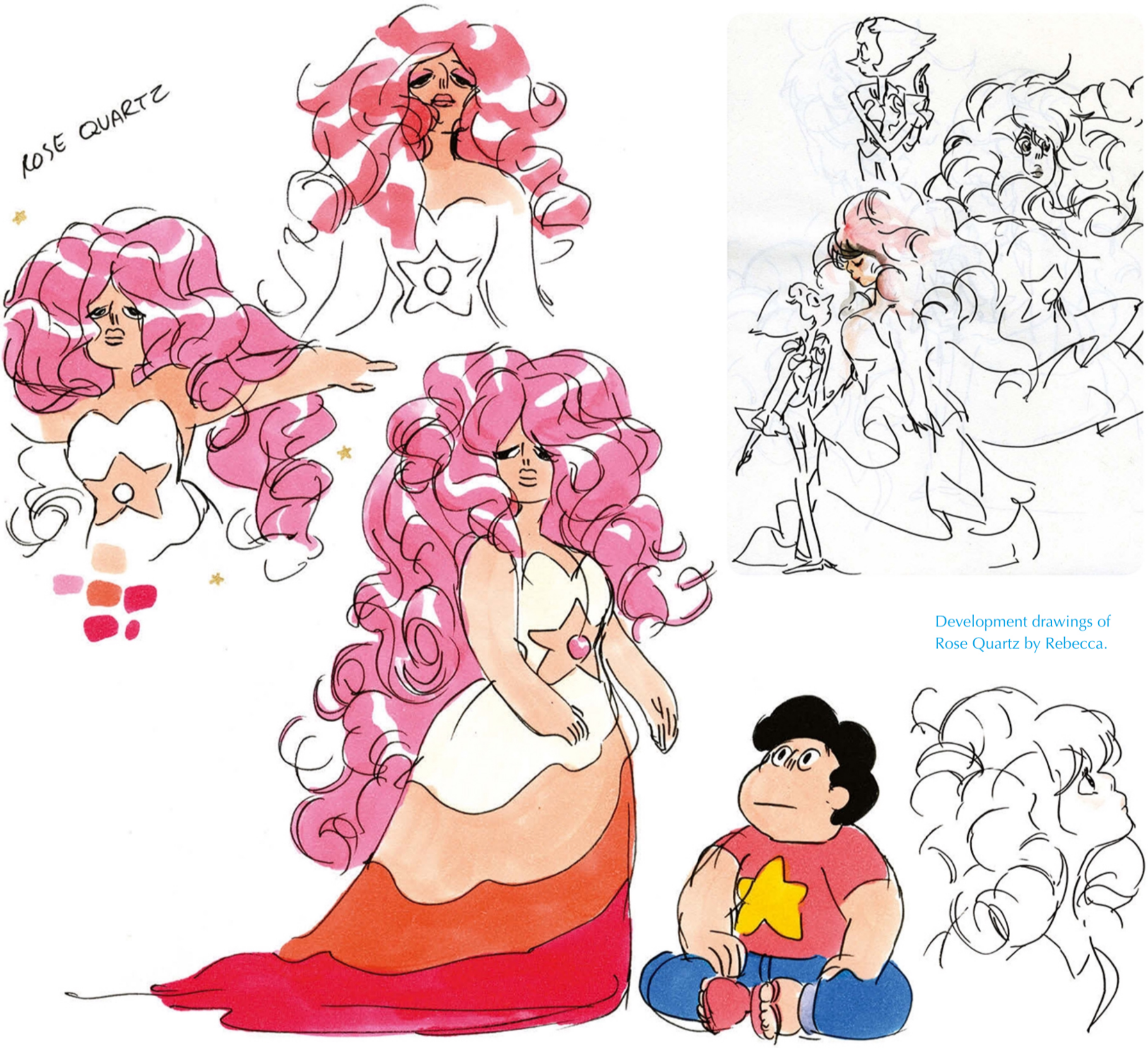
Katie Mitroff [storyboard artist]: I think a lot about character tropes when I write the Gems, and the sort of people I know that relate to each trope, and try to play off those expectations. Like, what new things can we say about this kind of character that might surprise someone who relates to these types?

Rebecca: Jasper is a bully in the truest sense. Deep down, she's afraid there's something wrong with her, so she has to feed her ego. She has to put other Gems down to stay on top. Who she is and where she's from gnaws at her all the time. She has a fantastic reputation, she's considered the greatest Quartz soldier produced on Earth, and that might impress other Gems, but it will never be good enough for her. She will always feel held back, and she'll always feel the need to go further to get ahead.

Ian: The Gems live a society with a very rigid social order and caste system, and Jasper has completely bought into that, and her self-worth is attached to it. Because she loves honor, fighting, making her mark, and winning the battle, she'll actually go against her programming a little bit just to be the winner. So she can be self-destructive at times. She is tragically obsessed with proving her superiority.

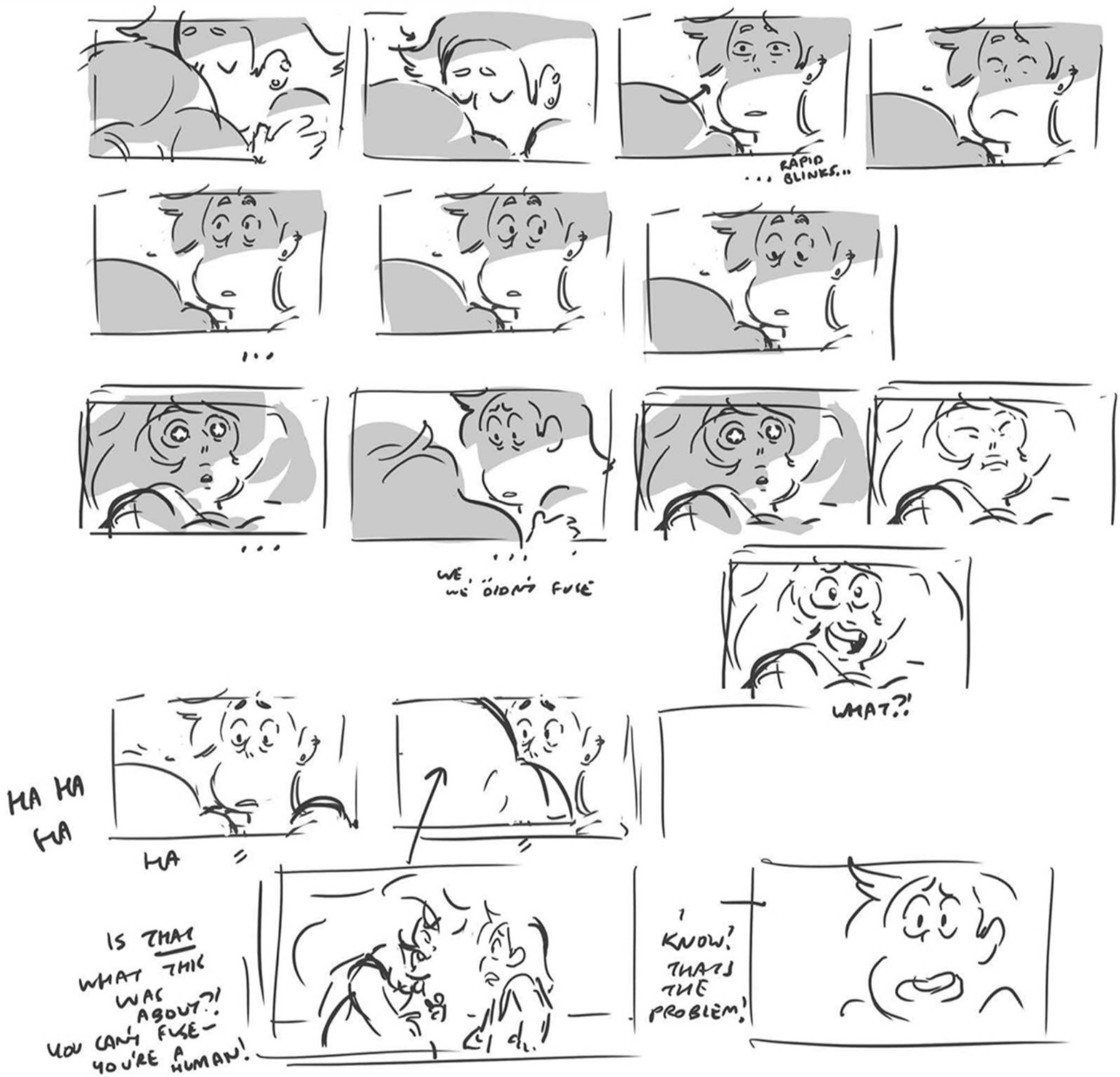
With finalized storyboards approved, each episode is ready to move forward. Next, the actors, composers, editors, and sound designers must begin to build up the intergalactic soundscape of *Steven Universe*, where voice, song, and synthesizers unite.

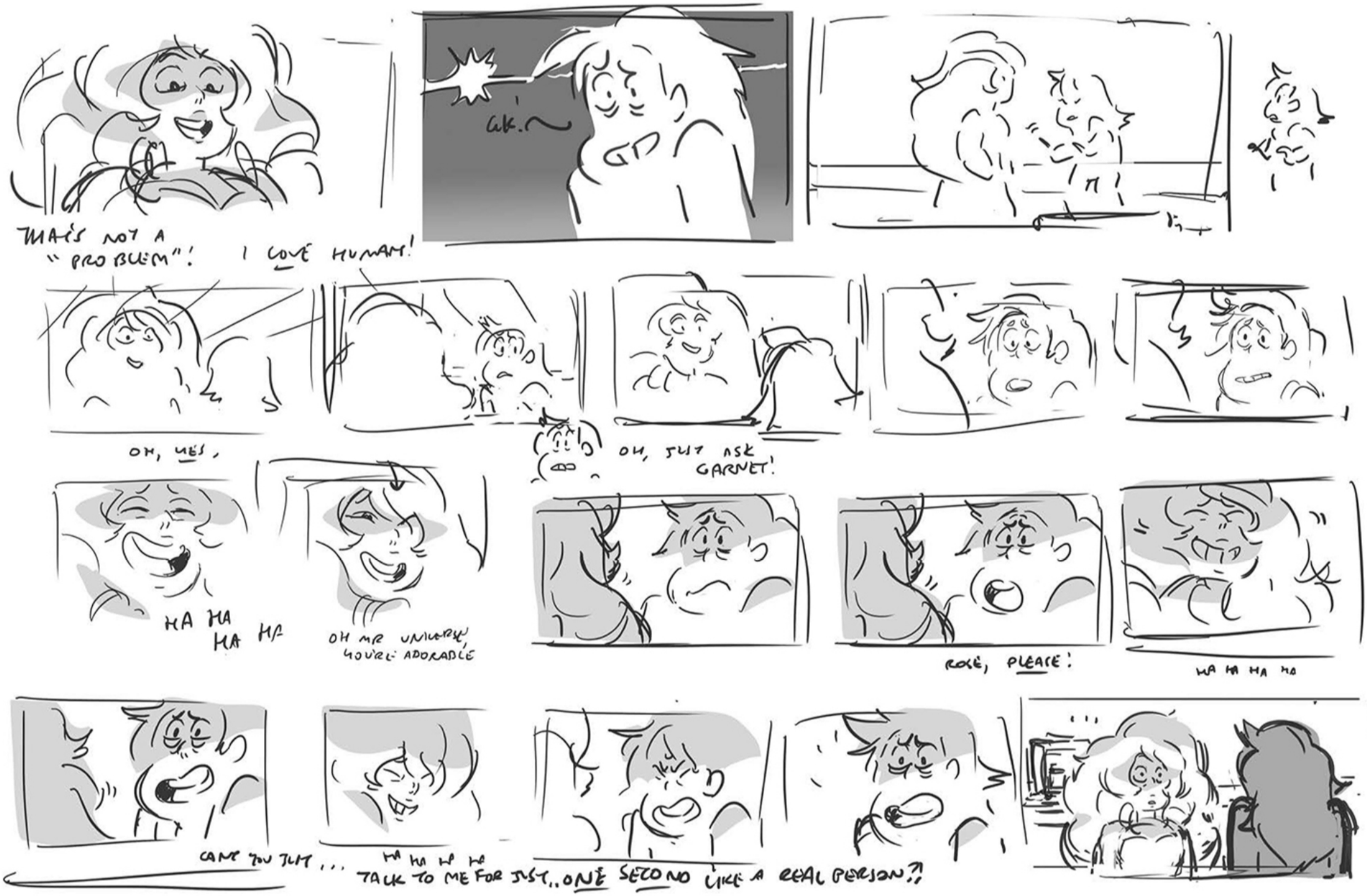




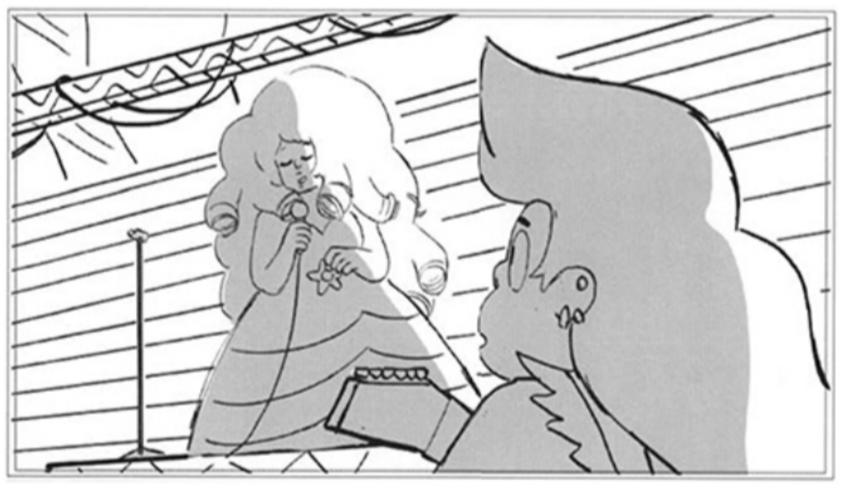
Development drawings of
Rose Quartz by Rebecca.

"We Need to Talk" Thumbnails

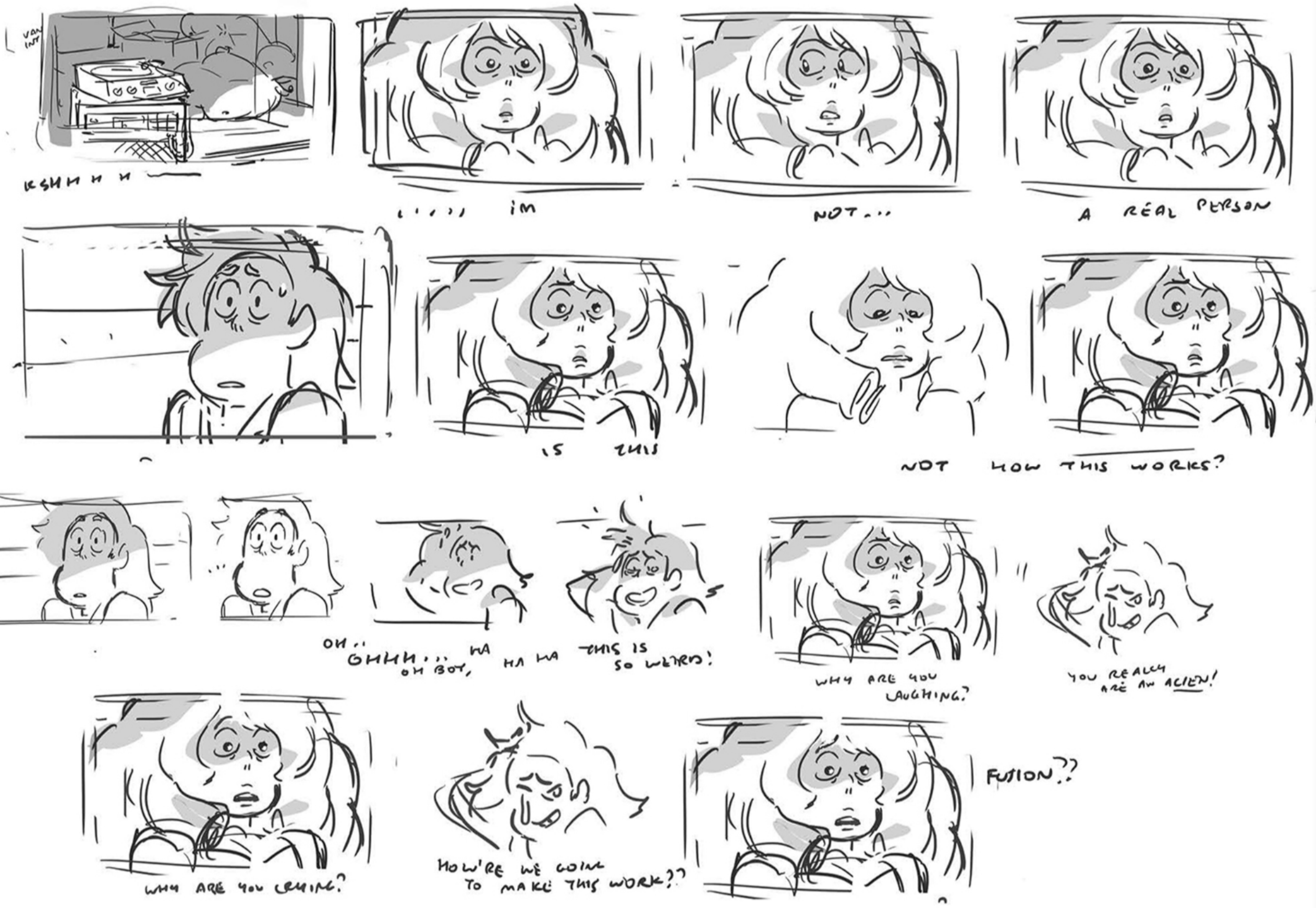




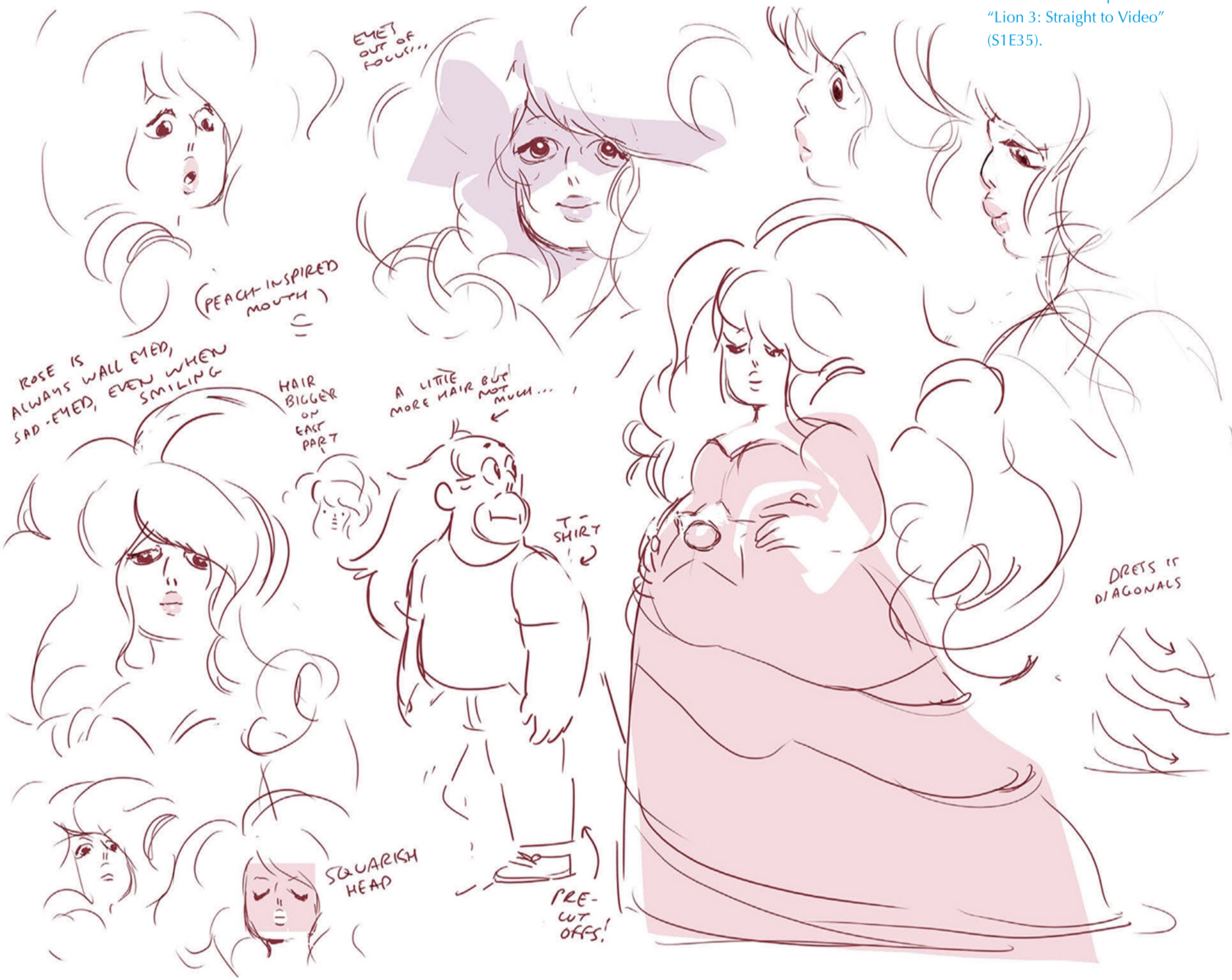
Although the episode "We Need to Talk" (S2E9) was boarded by Hilary Florido and Katie Mitroff, Rebecca made sure to give her team some specific direction for an especially emotional exchange between Rose and Greg in the form of thumbnail sketches. **Right:** A panel from the final board by Katie Mitroff.



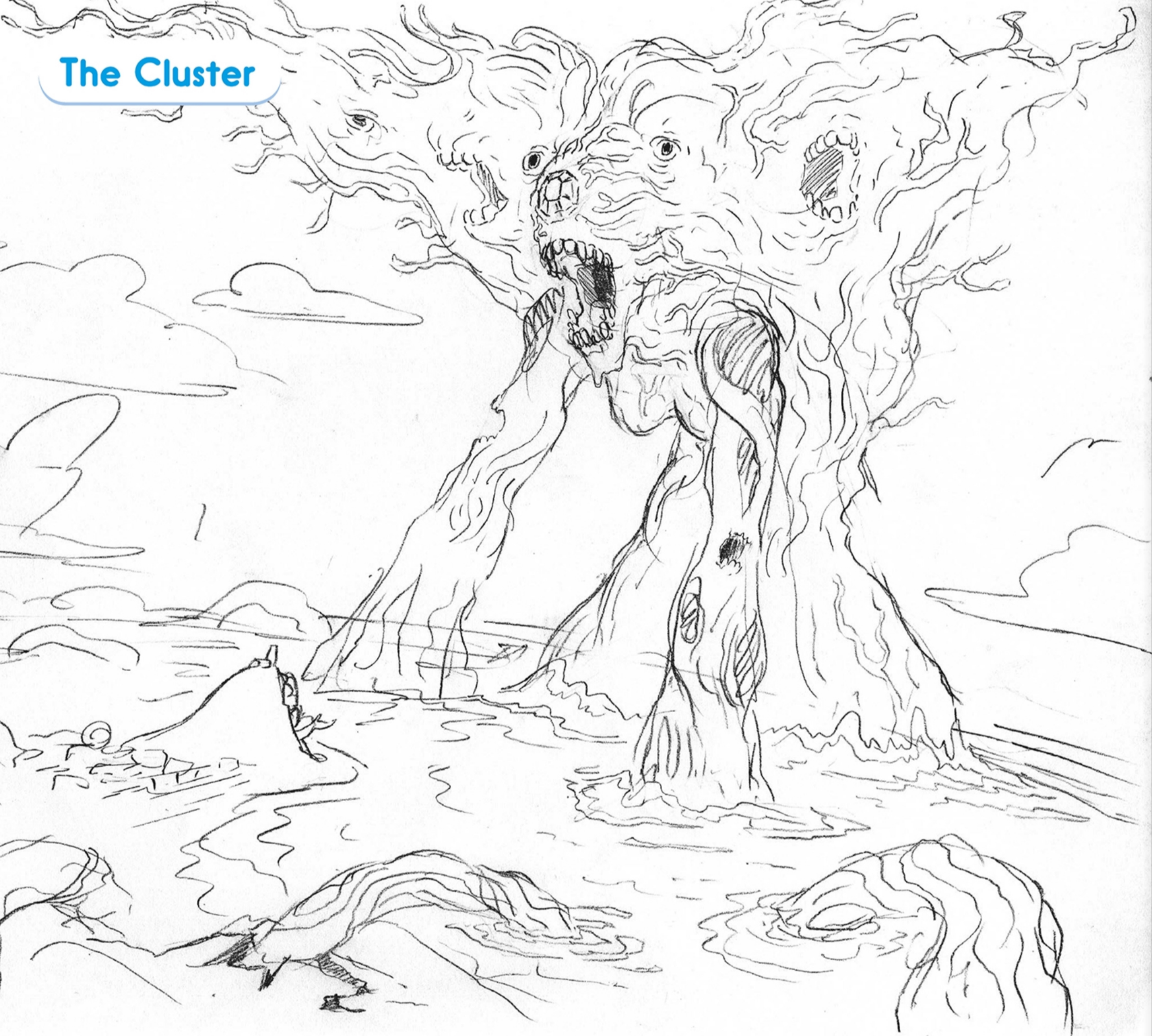
"We Need to Talk"



Concept drawings by Rebecca for the episode "Lion 3: Straight to Video" (S1E35).



The Cluster

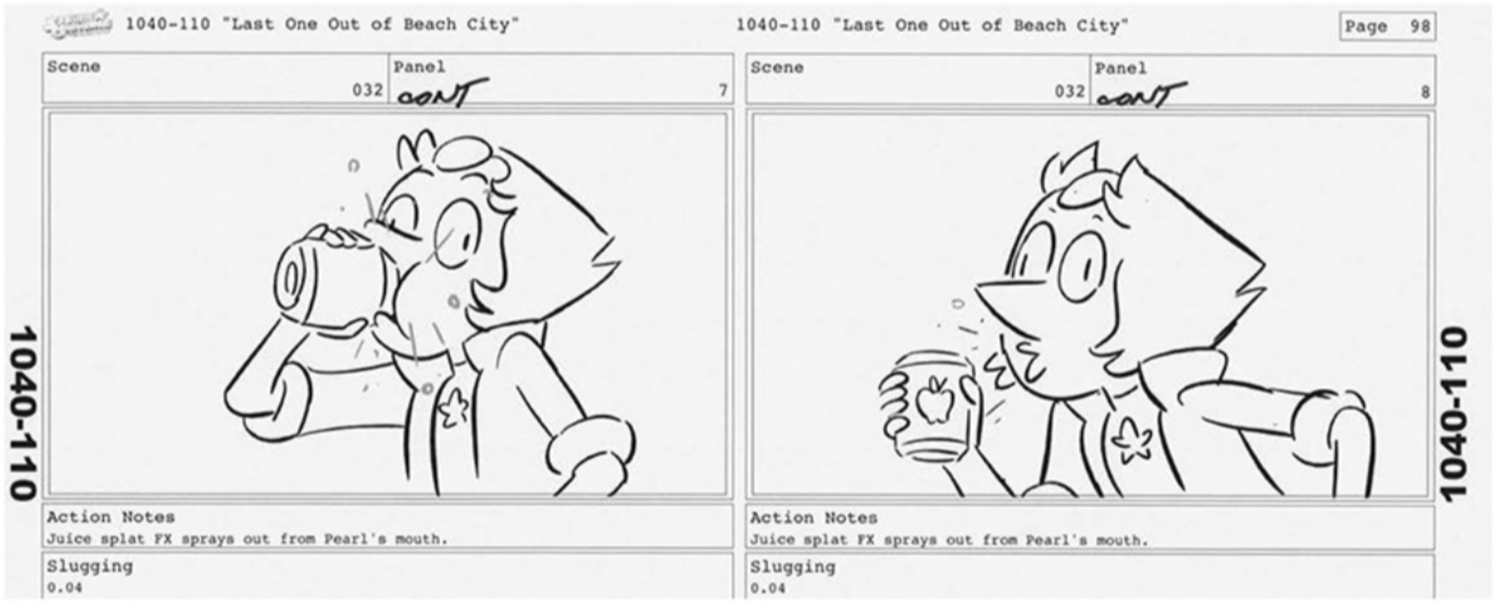


The concept of the Cluster arose from a writers' meeting discussion and drawing and became a pivotal plot point in the series. **Opposite:** Drawing by Joe Johnston. **Above:** Drawing by Jeff Liu.

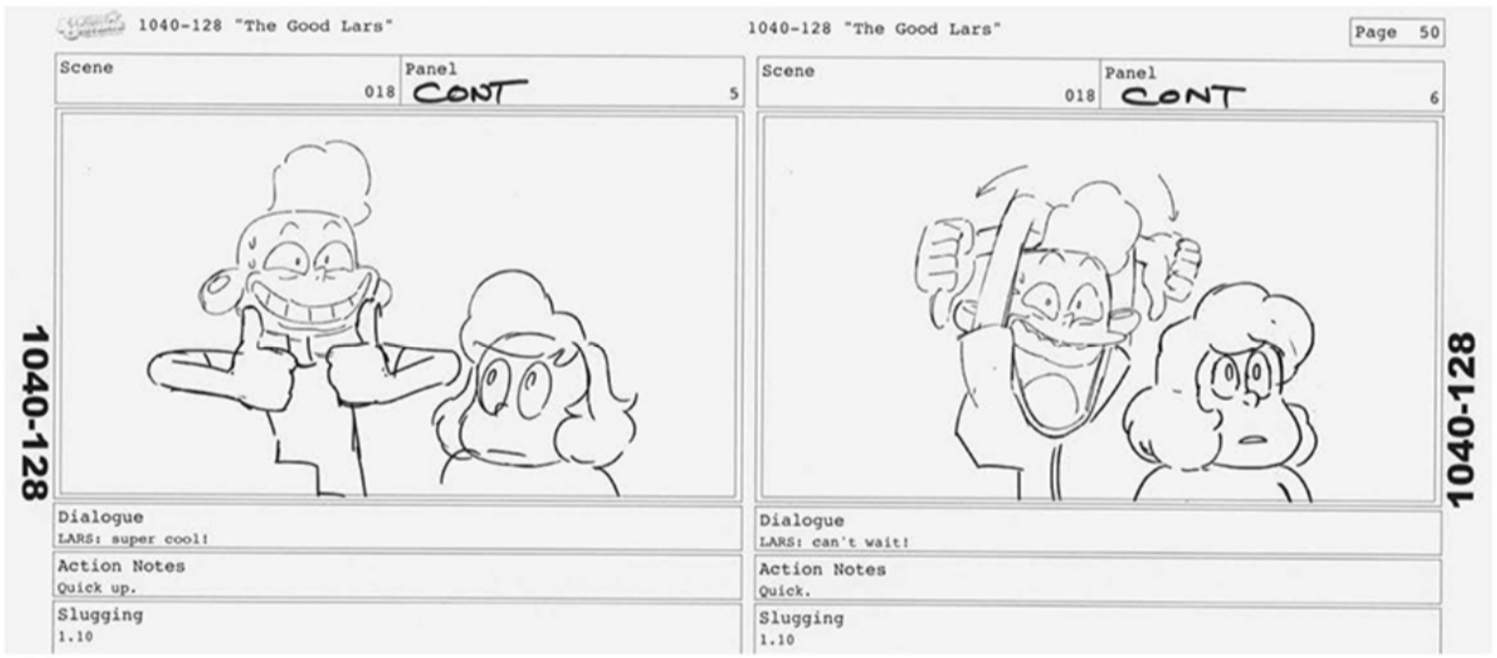
Funny Cartoons

Ian: While the Gems are designed as cool deity figures, they are also designed to be wacky cartoon characters and be really silly. The way that they can pull things out of their gems is a reference to how characters like Bugs Bunny can reach behind his back and pull out anything. The way that the Gems can shape-shift is like how, in old cartoons such as the Tex Avery ones from MGM, the characters do these wild takes and grow and shrink and transform for gags. The idea was: What if we take the way that a classic cartoon acted and turned that into a superpower?

Characters like the Gems that are supposed to be super in-charge never get to be funny. So one of our goals was to have these characters who were powerful heroes, but also have them be funny and weird, too.



Ben Levin



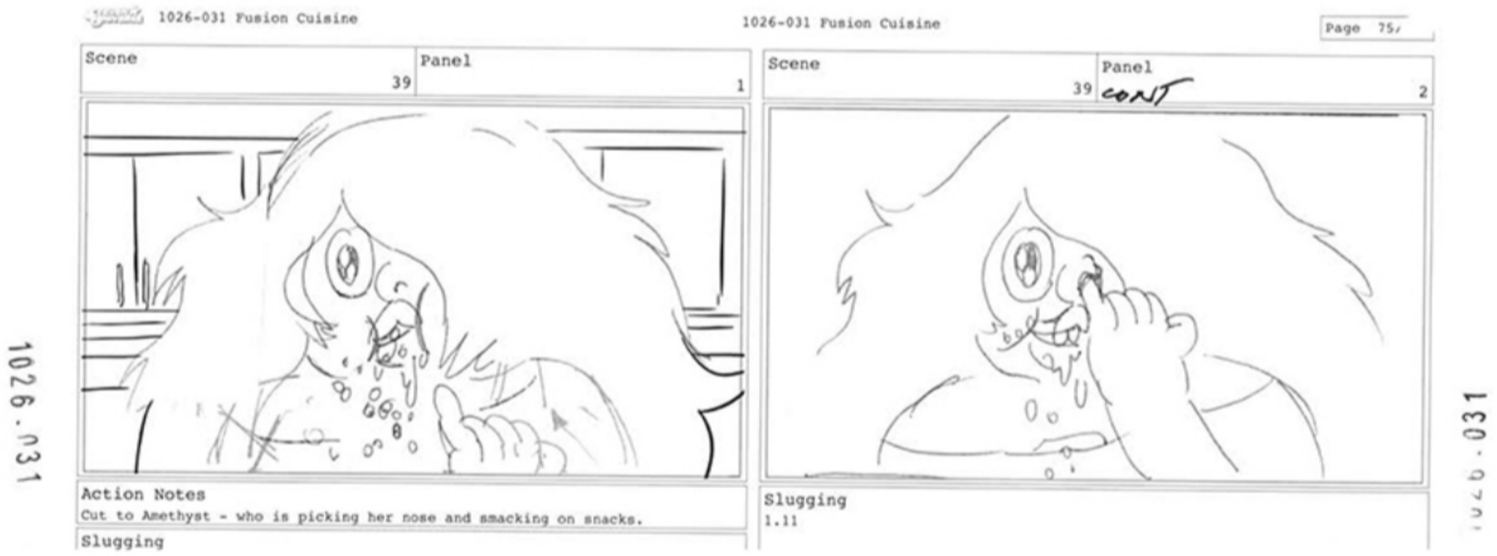
Colin Howard



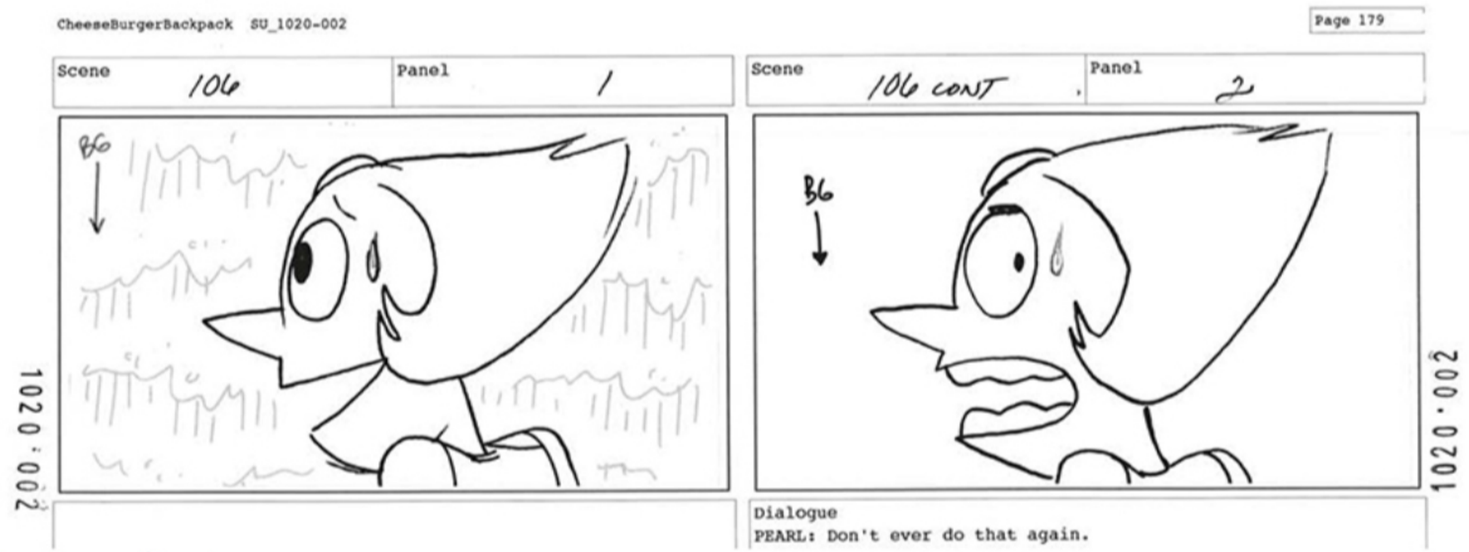
Hilary Florido



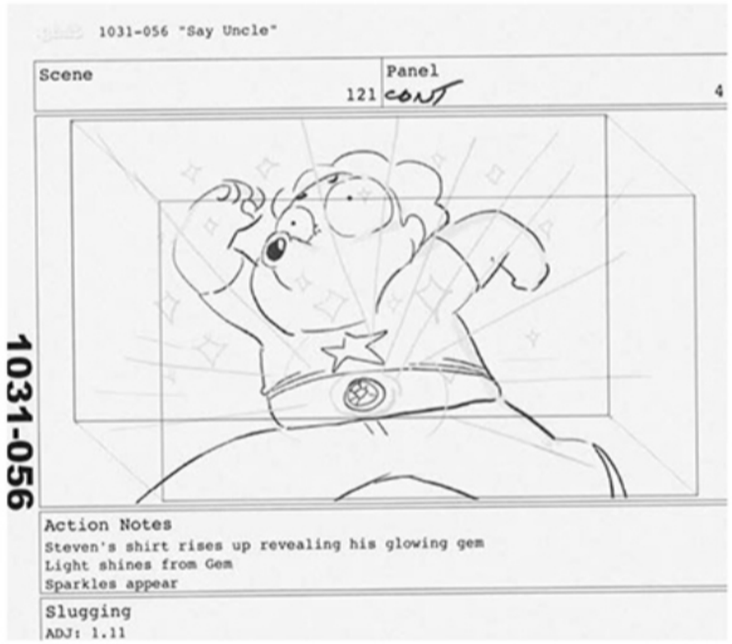
Ian Jones-Quartey



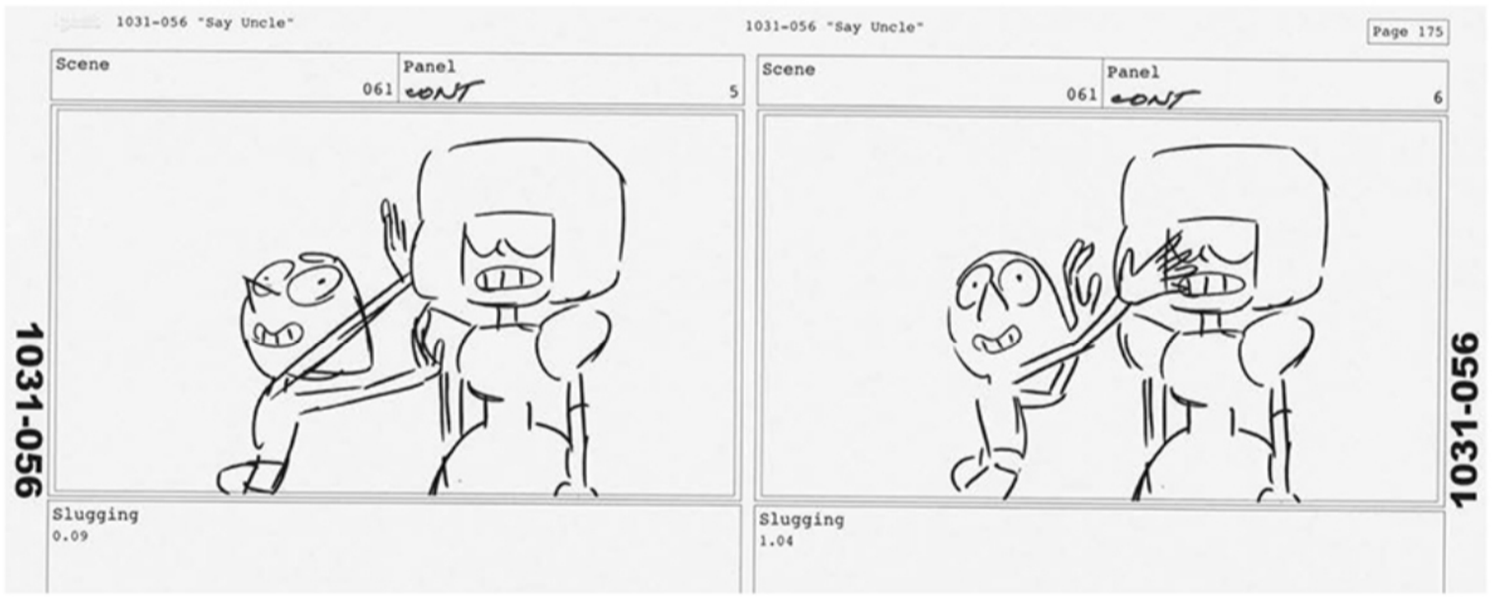
Hellen Jo



Ian Jones-Quartey



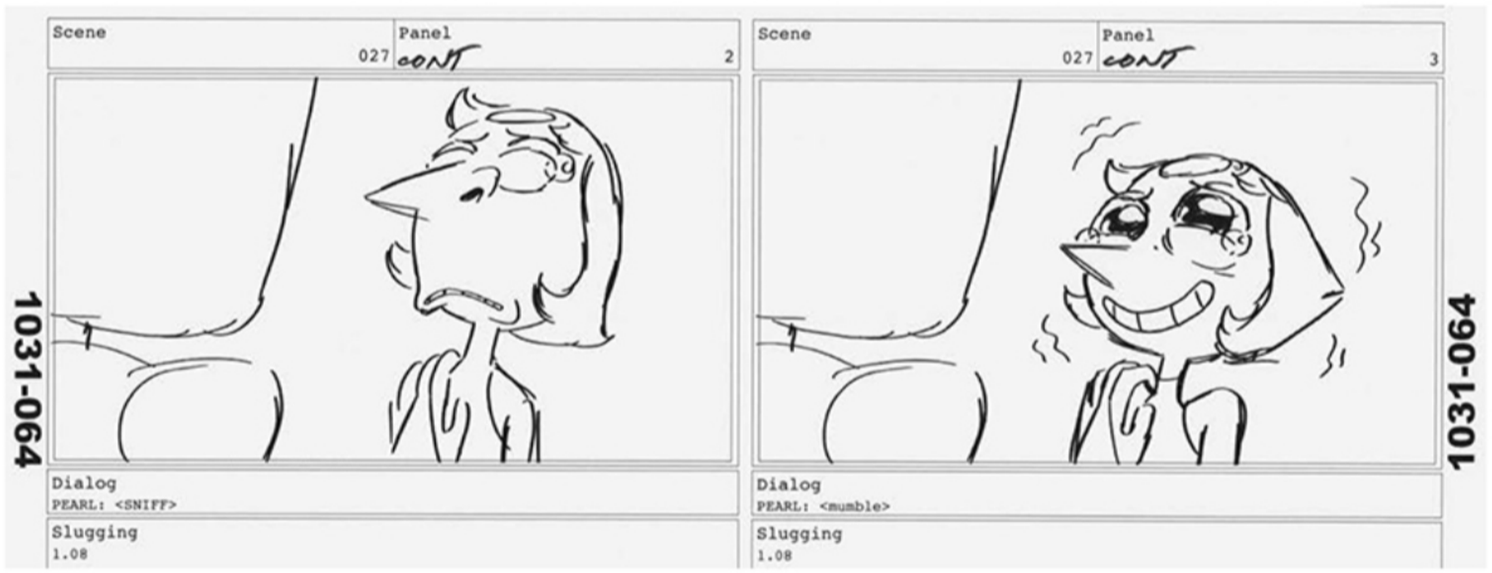
Jeff Liu



Joe Johnston



Jeff Liu



Joe Johnston



Rebecca Sugar

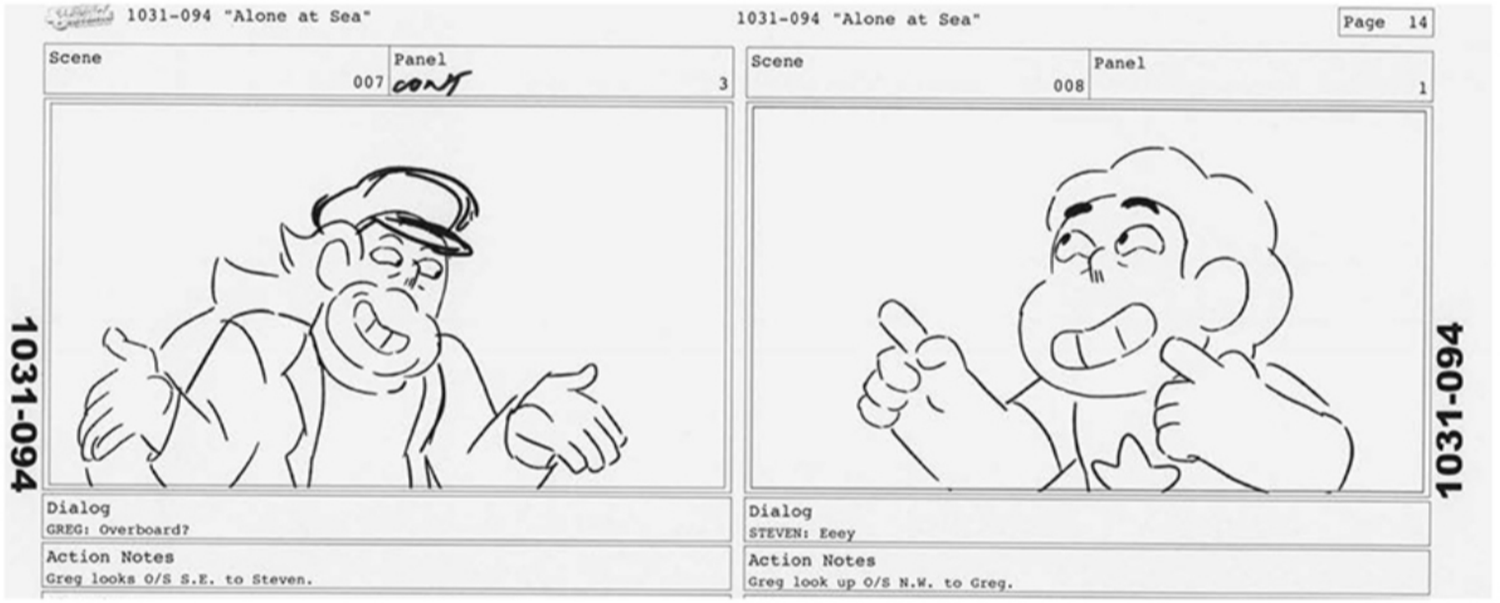
Funny Cartoons

Ian: From very early on, it was important that the characters look "alive," and in animation, the best way to do this is by letting the character models be flexible. For example, Steven's faces for excitement and anguish shouldn't be the same. This kind of exaggeration, to me, is one of the best parts of the show. It stops the show from looking static and lifeless. Steven and the Gems were designed to be funny cartoon characters.

As Steven's moods change from moment to moment, story goals and feelings change from storyboarder to storyboarder. Take a cursory glance through a couple episodes, and you'll notice that Rebecca's Pearl is not drawn the same as Lamar [Abrams]'s Pearl or Joe [Johnston]'s Pearl or Jeff [Liu]'s Pearl. The characters were designed to be elastic enough that you can recognize them even as they are being depicted through the hands of different artists.



Raven Molisee



Kat Morris



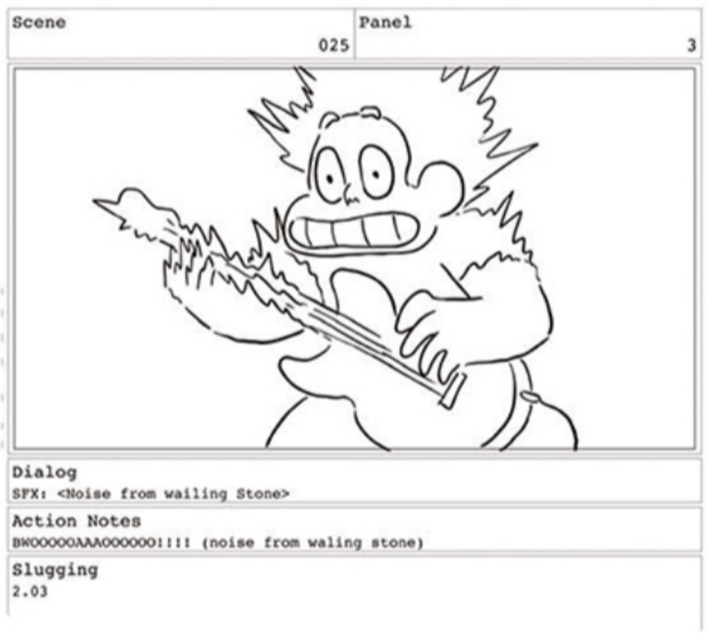
Katie Mitroff



Lauren Zuke



Lauren Zuke



Lamar Abrams



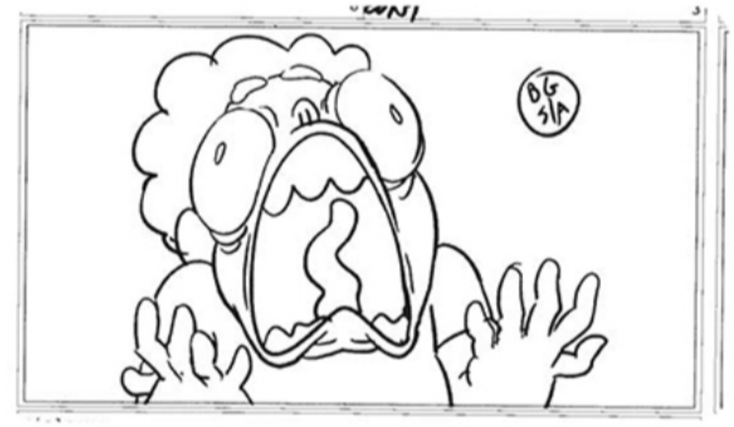
Raven Molisee



Paul Villeco



Raven Molisee



Paul Villeco

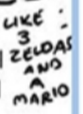
Storyboard Test

Steven Universe Storyboard Test



Thank you so much for taking the Steven Universe storyboard test!

This show revolves around Steven--a goofy real kid--in contrast to his teammates/allegorical "older sisters" Garnet Amethyst and Pearl, the magical Crystal Gems. Steven drags the Crystal Gems down to his level--the realness of their relationships to each other each other is what will bridge the comedy and the fantasy in the show.



I'd like to use magic to represent the adult world just at your fingertips when you're a kid. Magic should feel serious, scary and sublime in this show, like something unattainable/incomprehensible that Steven is seeing just a fraction of. Magic should feel anceint and futuristic at the same time, like it has always existed outside of time! The more intensely fascinating the magic is the funnier Steven's interactions with it/interpretations of it will be! BE CONCEPTUAL!!!

The storyboard portion of this test must demonstrate funny/sweet/subtle/naturalistic interactions between Steven and the Gems, extraordinarily interseting ideas for magical creatures/items and the effects of such, technical storyboarding skills, hilarious jokes, dramatic action--hilarious action and dramatic jokes!!!



Garnet, Amethyst, Pearl and Steven are walking along the beach searching for a magic object. Steven has a shovel to dig with and is super excited even though he doesn't know what they're looking for.
Garnet, Amethyst and Pearl can sense something underground. Steven, eager to help, gets excited and starts to dig into the sand. Suddenly, out of the hole comes a bizarre ancient creature. Garnet, Amethyst and Pearl get ready to fight, but Steven flips out and starts smacking it with the shovel. He defeats it without their help! Garnet steps forward, and rips the monster open. She reaches into it's guts and pulls out the magical object they were originally looking for- the monster's heart! Garnet decides that Steven deserves to have it. But Steven is really grossed out.

Please feel free to change the outline-paragraph, this is a wire frame to build off of! What the creature is and what it does is up to you, please be creative with it!!! Feel free to change what the item is, pick a time of day and have it matter, inject meaning into any details.



(Please complete in about 40 panels or less- ½ as boards, ½ as thumbs)

Drawing Game:



Garnet unrolls a canvas with a disturbing painting on it.
What is the painting of?

A candidate for a storyboard artist position on *Steven Universe* will get a test similar to the example here. **Above left:** Drawings by Rebecca. **Above right:** Drawings by Ian Jones-Quartey.

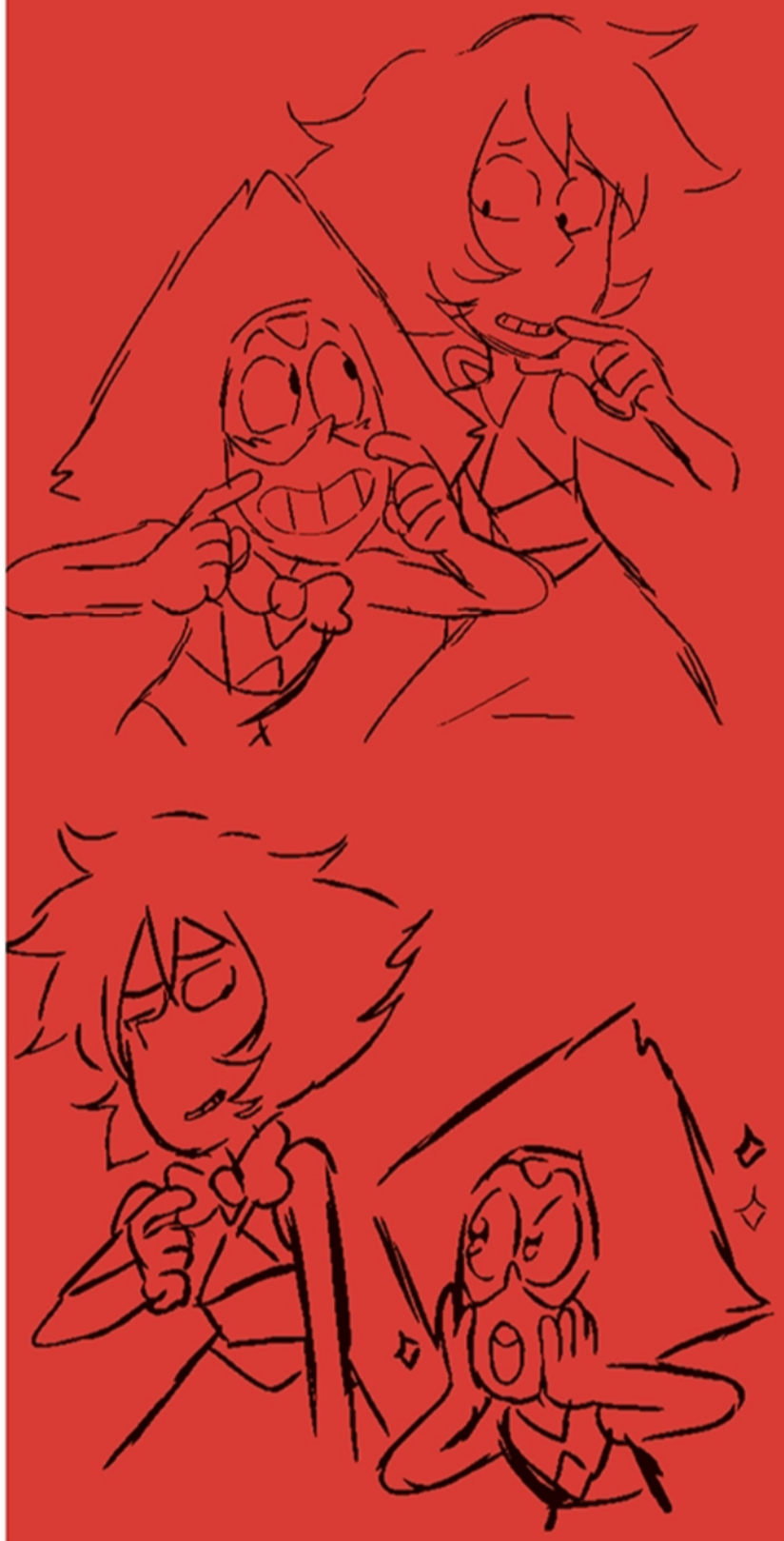
BONUS DRAWING GAME:
Draw one of the Gems, Garnet Amethyst or Pearl,
in an extremely dramatic pose.
Then draw Steven attempting to take that same pose.

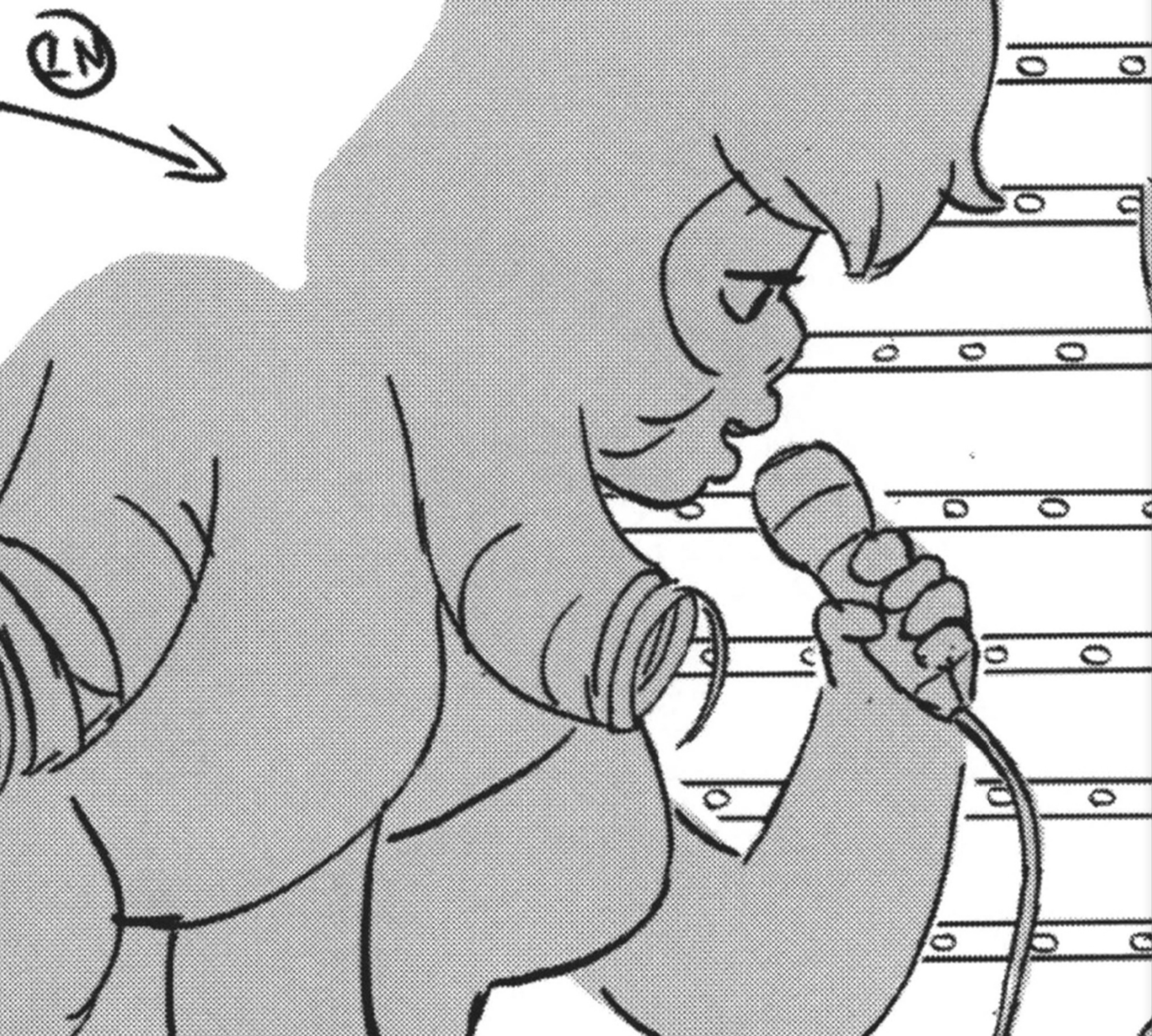
Writing Game:

Steven sings a song to make Amethyst laugh.
Pearl doesn't understand it, so Amethyst and Steven try to explain it to her.
Write Steven's song in 1. and some funny dialogue for this interaction in 2-5.



Left: Drawings by Rebecca.
Below: Drawings by Lauren Zuke.

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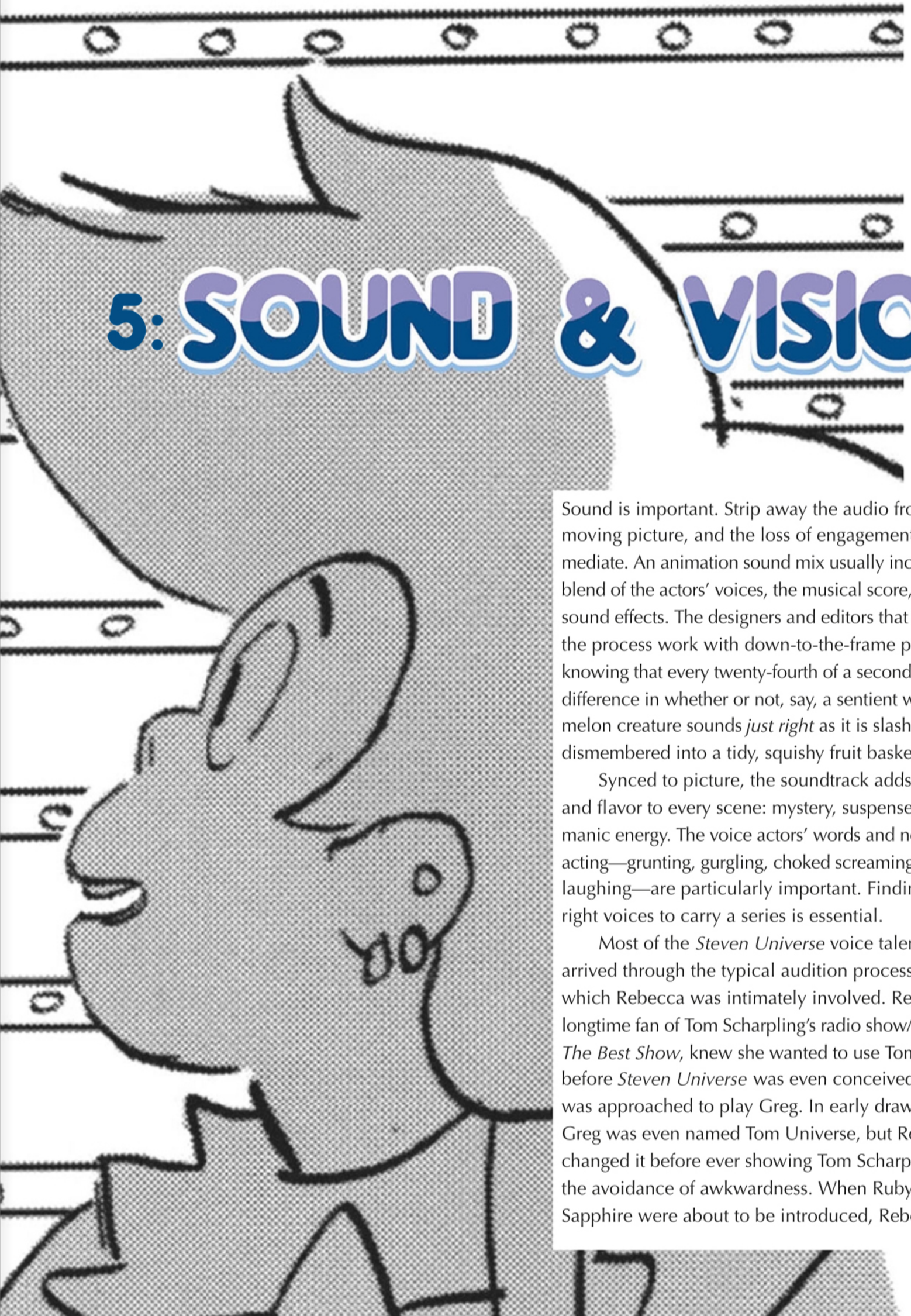


Panel from "We Need to Talk" (S2E9) storyboard by Katie Mitroff.

5: SOUND & VISION



Sound is important. Strip away the audio from any moving picture, and the loss of engagement is immediate. An animation sound mix usually includes a blend of the actors' voices, the musical score, and the sound effects. The designers and editors that manage the process work with down-to-the-frame precision, knowing that every twenty-fourth of a second makes a difference in whether or not, say, a sentient watermelon creature sounds *just right* as it is slashed and dismembered into a tidy, squishy fruit basket.

Synced to picture, the soundtrack adds mood and flavor to every scene: mystery, suspense, joy, or manic energy. The voice actors' words and nonverbal acting—grunting, gurgling, choked screaming, bubbly laughing—are particularly important. Finding the right voices to carry a series is essential.

Most of the *Steven Universe* voice talent arrived through the typical audition process, in which Rebecca was intimately involved. Rebecca, a longtime fan of Tom Scharpling's radio show/podcast *The Best Show*, knew she wanted to use Tom's voice before *Steven Universe* was even conceived, so he was approached to play Greg. In early drawings, Greg was even named Tom Universe, but Rebecca changed it before ever showing Tom Scharpling for the avoidance of awkwardness. When Ruby and Sapphire were about to be introduced, Rebecca penned an illuminated letter to Charlyne Yi, confident she was the perfect voice for Ruby (and all the Rubies!). Zach Callison landed his starring role as Steven through an audition process in which he recorded ten lines of test dialog from the pilot and sang the theme song. After an impressive callback in person at the studio, Rebecca knew they had found their lead half-Gem hero.

Zach Callison [Steven's voice actor]: I could tell right away that this show was very special to Rebecca. She's always been very involved in the recording process, and you could tell she had a clear vision for the show's future. She's also assembled an incredibly dedicated crew. Every single person involved has a passion for making the show and going the extra mile. It's inspiring to be around! I could tell the show was going to be a little different and offbeat from the get-go, but I had no idea how many times I would be handed a script full of what I call "actor food": scenes and storylines with staggering emotional depth, rich character development, and room to really *act*. The biggest reason this was so surprising to me was the eleven-minute format. It's a monumental task to fit all of these things into such a short time slot, yet the team pulls it off every time.

Steven Universe's leads—Zach Callison (Steven), Estelle (Garnet), Michaela Dietz (Amethyst), and Deedee Magno Hall (Pearl) are required for almost every episode, which means spending three to four hours a week in the studio, three out of every four weeks, ten months out of the year. Tom Scharpling (Greg) generally records his dialog from New York about three to four hours every other month, or more when a Greg-heavy episode is involved. For any given recording session, actors may be scheduled together or separately throughout the day, depending on availability, and are often recording for multiple episodes. A typical session might include initial recordings for a new episode, as well as pickups (retake lines for a previously recorded episode to cover new or changed dialog).

The sound booth is equipped with script stands, headphones, microphones, and room for up to six actors to stand comfortably in a semicircle. There is a monitor facing the actors for playback of the record board (a finalized version of the storyboard formatted especially for voice recording), which shows two panels of the storyboard at a time for visual context. Being able to see their character's poses and expressions as drawn in the board helps to inform their performances. The walls and ceiling are covered in sound-deadening material, and the floor is carpeted. The sensation of entering the booth is one of sound deprivation, or put another way, sound isolation; capturing the actors' voices in the sterile auditory environment creates a neutral, consistent baseline to build upon when designing the dialog mix. The Crystal Gems' voices can be transported from inside a hermetically sealed force field to an echoing cavern with the click of a mouse, using digital effects available in the audio editing software.

The room outside the booth is where the sound engineer, Robert Serda, operates his computer station and controls. He has a mic with a switch he can toggle, alternately piping his voice into the sound booth with the actors or muting it. He calls out the takes on the recording to identify each section of dialog and then the actors take over, delivering each line multiple times as they experiment with emphasis and intonation.

During a recording session, Rebecca sits next to voice director Kent Osborne in the control room, recording scripts in hand for reference. Both Rebecca and Kent will offer occasional adjustments to the actors—notes like "Push that more catatonic, and weak" and "How about one where you don't know what it is, but you know it's stupid." When they hear a take they like, a production assistant, who numbers and tracks each take, circles their selection. These circle takes [the selected best take for each line of dialog] get passed along to the animatic editor later, for building the rough cut of the episode.

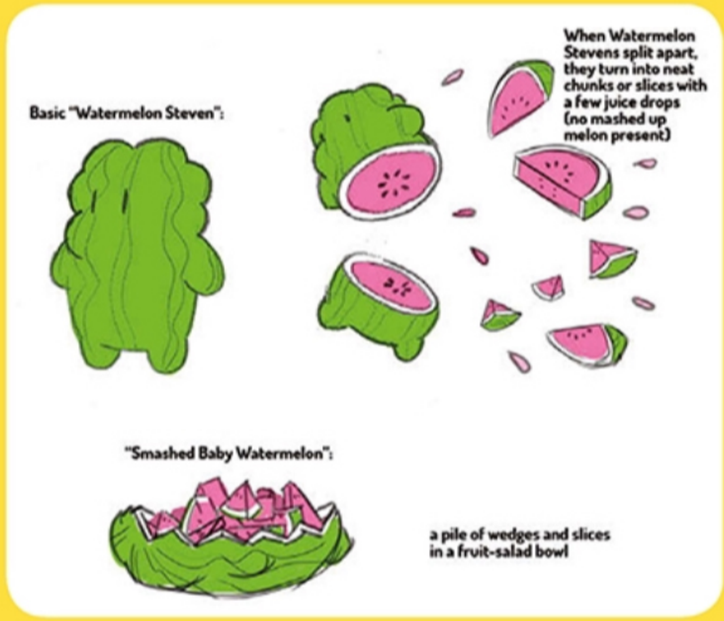
Michaela Dietz [Amethyst's voice actor] : When we record, Rebecca runs through the storyboards, fleshing out each scene. The excitement she has in describing each sequence, character intention, and relationship is as palpable as it was on the day of the first record.

Kent Osborne [voice director]: Yeah, this job's super easy because all I do mostly is just press this button. [*Laughs.*] Rebecca is so good at describing the scene in a way where she's not giving line readings and she's not telling them how to do it. She's so connected to the material that she can talk about it. She'll pitch sequences to the actors, and she's so good at pitching and not saying the lines, but saying different versions of them.

Giving a line reading [the act of performing an actor's line for them to communicate the intended direction] to an actor is generally understood to be a cardinal sin, unless specifically requested by the actor. The key to getting the performance from the actors is to give them all the tools they need to understand the scene and the desired direction, and then get out of their way.

Before and after recording, the actors chat with one another and Rebecca and enthusiastically discuss new wrinkles in the story, as they get to see only a few advance storyboards at a time before recording them.

Deedee Magno Hall [Pearl's voice actor] : During our group records, there is always so much laughter! Working together, feeding off one another, the banter



Above: Watermelon Steven notes by Ian Jones-Quartey.













Top: Matthew Moy (Lars) prepares to record. **Above right:** Rebecca and Kent Osborne direct lines. **Above left:** Deedee Magno Hall (Pearl), Michaela Dietz (Amethyst), and Zach Callison (Steven Universe) record lines for "Say Uncle" (S2E3). **Opposite:** View from the sound studio control panel, as Michaela Dietz, Zach Callison, and Colton Dunn (Mr. Smiley) record dialog in a group session for the episode "Tiger Philanthropist."

in between takes, the funny faces we make when trying to voice certain emotions or physical efforts . . . that is why I love group records.

Michaela: Sometimes, after sessions, Rebecca will bring us upstairs to the studio and play clips from upcoming episodes, explaining the challenges that they ran into while animating them, or let us listen to a new song while sharing what was going through her head when she wrote it. She shares because she cares! And the regard for the art and process is infectious. I admire how she values every contribution, makes everyone feel a part of the process.

Inevitably, the voice actors begin to identify some parallels between their own lives and those of their characters, especially as the writing crew and voice actors grow closer. Aspects of reality and fantasy can cross-pollinate.

Deedee: The more time we spend together and get to know each other during records, the better the creative crew can pick up on each of our personalities and isms that inevitably show up in our characters. My voice as Pearl is *my* voice. It may be more emotionally energized at times, but it's me. The first time my kids saw the show, they recognized right away that it was Mommy's voice coming out of Pearl's mouth, and I got a kick out of seeing my youngest son doing double takes at the screen and then back at me.

The way I speak with such concern for Steven and his safety and well-being is pretty much how I would with my own kids. There isn't much stretching there as far as character backstory or motivation goes. I'm happy to say that the care in my voice for this very special child comes naturally to me. I feel similarly about Steven's voice actor, Zach Callison, whom I've watched grow up the past few years during this show, and I can't help but see my two young boys in Zach!

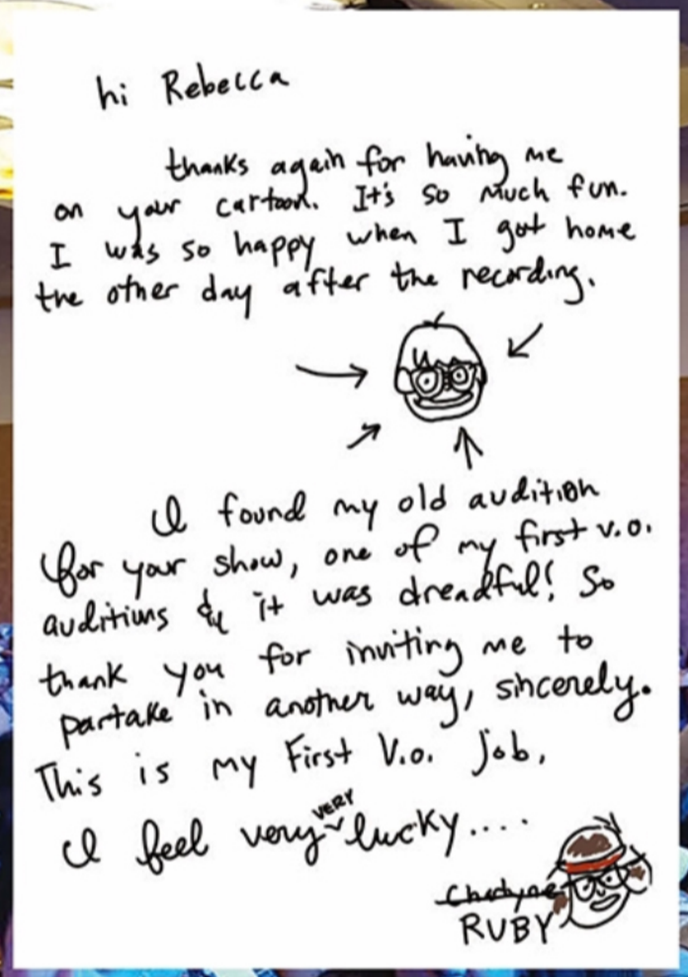
Michaela: It didn't take long for Deedee and me to treat Zach the same way Pearl and Amethyst might relate to Steven. We grilled him about his romantic life and what "the cool kids are doing these days." We fawned all over him and how much taller he was than the last time we had seen him. It was easy to shower him with praise; he was a bright kid, and now he's a genuinely great man-dude.

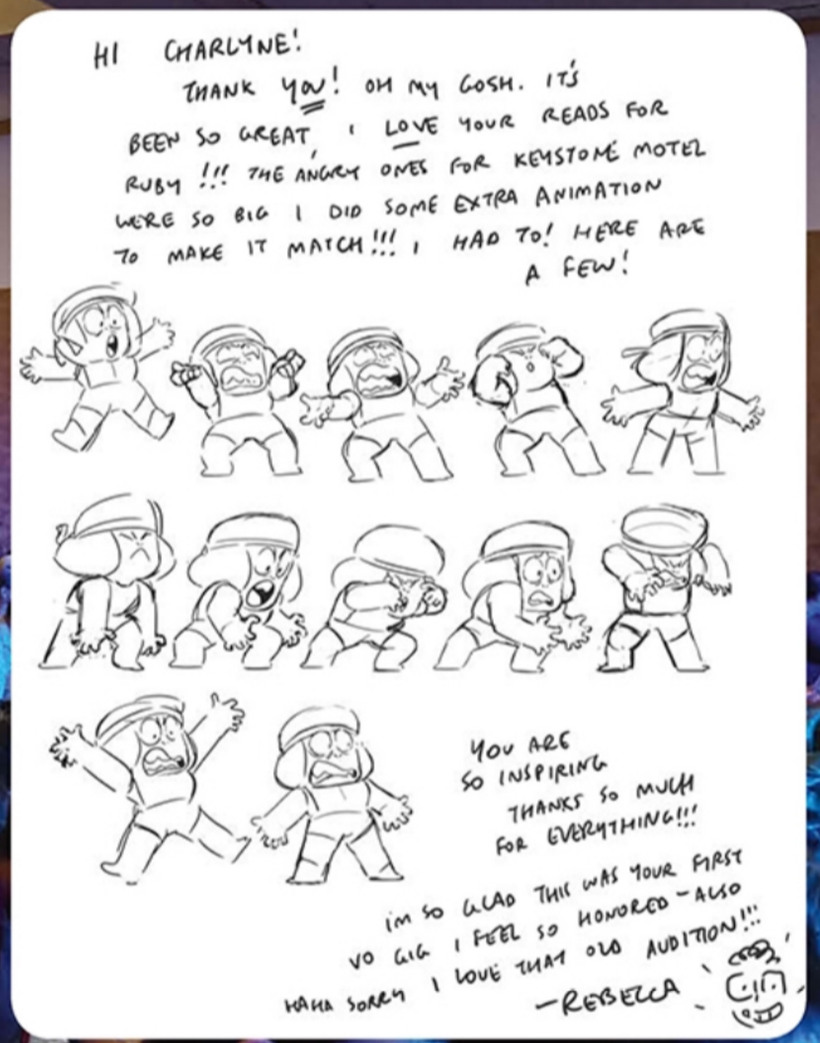
Deedee and I connected immediately. Besides being wildly talented and sweet, she's one of the most unintentionally hilarious people I have ever known. In the beginning, Deeds, Zach, and I recorded separately from Estelle. But in the sessions that we were all together, she definitely had a Garnet presence: She's so cool! And you definitely want to listen to what she has to say. The first day that I recorded with Susan Egan, voice of Rose Quartz, I hope I seemed normal on the outside. Internally, I was falling over myself not to gush too hard. [*Laughs*.] Yeah, I'd say that the Crystal Gem dynamic is somewhat paralleled with the cast in real life.

Michaela often finds herself on the receiving end of a recurring quip about her own similarity to her character (see page 140, for example). Beyond sharing voices and a funny, nonchalant attitude, Michaela can relate to the character's inner struggles as well.

Michaela: I'm frightened and complimented by the number of times I have heard that I am "Amethyst IRL [in real life]." I promise I'm acting! Humor and sarcasm often can mask deeper concerns. Relating to Amethyst as she battled insecurities about her origins and felt like she didn't belong was relatively easy for me. I am a Korean American adoptee, raised in a Caucasian home in a predominately Caucasian area. Like Amethyst, I've been reared and surrounded by people who love and challenge me, people who are no doubt my family. Also, yeah, I love them! And yet there is a void that I've carried with me throughout my entire life, a longing to know my birth family and why I am who I am. I read the script for the episode "On the Run" [S1E40] and cried. I wanted to hug Amethyst so tight. When you're hurting that much and feel like you were someone's mistake, even the kindest words from the most well-intentioned people can't always mend. I wanted to tell her that she's part of







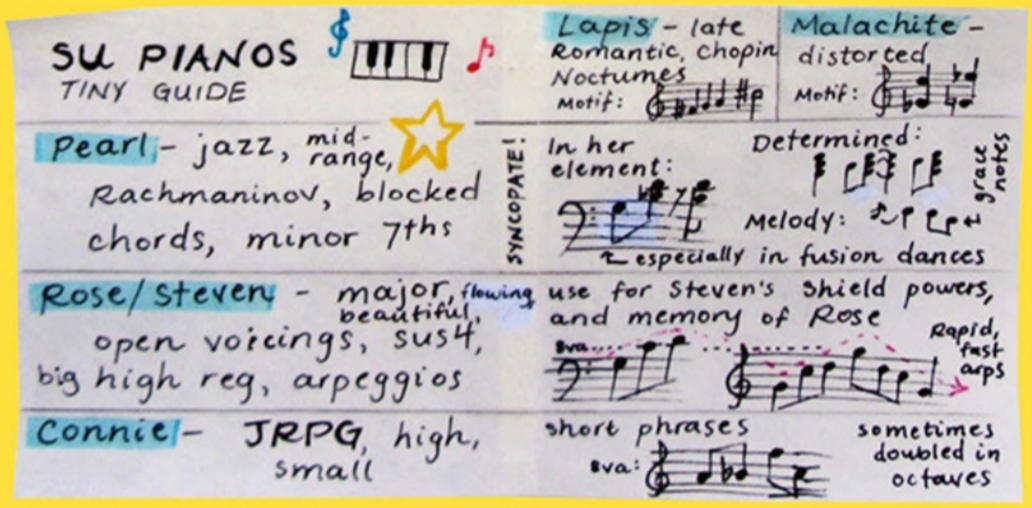
A letter exchange between Rebecca and Charlyne Yi (voice of Ruby).

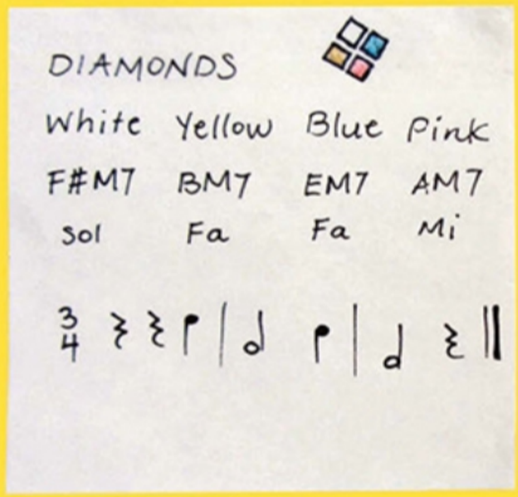


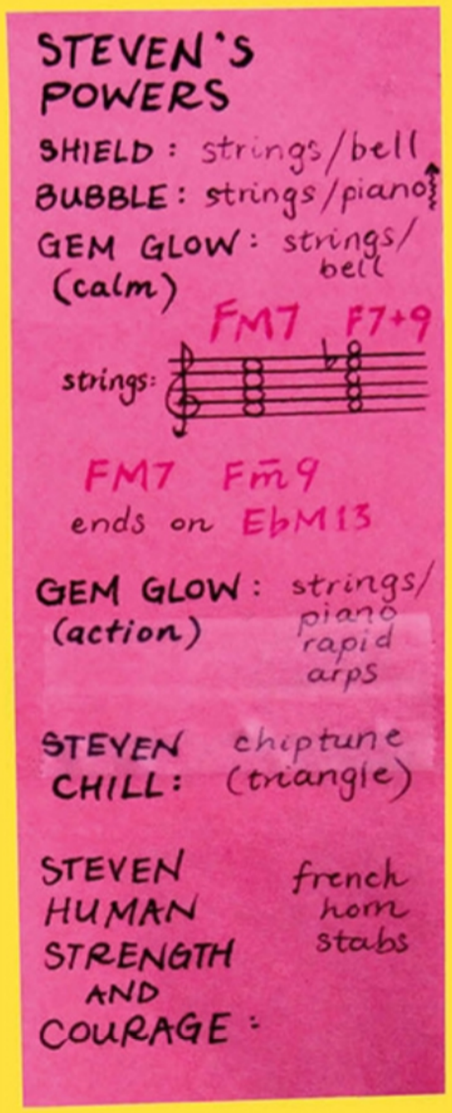












Above, right: Aivi and surasshu's notes hanging on their studio wall provide quick reference while composing music. **Below:** A live performance of music from the series was a highlight of San Diego Comic-Con for the fans, cast, and crew.







a lucky clan of adoptees. Although blood may not draw us together, we share something greater: an understanding that we're not alone.

Other members of the "Crewniverse" have been known to step into the recording booth to voice smaller parts that crop up throughout the series.

Jackie Buscarino [producer]: Rebecca has been sweet in letting me and our storyboard artist Lamar do voice-over stuff. I got to voice Vidalia, and Lamar voices Buck Dewey, the mayor's son. Ian did some voices early on, too. It's terrific that she looks within the people around her for talent to utilize in so many aspects of the show.

Rebecca Sugar [series creator]: This show is the first voice-acting gig for a lot of our actors. That's something I'm so proud of. This is Deedee's first VO [voice over] role (Pearl), Charlyne Yi's first VO role (Ruby), Tom Scharpling's first VO role (Greg), and Patti LuPone's first VO role (Yellow Diamond), just to name a few! I love that everyone is coming from wildly different places. It's a perfect reflection of what the show is about.

Estelle isn't the only major recording artist to contribute her voice talent to the show: Pearl's Deedee Magno Hall is the lead singer for the band The Party and has starred in a number of musical theater productions (most notably as Kim in the Broadway production of *Miss Saigon*). Jennifer Paz (Lapis Lazuli) has performed in *Miss Saigon* as well. Other professional performers/musicians who have guest-voiced characters include Aimee Mann (Opal), Nicki Minaj (Sugilite), AJ Michalka (Stevonnie), Alexia Khadime (Sardonyx), Lisa Hannigan (Blue Diamond), and Broadway legend Patti LuPone (Yellow Diamond). However, Rebecca's interest in storytelling through song means that most of the main cast ends up singing at one point or another, whether they are trained vocalists or not.

Rebecca: I wanted to bring in artists from musical theater because I feel like the overlap makes total sense. You have to be broad and theatrical when

you're doing musical theater in a way that lends itself perfectly to cartoons.

Rebecca has written or collaborated on most of the original songs for *Steven Universe*, which she records demos for whenever (and wherever) she can, day or night.

Rebecca: There's not really time to fit it into the production schedule during the week. I'll just do it on the side. I write music a lot when I have to travel. I'll take my ukulele with me.

Making the most of her time, Rebecca even composed the extended version of the theme song while waiting in the security line at LAX.

Rebecca: I remember I was taking off my shoes, singing, "If you could only know . . . what we really are!" [From the full version of the theme song, "We Are the Crystal Gems," which Rebecca revealed in an eponymous short at the 2015 San Diego Comic-Con.]

When composing intense moments for Garnet, Rebecca only has to go to the voice's source for advice and inspiration.

Rebecca: I listened to "Go Gone" [Estelle's 2005 single] a lot while I was first starting to think about the "Stronger Than You" sequence for "JailBreak" [S1E52]. Later, I asked Estelle's advice when I was really sitting down to write the song. I pitched her the "JailBreak" story: that Ruby and Sapphire had been forcibly separated and jailed, that they break out and find each other, and that they fuse back into Garnet. They're ecstatic to be back together and to be Garnet again, and they already know they'll win, and they burst into a song that's a love song, a fight song, and a victory song all at once. Estelle had some ideas right away. She brought up "Gold" by Spandau Ballet and sang a few bars of it over the phone and also mentioned the theme from *Fame* [1980]! I listened to both of those on loop over and over while working on "Stronger Than You"!

Estelle also gave me advice for "Here Comes a Thought" [from "Mindful Education" (S4E4)] and sent me some references. We talked a bit about how a calming song could still have a fast driving pace.

Besides composing music and singing, Rebecca's musical talents include the ability to play the ukulele and the Omnichord, which is an electric Autoharp made by Suzuki. A number of the people on the crew compose music and play instruments, too, including writer Ben Levin, who plays bass, writes lyrics, and helped compose "Empire City" and "Full Disclosure," and Jeff Liu, who has written a considerable amount of the music for the series such as "On the Run" and "Steven and the Stevens."

Joe Johnston [supervising director]: Groups of us have gotten together at different points and jammed. The song Greg sings, "Comet" [from "Story for Steven" (S1E48)], was an adaptation of a tune by a band our animation director Nick DeMayo was a member of in the eighties. A lot of care goes into making the musical performances in the show look realistic, and that's because of Nick's background in music. Fun Fact: Greg's real last name is DeMayo, after Nick.

Ben Levin [writer]: Steven Sugar plays accordion, though that has yet to be incorporated into the show. Although, one time, we made a Crewniverse band to play in a Cartoon Network talent show. It was Nick DeMayo on guitar, Joe on violin, Steven on accordion, and me on bass.

Once the voices have been recorded using the finalized storyboard as reference, it's time to make an animatic, which means incorporating the voices and images (and sometimes placeholder, demo, or final versions of music) into what is functionally an episode's rough draft. The animatic is an essential planning tool for creating a coherent story or setting a specific mood. Generally, only experimental, improvisational animation directors can afford to abdicate the control that an animatic provides. As the first cohesive draft of an entire episode, it is the first time that filmmakers







Above: Concept art by Rebecca. **Opposite, below:** Two rough drawings by Rebecca for signing cards to be used at public events.



see their project play in real time, with picture and sound together. The picture is simply the storyboard panels played back full screen, one at a time, with the voice recordings timed to match. On *Steven Universe,* it is animatic timer Lauren Hecht who takes on the tricky task of making everything flow smoothly while still staying within the eleven-minute running time. Rebecca and supervising directors Kat and Joe then screen animatics with an eye toward refining the timing and acting, or catching any issues that might reveal themselves. Finally, when everything is timed to their satisfaction, the episode is declared locked (a locked episode indicates that its scene lengths are now unchangeable), and it's ready to send off to the composers for original scoring.

Rebecca: The lock is really important. We can't do sound effects or music until we have everything completely set in stone for the timing. This is also our last chance to cut any lines that aren't working or any dead air that's slowing things down. We need to be thinking about sound while we do this, which sometimes involves us making noises to feel things out for time, like if there's a moment where you're hearing Connie running up to the door of Steven's house, we'll be testing it, "*'Thmp thmp thmp thmp THMP THMP!'* OK, we need that much time for her footsteps!" We also feel out comedic timing: "Hold this for a certain amount of time. . . . Wait . . . eight more frames. OK, yeah, that's way funnier." Sound does wonders. Great sound makes the animation look better.

Kat Morris [supervising director]: Choosing where the music should go is part intuition, part trial and error. Music works with the drawings and acting to help convey the particular mood of a scene, so we usually put it in places where we want the audience to feel a certain way about what they're seeing. A chase should feel intense; chilling at the Temple should be warm and fun. Sometimes, if we want something to be ambiguous, we don't have any music at all. We have to be careful not to cover every scene, because spotting everyone's emotions can become overpowering and even a little silly.

In the background of most *Steven Universe* scenes is sparkling instrumental music. The score has been described as "chiptune" due to the usage of vintage video-game sound effects and styles, but the overall sound defies being constricted to one genre and blends layers of live piano, strings, and lush film soundtrack–inspired influences. The team behind the music is Aivi Tran and Steven Velema, collectively known as aivi & surasshu.

surasshu [series music composer]: When we started working on the show in 2013, neither of us had any experience scoring for film or television. Storyboard artist Jeff Liu discovered Aivi's composing work on the indie roleplaying game *Cryamore* and shared it with Rebecca. Rebecca invited Aivi to audition, at the time when we had just finished and released our collaborative album, *The Black Box*, in high spirits. We figured that if we could also work on the show together, the result would surely be more versatile. Besides, it would make the workload less daunting for us as first-timers. So Aivi asked Rebecca if we could try out together.

We couldn't believe our luck as two relatively unknown composers. Cartoon Network was a household name, even in the countries where we each spent our childhoods—Thailand and the Netherlands—and we were both excited and expecting to wake up from a dream at any moment. Our test consisted of scoring an animated clip of a scene for what would later become the episode "Gem Glow" [S1E1]. We did our very best, composing every track together and showcasing the positive, eclectic musical style that we envisioned for the show.

When we were finished, we sent our work to Rebecca and started biting our nails. Aivi received the good news while she was teaching: The crew invited us to compose for *Steven Universe*.

Aivi [series music composer]: We knew from the start that we wanted each of the Crystal Gems to be represented by an instrument and not by a theme melody. By giving each of the characters their own sound palettes, we could express their personalities better and let them

react more flexibly to different situations. Since we felt that *Steven Universe* revolves around characters and their relationships, we thought that sound palettes would be a better way to reflect the transient nature of humanity than static themes. While we were at it, we also decided to create motifs and palettes for specific locations, objects, and abstract concepts in the show.

We selected the Crystal Gems' instruments on the basis of their personalities. And we also thought about how they'd fit together as an ensemble. From a composer's point of view, the Gems are essentially a jazz quartet with electronic sounds: Garnet on bass, the foundation of the band; Amethyst on drums, the momentum; Pearl on piano, the accompaniment and ornamentation; and Steven Universe on chiptune, a young and peculiar sound that is rarely paired with traditional instruments. As the musical style became established, the rules got more complex, but we always try to fit new characters' instrumental styles into this structure while still reflecting their personalities and backstories.

Aivi and surasshu's creative direction was established from those first pitch tracks. The music is stylistically faithful to their previous independent work, but for *Steven*, they incorporated narrative ideas into the composition of each character's theme.

For every episode, Aivi and surasshu tailor each theme to match the situation at hand. Whenever a Gem regenerates its light-manifested body after poofing, for example, there are usually subtle changes in its design. Aivi and surasshu embrace these changes by adapting the musical elements of each theme as the characters evolve throughout the series.

surasshu: When Peridot had her limb enhancers taken away [in "Catch and Release" (S2E18)], we changed her palette by removing her more mechanical sounds. When Garnet reformed during "JailBreak" [S1E52] we made her bass sound slightly more dynamic to illustrate that she had become somewhat less aloof and mysterious.

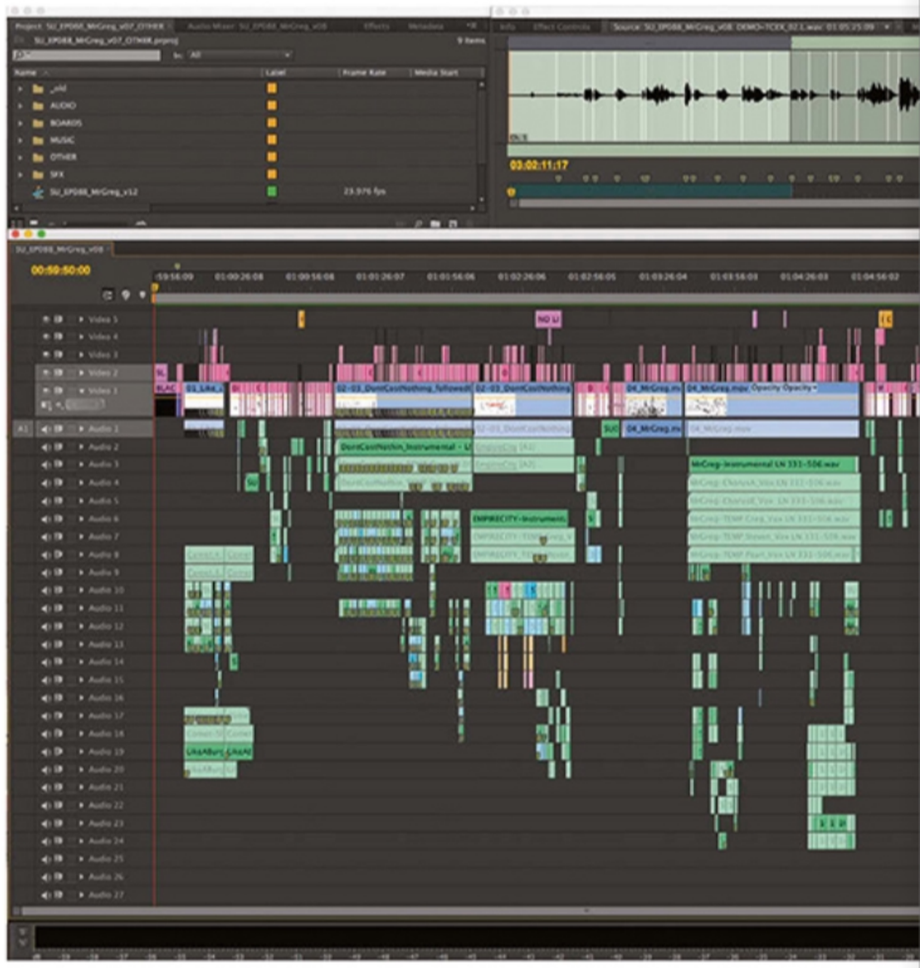
The four Diamonds, the authoritarian leaders of Gem society, have a special theme, a sequence of chords that represents each one of them: F# Major 7, B Major 7, E Major 7, A Major 7. This concept was pitched to us by Rebecca based on her idea that each Diamond is represented by a specific pitch and chord. She played the chords for us. It was one of the few times when she actively pitched specific music for the score, apart from her lyrical songs.

Some of our palette designs reveal a character's backstory. For instance, we wanted to connect Jasper's theme with Amethyst's, since they are both Quartz soldiers from Earth. The parallel we drew was the eclectic drums in both of their themes. But instead of using fun percussive samples like we do for Amethyst, we used a lot of intense, cranked, out-of-control sounds for Jasper. Her music captures her intimidating, militaristic nature. It has a dark, marching pace that suggests that the Crystal Gems should lose all hope of defeating her.

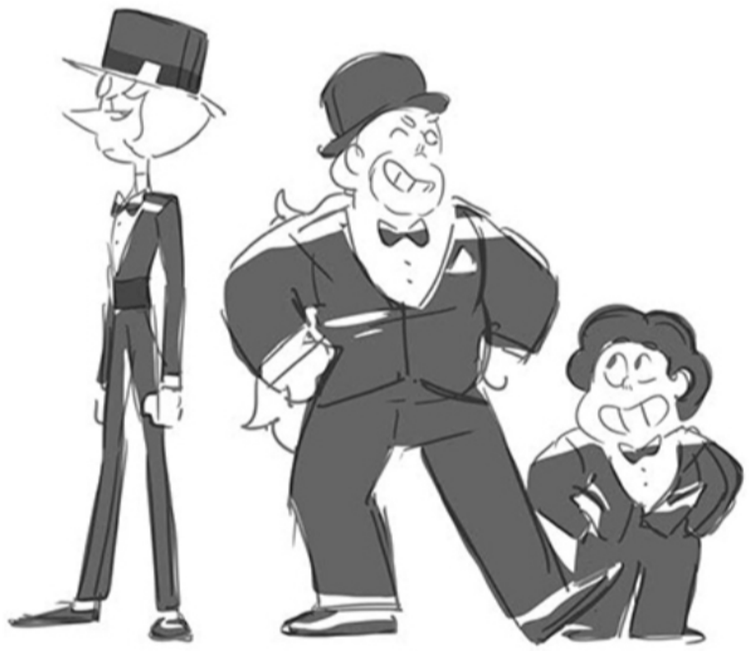
In a typical episode schedule, Aivi and surasshu need to work quickly and methodically to produce the music on time from their remote studio in San Francisco.

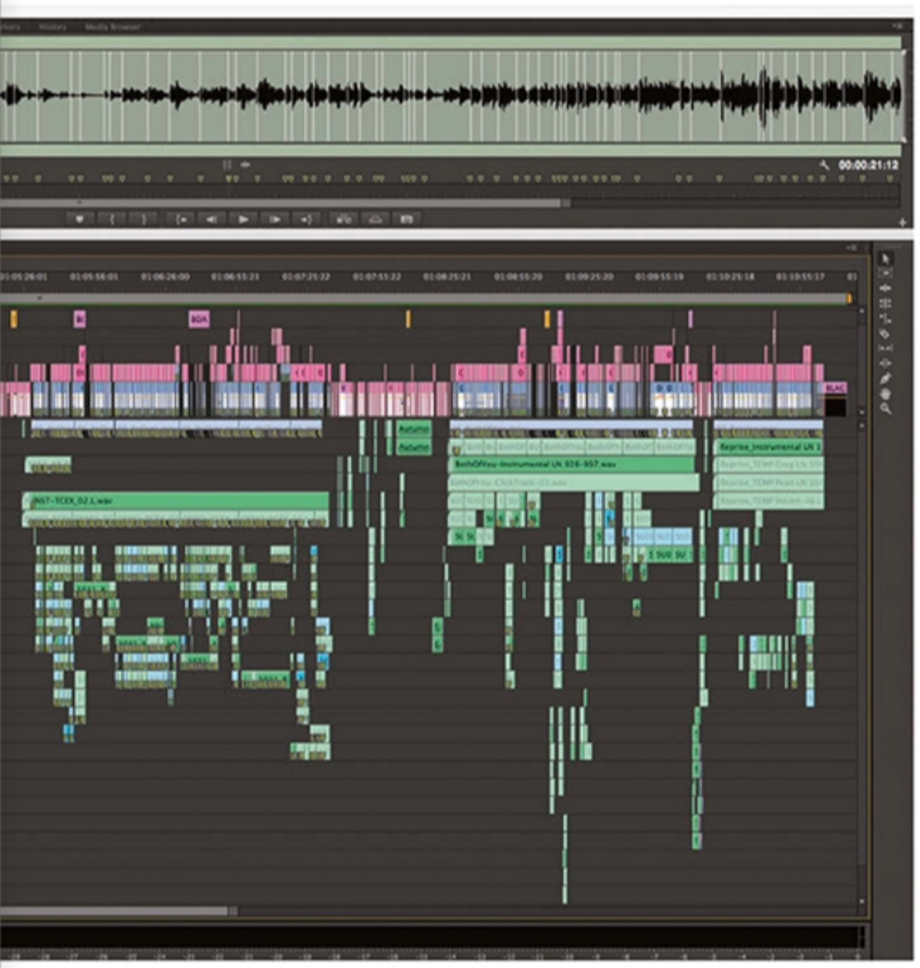
surasshu: We get a locked video, where all the timing of an episode is finalized—including voices and editing—and then around six that evening, we video-chat with Rebecca and the creative director on the episode, which at first was Ian and now is either Joe or Kat. We talk through the whole episode and listen and take notes.

Then we have a week to compose the music and send over a preview. It always takes the both of us the better part of a working week to complete the score, along with contracting our musicians and with programming and recording instruments ourselves. We have another call to discuss any changes, which is also the same call to discuss the next episode and start the process again. So each week we are discussing the changes from the previous week as well as the next episode. Then we render out all the music stems [the completed music saved as stereo files that will be incorporated into the final sound mix for broadcast along with voice and sound effect stems] that get sent to Sabre Media Studios in Burbank, where they do the sound design



Above: A view of one of the more complex animatic edits to come across Lauren Hecht's screen—that of "Mr. Greg" (S3E8), the musical episode, which entailed editing many layers of vocals and music with the visuals. **Below, right:** Drawings by Rebecca.







concurrently with our music, and then they put together the final mix with everything.

Aivi: It helps to have two of us, since we're composing each eleven-minute block in one week. Some things go quicker, like scoring the Gems casually hanging out, and some take more time to compose, like lyrical song arrangements and big emotional action pieces.

The songs that are sprinkled throughout the series function like they do in a musical, usually emphasizing an emotional high or low, framing a conflict or a feeling, and pushing the story forward. These come to Aivi and surasshu as demo tracks recorded by the crew in various states of completeness, and it becomes their job to reimagine and record the final music.

Aivi: When we are working with Rebecca's demos, we try to take good care of them and bring out her ideas, while at the same time incorporating them in the musical style we've established for the show in general and the specific musical profile we developed for each character.

At first, we were always referring to recognizable, common genres when we were developing ideas for songs. For instance, "Strong in the Real Way" [featured in "Coach Steven" (S1E20)] was supposed to be in the style of rock opera and musicals. Later on, we became more ambitious. The songs themselves became more complicated and our references more abstract. It's a trained skill for us to listen to a song and imagine it with different instruments. But sometimes we are unable to find existing examples for what we want, so we'll listen to the song together with Rebecca and only discuss the "feel" of it, regardless of the musical content. That's how we worked on "Here Comes a Thought" [featured in "Mindful Education" (S4E4)]. We love having that kind of creative freedom and flexibility. Rebecca always encourages us to take liberties, and she seems to enjoy the consequences.

To the delight of fans everywhere, the first all-musical episode of *Steven Universe* finally arrived in season three: "Mr. Greg" (S3E8). A particularly introspective, sad, and funny episode, it focuses on the complicated triangle of feelings between Greg, Steven, and Pearl. In it, Steven wants Greg to bring Pearl on their trip to Empire City, where they were planning on celebrating Greg's surprise windfall royalty check that made him an instant millionaire. Pearl hesitates, wary of spending time with the man who ultimately spelled the end of Rose's life. "Aw, c'mon, we're all a big family. It'll be great!" Steven exclaims with naive enthusiasm to Greg. "Just you, me, Pearl—and don't forget Mom!" Steven adds as he pulls up his shirt, revealing the rose-quartz bellybutton gem. Greg and Pearl wince. Eventually, Steven explains his intentions were based in his desire to heal some of the fissures in their family: "You both love me, and I love both of you. . . . I know you both need it, someone who knows what you're going through."

Ben: We do so much with music on the show; how were we *not* going to do a musical at one point? We were making this full-on musical episode, but Jeff and Joe still had only five weeks to board it. And unlike with most storyboards, they had to have the episode essentially timed out before the actors came into the studio. Because when you've got an episode that's nearly wall-to-wall songs, there's only so much you can edit out if it's over time.

I don't think we had written the outline with the intention that this would be a full musical, but once it became clear that this was going to be all songs, we trimmed the three-page outline down to a simple song list, with a few lines describing how each number moved the story forward.

Even though Jeff and Joe had to be fairly precise about timing, it was still a pretty organic process. While writing the outline, I had come up with the "Empire City" song and the first half of the song "Mr. Greg." I pitched "Mr. Greg" a cappella to the group, which felt very silly, but it must have amused everyone enough to stay in the picture. Jeff and I recorded a demo for that song with Jeff playing some amazing jazz guitar. The song was originally only the first verse and then an instrumental where Steven and Greg tap-danced. In the outline, Greg gets so caught up

Right: Drawings by Ian Jones-Quartey.
Far right: Steven and Peridot encounter the Cluster.





in the spirit of the music that he asks Pearl to dance, and that's when she pulls away, showing that Greg and Pearl have a long way to go. Jeff and I showed our demo to Joe, and he said, "This needs a second verse from Pearl's point of view." So together we wrote another verse, with Pearl singing, to show how she was warming up to the idea of Empire City but was not totally comfortable with Greg yet.

Aivi: The soundtrack for this episode was a huge collaborative effort for us, with Rebecca, Ben Levin, Jeff Liu, and all of the instrumentalists who performed on it: Jeff Ball on violin, Stemage on electric guitar, Kristin Naigus on clarinet and flute, and Jesse Knowles on trumpet. It was a behemoth of a production and an exciting experience that we're all proud of.

Even all-musical episodes get the standard schedule and deadlines. In fact, throughout the season, each episode presents unique challenges just based on the specific ideas at play. The climactic disarming of the Cluster, for example, was the most difficult score to crack.

surasshu: The episode "Gem Drill" [S3E2] was an immense struggle because it was often difficult to express the emotions dominating those scenes. We were also technically challenged by the experimental "granular synthesis" we wanted to use. Granular synthesis is a relatively new concept, which involves taking a sound, breaking it into a million tiny bits, then playing all those bits rapidly, often with random pitch variation, positions, and timing. The musicality is often really weird and hard to control.

Aivi: I was working on the track "Inside the Cluster" and spent three days on it. It was a very important moment in the show—the climax of a story arc that had been building up for several episodes. There was essentially no physical movement on screen to keep the music rolling along. The music needed to convey a violent emotional pain without suggesting action. At the same time, it had to sound huge, terrifying, and planet-size, but also tiny, beautiful, and intimate. By far the most difficult track in the series to date.

When the score, sound effects, and mixing are complete, the final sound design of an episode coalesces. Soon, animation will begin returning from Korea, and designers and painters will work to finalize the backgrounds that will set the scene for all the action beautifully.



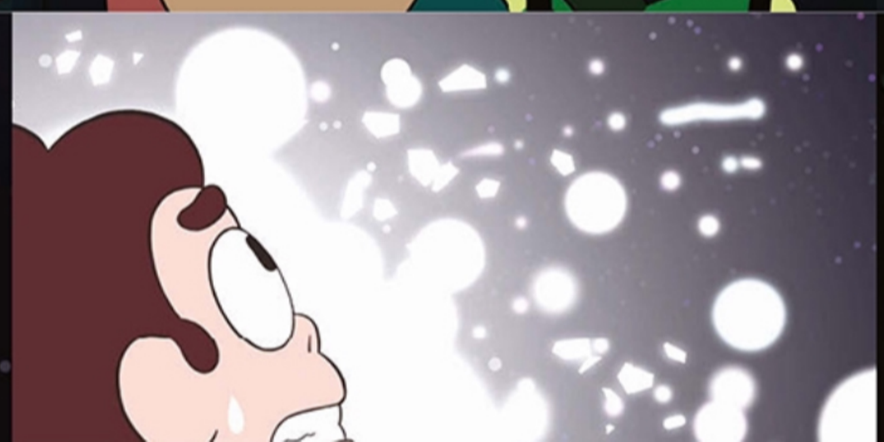
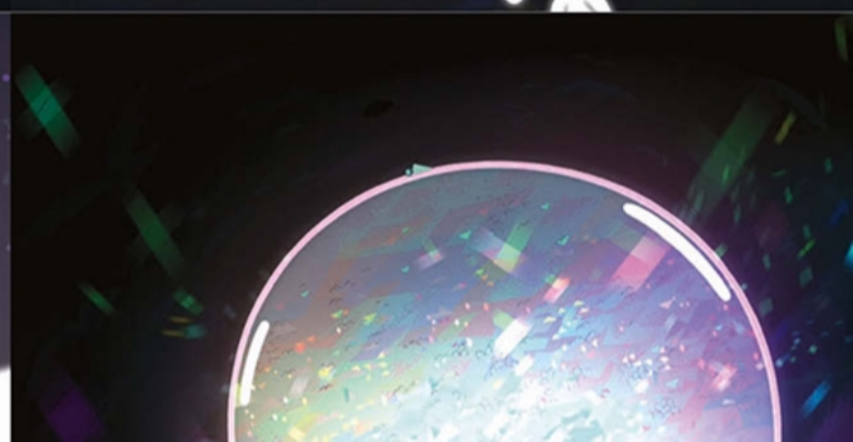










Musical Palettes

Leitmotif is a reoccurring theme throughout a composition that is associated with a specific character or situation. A popular example is Sergei Prokofiev's symphony *Peter and the Wolf,* in which each character has a signature musical theme. For *Steven,* Aivi and surasshu have composed character leitmotifs and taken a step further, establishing signature instrument musical palettes for each character that intentionally speak to their characteristics.



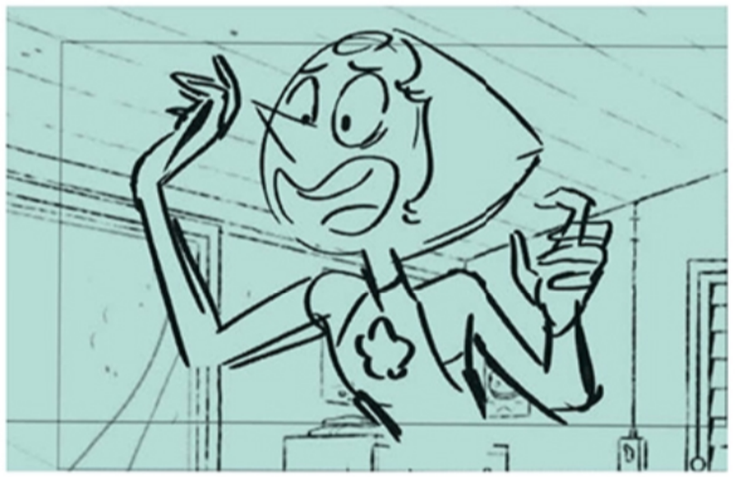
Steven: chiptune/triangle wave (secondary: Rose's palette for his Gem powers and empathy; horns for his human physical strength)



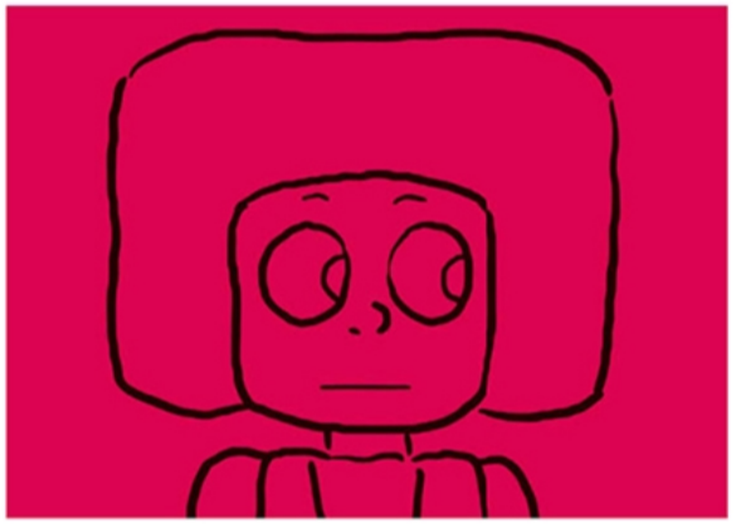
Garnet: Garnet's synth bass (secondary: Garnet's synth bell)



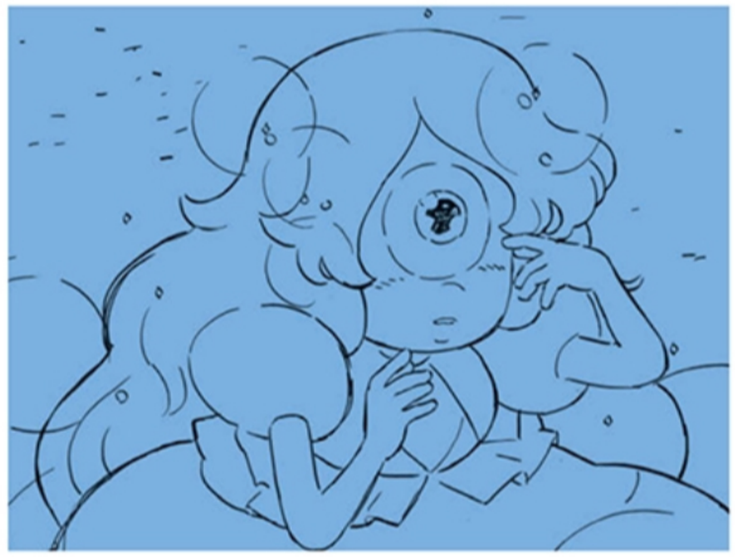
Amethyst: eclectic drums (secondary: electric bass, Amethyst's synth bell)



Pearl: piano (secondary: harp, electric piano)



Ruby: a slightly janky square wave



Sapphire: Sapphire's synth pad



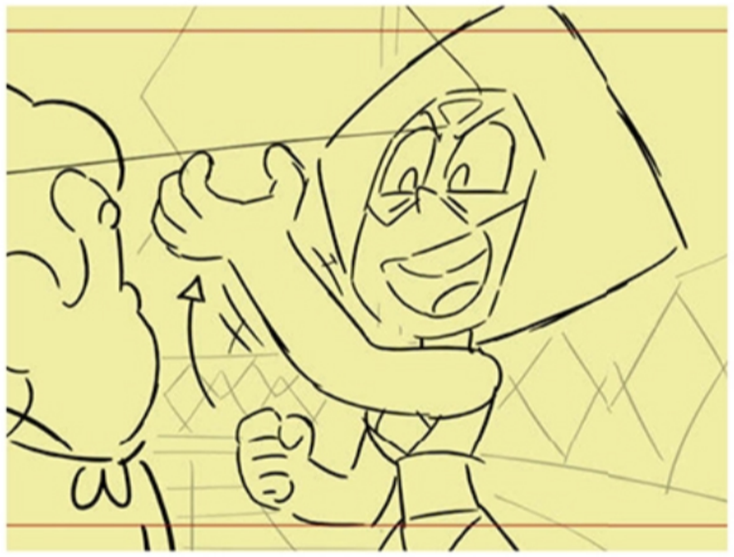
Ruby and Sapphire's love: electric piano



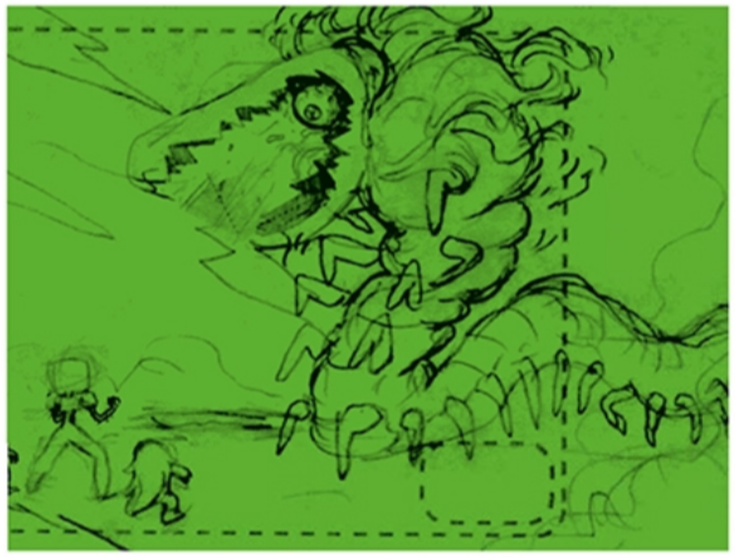
Rose (as remembered by others): strings (secondary: piano, Rose's synth bell)



Connie: Connie's synth bell (secondary: piano for her battle scenes)



Peridot: sine wave (secondary: Peridot's bells, Peridot's drum kit)



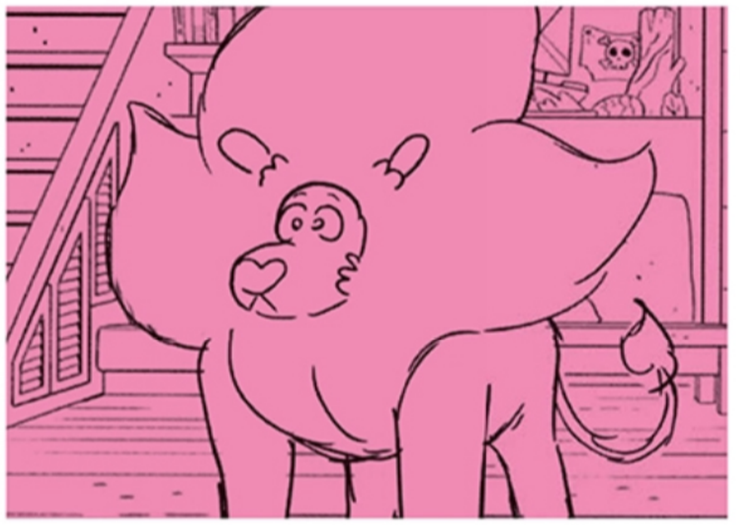
Mother Centipeetle: synth gamelan



Greg: Greg's synth bell (secondary: electric guitar)



Jasper: eclectic drums (secondary: synth choir)



Lion: a special synth bell that we use for all of the Gems' sweet family moments (secondary: Rose's palette)



Lapis: celesta (secondary: timpani, piano, acoustic guitar)



Bismuth: reverse electric guitar



Diamonds: The Diamond instrument (a synthetic sound that surasshu made combining harmonette and strings, processed by a synth)





An early Gem Temple concept drawing by Kevin Dart.



6: BACKGROUND DESIGN & PAINTING

Light sparkles as it meets the water, refracting in the waves. Tiny diamond shapes of light are a de fining element of the background art of *Steven Universe*. First established in season one by original art director Kevin Dart, the show's visual style—the sensitive observation and stylized portrayal of light and atmosphere—has gradually evolved under each of Kevin's successors: first Jasmin Lai, then Elle Michalka, and recently Ricky Cometa. This treatment is applied to an tangible, painstakingly specific world, carefully mapped out and articulated by the layout department, headed by Steven Sugar.

Jasmin Lai [former art director]: At the start of the show, Rebecca's ideas about color were primarily about making magical things feel magical, and making delicious things feel delicious. The challenge was more about making something feel right, rather than favoring one color over the other.

There are actually fewer sprinklings of diamond shapes now, in the recent seasons, than in the earlier episodes. The original idea for these diamonds was to emanate a graphic sense of light and sparkle, which helps tie in with the story theme of crystals. The earliest episodes had so much light and sparkle, though, that sometimes it would look odd if a character walked right over it without being affected by it. So now the sparkles are still used for the same purpose, but just in more controlled areas, where it wouldn't concern character interaction.

Most background designs start as rough drawings in the storyboards; the storyboarder sketches out the broader ideas of each location behind the characters, though the level of specificity can vary.

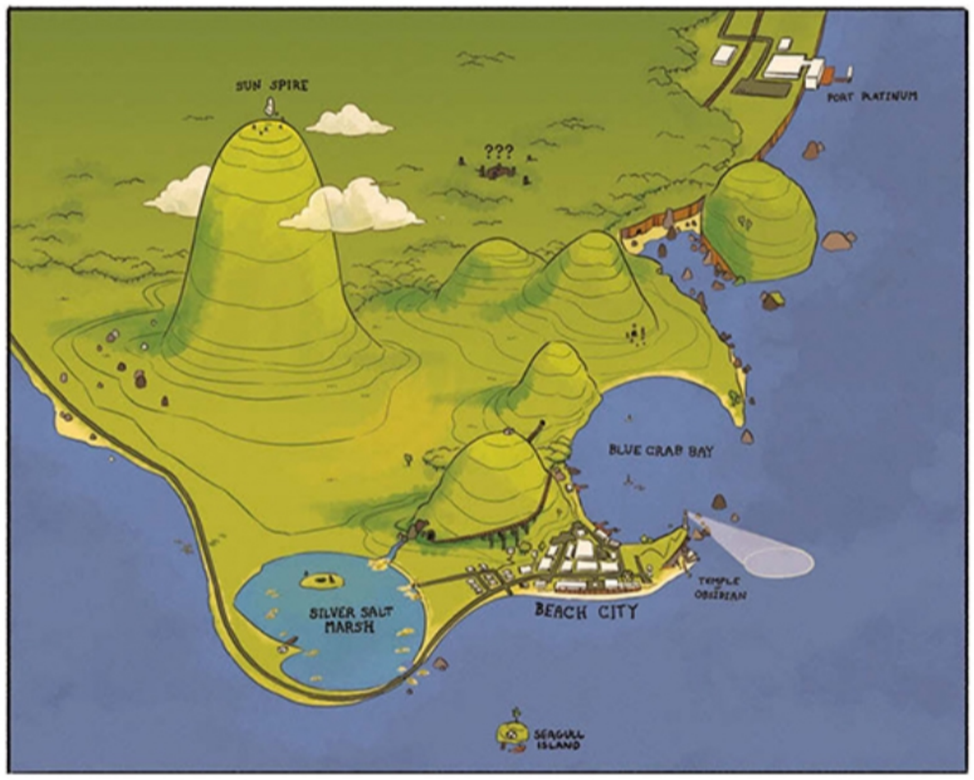
Steven Sugar [background designer]: How much we have to work with as designers totally depends on the storyboarder and the board. Some places, like the Great North or Empire City, had some rather figured-out ideas by the time they got to design. The Moon Base was pretty much already solved in the storyboard. But places like Onion's house or Bismuth's Forge or the Human Zoo were left almost completely open-ended for design to figure out, so we had a lot of freedom.

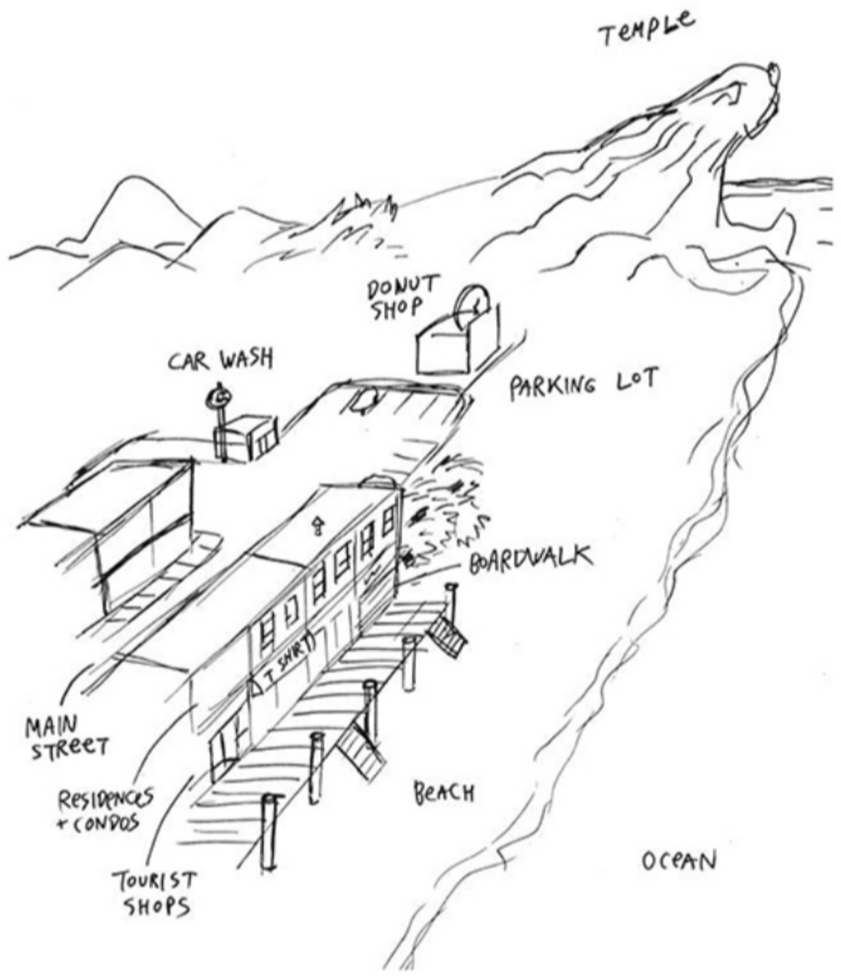
It is lead background designer Steven's job to take what's suggested in the board and create clean, black-and-white line art that clearly and evocatively conveys the locations in the series—down to the smallest detail.

Steven: I'm fascinated by details and specifics—the details around Steven's house, how the house is constructed, where there are power outlets and wires. Or thinking about Beach City and designing

(Continued on page 174)

World-Building Mapmaking





Left, below: Series development maps by Steven Sugar depicting possible options for the wider country surrounding Beach City and beyond. (Bottom map based on sketches by Joe Johnston.) **Right:** Original sketch of the boardwalk by Ian Jones-Quartey. **Opposite:** A tighter aerial view of the town itself and its many familiar locations.


BAY CAVE
BOAT
REHOBOTH BAY
BEACH CITY WATERTOWER
BEACH CITY
THE MAYOR'S HOUSE
1A
TOWARD
13
95
FUNLAND AMUSEMENT PARK
THE OLD DOCKS (DESTROYED)
BEACH CITY LIGHT
U-STOR SELF STORAGE
IT'S A WASH
LIGHTHOUSE PARK
DEWEY PARK
STEVEN'S HOUSE
BEACH CITY VISITOR CENTER
CONE 'N SON
FUNLAND ARCADE
BEACH CITYWALK FRIES
FISH STEW PIZZA
???
T-SHIRT SHOP
THE BIG DONUT
BEACH CITY
DELMARVA
N
ATLANTIC OCEAN


BEACH CIT

Two views of Beach City and the Temple. Line art drawn by Steven Sugar. Painted by Amanda Winterstein.

(Continued from page 169)

the street signs and curbs. I love adding the nitty-gritty stuff to a cartoon town.

The process begins when approved boards are passed on to the art director and the shot list is assessed. Even if the characters are revisiting old locations, the team often updates and modifies backgrounds to maintain the feeling that the world is real and constantly changing, and that the actions of the characters can have a lasting effect.

Steven: We've always had this theory on the show: We wanted this beautiful perfection of everything that had to do with Homeworld and Gem society, but it had to be kind of eerie. One of the principal ideas is that perfection is not something to strive for—that it's not necessarily good, that imperfection should be celebrated. And so when we're dealing with Beach City or with anything human-related, we want to emphasize the imperfect qualities of it. Things that would normally be thought of as gross or ugly. It's not poking fun at it or trying to turn the viewer away from it, but celebrating it.

Rebecca has always championed the idea that backgrounds be studded with items of potential future significance to the story, as well as evidence of the past.

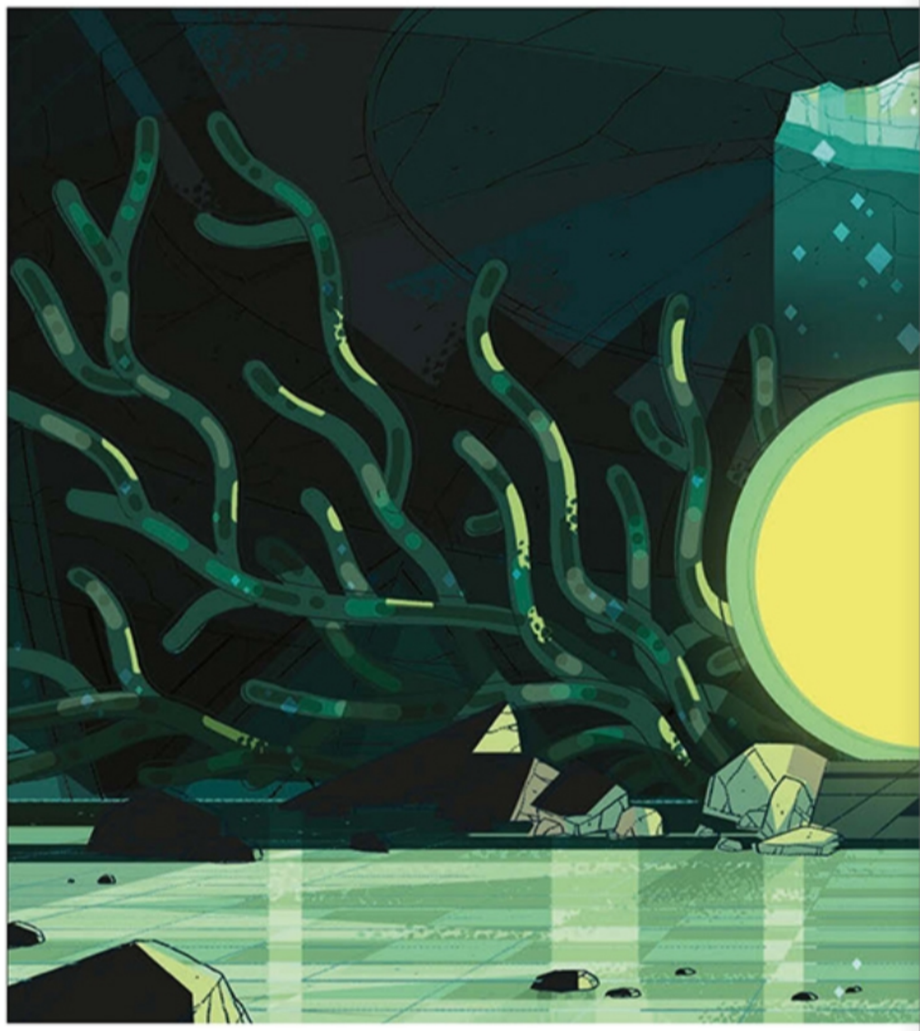
Steven: We're always trying to hide things in the backgrounds—not just Easter eggs and references, but actual narrative bits. I think that's the core of world-building: just having a cohesive underlying structure to everything—a whole world of stories in which the audience gets to see only a select few parts. So there are stores around Beach City that will close and reopen as new stores; permanent world changes, like the fence and crater on the Temple hill; callbacks to earlier props or designs . . . that sort of stuff. And lots of it, most of it maybe, is just getting squeezed in at the design stage!

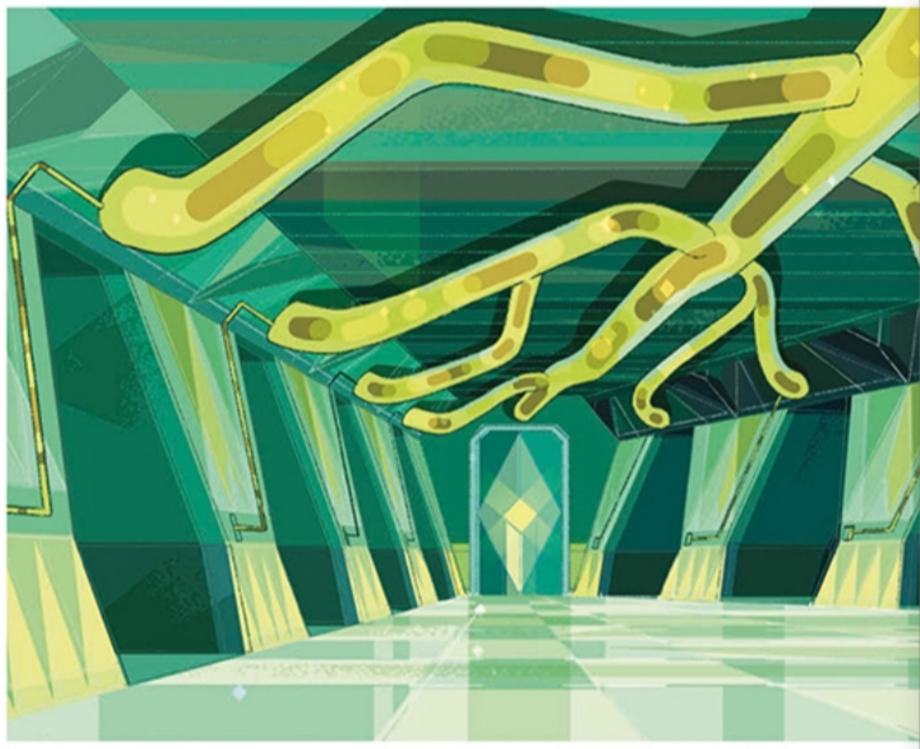
Rebecca: Right! It's in "An Indirect Kiss" [S1E24] that Pearl gets upset that Amethyst fell off the cliff and says they should build a fence. From then on, it's always there! Later, when the hand ship crashes into the Temple hill, there is a crater there that never goes away. The permanence of these changes are really important to all of us because it makes it feel real. I love the fence especially because it was just a joke but now it's always there. They really built that fence.

Once a background design's line art is complete, the painters take over. The painters consult with the art director and Rebecca and reference the boards for context. The painter's tools are color and shape, which help suggest light and atmosphere, while the lines from the layout art handle the structure and detail. The painter's primary goal is to complete the scene, story-wise—color tells us whether it's day or night, sunny or foggy—while, secondarily, enhancing the mood and strengthening the composition. Because of the inventive style developed for *Steven Universe*, this process is never simply a color-within-the-lines chore.

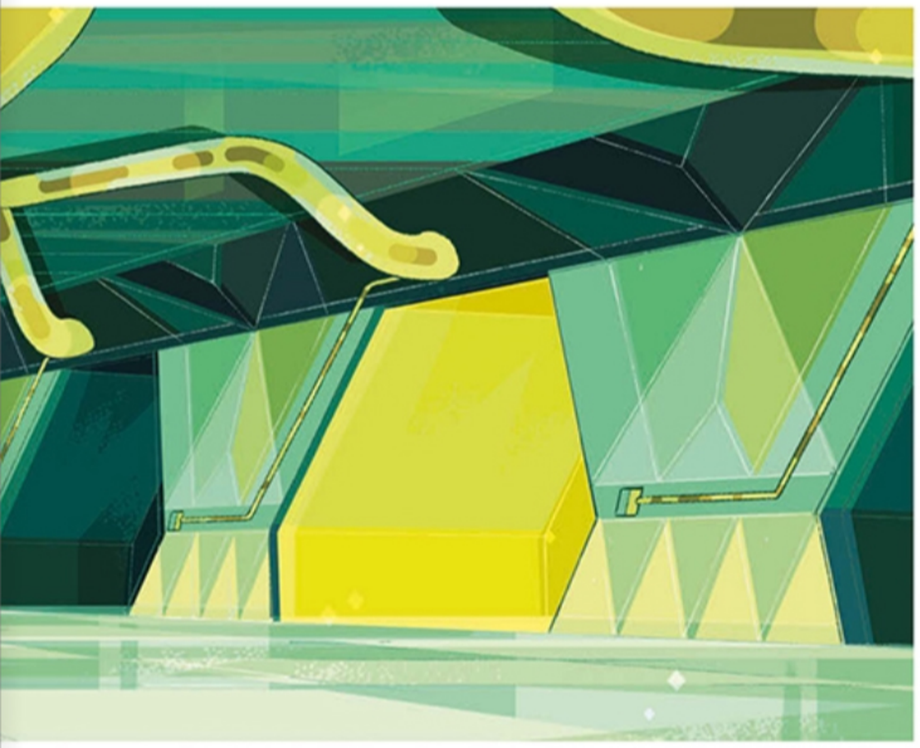
Elle Michalka [former art director]: When Rebecca and I were initially working on the pilot, we discussed theories of the sublime as being non-frameable. We looked at Barnett Newman and Piet Mondrian and wanted to include hints of things off screen, a light source or a shadow. We talked about the *Tao Te Ching* highlighting the importance of empty spaces, like the space within a vase as being the part of the vase that makes it useful, and wanted the backgrounds to be the same. It made sense because we were drawing this world in bits and pieces; these places did not exist outside of the frame. We also looked at how Paul Cézanne painted, allowing less important spots in his compositions to be a little messy like the viewer's own lack of focus, but laying up a lot of detail and specificity on objects. When we approached the style of the backgrounds, we decided that we could achieve this same effect. The lines became the descriptive bones, and the paint was applied more loosely, breathing underneath. We even made the color slightly off register with the line to highlight that distinction.

For the color, Beach City is typically more realistic and special locations are more fantastic, but overall, we wanted to use pastels and purples that gave it a magical-girl feel. We always put little diamond shines









Top: Line art by Sam Bosma. Painted by Jasmin Lai. **Above:** Interior spaceship view from "JailBreak" (S1E52). Line art by Steven Sugar. Painted by Jasmin Lai.

to emphasize areas in the composition, but for special shows like "Alone Together" [S1E37] we started to incorporate the type of bokeh [the visual effect in out-of-focus areas of the background of a photograph or film that is produced when using a shallow depth of field] lights that pop up in shojo manga [Japanese comics designed with a teenage female target-audience]. It went along with the vibe of the narrative—magical but also slightly kitschy and familiar.

To explore this looseness in the paint, our earliest passes used superimposed watercolor texture. But that made it very clunky, so we ditched it and streamlined the process to be what was easiest to make within the medium of Photoshop itself. Being a TV show with a tight schedule, they had to be efficient to make. The process started with large shapes of color underneath the line and built up details within the shapes. We tried to keep the colors to a minimum, nearly monochromatic, with only a few secondary colors. Simple in theory, but still taking a lot of effort to make the specific decisions that created this simplicity. Amanda [Winterstein] and Jasmin were really great at pinpointing interesting color combinations that felt just right and not too over the top.

Having Kevin [Dart] come in as art director gave everything a cohesion thanks to his phenomenal sense of style. His early explorations for the show made us all really see the potential in what we were doing.

After the primary backgrounds have been painted, the color stylist needs to choose colors that will match and complement what's already in the scene to be applied to the character and prop model sheets.

Jasmin: Model sheets are sent to the color stylist in a grayscale state. The color stylist then takes the model and colors it while referencing the appropriate storyboard and backgrounds. At this point of the color pipeline, the backgrounds will ideally have been painted to set the mood and tone of the environment. This way, the color stylist can use the background colors as a point of reference to design the props, effects, and character colors. It is important to know what kind of background the prop, effect, or character is moving over, so that the entire scene feels clear and right; the object must be properly lit by the scene so that the audience feels a sense of groundedness.

As a general rule, colored lines on effects, props, and characters are reserved for special cases. For instance, a soft, light-brown line on a loaf of bread looks more delicious and edible than a hard black line. This is also the case for removing lines or "self-lining" objects, which can be seen in an example of light effects. Replacing the line around the edge of a sparkle shape with a soft glow will give the appearance of a brighter, more luminous sparkle.

The earliest episodes were still very much in the experimental stage with regard to color. We were faced with the challenge of unexpected character and background interactions in postproduction, where we would see a brightly lit character walk straight into a pool of shadow without looking affected by it, or a character looking oddly colored due to the placement and location over the background. These challenges would typically be avoided in the preproduction stage with careful planning and checking, but mistakes naturally happen—and over time we've learned a lot!

The primary background art that sets each scene is created in-house in Burbank, while the secondary backgrounds—often, close-ups of pre-established backgrounds—are left to the artists in Korea to complete.

Ricky Cometa [former art director]: We do the main key backgrounds and the main idea over here. In black and white, Steven will provide the animators in Korea with the language of what these trees are in this scenario, and what these mountains are in this scenario. And we do the same thing in paints. And then we say, "We need this detail of the clothes on the floor," for example, or, "We need the details of the close-up of this tree bark," and they'll complete those shots.

Rebecca and the departmental leads work hard to unite the crew under a collective vision for the show, ensuring that background design, prop

(Continued on page 182)

Space

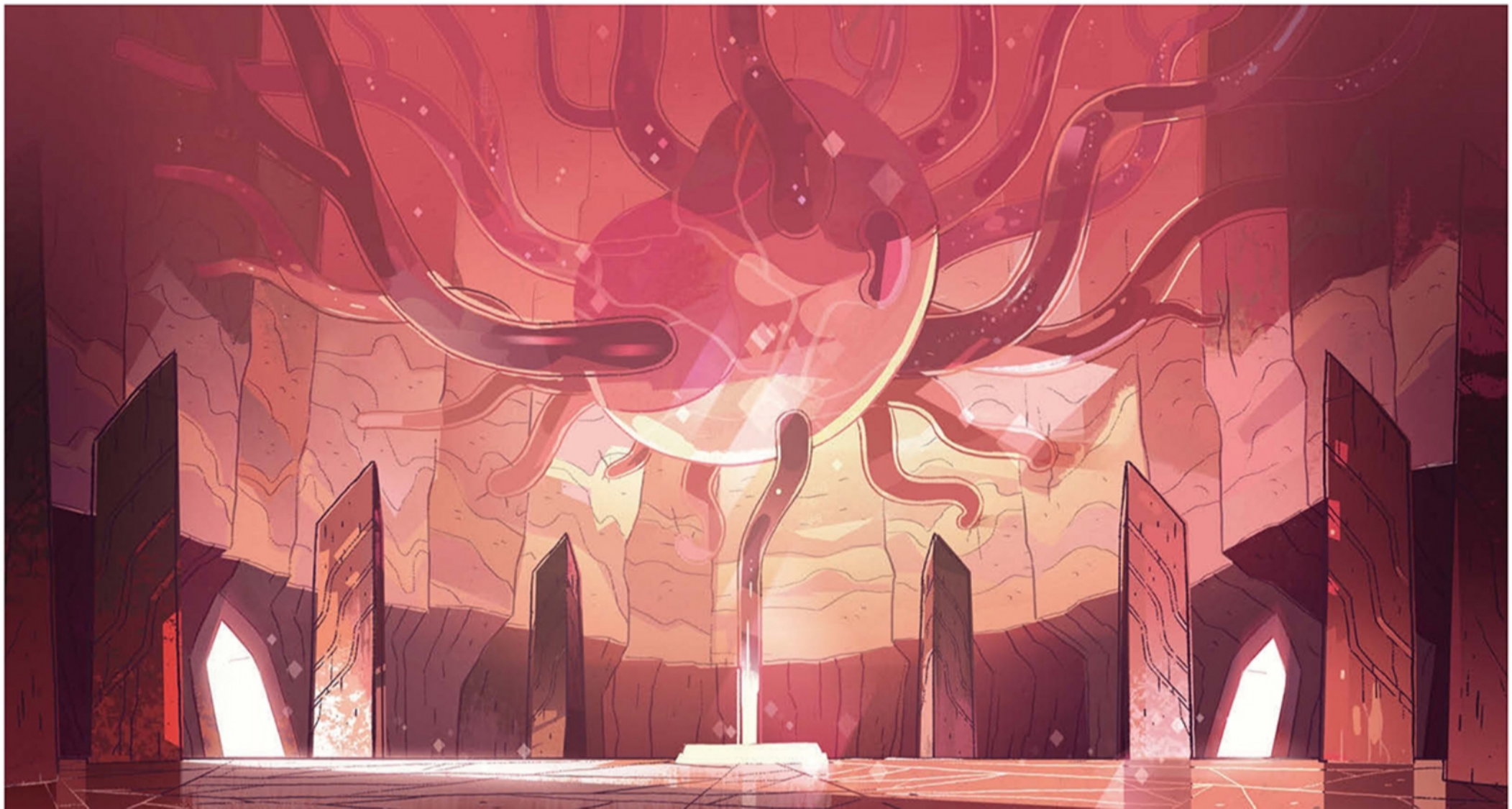






Opposite: Line art by Emily Walus. Painted by Amanda Winterstein. **Opposite inset, above:** Line art by Sam Bosma. Painted by Amanda Winterstein. **Right:** Line art by Sam Bosma. Painted by Jasmin Lai. **Below:** Space background painted by Elle Michalka.

Color and Light





Opposite top, bottom: Line art by Sam Bosma. Painted by Elle Michalka. **Right:** Line art by Steven Sugar. Painted by Amanda Winterstein.

Color Keys









Above: Elle Michalka's color keys define the color and mood of the warehouse party that Stevonnie attends. **Top:** Line art by Steven Sugar. **Right:** Images from the episode "Alone Together" (S1E37).





















Jasmin Lai: The color keys serve as an additional guide for the crew to follow when creating a palette for each individual prop, effect, character, or background color model. Color keys are not always created for every episode, but when a story calls for a specific palette change that helps deliver the intended message and emotion, these guidelines are especially useful.









Left: Color keys by Jasmin Lai, line art by Emily Walus (second from bottom) and Steven Sugar (bottom). **Above:** Images using the color direction from the episode "Message Recieved" (S2E25).

(Continued from page 175)

design, color styling, and paint are all speaking the same visual language. The series also benefits from the creative cross-pollination that happens naturally in the studio.

Steven: I'd talk with Danny [Hynes, lead character designer] and Angie [Wang, prop and effects designer] often about how to bring ideas from the character and prop-design side into our background layouts. They came up with some genius theories about how everyday objects should look—and equally genius ideas about Gem designs and shapes—and how that might impact their architecture and statues.

Danny talked to me about this theory early on—"threat of activation." The idea being that you populate the world with little details that you design and paint like props, like they're on cels [short for celluloid, a transparent sheet on which each frame of hand-drawn animation is inked and painted, largely now replaced with digital ink and paint]. And since the audience at least subconsciously knows that drawings on cels are probably going to move, you create this illusion that those things *could* move, even if they never do!

The result of this cross-departmental collaboration is a more fully imagined world; all of the little details add up to a very specific, perfectly imperfect place that viewers want to spend time in.

Steven: Whenever I look at what people are saying online, the nicest thing is always when I see comments like, "I want to live in Beach City." Because to me, that says we've made a world that *means* something to people—like they can connect the dots and see something deeper than a few hundred backgrounds of side streets and building exteriors.



Right: Background art by Elle Michalka from "The Answer" (S2E22).



"The Answer"



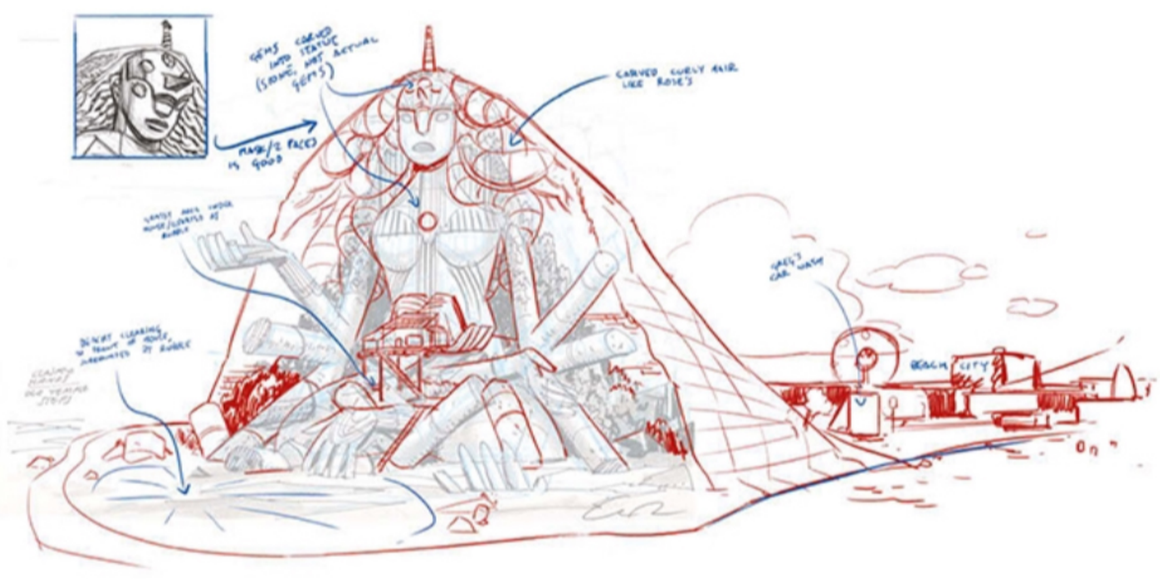




"The Answer" (S2E22) painted a romantic picture of Earth's beauty as Ruby and Sapphire discover their love. Painted by Elle Michalka, inspired by the style of art director Jasmin Lai.

The Temple




GEMS CARVED INTO STATUE (SOME, NOT ACTUAL GEMS)
MASK/2 FACES IS GOOD
CARVED CURLY HAIR LIKE ROSE'S
GREG'S CAR WASH
BEACH CITY



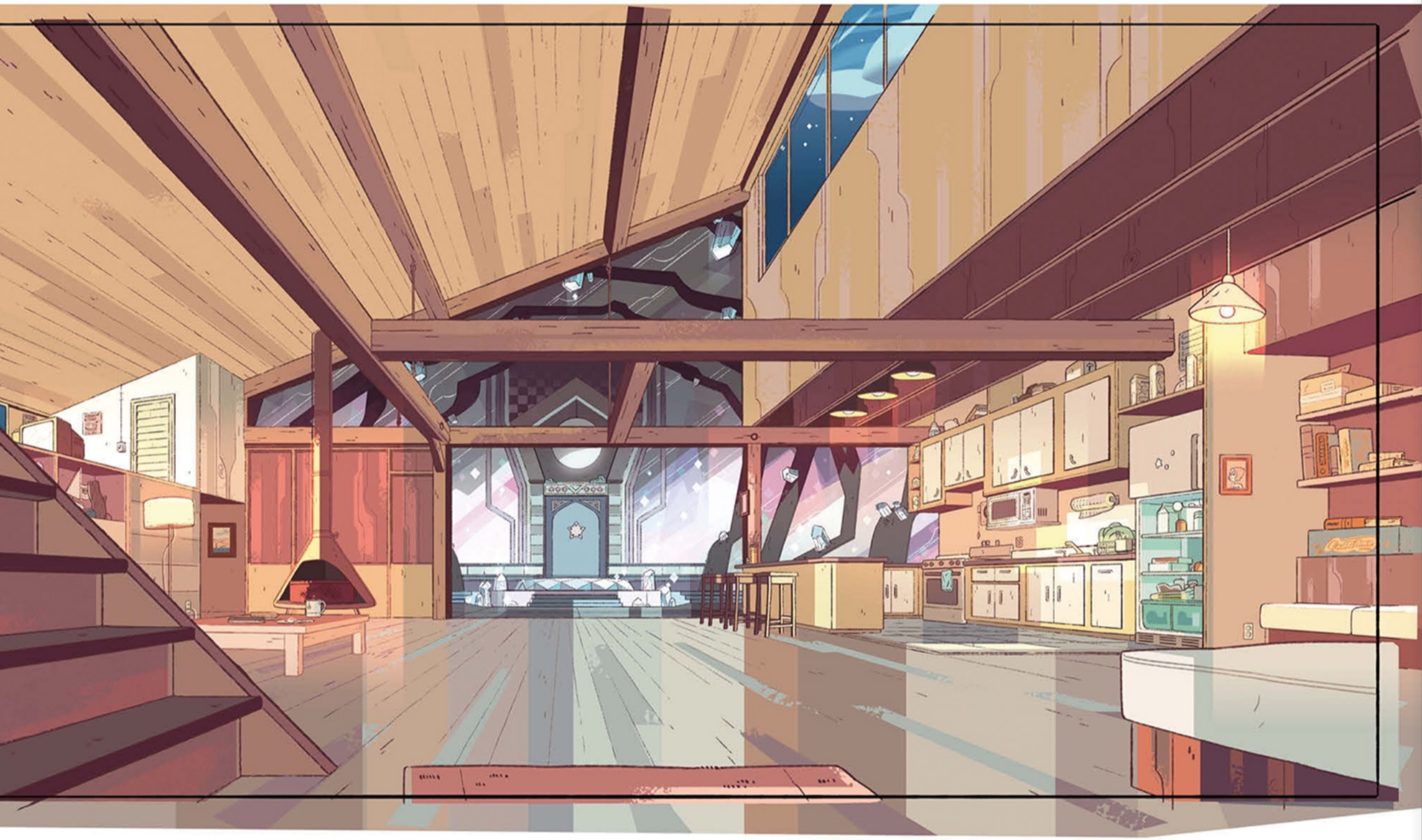




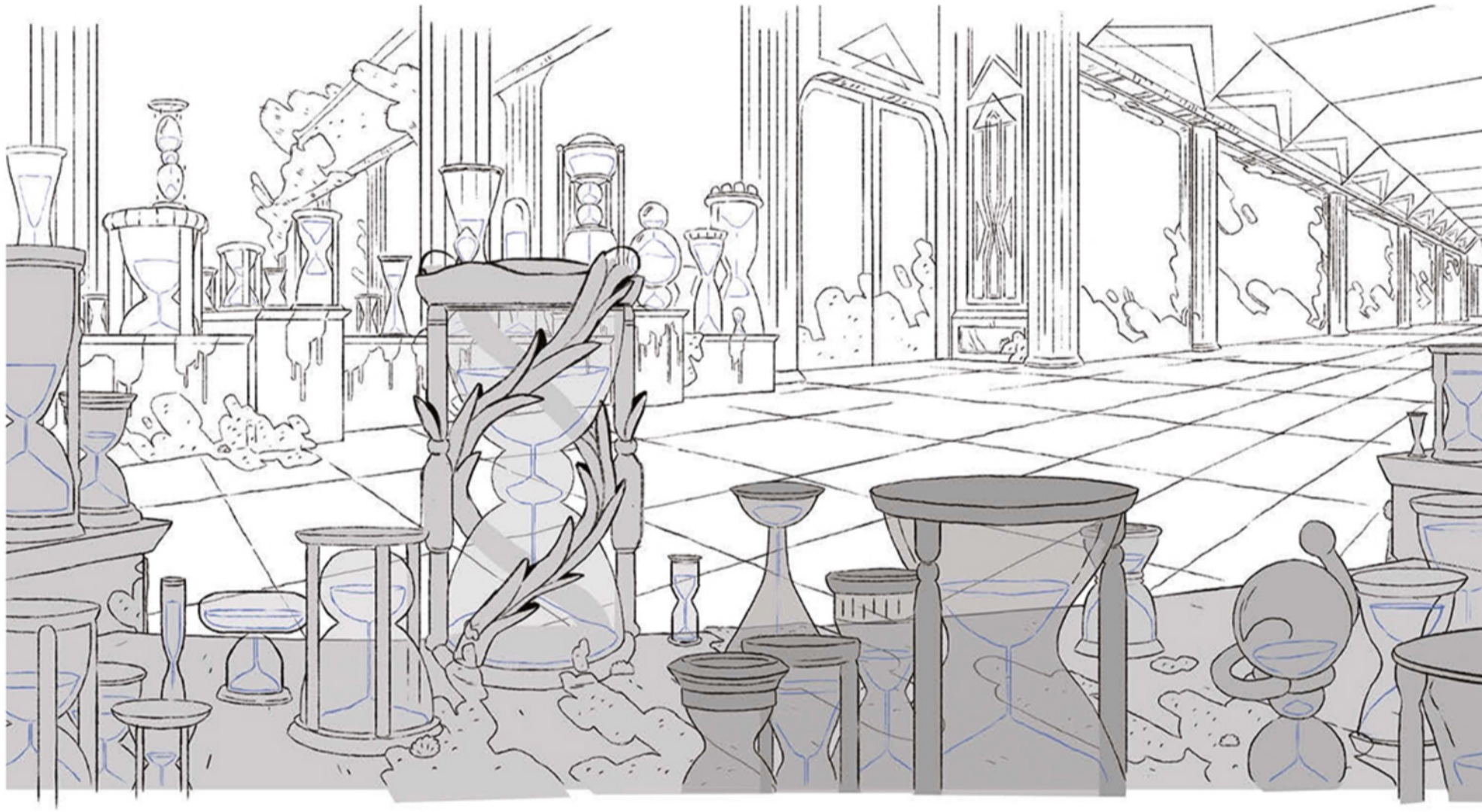


Opposite top, right: Guy Davis's early concept art for the Gem's ancient Temple defined many elements that carried through to the direction for series design. **Opposite bottom:** Notes drawn on top of Guy Davis's concept art. **Above right:** Concept art by Colin Howard.


Beach Citywalk
FRIES
PIZZA



Opposite top: Line art by Steven Sugar. Painted by Amanda Winterstein. **Opposite bottom:** Line art by Steven Sugar. Painted by Elle Michalka. **Right:** Line art by Jake Wyatt from the episode "Steven and the Stevens" (S1E22). Painted by Amanda Winterstein.





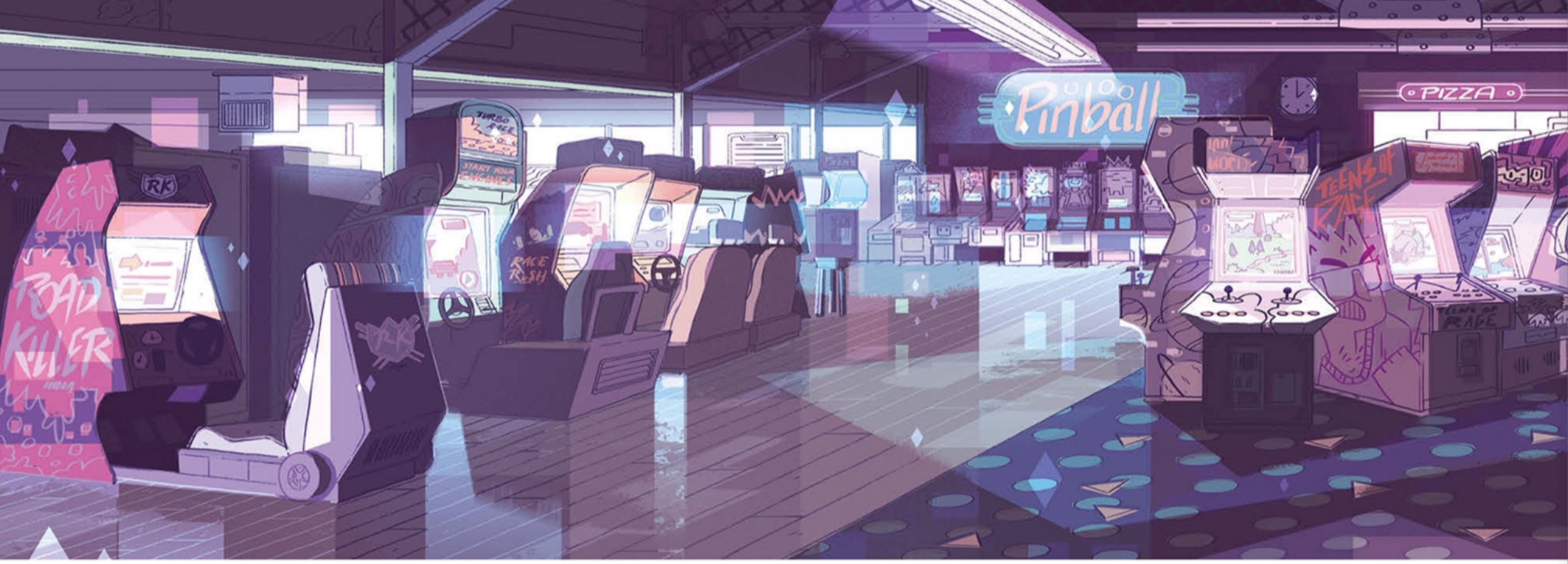
"Island Adventure"



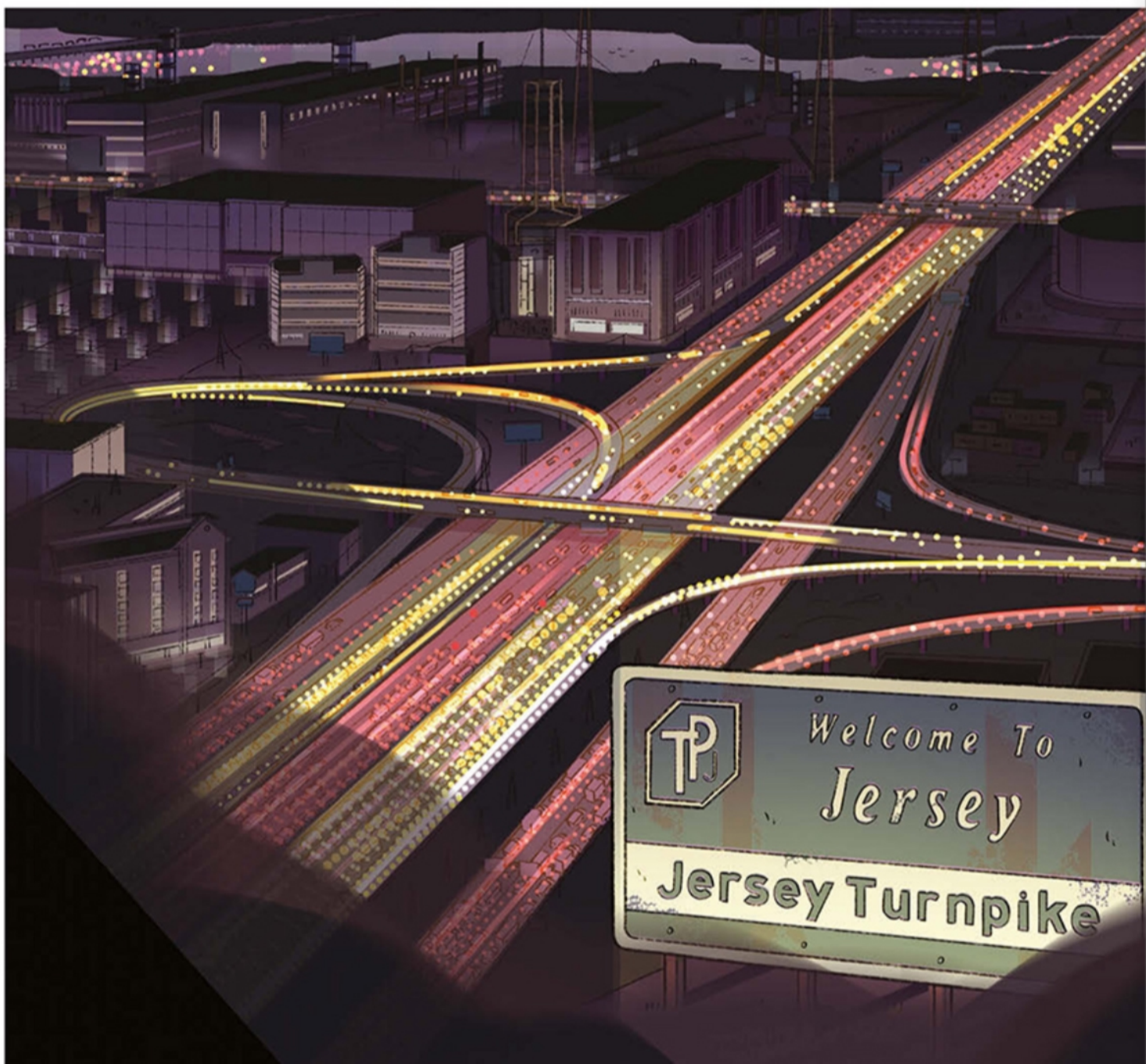




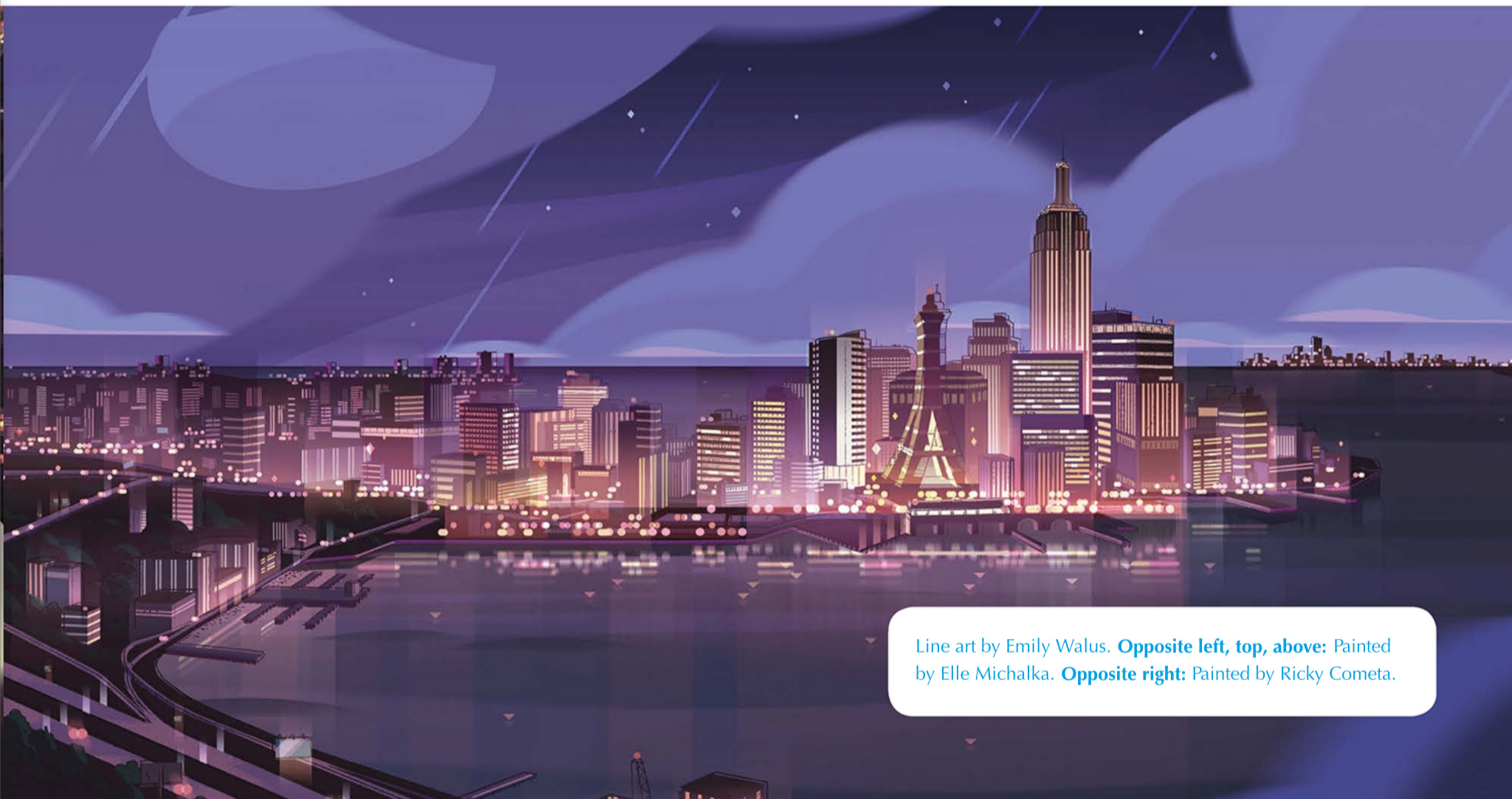
Background art from "Island Adventure" (S1E30). Line art by Sam Bosma. **Opposite top, opposite left, left:** Painted by Amanda Winterstein. **Opposite right, above:** Painted by Jasmin Lai.


Pinball
PIZZA
TURBO RACE
START YOUR ENGINES
RACE RUSH
ROAD KILLER
TEENS OF RAGE


HIMITSU
SUNY
soda
GOOD HOB


Welcome To
Jersey
Jersey Turnpike





Line art by Emily Walus. **Opposite left, top, above:** Painted by Elle Michalka. **Opposite right:** Painted by Ricky Cometa.



Line art by Sam Bosma. Painted by Amanda Winterstein.



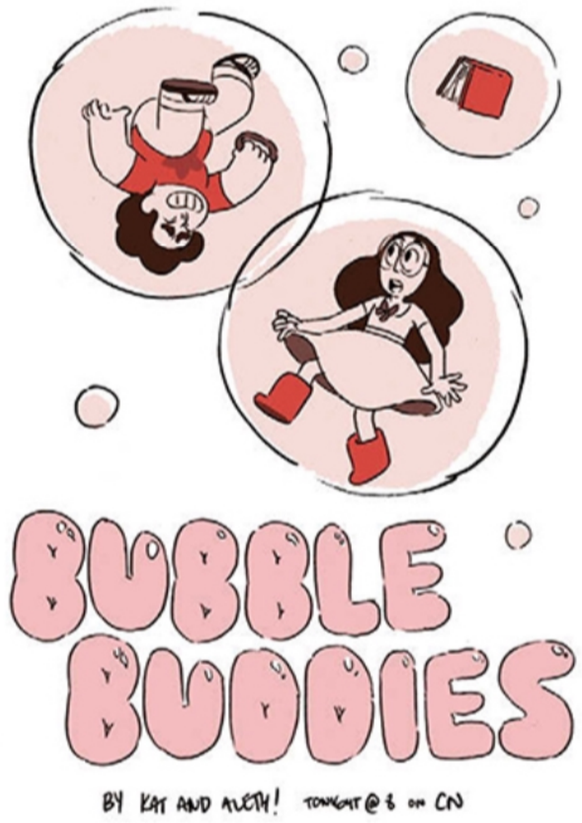
Line art by Steven Sugar. Painted by Elle Michalka.



Animation drawing of Pearl, by the animation team at Sunmin Image Pictures, from the episode "Mr. Greg" (S3E8).



7: ANIMATION & POST



Promo drawing by Kat Morris.

Almost none of the final animation for *Steven Universe* is created at Cartoon Network Studios. All of the previous stages of development, in which a single episode is volleyed among writers, producers, designers, colorists, composers, and editors, could be viewed as the meticulous crafting of a fine set of blueprints. The animation production phase, when teams of artists on the other side of the globe actually draw the action on paper one frame at a time, is where those blueprints are followed. Compared to animating in the United States, outsourcing animation to foreign studios is usually the favored, less expensive method of production for television networks, and it's been that way for most of television history (one of the earliest examples being Jay Ward Productions' use of Gamma Productions in Mexico for *The Rocky and Bullwinkle Show*, which first aired in 1959). More recently, South Korean studios in particular have become known for their quality animation work, and this is where episodes of *Steven Universe* are brought to life: at Sunmin Image Pictures Company (known for their action animation work, such as *Megas XLR*) and at animation powerhouse Rough Draft Korea (known for animating *Adventure Time*, *The Simpsons*, *SpongeBob SquarePants*, and many more). It's an arrangement that requires constant communication.

Jackie Buscarino [producer]: Our production team handles information coming to and from the two overseas studios that we split the episodes between. There is daily email communication between our team and theirs. For extra-special episodes that need a lot of care and detail, we'll video-chat for direction and specifics from Rebecca or our supervisors.

When an episode's timing is locked and almost ready for shipping [the transfer of production-ready digital assets] to the Korean studios, animation director Nick DeMayo and his team go to work creating a detailed plan for the animators to follow.

Nick DeMayo [animation director]: My role falls between the storyboards and the animation. Before I get started, I review the locked animatic. We discuss anything from fine-tuning the details from the board to fixing anything that may not translate well in the final animation.

I, along with my team, then go on to the "timing" aspect of the job. On exposure sheets [sheets with grids that represent every frame of exposure in a motion picture, with room for instructions to be written on them for animators and camera operators to follow], we communicate to the animators the exact amount of time it takes for each action to

happen, whether it be a footstep, body gesture, smoke effect, and so on. Track readers analyze the dialog and record the phonetic sounds of each word. We then add written direction for the lip sync on the exposure sheets, otherwise known as mouth assignments, which define which mouth shape should be drawn and when.

The files are then transferred to one of the two animation production studios, delivered as two digital bundles: black-and-white materials, followed shortly by color materials.

Christy Cohen [production coordinator]: The black-and-white materials are sent first and consist of the final storyboard, the animatic (locked for dialog and time), an audio track of the episode, exposure sheets (with all the animation direction notes), lead sheets (a scene list that has the footage length for each scene), a black-and-white background reference list (a breakdown of which backgrounds should be used or referred to for each scene), and a model pack of all the black-and-white line art designs for backgrounds, characters, props, and FX [in this case, drawn visual effects and how they should look]. The model pack includes any designs that are being reused from past episodes and designs that have been created newly for that specific episode.

The color materials are sent a couple weeks after the black-and-white materials, and they consist of a color reference list (which expands upon the black-and-white background reference list by breaking down the different palettes by scene and detailing which color backgrounds should be used or referred to for each scene) and a model pack of all the colored and painted versions of the backgrounds, characters, props, and FX that will be needed for the episode.

The closeness of the relationship developed between an American showrunner and an overseas production crew will vary by series. Rebecca Sugar, with her background as an animator herself, is deeply involved on a personal level (as expected) because she knows that the production teams on the other side of the globe are essential partners in making her vision a reality.

Rebecca Sugar [series creator]: I've been to the Korean studios twice now. I go whenever I get a chance to. Cartoon Network will send several executive producers from the various shows they are producing at any given time. The first time I went, it was very hands-on. At RDK [Rough Draft Korea], I sat down and drew with my directors and my team while they asked questions. I drew guides for the construction of everyone's heads, how they bend at the waist, Pearl's long feet versus Amethyst's tiny toes . . . things like that.

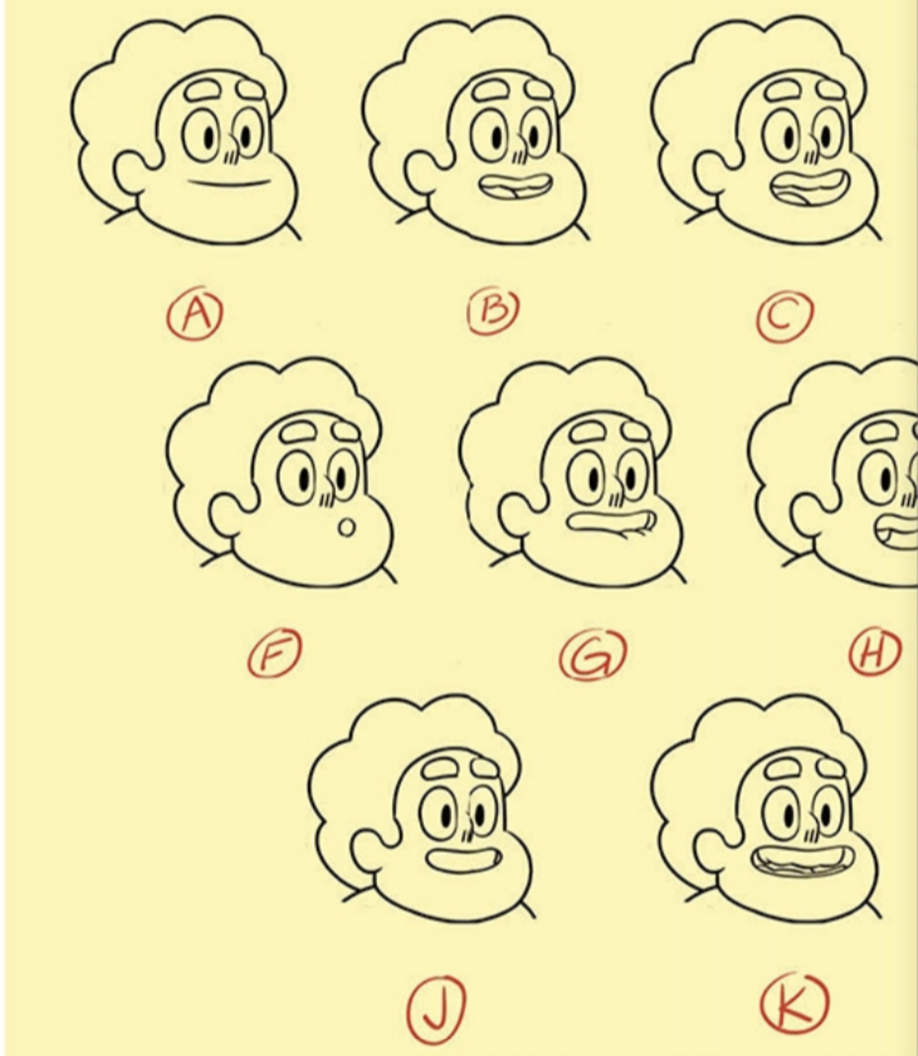
At Sunmin, they were compositing "Giant Woman" [S1E12] at the time. We sat down and drew together, and I answered a bunch of questions about the story. This was a really different show for Sunmin—they had been doing mostly action shows. They were suddenly doing such funny drawings, and such cute drawings. I was really excited about an intersection between Hanna-Barbera and anime: Hanna-Barbanime. Director [Ki-Yong] Bae at Sunmin is so experienced; he'd worked on anime and on western animation—he was right on top of this.

The second time I visited Korea was very different because we all knew each other better, so mostly I was excited to see everyone again and meet some new team members that had started since my last trip. One of my team members recommended a *jjimjilbang* [Korean bathhouse] by the beach that I've got to go back to. She was worried about me; she said I was working too much, and that if I didn't do any living, I wouldn't have anything to write about.

Sunmin has a ukulele club now! They've been playing uke versions of songs from Ghibli movies [Studio Ghibli is an internationally renowned Japanese animation studio]. Our translator was helping me sing "It's Over" in Korean.

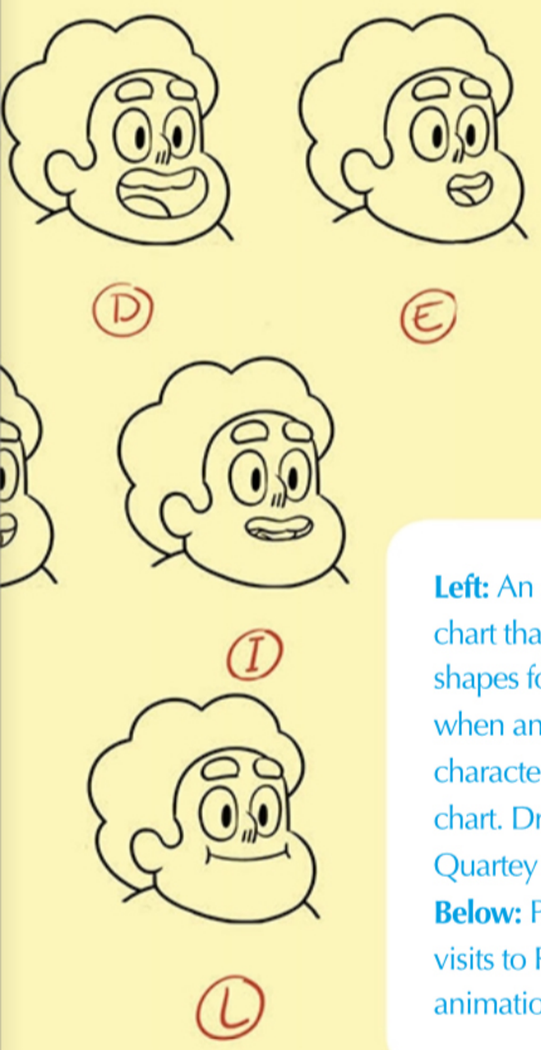
I talked a lot with my directors about "Mr. Greg" [S3E8] and how beautiful the animation was. Director [Jin-Hee] Park did all these incredible drawings for the song sequence—she does the absolute best Pearl drawings. She animated the tear at the end. . . . It's about seventy drawings, just for that tear.

Often, though, the heads of Sunmin and RDK visit LA, and we meet whenever they're in town. I talk about upcoming episodes and which ones are going to be special and answer any questions they relay to me from the teams.









Left: An example mouth chart that defines the mouth shapes for animators to draw when animating dialog. Each character has a unique mouth chart. Drawn by Ian Jones-Quartey and Danny Hynes.
Below: Photos from Rebecca's visits to RDK and Sunmin animation production studios.





The Korean studios pencil and ink every animation drawing on paper—not digitally, as may be assumed in this age of digital drawing tools and software.

Rebecca: Most Cartoon Network shows are animated on paper. Working on paper means the most high-resolution drawings possible. It's just as much work to draw thousands of drawings digitally as it is to draw thousands of drawings traditionally—a drawing is a drawing. Some digital animation programs have features that create the illusion of in-betweens [intermediate, distinct drawings that create a smooth transition between key drawings] by bending and sliding and morphing existing drawings, but this is noticeable. It can look very appealing; animation may appear fuller when characters are sliding and easing and bending, all while staying extremely on-model and consistent. But I am not interested in fullness *or* consistency. If I were to do a project digitally, I'd still want every in-between to be its own drawing, and I'd still want limited animation that goes off-model.

When I made my student film in college, I animated and inked it on paper, scanned it, and colored it digitally. A lot of people assume I did that film digitally, too! But no, it was made the same way my show is made now.

Although classic animated feature films from the likes of Disney aspired to a quality of movement that can be described as full animation, in which characters move and act with fluid naturalism, limited animation has generally ruled in television for economic reasons. From *The Flintstones* to *Adventure Time*, this more staccato approach to the timing and posing of characters is an art unto itself. Creating expressive and unique key-animation drawings will always play to limited animation's strengths.

At the animation production studios, the directors and artists take the preproduction deliveries from the Burbank studio and begin to animate. Rough drawings are penciled onto paper, tested, then cleaned up and inked. Each inked drawing is carefully completed with an attention to the line quality. The line of the brush pen allows for variation in the thickness of each stroke. This is one of many touches in the series that reinforce evidence of the human hand in the process.

Rebecca: Our studios follow the storyboards for expression and proportion. The details of a character will be referenced from the model sheet; for example, Steven will always have a star on his shirt (unless he's wearing something other than his usual shirt), and the board might not always include details like that star.

One of the trickiest things I described at length early on was "emotive hair," because even in shows that push and pull facial expressions and gestures, hair is usually considered a detail and kept pretty static and consistent. But we would get very specific with hair; for example, Raven would have Pearl's hair sag when she felt defeated or spike up when she was alarmed. Amethyst's hair changes based on who draws her—Lauren [Zuke] tends to treat it wild and chunky in a very specific way. And a lot of characters have hair that frays when they're stressed. So the big thing was communicating that this wasn't a mistake to fix, but rather an expression extending out through the hair.

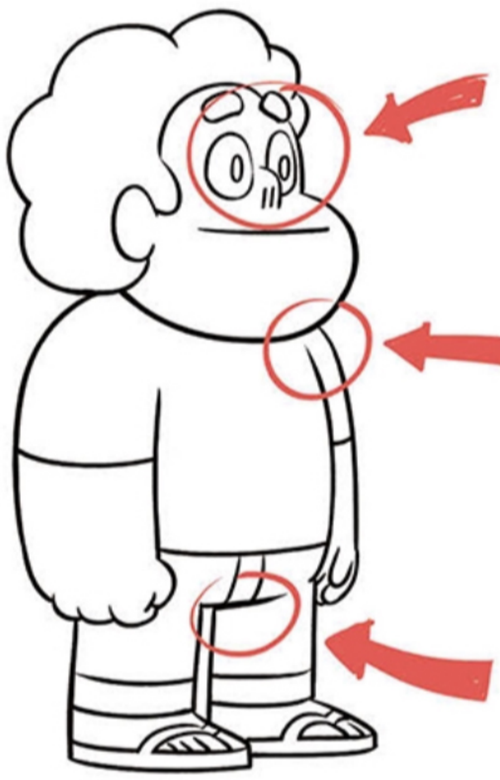
The designs act as a default version of the characters, but the characters will almost never look like that default, except for their clothes, really, which will stay consistently mapped over the characters as they're pushed and pulled into different expressions and proportions.

As scenes are completed, animation is scanned and digitally colored, and it begins flowing back to the States, where it is assembled as a work print, the initial pass of completed animation and sound together.

Nick: My final job happens after we receive the first pass of the animation from one of our overseas animation studios. In a work print meeting, I, along with Rebecca and the directors, review the episode and make notations of any mistakes that may have occurred. These could range from animation to color to framing composition errors. These corrections are notated and executed by me, then handed off to either the overseas studio or our postproduction department to be corrected.

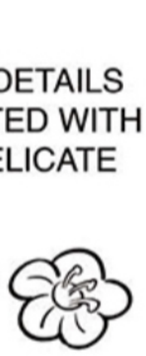
(Continued on page 202)

Inking and Construction Guides



DELICATE DETAILS ARE TREATED WITH A MORE DELICATE LINE.

IE:





THICK AND THIN LINES BECOME LESS PRONOUNCED IN THE DISTANCE AND ON SMALLER OBJECTS (THOUGH IT IS STILL THERE)

IE:



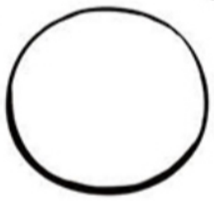
LINES TAPER AT ENDS.

IE:





IE:



LINE THICKENS AT BOTTOM OF FORMS AND AREAS THAT WOULD BE IN SHADOW.

IE:

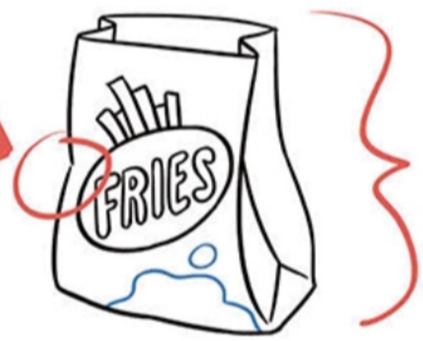




LINES TAPER WHERE THEY MEET WHEN OBJECTS ARE FOLDING

IE:

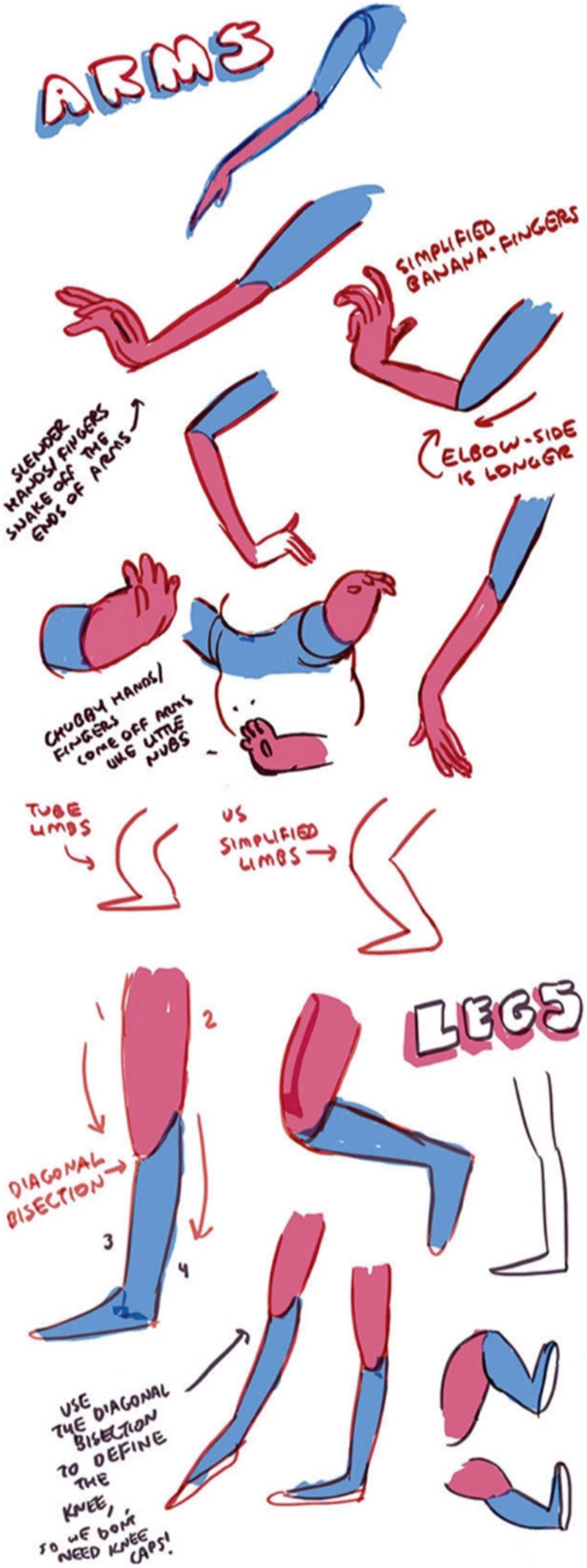




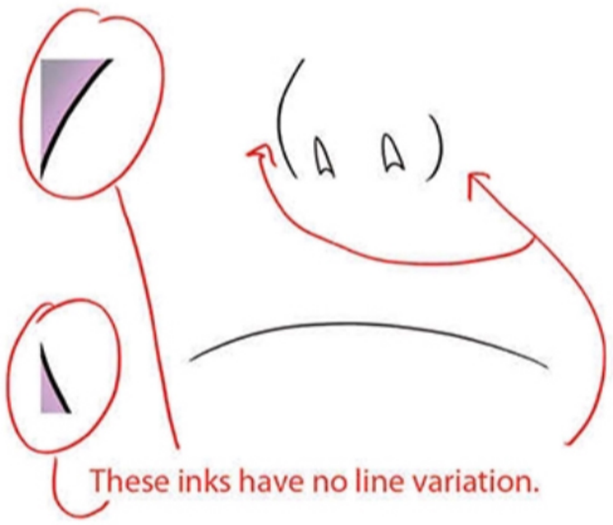
IN GENERAL, PROPS HAVE LESS VARIATION OF LINE. THOUGH THICK AND THIN PRINCIPLES STILL APPLY.

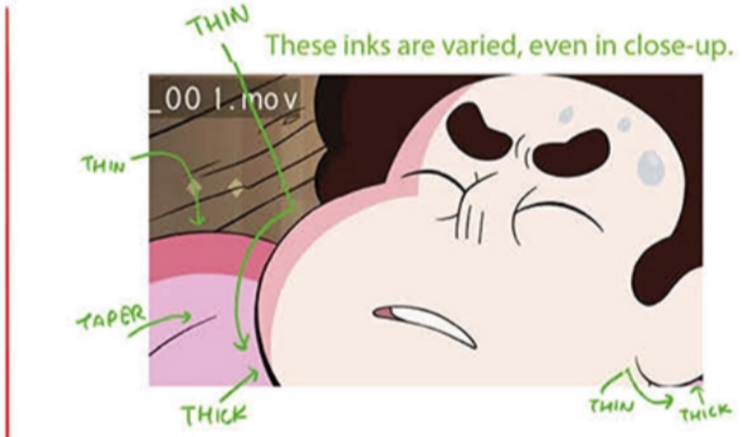
Above: Art by Danny Hynes.
Below, right: Art by Rebecca.

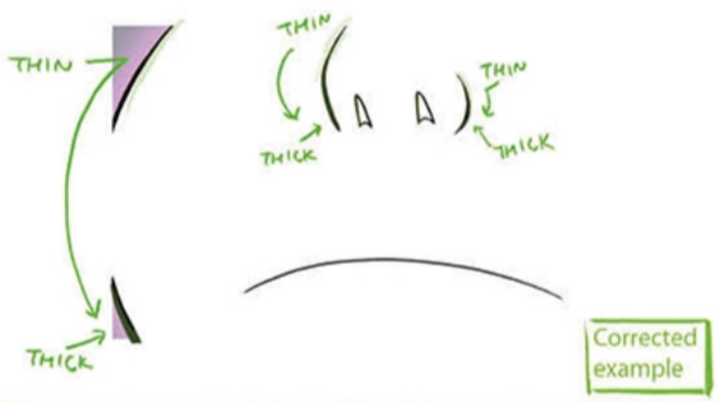


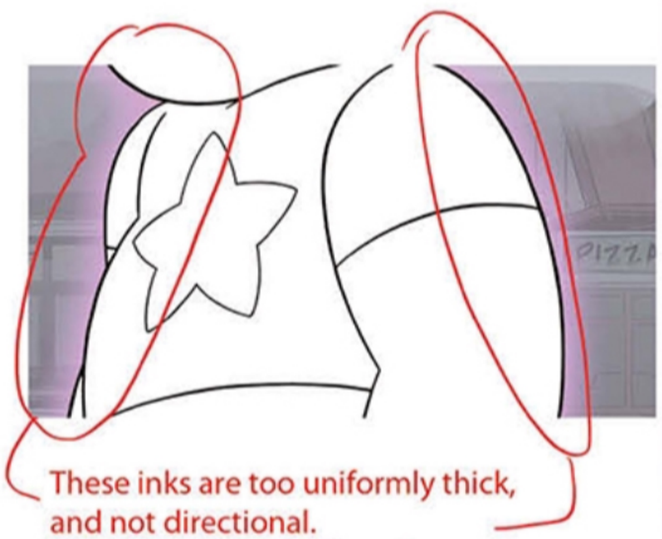


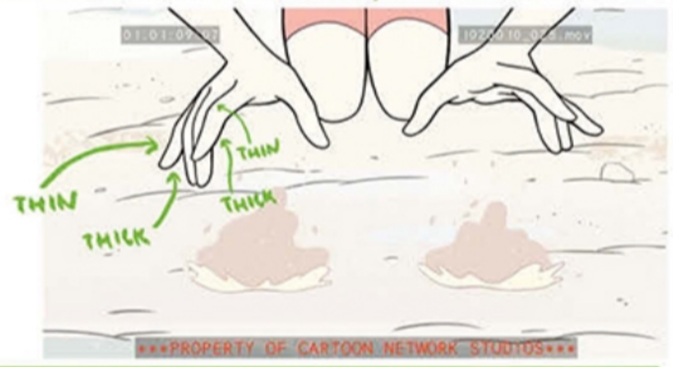
INKING FOR CLOSE-UP

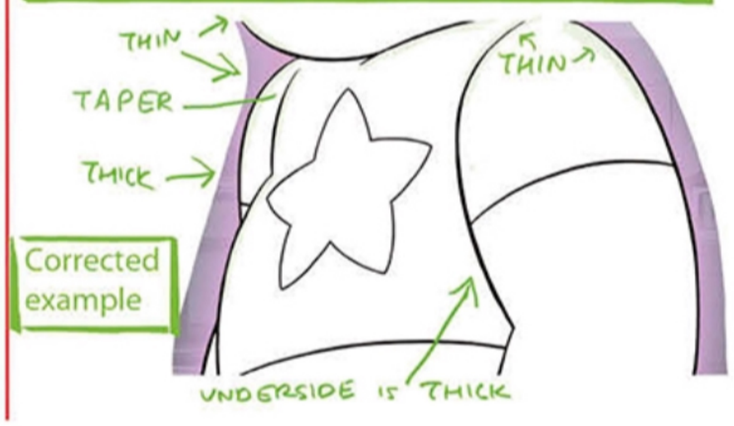




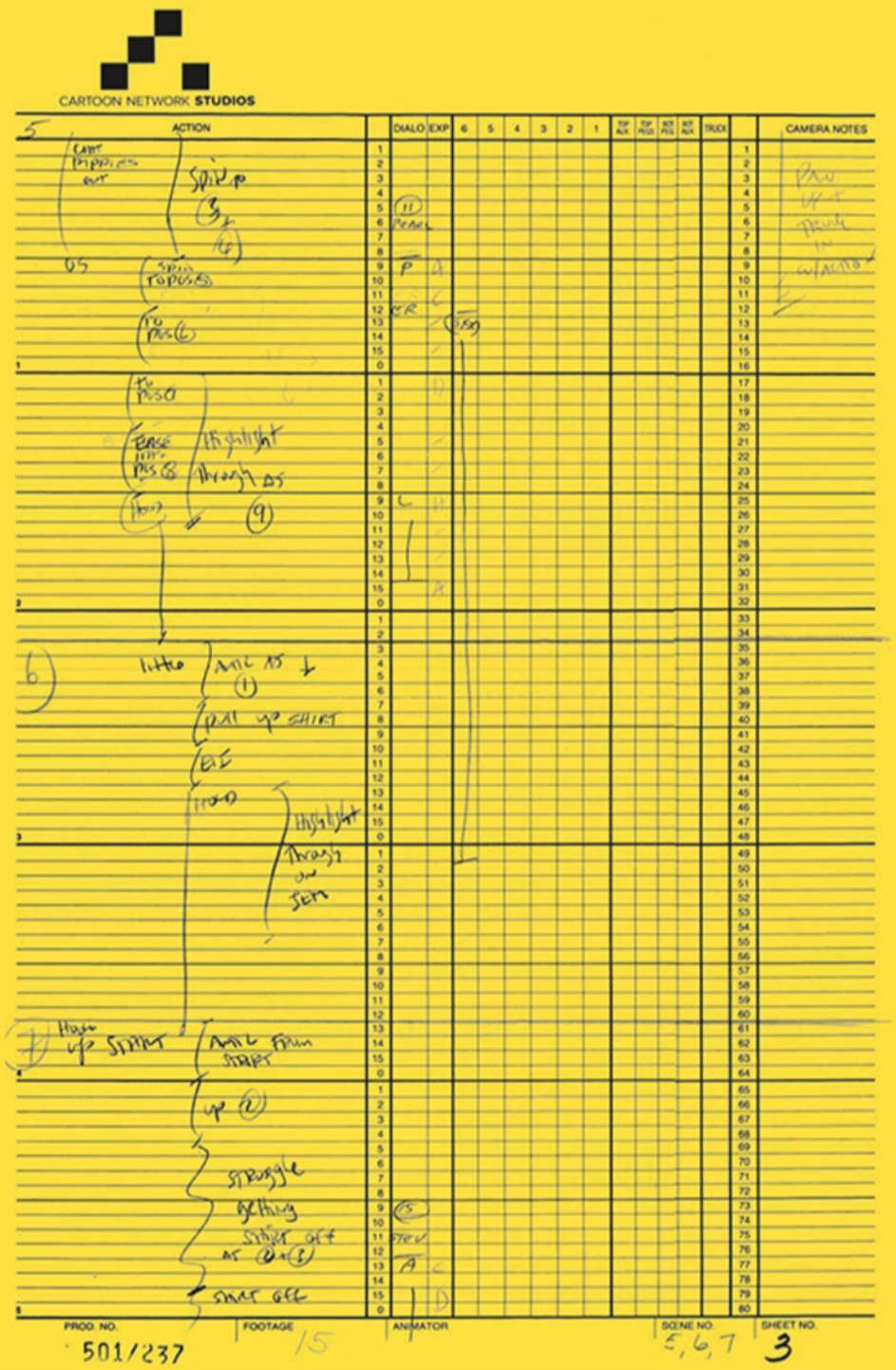








Above: Art by Ian Jones-Quartey and Rebecca.



Left: Some helpful tips on the construction and inking of *Steven Universe* characters. These tips are put to use in the Korean production studios where the penciling and inking of individual animation frames happens.
Above: A sample page of an exposure sheet that animation director Nick DeMayo uses to communicate specific direction to the animation studios. This includes direction on the timing of actions as well as what mouth shapes to draw for the character's dialog.

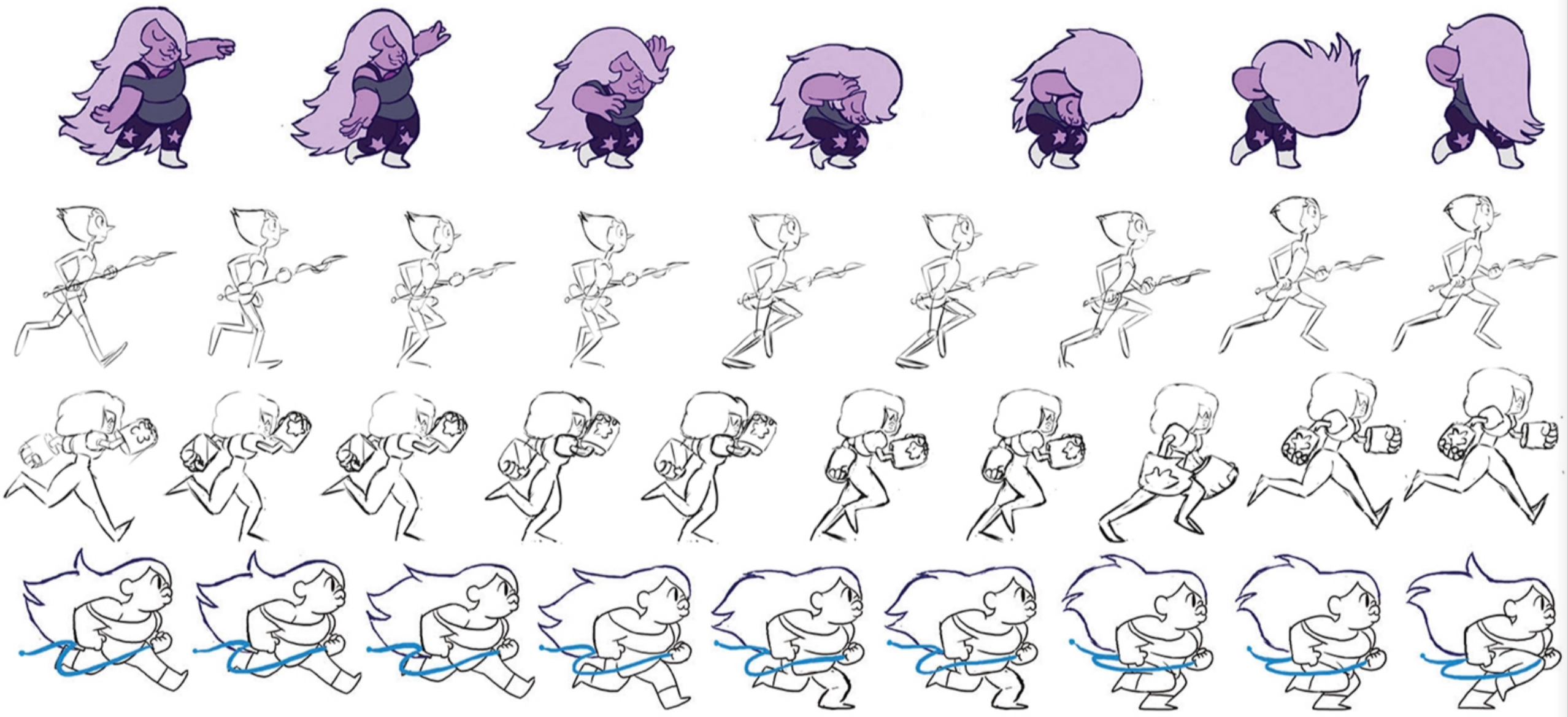
(Continued from page 199)

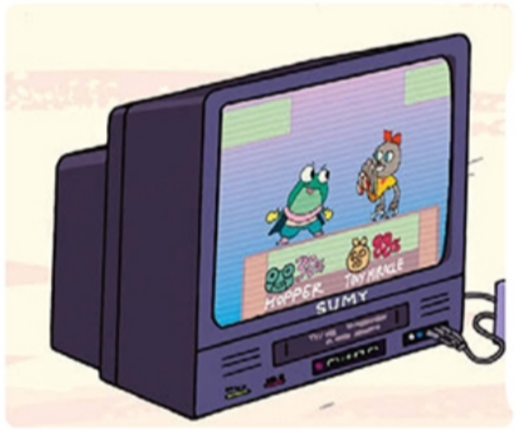
Steven Sugar [background designer]: There were a couple of episodes where, after we got them back from Korea, we realized, "Oh, wait, this should be the middle of summer." So we added beach umbrellas and stuff to the scene. If a design doesn't come out like we want, we can refine it. Occasionally, there have been moments when Rebecca will go in and animate something herself—generally not full animation—but if a character's expression isn't quite right or an eye direction isn't what it needs to be, we can fix it.

In addition to fixes, the crew seizes upon occasional opportunities to originate animation. For the episode "An Indirect Kiss" (S1E24), Ian animated a teardrop splash. For the *Uncle Grandpa* crossover episode, "Say Uncle" (S2E3), Ian animated the 64-bit–style video game that Steven and Uncle Grandpa play. The Cartoon Network Studios bumper that displays at the very end of each episode was also animated by Ian.

Rebecca: If a piece of animation isn't working, we can adjust it. We can make something faster by taking drawings out. There's still a little room to experiment with this down to the wire, as long as the little changes don't change the scene length and still fit with the sound, which is being done based on the lock. Additional effects and small corrections can still be done while sound is being worked on—cam shakes and such! All the little fixes add up; everything truly comes together right at the end, thanks to Kat [Morris]'s and Joe [Johnston]'s direction, Mattaniah [Adams]'s editing, Aivi and surasshu's music, and Tony [Orozco]'s sound design!







Occasionally, the Burbank-based Crewniverse does get some animation in. Below, Ian Jones-Quartey's *Smash Bros* animation was placed inside an in-show TV. Below that are drawings from Jeff Liu's scene of Amethyst flipping her hair in the opening credits. Below that are rough animation drawings of Pearl and Garnet running, animated by Joe Johnston, and Amethyst running, drawn by Ian Jones-Quartey.







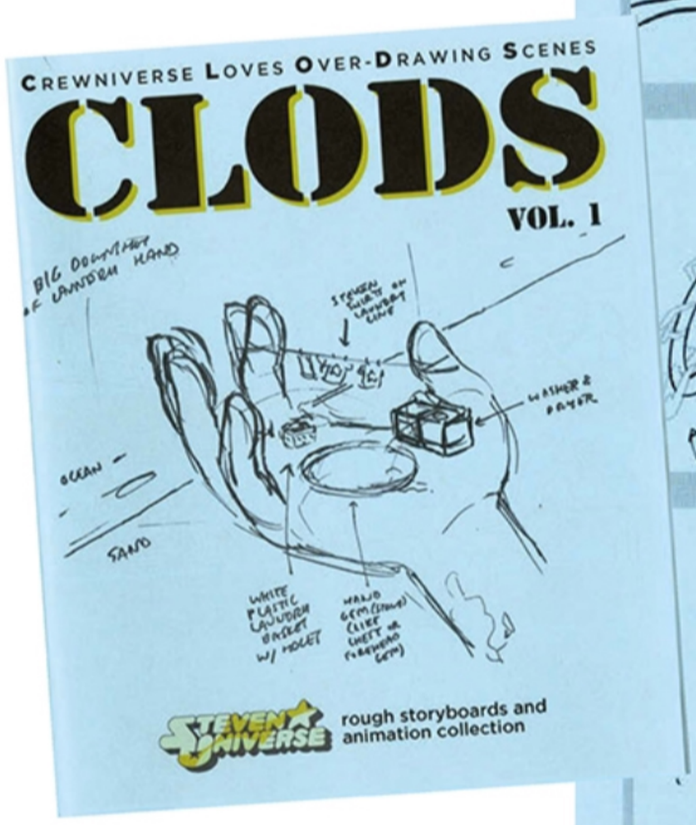




C.L.O.D.S., Vol. 1









"Catch and Release"
Hilary Florido





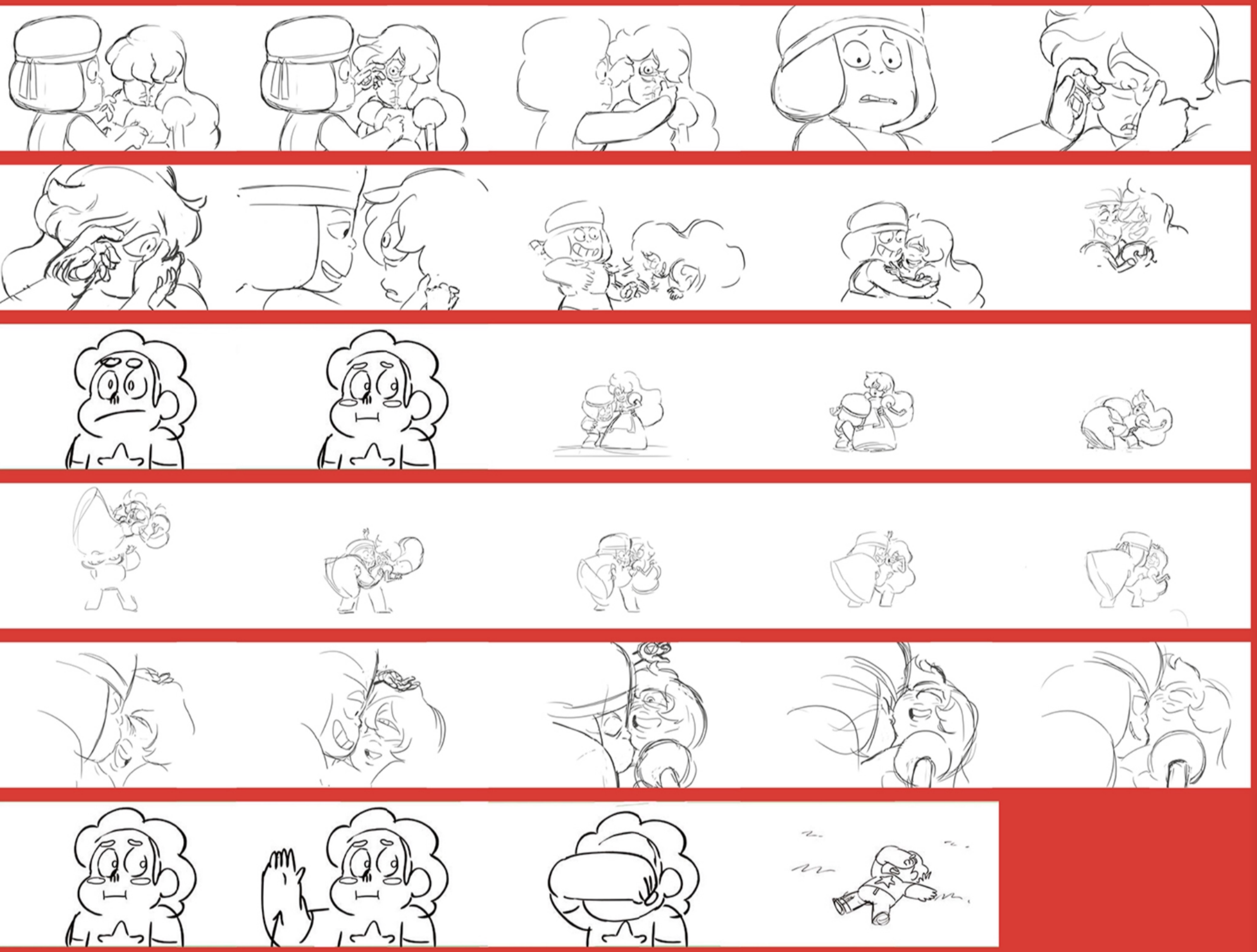


"Jailbreak" - Jeff Liu

C.L.O.D.S.: Crewniverse Loves Overdrawing Scenes, Vol. 1 is the second *Steven Universe* zine produced by the crew and features scenes that have been given special attention by the storyboard artists above and beyond the typical standard. This is usually for scenes with lots of action and specific acting nuance. Zine compiled and printed by Ian Jones-Quartey.

Ruby and Sapphire Keys

Rebecca's key drawings of Ruby and Sapphire's make-up embrace from the episode "Keystone Motel" (S2E12). Steven drawings by Raven Molisee and Ian Jones-Quartey.









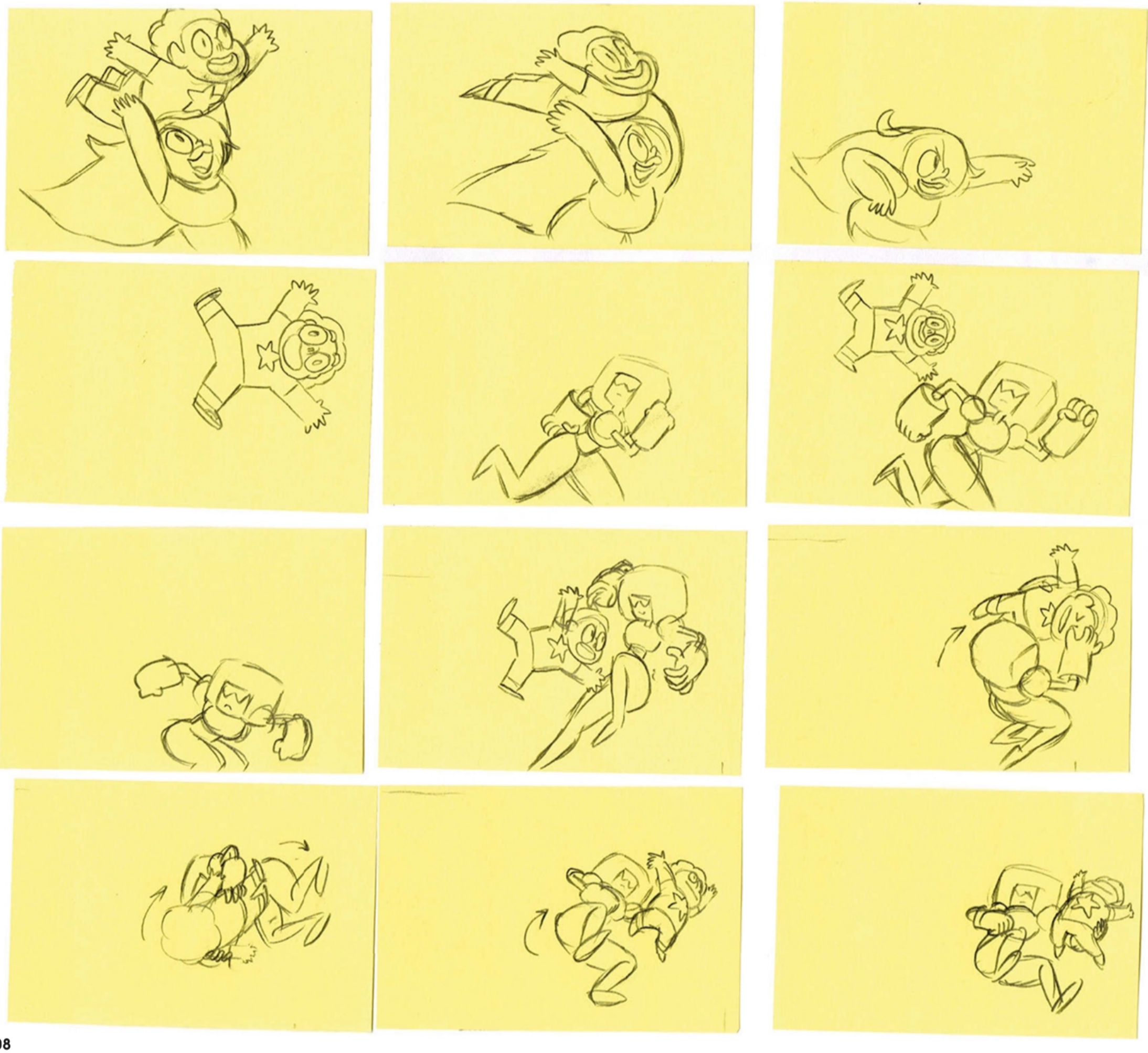






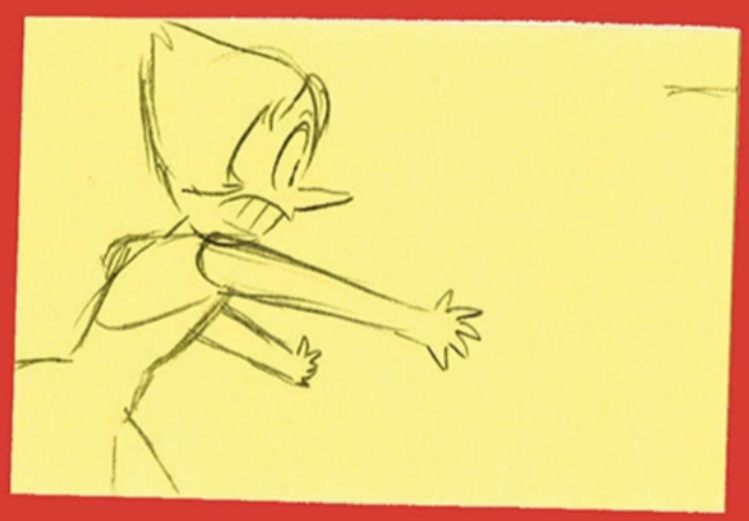
Rebecca: As often as I can, I like to jump in and do key poses. This is what I do for fun on the weekends! There are certain moments in certain episodes that I like to cherry-pick to pose out and flesh out so you'll hopefully feel the weight of that extra level of detail or that really specific action. Sometimes, it's just something really character-specific I want a certain way, like Ruby and Sapphire's reunion in "JailBreak" [S1E52], or Pearl's crying in "Rose's Scabbard" [S1E45], or how Peridot uses her floating fingers when she's freaking out in "Catch and Release" [S2E18]. Sometimes, one of our actors will read a line in a really surprising way, a way that's unlike any of the drawings in the board, and I'll jump in and do key poses to their voice! I love to do this—I think it really makes the characters feel alive.

CN End Tag Animation















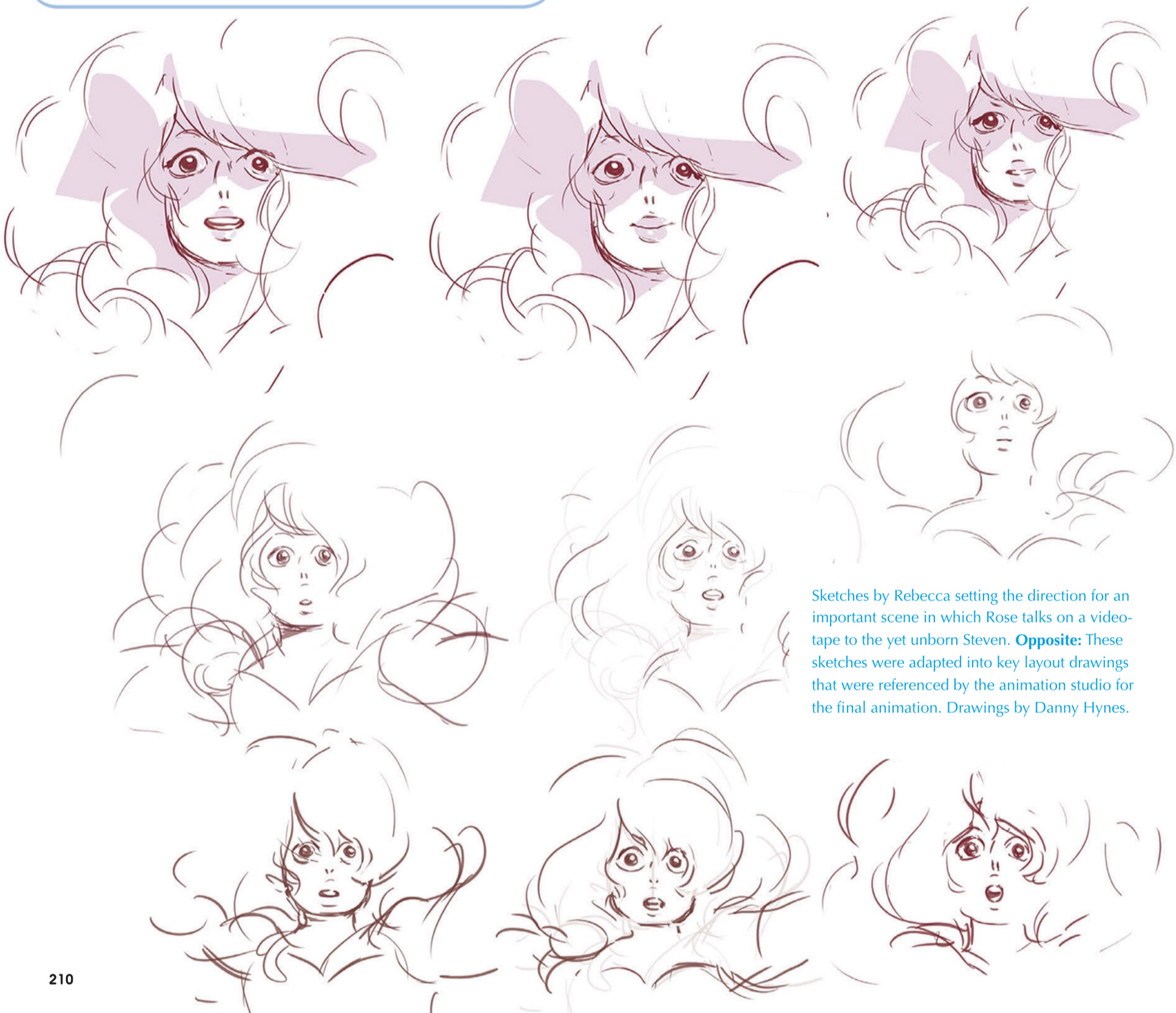




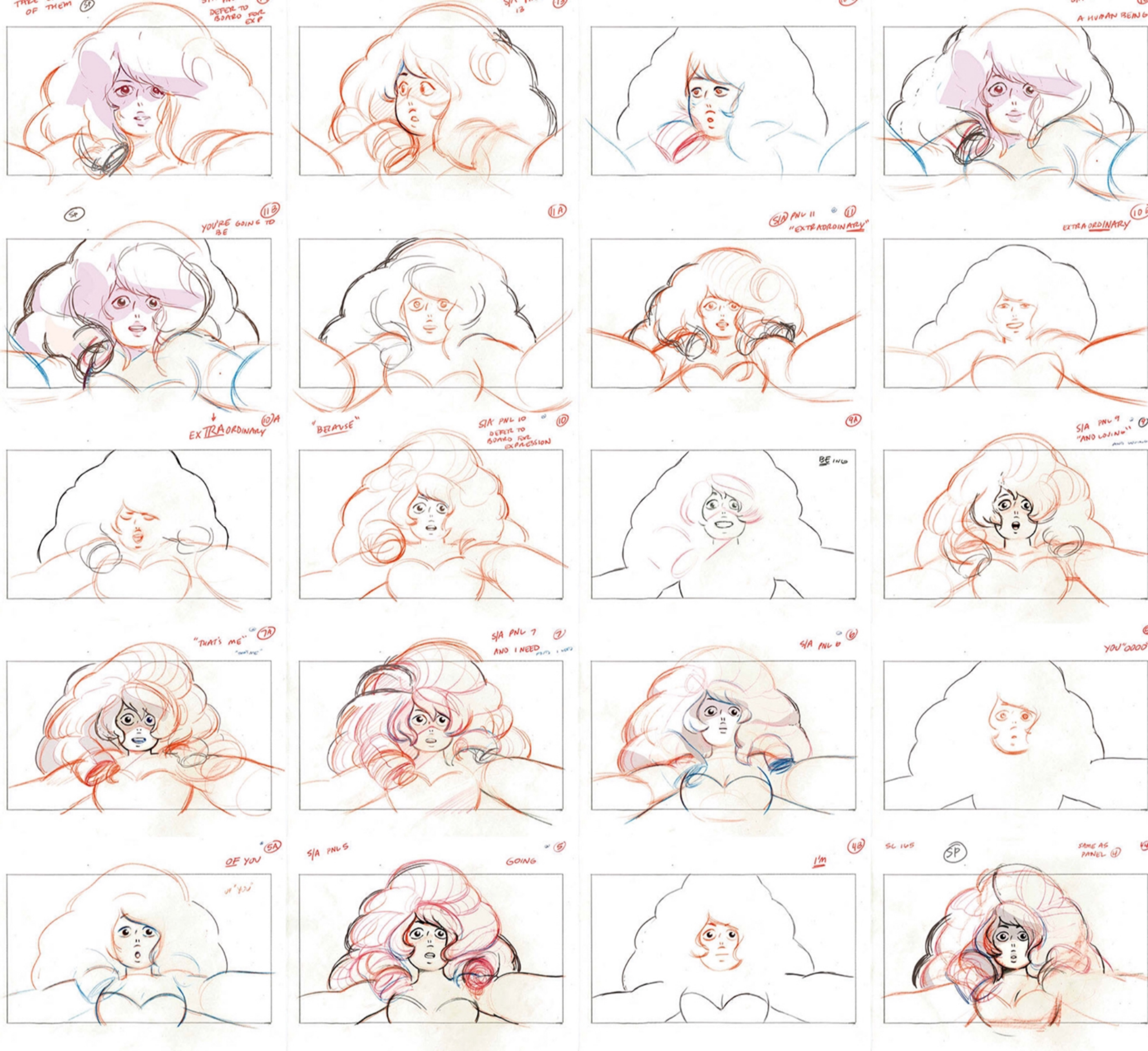
Composed on sticky notes by Ian Jones-Quartey, the animation for the end tag shown after the credits on each epsode depicts Steven being tossed around like a football.



Rose Quartz Key Drawings



Sketches by Rebecca setting the direction for an important scene in which Rose talks on a videotape to the yet unborn Steven. **Opposite:** These sketches were adapted into key layout drawings that were referenced by the animation studio for the final animation. Drawings by Danny Hynes.


OF THEM
DEFER TO BOARD FOR EXP
A HUMAN BEING
YOU'RE GOING TO BE
"EXTRAORDINARY"
EXTRAORDINARY
EXTRAORDINARY
"BECAUSE"
S/A PNL 10
DEFER TO BOARD FOR EXPRESSION
BEING
S/A PNL 9
"AND LOVING"
"THAT'S ME"
S/A PNL 7
AND I NEED
S/A PNL 6
YOU"OOOO"
OF YOU
S/A PNL 5
GOING
I'M
SC 165
SP
SAME AS PANEL 4

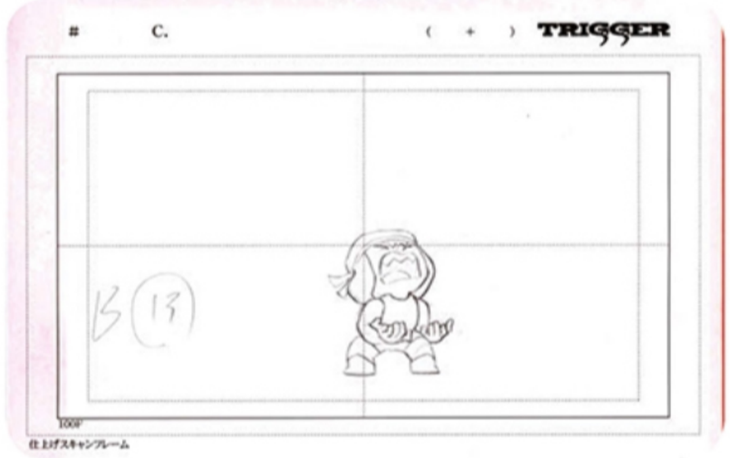
Takafumi Hori Layout Drawings

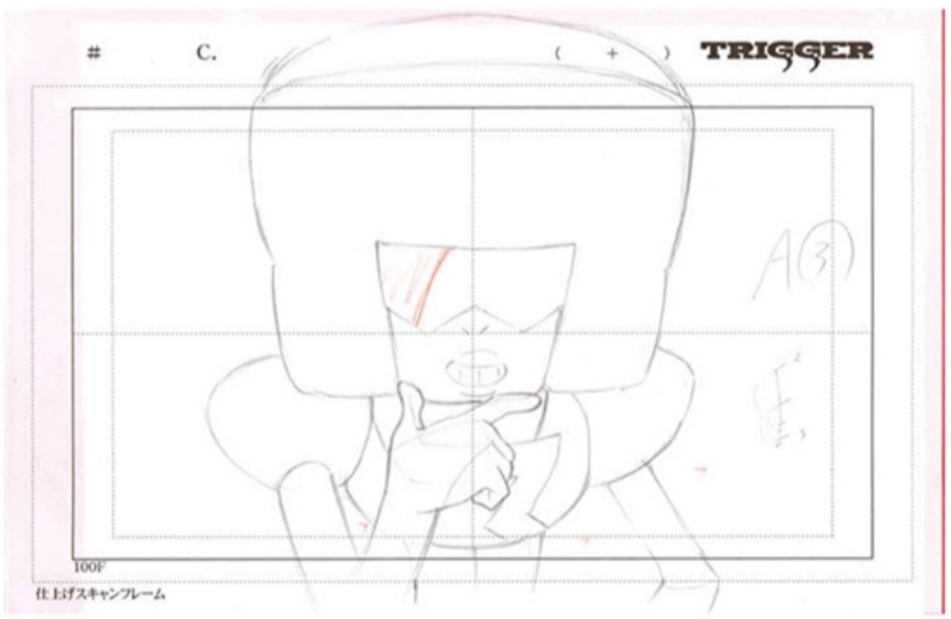
In an unusual arrangement, the *Steven Universe* crew collaborated with guest animator Takafumi Hori, known for his work at the Japanese Studio Trigger, for several sequences in "Mindful Education" (S4E4).

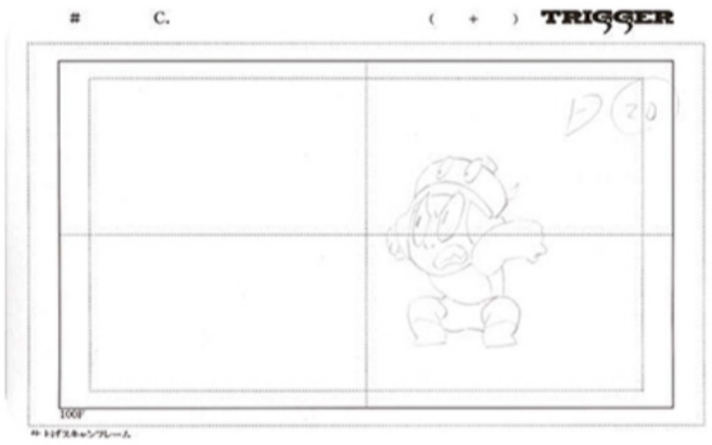
Jeff Liu [storyboard artist]: It was a huge honor to work with Takafumi Hori! I worked with Rebecca's demo of "Here Comes a Thought" to board the musical sequence. The storyboards were then handed to Hori-san, and he did beautifully detailed clean-ups of the panels and added extra poses for animation. He also did some masterful work on the action sequence in my partner Colin Howard's boards. These drawings were finally sent to Sunmin Image Pictures to be skillfully animated and colored into the final product.

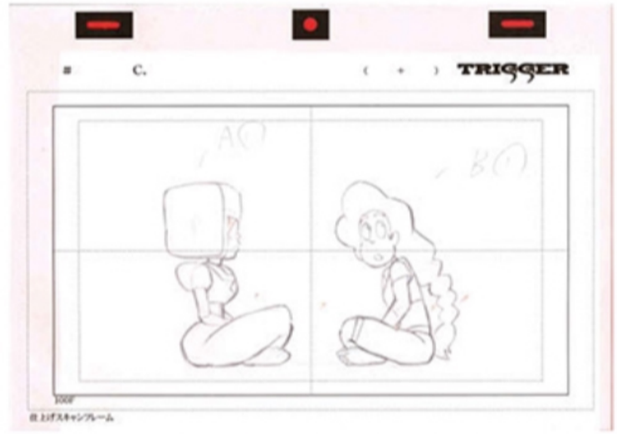




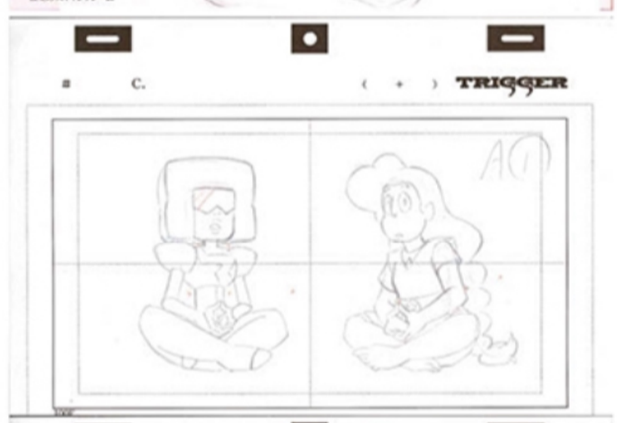




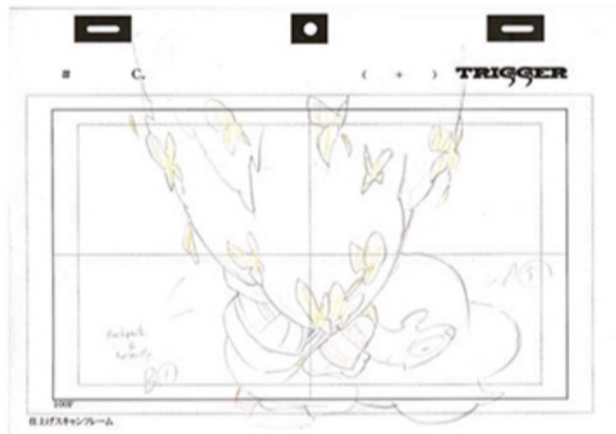


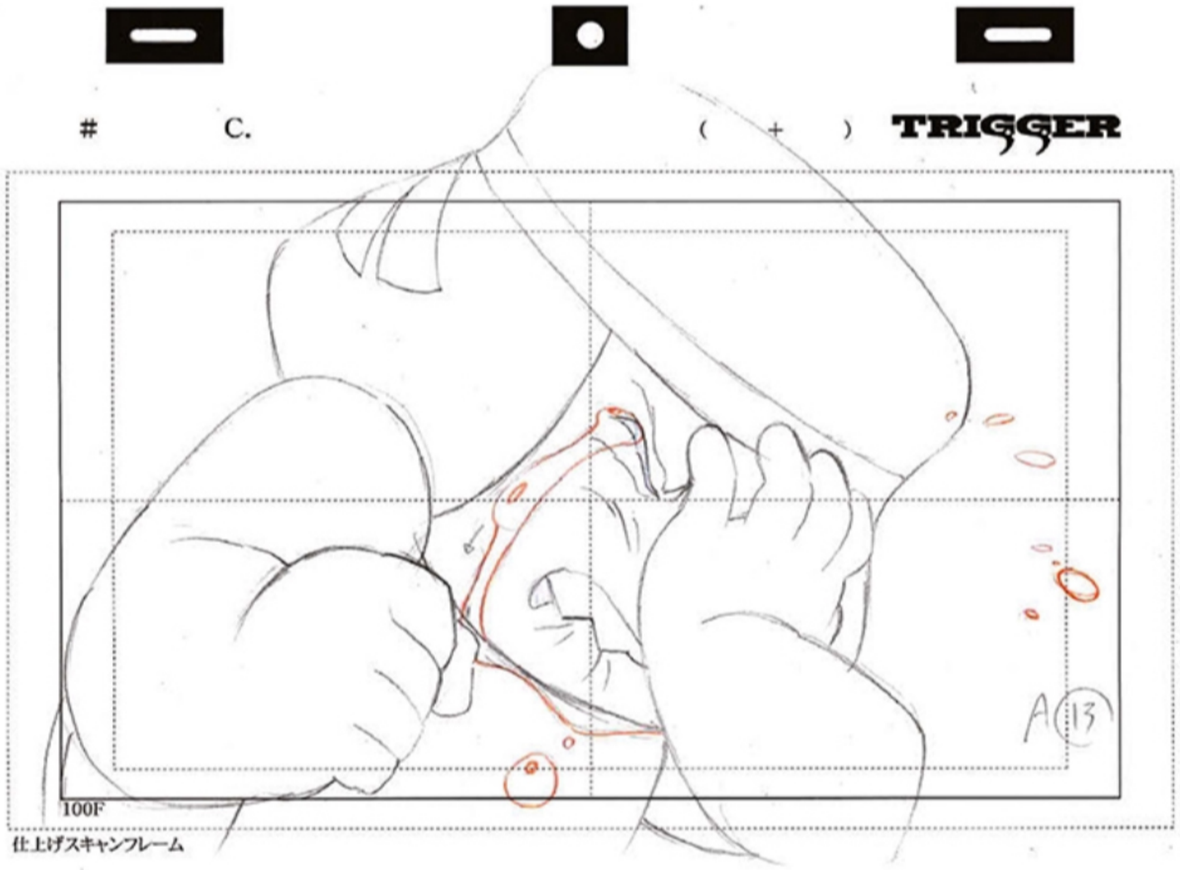








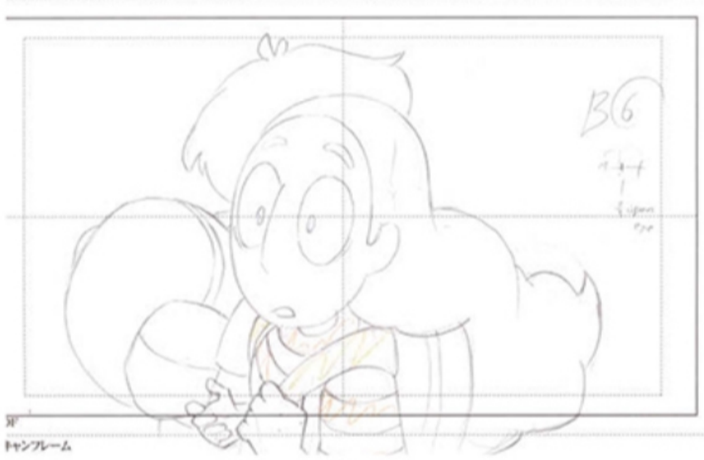




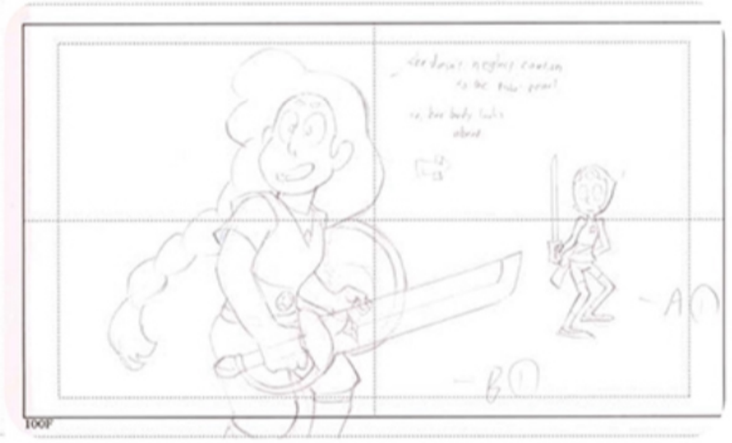
仕上げスキャンフレーム

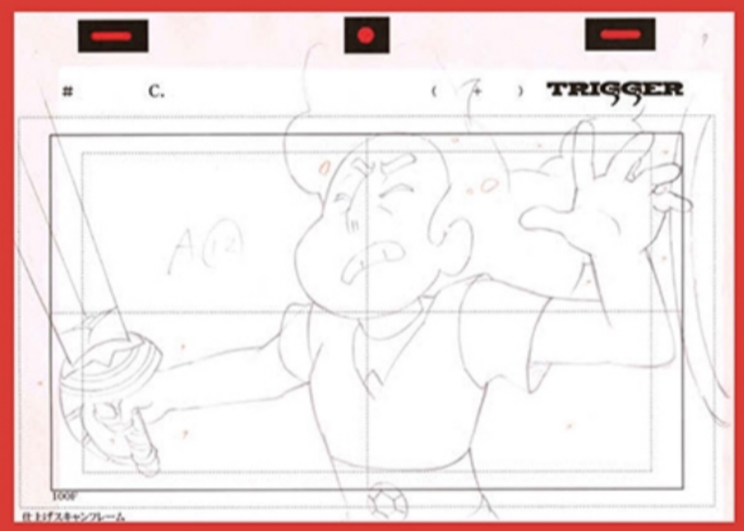


上げスキャンフレーム



トャンフレーム





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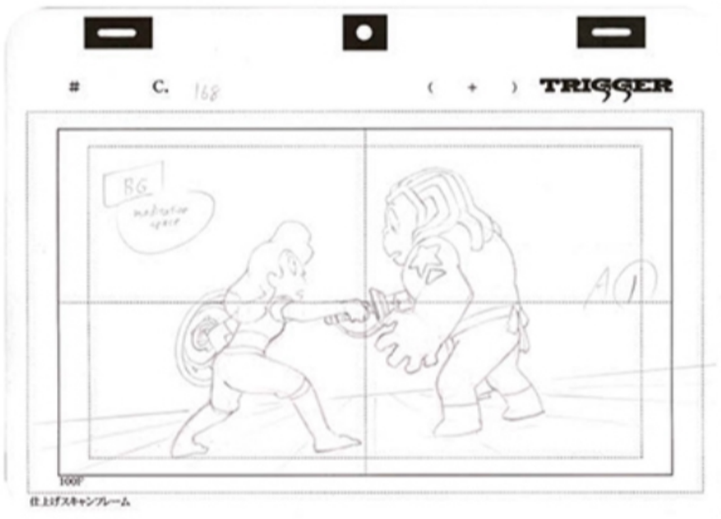

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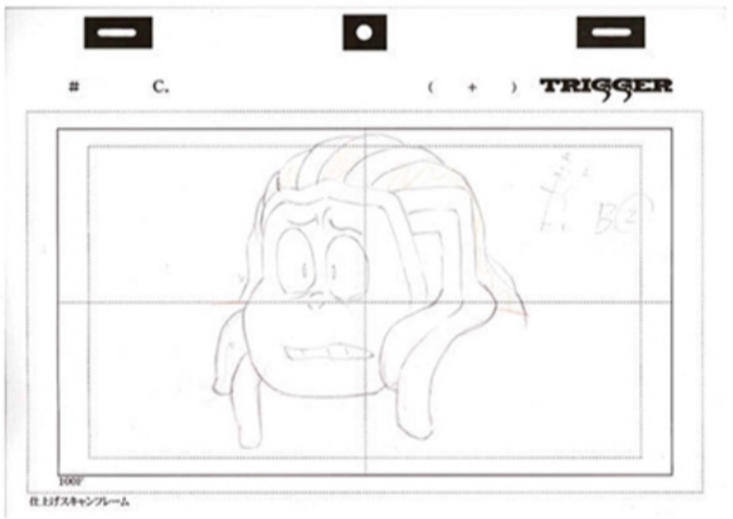

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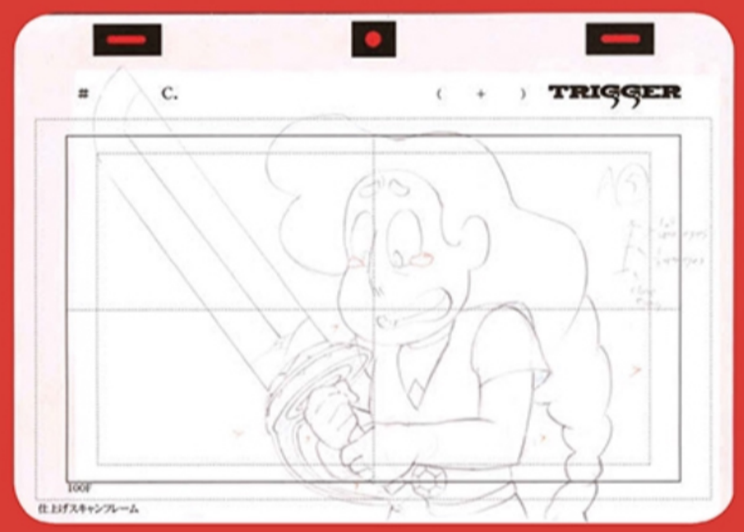
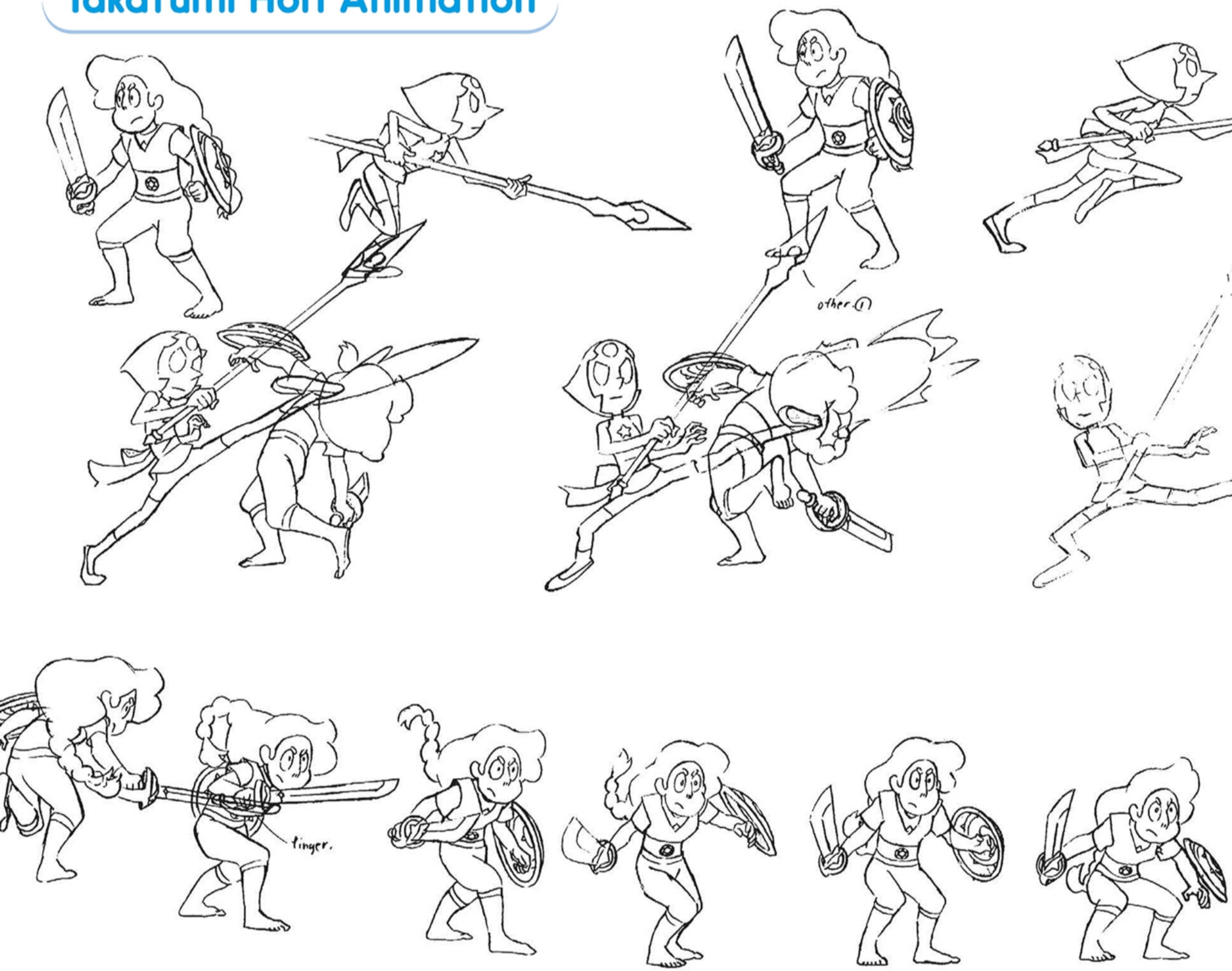
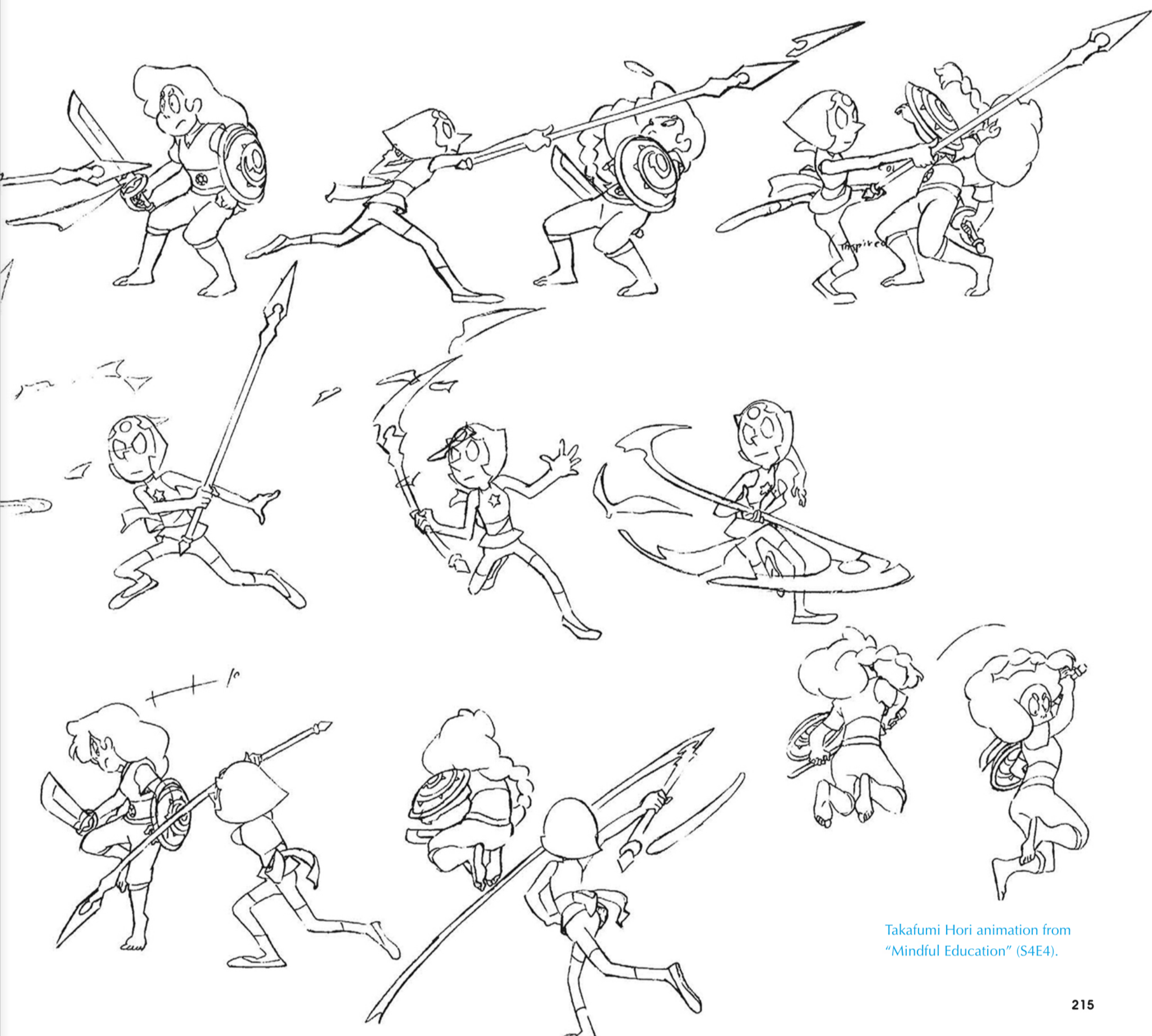


仕上げスキャンフレーム

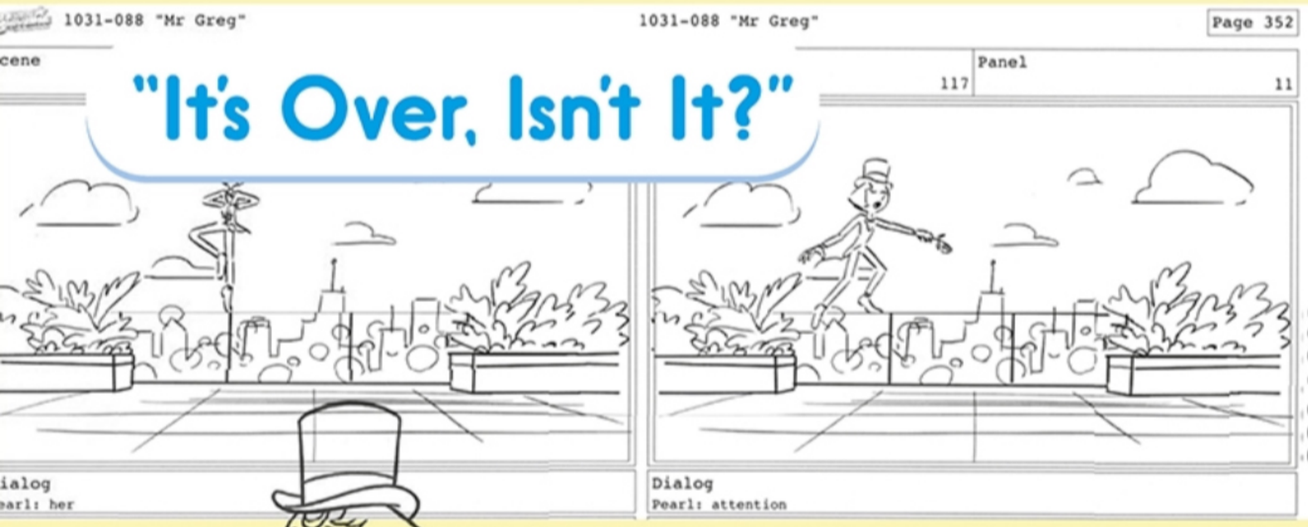
Takafumi Hori Animation

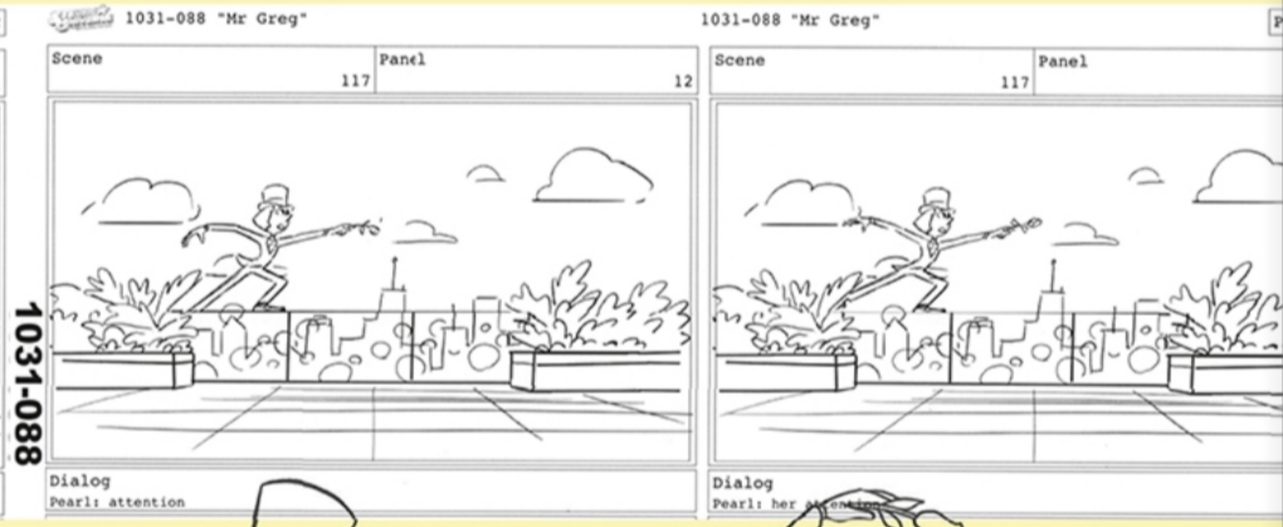




Takafumi Hori animation from "Mindful Education" (S4E4).

"It's Over, Isn't It?"





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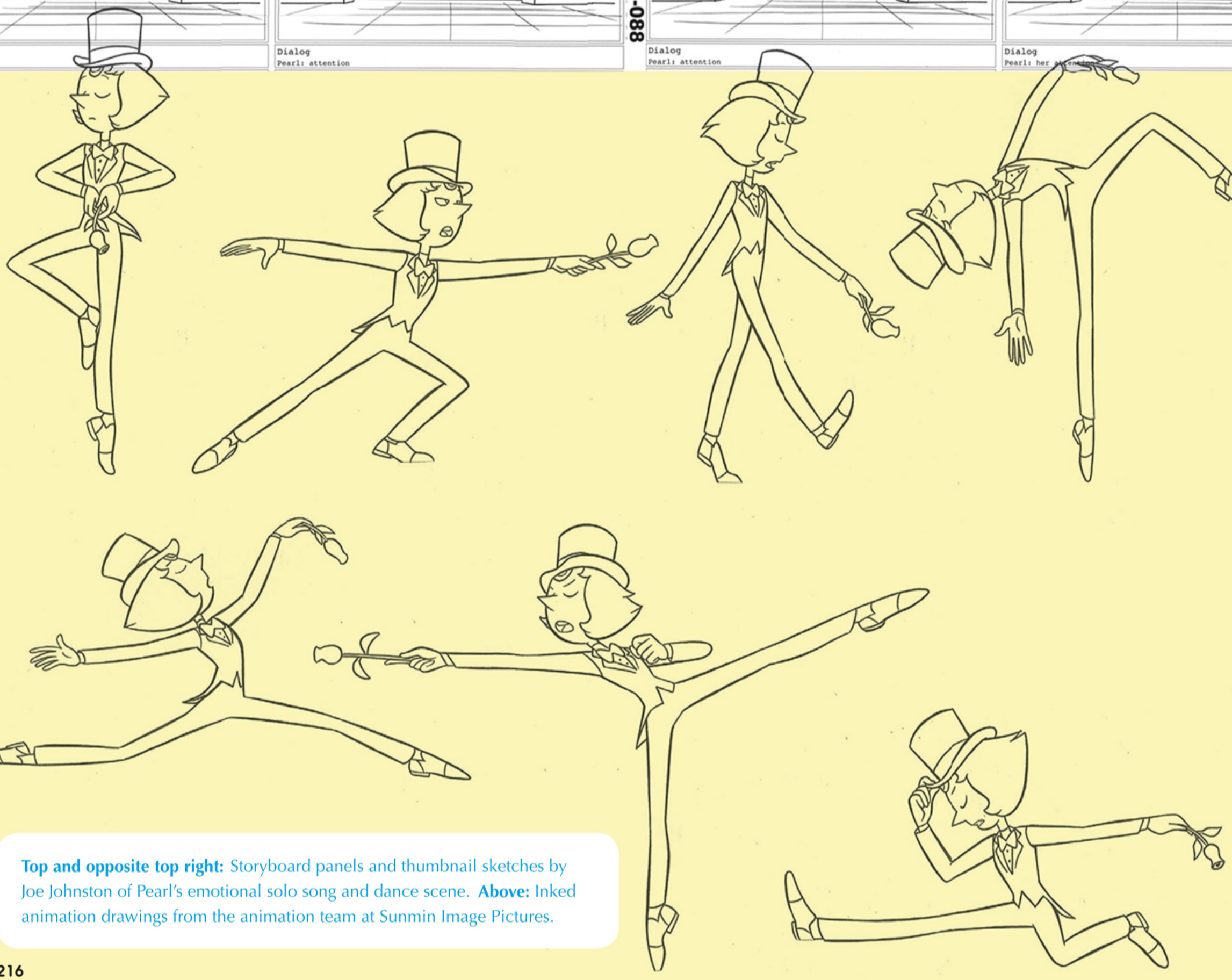
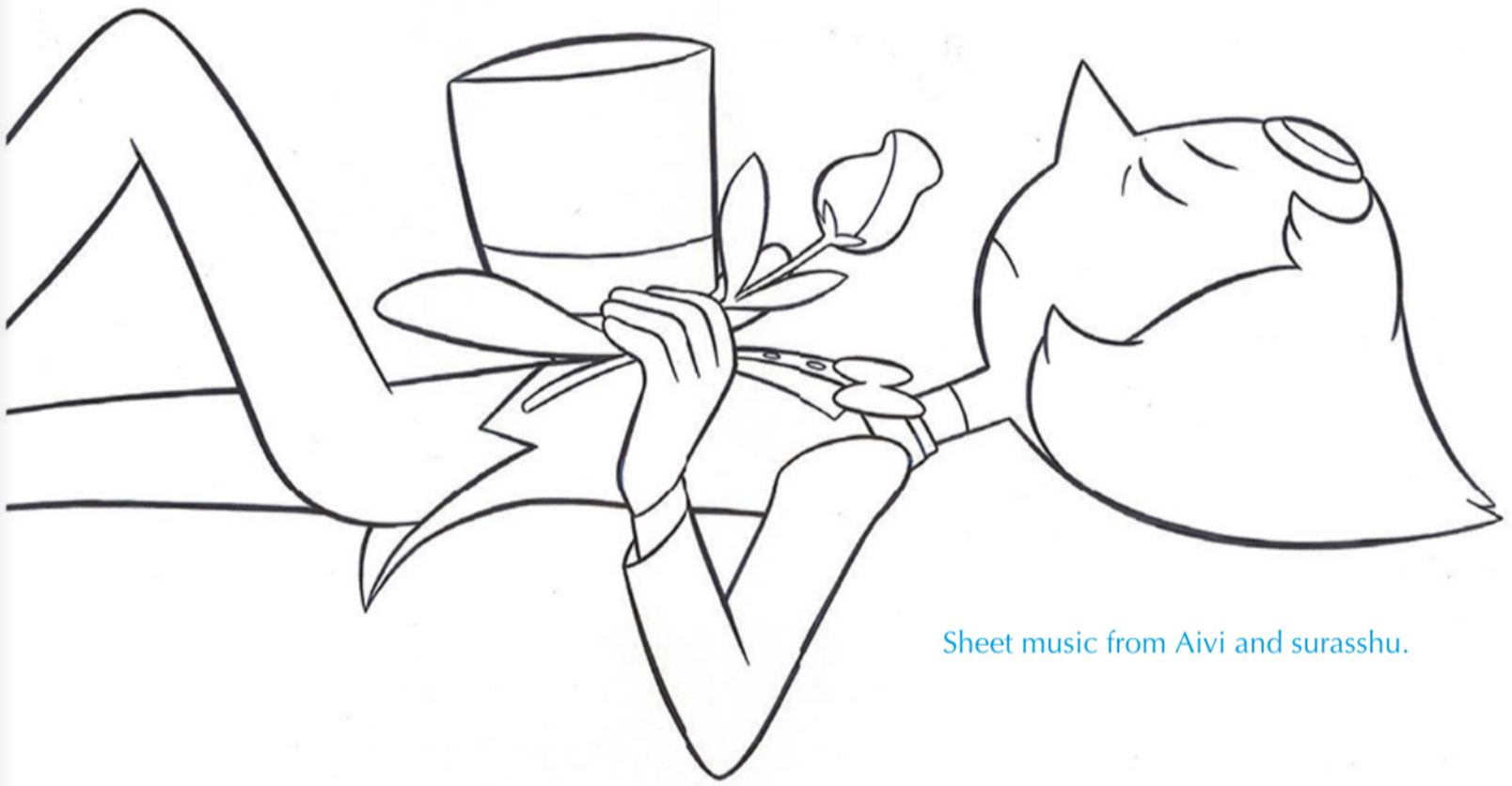
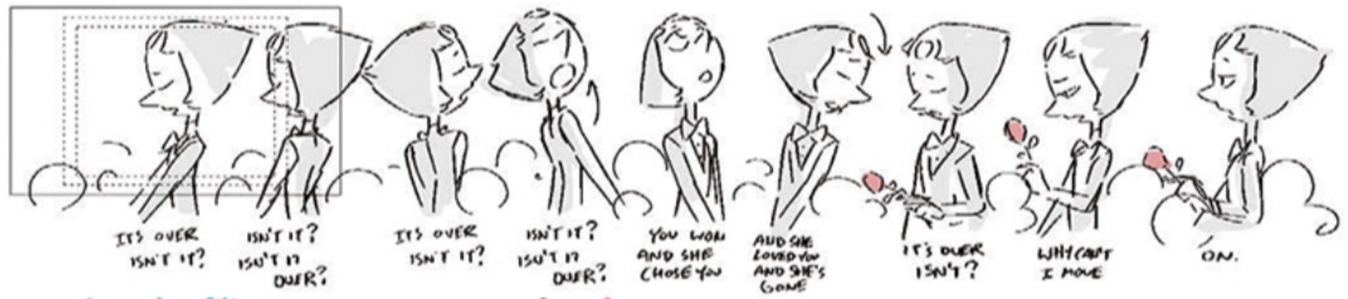


Top and opposite top right: Storyboard panels and thumbnail sketches by Joe Johnston of Pearl's emotional solo song and dance scene. **Above:** Inked animation drawings from the animation team at Sunmin Image Pictures.







It's Over, Isn't It

Music/Lyrics: Rebecca Sugar
Arrangement: Aivi & surasshu

(D)
I was fine with the men...

8

14 Dm9 G6 C
It's over, isn't it...

20

25

29 A Dm9

34 Am E C D Dm Am F#o E
War and glory.

38 Am E C D Dm Am F#o E

42 F#o E

46

50

55 A MAJ AEP

60 (D)

65 Dm9 Db M9 C M9

Sheet music from Aivi and surasshu.

"Mr. Greg" Dance Reference









Shelby Rabara (voice of Peridot) performed dance routines in front of the camera for use as key pose reference. Shelby's husband, Harry Shum Jr., also joined in for a couple's dance. Storyboards by Joe Johnston.






AP '15

Opposite: Detail of a drawing by Amber Cragg.

8: ONWARD





Art by Joe Johnston.

The lumbering media giants have been slowly catching on. It turns out, they are realizing, that the big world out there is hungry for stories from all kinds of voices. In recent times, television audiences have increasingly embraced more diverse programming, which has incentivized networks to continue producing it. In the mix of this wider trend toward more inclusive television is *Steven Universe*.

Rebecca Sugar [series creator]: One of my early goals was that I wanted everyone's personal experiences to have a home in this show. A lot of us are writing from a personal place we haven't seen on television that we would love to see. It's been really moving to see the receptions to a lot of these things that were honestly just parts of our childhoods. But at the end of the day, we are all still just making the show that we want to watch, and that's the most important thing. To tell the truth.

In a world as diverse as ours, it follows that all types of people should be able to see authentic reflections of their own lives and experiences on-screen, in all sorts of roles. However, the value and accuracy of these reflections hinge on equal representation in front of *and* behind the camera, something that the *Steven Universe* team prides itself on—but only as a happy side effect.

Ian Jones-Quartey [former co-executive producer] : What's exciting to us is that the crew is getting to make something that reflects their lives and is real. The representation just sort of happens.

Rebecca: We're making something that people can connect with because it's coming from a real place.

Rebecca's message of inclusion is one that is sorely needed in this time when kids are exposed to frequent news reports—or firsthand experiences—of division and bigotry. *Steven Universe* follows in the tradition of popular entertainment as catharsis, and as a channel to explore serious issues through fantasy. Like the Cold War era, which saw a boom in science-fiction film—a reflection of collective anxiety over the seemingly constant threat of communism and atomic annihilation—America's present-day "global war on terror" exerts its own dark pressures on the nation's psyche. For example, Steven's sunny acceptance of anything or anyone unfamiliar or foreign is a clear counterpoint to contemporary fears many people harbor against groups and ideas that are different from their own.

In a May 2016 interview published in the *Los Angeles Times* column Hero Complex, Rebecca says that she meets any resistance to *Steven*

(Continued on page 224)

Crewniverse Art



Art by Lamar Abrams.



Art by Rebecca Sugar.



Art by Joe Johnston.

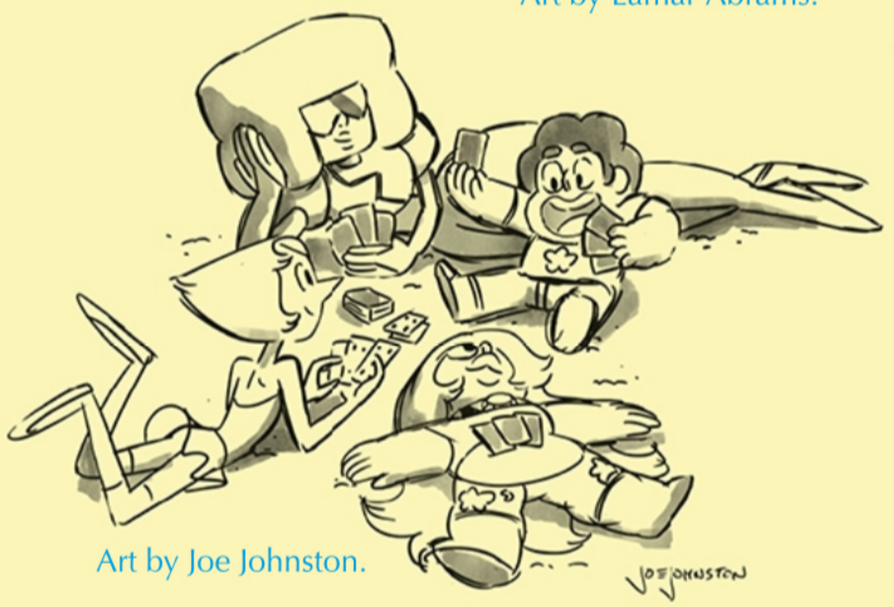


Art by Ian Jones-Quartey.

Left: Art by Angie Wang.



Art by Lamar Abrams.



Art by Joe Johnston.



Art by Lamar Abrams.

(Continued from page 221)

Universe's progressive exploration of gender, love, and family with an unflinching commitment to what she believes in: "When you have a message of love and tolerance, it's very hard for someone to say no, because it's love and tolerance. Where I've stood throughout, when it comes to what I want to say and standing my ground, is that it will always be better to send this message of love and tolerance. It will always make sense."

Joe Johnston [supervising director]: We, as a society, are surrounded by media every day of our lives. A lot of that media can be dark, and subversive in a negative way. Something that Rebecca has said time and time again is that we want the show to be "subversive in a positive way." So, what better medium than animation (a medium that is watched mostly by children) to try to make a show that does that?

Lauren Zuke [storyboard artist]: It's tough. We're in a position where what we're writing can and undeniably will affect people. So I'll be honest: It makes me anxious. I hope with every episode, the show can provide some insight on something that someone might've struggled with. Just insight . . . not a solution. That solution comes from the viewers themselves, from what they decide to do with the message, ultimately.

Matt Burnett [writer]: I'm very proud of the show's messages, but it's a really nerve-wracking thing to put yourself and your values out there like that. Ultimately, the show falls into an audience's hands, and they get to interpret it however they want. Your intentions can be wildly different from what someone actually takes away from an episode. Over time, I think that has helped us clarify the messages of the show and really make sure the ideas we are trying to convey read loud and clear to a young audience.

The thing about *Steven Universe*'s particular message about love and acceptance that I find most interesting and, I think, can be challenging, is the totality of it. Anything purely negative does not exist in the show. The antagonists are never evil—despite the terrible things they may do or the harmful views they may hold, we always try to present another side to them and humanize them. With the comedic exception of Kevin, Steven can never bring himself to hate anyone. The ultimate solution to all of the problems the show presents is never violence, really—it's education and understanding. Steven always tries to understand who someone is, and why they are the way they are, and tries to teach them what he believes in and why it works for him. In the real world, you can't just get rid of the people you disagree with, no matter how immoral you consider their point of view. You just can't. You have to figure out a way to inspire change in their way of thinking.

Kat Morris [supervising director]: We're really lucky to be living in a time when people are able to tell stories that challenge society as it is now on a platform that can be seen by millions around the world. I know we can't get everything right one hundred percent of the time, but I hope the core values of love and acceptance—not only for others, but also yourself—resonate with our audience and radiate outward to create a happier and safer future for the next generation. I know that's a lofty goal for a kids' cartoon, but why not?

The media consciousness exhibited by *Steven Universe*'s writers and artists, who are all currently in their mid-twenties to thirties, sits in contrast with some of the cartoons that they themselves grew up with in the 1980s and nineties. At that time, most of the offerings for children on Saturday mornings and weekday afternoons were glorified toy commercials. Or *literal* toy commercials, since some were produced by the toy manufacturers themselves. The simple premise of many of these cartoons often split the world into good and evil.

Lamar Abrams [storyboard artist]: I remember loving all of those old cartoons, but I also remember getting older and wanting something more. I was pretty sensitive growing up, and none of the media I consumed told me it was OK to be sensitive. Crying and empathy and understanding and compromise

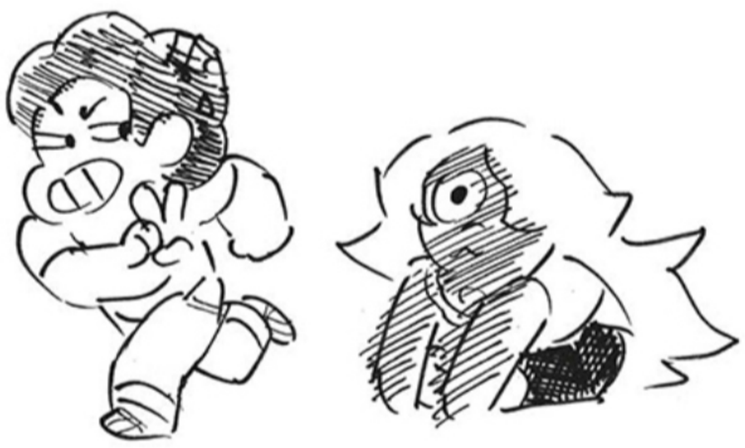


Art by Katie Mitroff.



Art by Rebecca Sugar.





Art by Kat Morris.

weren't the feelings you were supposed to be proud of having. I think, at the age I am now, I wish I'd had shows that let me know it was OK to feel all those things. Like, I wasn't *less* of anything or weak or stupid if I showed these emotions. It would be super easy to make a show that sells violence and a lot of other bad ideas, but I want something that challenges the norm. I sometimes feel like, if you're not challenging the status quo in any way . . . I don't know . . . it's just going to be forgettable. I feel like I'm trying to make up for the stuff I absorbed as a kid. I would've loved to have a show like this as a kid. It would have made me feel so much better about myself.

Matt: I think, today, way too much of culture is framed as a binary, "good versus evil" conflict. Over every little issue, people feel compelled to split into two opposing sides. Each side thinks they are the good side and the other is the evil one. It's everywhere. A movie is either the best movie ever or the worst of all time, and people are going to argue aggressively to convince the other side that their opinion is the objectively correct one. It's a really unpleasant world in which to try to have a conversation with somebody!

I don't know if the simpler cartoons we grew up with are directly responsible for that, but I mean, it can't hurt to shade the world as a little grayer for kids. The world they are living in is a little more complicated than the "us versus them" mentality that is getting people nowhere right now. You have to figure out a way to coexist. It's a challenging, nuanced idea in some ways, but I don't think we should be afraid to challenge kids. They want to be challenged—kids are always looking to act older and smarter than adults expect them to.

Kat: I'm hesitant to frame what we do as *too* important. We're not curing disease or feeding the hungry or reversing the effects of global warming. We talk a lot about the messages we're trying to convey to our audience, but ultimately, I just want to create something entertaining. I watched all kinds of thinly veiled toy commercials as a kid, and I thought they were great, but the ones that really stuck with me were the ones that felt real, the ones that I could see myself in and that challenged me. As a lifetime lover of television, I feel like it's my time to pay it forward.

Ian: The most important thing has always been trying to tell a solid story and making something really entertaining. Not all messages you might derive from the show are airtight pearls of wisdom that you'd want to teach a class of children or something. I think it's great that people are connecting to the show, but we never had a goal of teaching lessons. We are excited about doing new things on TV.

Dogcopter, the flying dog action hero with helicopter blades protruding from its back, speaks to Steven in a dream in the episode "Lion 3: Straight to Video" (S1E35): "Don't focus so much on talent, Steven. Making art is all about communication. A piece of art is a conversation. Every choice you make is a statement. Don't worry about labels or conforming to a standard. Just be true to yourself and people will appreciate your honesty." Dogcopter's message reads like a manifesto straight from the crew.

Jeff Liu [storyboard artist]: I wrote this scene! (With help from Rebecca and the rest of the story team, of course.) Artists can be very critical of themselves, sometimes viewing their artistic skill as if it equates with their worth as human beings. Fear, which is completely normal, can slow down the creative process a lot. More time can be spent judging oneself and worrying about judgment from others, rather than simply creating. An artist can reach great potential for growth when they accept themselves fully as they are, including all of their perceived faults.

Matt: "Just be true to yourself and people will appreciate your honesty" is a creed that really resonates with me, especially with this show. The only audience that matters to me is the one in the writers' room—my coworkers and myself. We're ultimately making this show for ourselves. You just have to have faith that there are other people like you out there who will watch and enjoy the show, too.

(Continued on page 228)

Crewniverse Art

Art by Hilary Florido.



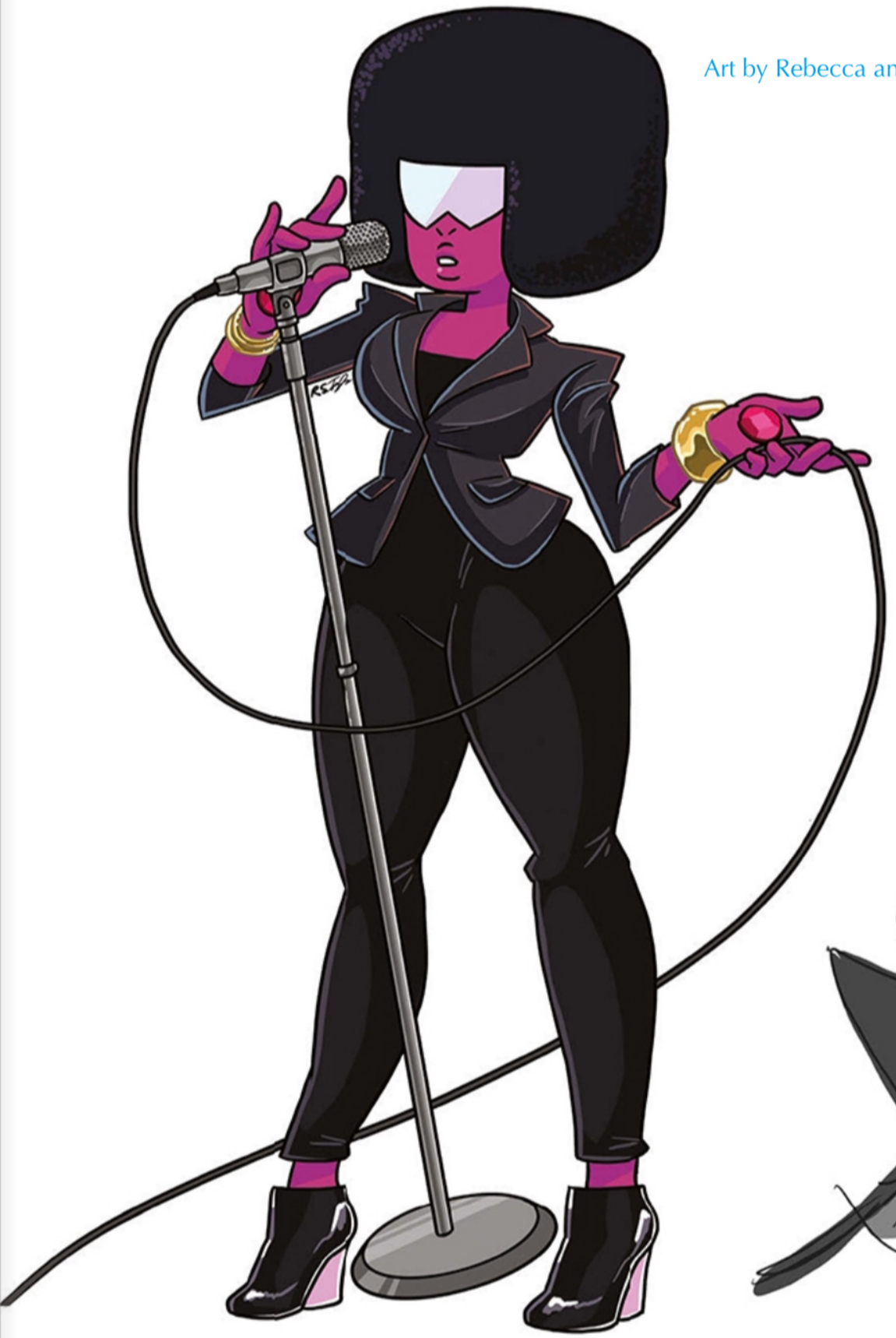


Art by Amber Cragg.



Art by Joe Johnston.

Art by Rebecca and Ian Jones-Quartey.



Art by Ian Jones-Quartey.





Art by Rebecca Sugar.

(Continued from page 225)

It's hard to put into words how it feels to see people responding so passionately and positively to something you worked on. It's just really, really nice. I've teared up at every single public screening of the show, like at San Diego, because when you can be in the room to hear hundreds of people gasping and cheering and laughing at a thing you worked on . . . it's a very powerful experience. Even though the show has been around for a while and has had fans from episode one, it's easy to forget what an impact our goofy little stories can have. It's scary, but it does make you think hard about your work and make sure you're confident in what you put out there to millions of people and willing to stand by it.

Dwelling on the fact that millions of viewers are watching your work could indeed be crippling. The crew must temper this awareness of their audience with an equal focus inward to make a show that they themselves want to watch. Cartoon crews do observe what goes on in fan communities online—the good and the bad—taking note of the fan art, fan fiction, fan cosplay (costume-play), and more.

Matt: Talking to fans online has been interesting. . . . It's really awesome that the world today allows a direct connection between creators and fans. As a kid, I went to comic-book conventions and waited in line for hours to meet writers I admired and ask them a question about some issue of *Ka-Zar* they wrote. Those experiences are things I'll never forget, so I've tried to be accommodating to fans who find me online. I've had a lot of fun doing it at times, but there is a little something lost when the interaction happens through tweets rather than face-to-face—maybe it's gotten too easy to connect. The few times I've met fans in public have been great; they're always so excited and polite and energetic. Those are the moments that really remind me what a cool thing I'm a part of.

Amber Cragg [storyboard revisionist]: I feel like I have a particularly interesting relationship with the online fandom, because that's where I came from. The day the pilot was released online, I posted fan art of Pearl to my Tumblr [a blogging platform with a social-networking aspect popular with young artists and people of all sorts], claiming I could tell she was going to be my favorite (she still is!), and through early 2014, I was drawing fan comics for the show. I was contacted by Ian to do a test that summer, and by the time "Steven and the Stevens" [S1E22] aired, I was watching it as part of the crew. It's incredibly weird to cross to the other side of something like *Steven Universe*, but it changed the way I see and value things online. It means a lot to see people genuinely enjoying themselves and enjoying the show we're making, and it also can sometimes be overwhelming. I think the thing that I've come to learn from the experience is that the world is much smaller than you think it is. In both directions, people see and hear what you say, and you have to be conscious of that impact. There's a definite struggle going on because of that visibility, and everyone sort of has to find the balance that works out the best for them. For me, that means not going online very often! [*Laughs*.]

As for being around fans in person—that's amazing. Online, it's hard to visualize the person behind the Pearl icon, but to see someone showing their support by even just wearing a pink shirt with a star—it means so much. Rebecca thanks the fans she interacts with for caring so much about the show, and I've taken to doing that, too, because they should be thanked. It's so great to know that people value the things that we all work so hard to make, and to see it with your own eyes!

I still consider sitting in on the 2015 San Diego Comic-Con Cartoon Network panel to be one of the best moments of my life. To be in a room full of people screaming with excitement over the thing that you're working on . . . Sometimes if I'm bummed out, I'll watch a clip of the Sardonyx [the fusion made by Pearl and Garnet] reveal on YouTube. It's very uplifting.

Ben Levin [writer]: When I saw the animatic for the pilot, I knew this was going to be something special. And as we began writing the show, I really had the feeling that this would resonate with a lot of people. But I had no idea the scope would be this big. When



Art by Kat Morris.



Art by Rebecca Sugar.



Art by Lauren Zuke.

the show first started airing, I was blown away by the fan art and the amount of reactions. I've never been a part of anything that was deemed fan art–worthy. But then we hit "JailBreak" [S1E52], and it went to another level. We used to be able to keep track of the fandom. Someone on the crew could say, "Did you see that Jamie drawing?" and I'd know what they were talking about. But post-"JailBreak," it seemed like I could refresh Tumblr and there'd be something new every time.

Like Matt and Amber said, being at that Comic-Con panel in 2015 was something else. It brought tears to my eyes to see all of those people there and to see and hear them react to the show. We all work really, really hard to make *Steven Universe*, and so it's rewarding to see that work appreciated and to hear that it has an impact on people's lives. Also, there's a shaky handheld video of that panel on YouTube that I've watched, like, twenty times, just to hear the audible gasps when Yellow Diamond appears for the first time.

As far as interacting with the fans, I've answered some questions online from time to time, and that's fun. I'd answer more, but it's impossible to answer most of their questions without spoiling the show. Personally, the fan reactions don't really affect how I write the show; we're writing so far ahead of what's airing that we just couldn't react if we wanted to. At least plot-wise. I mean, by the time the first episode aired, we were already writing episode forty-one.

The most fun fan interactions I've had have been with the *Keep Beach City Weird* blog. The fans completely play along with the reality of Ronaldo. They get the joke and escalate it—it's super funny. It feels like doing improv over the Internet.

Breaking bread together is the tradition of families everywhere. The crew has found this to be one more way to deepen their bond with one another. On nights when new episodes are premiering, many of the artists make a point to stick around the studio to watch it together in the common area, which includes some couches, a TV, and a kitchenette. Christy Cohen's duties as a production coordinator do not formally include creating elaborate treats to share, but it has become her tradition.

Christy Cohen [production coordinator]: The viewing parties are really nice because they are a way for us to be able to see the final product of an episode that most of us might not get the time to see otherwise—and we get to watch it all together!

My first design breakdown meeting for the show was for "Gem Glow" [S1E1]—I knew right then I would have to make some real-life Cookie Cats. My episodes continued from there with "Together Breakfast" [S1E4], "Frybo" [S1E5], "Serious Steven" [S1E8] (with the strawberry-covered battlefield), and other episodes that had food heavily involved in them. So I planned, early on, to try to do fun food things to go along with the episode airings. It's harder to do when there are five new episodes in one week, but I still do it when I can as my way to celebrate the show and the crew.

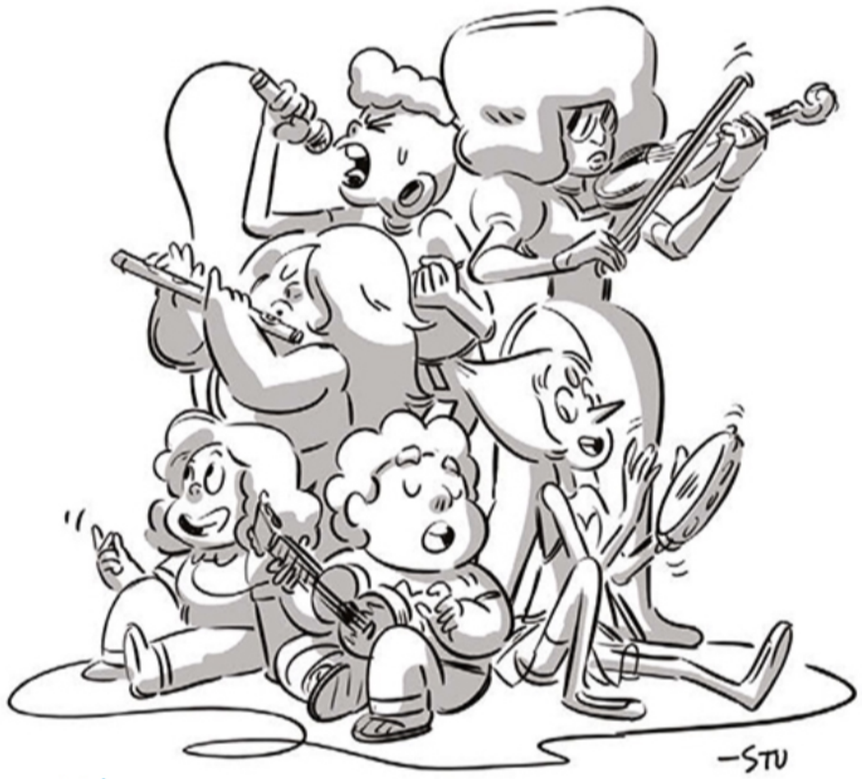
Already years into the marathon production schedule, the crew still wonders at their good fortune of landing among such a tight-knit, supportive community of coworkers who get to work together on a series that they love.

Matt: I've said it from the very beginning: There will never be another show like this, ever. The level of support from the network and the collaboration and freedom that individual artists have been granted is really unique in the landscape of all of television, really. At my very first staff writing job, when I was in the room of a scripted live-action show, my writing partner and I bristled when a few of our jokes in a script got changed by our bosses. The guy running the room at the time was very polite, but very honest, when he told us that, as first-time staff writers, on most shows, we would be lucky if we got a comma through unchanged from our first draft to the final script. The fact that a significant portion of that script was left untouched was unusual, and we should be grateful only a few bits were changed.

As a showrunner, Rebecca is open to opinions and new ideas and changes and risks almost every step of the way. She is guided by both a clear, complete vision for what this show is and a desire to have that vision evolve and be both supported and challenged by the people she has chosen to work with



Art by Aleth Romanillos.



Art by
Stu Livingston.

her. I think this entire crew feels a personal investment in the show in a way that would be very hard to replicate. It will not ever get better than this.

Amber: *Steven Universe* means pretty much everything for me! It came into my life at a very low point—for a while, I had good reason to believe I'd be spiraling in central Kentucky with no footholds for an artist to grab on to. *Steven* started airing, and it felt like it was specifically made for me. It is my first creative job, my stepping-stone into the art industry, and a melting pot of all of my interests and passions. Everyone working on the show is an inspiration.

Steven Sugar [background artist]: Looking back to before I moved out to LA to work on *Steven Universe*, it feels like a different life. I imagine all jobs sort of shape and change you, and I think it's fair to say this one, and working with this crew, has shaped me into a much better person! This is a hard show to work on, with lofty ambitions, but through it all, I think this is a crew of some of the best people anyone could hope to work with.

Christy: All the little details in the show, the environment for the crew—it all feels like it's worth fighting for and protecting. I've been able to closely watch as the whole process happens—from premises to pitches to records to design and through to the end—and I've seen the work, the care, the love that goes into each stage of each episode and how episodes can evolve. This is something that feels really special, something that I feel so lucky to be a part of.

Kat: I'll lead with the cliché—our crew is a big family! There's something about the act of creating with another person that forms a kind of bond you carry with you. I think we've all seen one another at our best and our . . . not best. We've carved out roles for ourselves outside of just our job titles; everyone I've worked with holds a special significance in my life.

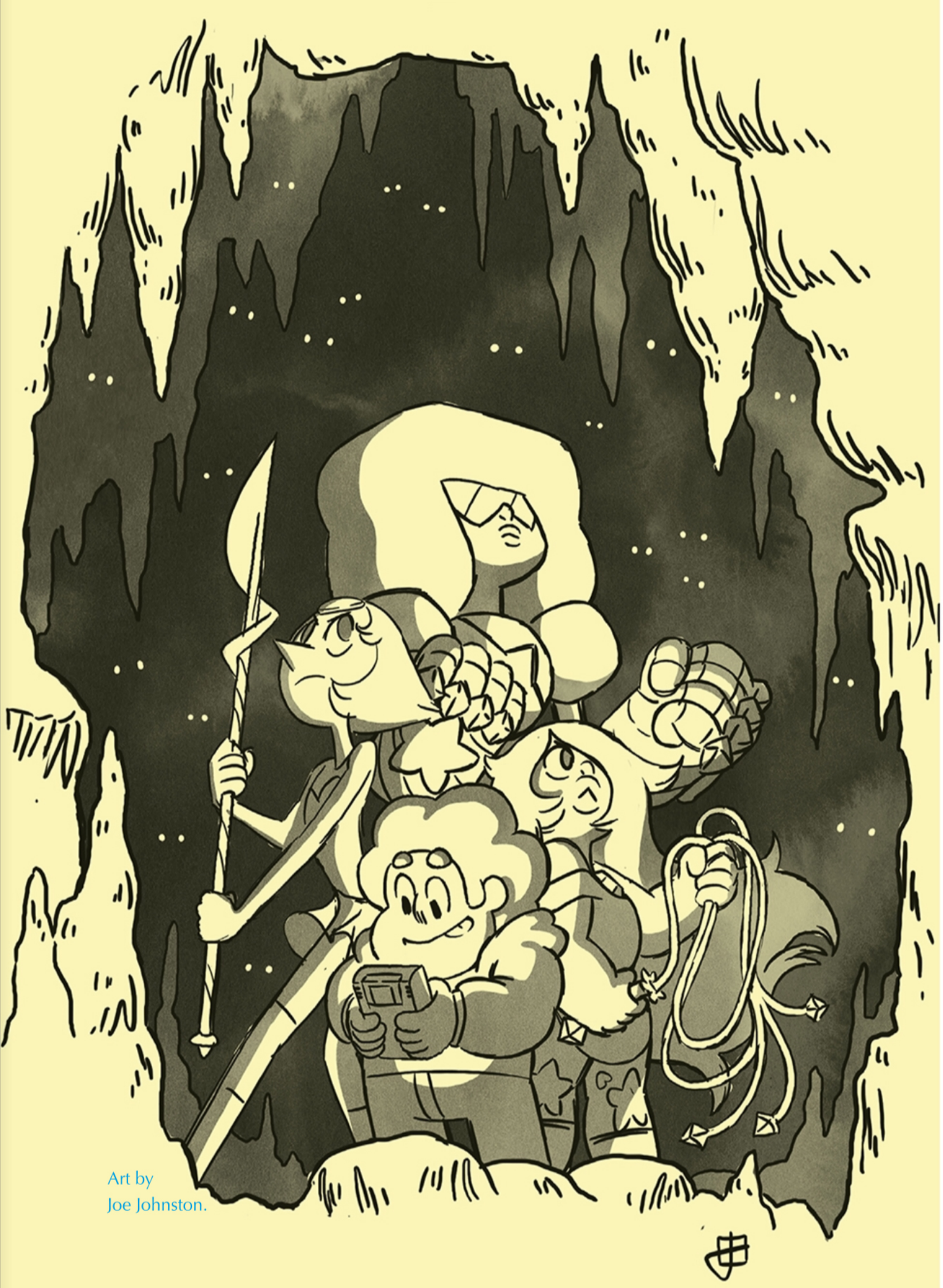
What's even more special is that I've been able to work on a show I truly love. I don't know how many times that can happen in one's life, so I'm grateful even in the moments that are challenging.

Ben: The days and episodes blur together because we're always racing to meet a new deadline, but every so often I'll stop to look around, and I'll think to myself, "This is exactly where I want to be." Rebecca pulled together a really special group of people who have put so much of themselves into the show, at all levels of production. We've grown together and learned from one another because of the open atmosphere that Rebecca has fostered. I'm just so thankful to her for bringing this crew together. I don't know if I'll ever be a part of something like this again.

Ian: I've spent so much time with these stories and characters—helping them come into existence,



Art by Katie Mitroff.



Art by
Joe Johnston.



Art by Rebecca Sugar.

shaping them into something entertaining, and then the hard work of following that through from still drawings to animation to finished product. I feel so close and so connected with the episodes because they are made from the people and experiences of our amazing crew. I've spent hours trying to honor the dreams of the crew—to make sure that everything has that special "*Steven Universe*-y" feeling. It's exhausting, but it doesn't catch up to me until I see the show play live on television. Tears spontaneously start rolling down my face.

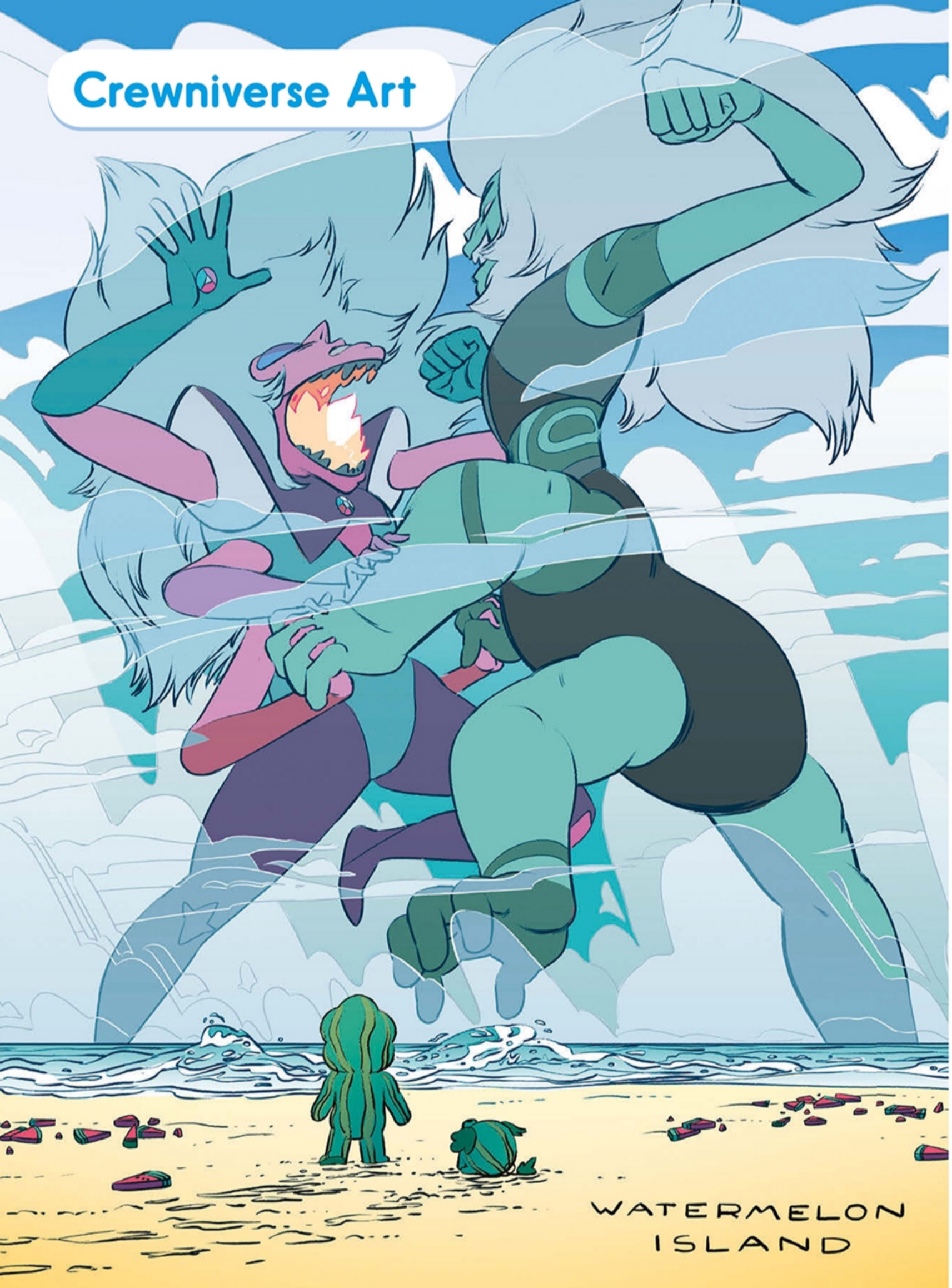
Steven Sugar is more than pleased with being the inspiration for a cartoon hero, though he doesn't see Steven Universe as an exact replica of himself.

Steven: It's an odd thing, seeing what Steven has become after being handled by so many writers. I don't think it felt like Steven ever was me, just a cartoon inspired by who I am when I'm with Rebecca.

I think those traits that make *Steven Universe* great are things that I can relate to, but exaggerated and idealized. Steven's a mix of strength, innocence, patience, and unconditional support that makes him into a sort of hero. All those things that he embodies are things I recognize, on some level, in myself, but just a little, since he's inspired by just that one part of me. So, weirdly, it'll sometimes feel like cartoon Steven is more the Steven I should be, or wish I was, rather than the Steven that I am.

Also, Dad gave me the nickname Schtooball, so that's another thing we have in common!

Crewniverse Art





Art by
Katie Mitroff.



Art by Matt Burnett.

Left: Art by Aleth Romanillos.



Art by Amber Cragg.



Art by Lamar Abrams.



Art by Kat Morris.

Art by Joe Johnston.

Art by Katie Mitroff.























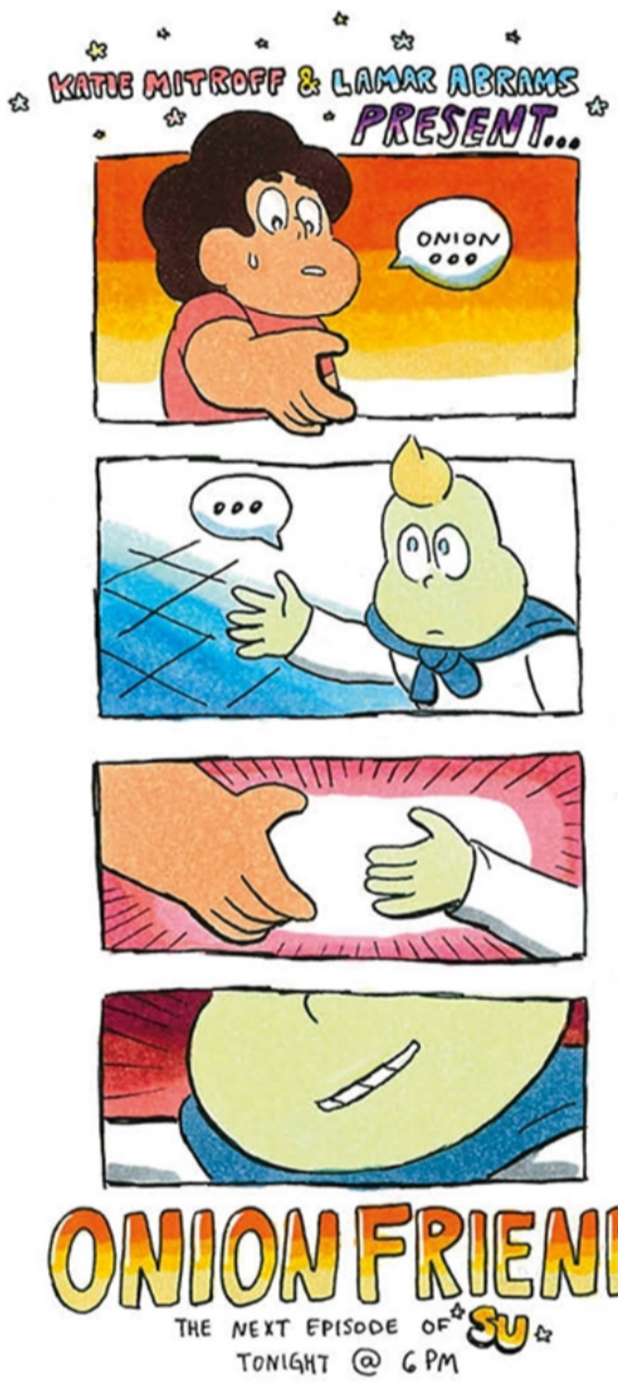



Promo Drawings

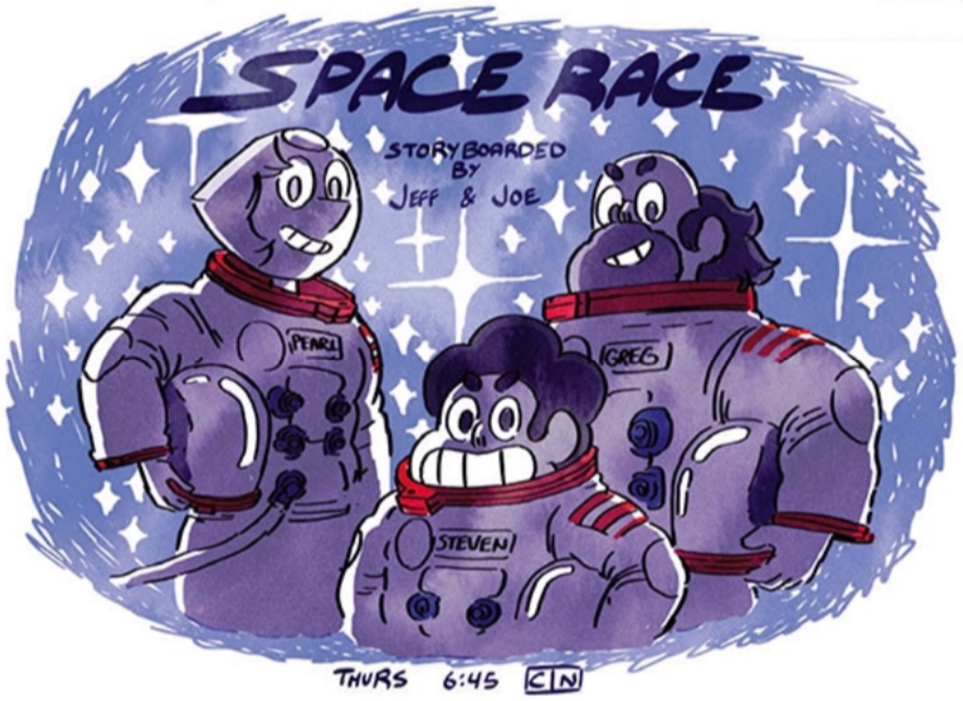




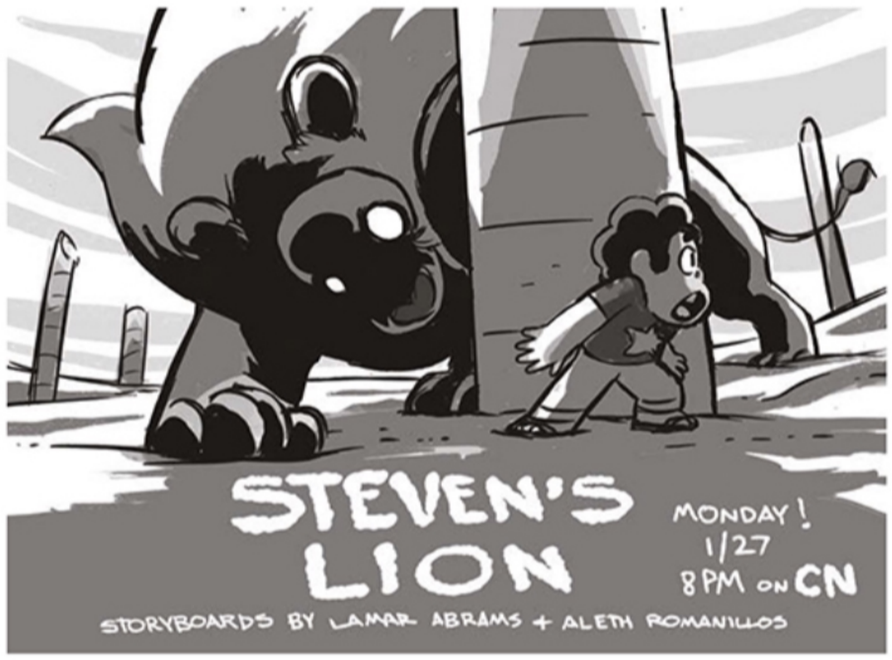














THE STEVEN CREW-NIVERSE PRESENTS:



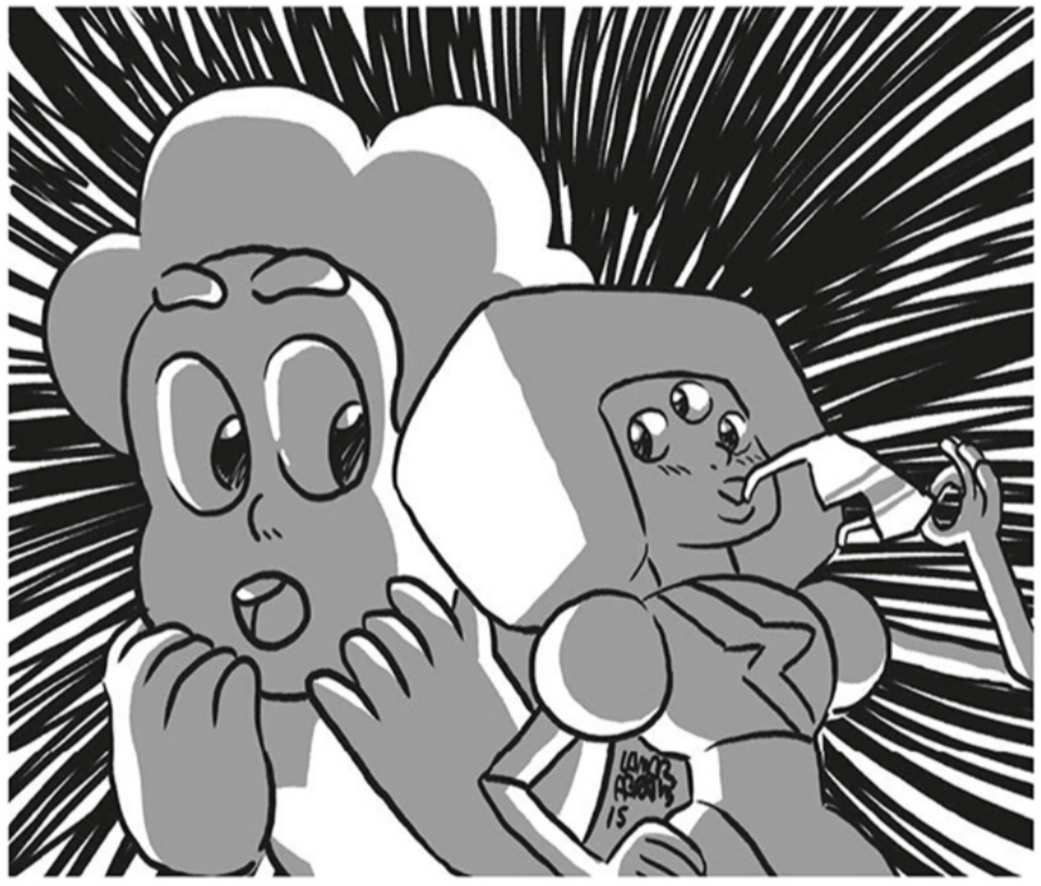


story boarded & written by
HILARY FLORIDO, KATIE MITROFF
and REBECCA SUGAR



S★U
HOUSE GUEST







"CAT FINGERS" BY REBECCA, IAN, HILARY + KAT
TONIGHT @ 8PM ON CN

Credits

"The Time Thing" Pilot Credits

Created by: Rebecca Sugar
Supervising Producer: Pete Browngardt
Producer: Nate Funaro
Creative Director: Phil Rynda
Art Director: Sue Mondt
Written and storyboarded by: Rebecca Sugar
Production Coordinators: Kelley Derr, Marcy Mahoney
Production Assistant: Adam Robezzoli
Character Designer: Phil Rynda
Prop Designer: Angie Wang
Background Designers: Tom Herpich, Art Morales, Chris Tsirgiotis
Background Painters: Mark Bodnar, Elle Michalka, Steven Sugar
Color Key: Amanda Rynda
Timing Director: Genndy Tartakovsky
Animatic Timer: Oliver Akuin
Animation Checking: Sandy Benenati
Featured Voices: Zach Callison, Deedee Magno Hall, Michaela Dietz, Estelle Swaray, Kate Micucci, Matthew Moy
Casting Director: Maria Estrada
Voice Director: Maria Estrada
Recording Studio Manager: Karie Gima Pham
Recording Engineer: Robert Serda
Music by: Jonathan Baken
Supervising Editor: Paul Douglas
Dialog Editor: Matt Brown
Re-Recording Mixer: Robert Serda
Sound Effects Design/Editorial: Robert Serda
Director Production Technology: Antonio Gonella
Post Production Supervisor: Tony Tedford
Post Production Coordinator: Alicia Parkinson
Track Reading by: Slightly Off Track
Production Estimator: Cecilia Rheins
Production Administration: Linda Barry
Overseas Production Facility: Rough Draft Korea Co., Ltd.
For Cartoon Network Studios:
Executive Producers: Brian A. Miller, Jennifer Pelphrey
For Cartoon Network:
Executive Producers: Curtis Lelash, Rob Sorcher
Executive in Charge of Development: Katie Krentz

Series Combined Credits

Created by: Rebecca Sugar
Written and Storyboarded by: Rebecca Sugar, Kat Morris, Ian Jones-Quartey, Jeff Liu, Joe Johnston, Paul Villeco, Colin Howard, Aleth Romanillos, Raven Molisee, Lamar Abrams, Luke Weber, Hellen Jo, Hilary Florido, Katie Mitroff, Lauren Zuke, Takafumi Hori, Matt Braly
Co-executive Producer: Ian Jones-Quartey
Art Director: Kevin Dart, Ricky Cometa, Elle Michalka, Jasmin Lai
Supervising Director: Ian Jones-Quartey, Joe Johnston, Kat Morris
Executive Producer: Rebecca Sugar
Producer: Jackie Buscarino
Supervising Producer: Chuck Austen
Storyboard Supervisor: Kat Morris
Animation Director: Nick DeMayo
Story Editors: Matt Burnett, Ben Levin
Story by: Matt Burnett, Ben Levin, Rebecca Sugar, Ian Jones-Quartey, Kat Morris, Joe Johnston
Production Coordinators: Carder Scholin, Carolyna Robezzoli, Lisa Zunich, Christy Cohen
Production Assistants: Christy Cohen, Lisa Zunich, Raymond Schmidt, Kevin Inciong
Digital Production Assistant: Alan Pasman
Lead Character Design: Danny Hynes, Colin Howard
Character Design: Colin Howard, Aleth Romanillos
Additional Character Design: Joseph Pitt, Guy Davis, Ricky Cometa, Carly Monardo
Character Design Inspired by: Carey Yost, Phil Rynda
Prop Design: Angie Wang
Additional Illustrations: Guy Davis
Additional Prop Design: Nick Edwards, Bill Ramos Flores, Thaddeus Couldron
Additional Model Design: Ricky Cometa, Carly Monardo, Lauren Monardo Gramprey, Erica Jones, Katie Mitroff, Dou Hong
Model Clean-Up: Erik Elizarrez
Lead Background Design: Steven Sugar
Background Design: Steven Sugar, Emily Walus, Sam Bosma, Clarke Snyder, Nick Edwards, Bill Ramos Flores, Elle Michalka, Mary Nash, Jane Bak
Additional BG Design: Patrick Leger, Sam Bosma, Jeff Mertz, Guy Davis, Martin Cendreda, Jake Wyatt, Justin Martin, Clarke Snyder, Kevin Dart, Myung Eusong Lee Seo, Mary Nash, Jane Bak
Background Painters: Elle Michalka, Amanda Winsterstein, Jasmin Lai, Ricky Cometa, Michelle Kwon
Additional BG Paint: Sophie Diao, Gyimah Gariba, Cat Tuong Bui, Katie Mitroff, Kevin Dart, Dylan Forman, Craig S. Simmons, Myung Eusong Lee Seo, Emily Walus, Elle Michalka, Efrain Farias, Jasmin Lai
Additional Visual Effects: Andrew Chittenden
Color Stylist: Tiffany Ford, Efrain Farias, Hans Tseng, Elle Michalka
Additional Color Stylists: Amanda Rynda, Jessica Yost, Catherine E. Simmonds, Tiffany Ford
Animatic Timer: Lauren Hecht
Additional Animatic Timing: Oliver Akuin
Storyboard Revisions: Aleth Romanillos, Stuart Livingston, Antony Mazzotta, Lauren Zuke, Amber Cragg
Additional Storyboard Revisions: Antony Mazzotta, Hilary Florido, Katie Mitroff, Luke Weber, Jeff Liu, Melissa Juarez, Kartika Mediani, Mickey Quinn
Featured Voices: Zach Callison, Estelle Swaray, Michaela Dietz, Deedee Magno Hall
Additional Voices: Tom Scharpling, Billy Merritt, Ian Jones-Quartey, Eugene Cordero, Matthew Moy, Kate Micucci, Dee Bradley Baker, Grace Rolek, Joel Hodgson, Atticus Shaffer, Zachary Steel, Sinbad, Aimee Mann, Chris Jai Alex, Lamar Abrams, Reagan Gomez, Brian Posehn, Nicki Minaj, Susan Egan, Godfrey Danchimah, Toks Olagundoye, Jennifer Paz, Crispin Freeman, Mary Elizabeth McGlynn, Rita Rani Ahuja, AJ Michalka, Andrew Kishino, Shelby Rabara, Mason Cook, Braden Fitzgerald, Eric Bell Jr., Jackie Buscarino, Jon Wurster, Kimberly Brooks, Erica Luttrell, Charlyne Yi, Kate Flannery, Pete Browngardt, Eric Bauza, Adam DeVine, Kevin Michael Richardson, Alexia Khadime, Colton Dunn, Olivia Olson, Patti LuPone, Nancy Linari, Uzo Aduba, Natasha Lyonne, Brian George, Dave Willis, Lisa Hannigan, Christine Pedi, Cristina Vee
Voice Directors: Kent Osborne, David P. Smith
Recording Studio Managers: Karie Gima Pham, Susy Campos, Stacy Renfroe

Recording Engineer: Robert Serda, David W. Barr
Sheet Timing: Maureen Mlynarczyk, Doug Gallery, Kimson Albert, Greg Miller, Robert Ingram
Animation Checking: Sandy Benenati, Vicki Casper, Takafumi Hori, Julie Benenati
Track Reading by: Slightly Off Track
Picture Editor: Mattaniah Adams
Assistant Editor: Anna Granfors
Dialog Editor: Eric Freeman, Alex Borquez
Additional Dialog Editing: Alex Borquez
Director Production Technology: Antonio Gonella
Supervising Sound Editors: Timothy J. Borquez, MPSE, Tom Syslo, Tony Orozco
Sound Editors: Tony Orozco, Daisuke Sawa, Eric Freeman, Tom Syslo
Tap Dancing by: Shelby Rabara
Re-Recording Mixers: Eric Freeman, C.A.S., Timothy J. Borquez, C.A.S., Tony Orozco
Post Production Supervisor: Tony Tedford
Post Production Manager: Alicia Parkinson
Post Production Coordinator: Alicia Parkinson
Production Estimator: Cecilia Rheins
Production Administration: Linda Barry
Music Composers: Aivi & surasshu
Main Title Lyrics by: Rebecca Sugar
Main Title Music by: Rebecca Sugar, Aivi & surasshu, Jeff Liu
Additional Guitar for Main Title: Stemage
Additional Strings for Main Title: Jeff Ball
Additional Music by: Rebecca Sugar, Nick DeMayo, Jeff Liu, Ben Levin, Stemage, Roger Hicks, Hellen Jo, Ian Jones-Quartey
Additional Violin Music by: Jeff Ball, Patti Rudisill
Additional Electric Guitar by: Stemage
Additional Drums by: Roger "Rekcahdam" Hicks
Additional Guitar by: Stemage, Edwin Rhodes, Jeff Liu
Additional Strings by: Jeff Ball
Additional Clarinet by: Kristin Naigus
Additional Trumpet by: Jesse Knowles
Additional Saxophone by: Tim Teylan
Saxophone Recording Engineer: Julian Sanchez
"Here Comes a Thought": Music & lyrics by Rebecca Sugar
"OK K.O.!" Music: Jake Kaufman
"OK K.O.!" Arcade Machine Music: Arranged by Aivi & surasshu
"Like A Star": Mike Krol
"Fifteen Minutes": Mike Krol
"Still Not Giving Up": Music & lyrics by Jeff Liu
"Haven't You Noticed I'm a Star": Music & lyrics by Rebecca Sugar
"Crying Breakfast Friends Theme": Music & lyrics by Jeff Liu
"I Could Never Be Ready": Music & lyrics by Rebecca Sugar
"What's the Use of Feeling (Blue)": Lyrics by Rebecca Sugar, music by Rebecca Sugar, Aivi & surasshu
Additional Lyrics by: Rebecca Sugar, Jeff Liu, Ben Levin, Matt Burnett, Paul Villeco, Hellen Jo, Ian Jones-Quartey, Lamar Abrams, Nick DeMayo, Joe Johnston
Vocals by: Rebecca Sugar
Arrangement by: Aivi & surasshu
Overseas Production Facility: Rough Draft Korea Co., Ltd., SMIP CO.,LTD
Development Executive: Katie Krentz
Current Series Executive: Nicole Rivera
Executive Producers: Curtis Lelash, Jennifer Pelphrey, Brian A. Miller, Rob Sorcher

Rough Draft Korea Co. Ltd Credits

Supervising Director: Haesung Park
Animation Directors: Byungki Lee, Sangman Park, Heejin Won, Sangun Jun, Dongsoo Lee, Dongyoung Kim, Seungwook Shin, Dongboon Kim
Senior Producer: Chulho Kim
Production Managers: Minsuk Kim, Hyunsik Hahm, Kilhong Kim
Production Assistants: Mekyung Song, Hyukmin Yea, Hana Do, Yeonju Noh, Min Choi
Senior Head of Translation: Yeonhwa Jeong
Translators: Youngwon Kim, Mirae Lee, Gahyun Baek
Layout Director: Seungryul Lee
Layout Artists: Moonjung Choi, Moonjung Song
Animators: Sangun Jun, Seungwook Shin, Sangman Park, Dongsoo Lee, Dongboon Kim ,Heejin Won, Dongyoung Kim, Minjung Kim, Sangtag Oh, Misoon Yun
Model Checker: Juhee Lim
Chief of Assist Animation: Boyoung Sung, Sungsook Cho
Assist Animators: Byungjo Kwan, Junghoon Kwan, Mijin Kim, Jungmi Kim, Jinah Kim, Hyeran Kim, Mikyung Mun, Junghoon Park, Eunju Seo, Mijung Song, Sunhee Ahn, Soojung Ahn, Minah Yang, Eunmi Oh, Mihyang Won, Daesoo Lee, Kyunghye Jang, Hyeryun Jeon, Yunjung Jung, Yangsook Cho, Hyunlim Ha, Sooyoung Hwang, Jiyeon Hwang, Miok Kang, Dohee Kim, Miyea Kim, Oksun Kim, Eunhee Kim, Hyunjung Kim, Jinhee Ryu, Eunyoung Seo, Suok Yu, Hwasoon Lee, Seohyun Lim, Younghee Jung, Yeonyeol Choi, Mijin Han, Kyungmi Hong
Animation Checking: Choonkeun Choi, Hyukjun Kim
Retakes Supervisor: Yongnam Park
Unit Digital Supervisor: Doohwan Kim
Chief of Compositing: Younghyun Lee, Sangkyun Cha
Camera Compositing: Kiyoung Park, Changwook Lee, Jaewoo Shim, Wonjun Hwang
Digital San/X-Sheeting: Chunhwa Ahn, Jinyoung Kim, Sohye Kim, Mijung Kim
Chief of Ink & Paint: Myungsoon Kim
Palette: Taesun Kwan
Ink & Paint: Seunghee Koh, Hyunah Park, Myunghwe Ahn, Hyunkyung Lee, Soonil Yu, Sunok Cho
Background Clean-Up: Haesook Park, Soomi Kim, Deukyeo Kang, Yunju Hyun
Background Painting: Jayoung Won, Kyungae Noh, Soojung Shim
Chief of Editing/Technical: Heechul Kang
Editor: Minhee Hong

SMIP CO. LTD Credits

Director: Ki Yong Bae
Assi Director: Jin Hee Park, Sue Hong Kim
L/O Checker: Yeong Gyun Yoo
Key Animation: Eun Ok Choi, Sun Ok Jo, Gyeong Ho Lee, Byeong Cheong Shin, Gang Yong Lee, Yeong Mi Lee
Model Checker: Gyeong Suk Yoo
BG: Jin Yang Lee, Hyeon Ho Lee
Inbetween Checker: Gyeong Suk Chun, Yun Hui Choi, Seong Gwon Kang
Final Checker: Eon Su Son, Jong Min Choi
Color Checker: Eun Sil Lee, Mija Na
Compositor: Sam Rye Na, Gi Yeong Yang





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–Chris McDonnell, Philadelphia, January 2017

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Associate Manager, Creative: Janet No
Designer: Chris McDonnell
Production Manager: Denise LaCongo
Cover art by Jasmin Lai
Cover design by Chris McDonnell and Rebecca Sugar

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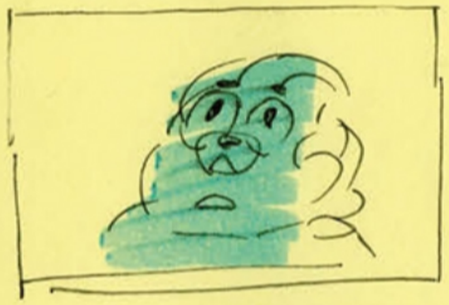




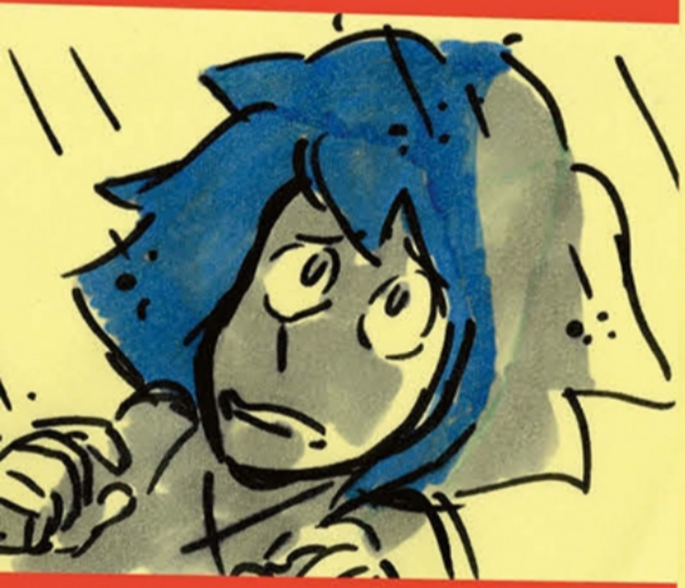




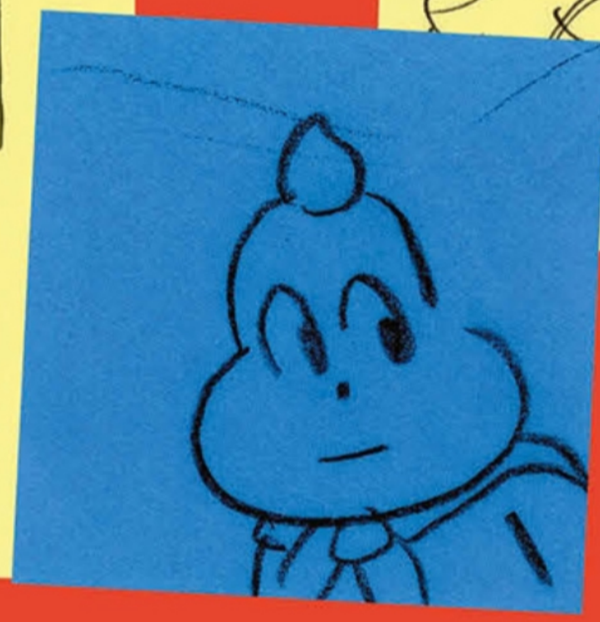
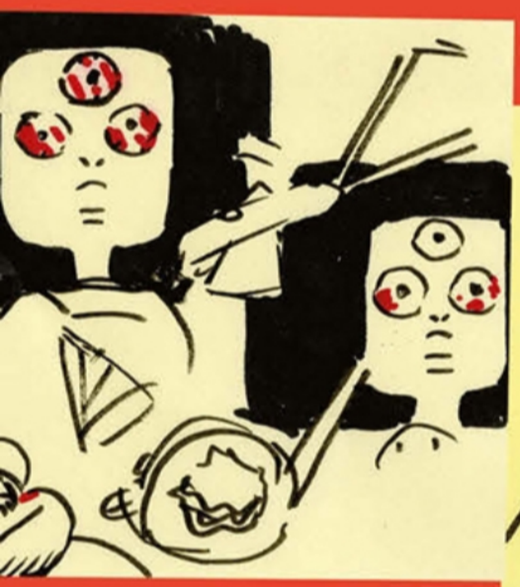





MY HAIR...

HA HA THIS LOOKS LIKE ME

?

Why

What is this extra hair?

