Seattle Children's Theatre
ACTIVE AUDIENCE GUIDE

Season 43, Show 6

THE LAMP IS THE MOON

APRIL 12 - MAY 20, 2018

BY KIRK LYNN

DIRECTED BY RITA GIOMI ILLUSTRATION BY LIZ WONG

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SYNOPSIS

As we write this synopsis, the script for *The Lamp is the Moon* is still being developed. There may be some differences between what you read here and what you see in the show.

BE WARNED: THIS SYNOPSIS HAS SPOILERS.

Shawn, a young girl, enters her bedroom with an old lamp in her hands, slamming the door behind her with her foot. In the bedroom there are pillows, science books and art supplies. She apologizes to the door for slamming it. Shawn explains carrying the lamp made her hands unavailable for use. Promising more care, Shawn places the lamp atop the table.

Speaking to her furniture, Shawn advises everyone to behave during naptime today. This bedroom and its inhabitants have been known to push the limits. Today is the most important day for a successful naptime because Shawn's grandma is departing for the airport soon and she wants to be sure to offer a proper goodbye. We learn Grandma gave Shawn the lamp so it "could light up her dreams." Shawn engages the lamp but finds it is "sleeping," something she wishes she could do so easily.

Shawn shares her biggest dream with the sleeping lamp—she wants to become an astronaut and meet the Moon. The profession suits her perfectly because she always likes to be moving. In her excitement, she revolves like the Moon and nearly knocks the lamp over. It starts to speak! Lamp is nervous about the two of them getting in trouble if Shawn doesn't nap. Shawn reassures Lamp that they will be fine. She has a deal with her parents that if they have to check on her three times there will be consequences. She demonstrates that there is a gradation of acceptable sound levels, and that causes her parents to check on her. She feigns sleep and the door closes. Lamp asks the audience to help keep Shawn safe from the danger of three door visits. At Lamp's urging, Shawn builds a parent tracking system starting with one pillow.

The two share their admiration for he Moon and Shawn discovers Lamp knows a lot about it. Shawn asks how she can meet the Moon. Working together, they make an interactive map of part of the Earth and the solar system. There are so many places to explore. Their mission begins, following the three rules Shawn just made up: Teamwork, Proper Preparation and Lift Off.

They start training by taking imaginary monkeys to space. Lamp shares that monkeys saw space before humans ever did. They suit up their imaginary monkeys and invite them

to take the mission pledge. Shawn teaches the audience the words. The pledge gets a touch out of control and her parents again open the door. Shawn gets under the sheet just in time. The door closes, and Shawn adds another pillow to the tracker.

She and Lamp move on to rule #2: Proper Preparation. They improvise an astronaut's uniform, adding underpants as a helmet for the final touch. They realize the rocket needs fuel. Encouraging the audience to create a pipeline by taking hands, they all pump fuel into one of Shawn's dresser drawers they imagine to be the rocket's fuel tank. Footsteps are heard at the bedroom door. The two quiet their activities.

Once they are in the clear, they pick up with rule #3: Lift Off. Shawn is disappointed she can't jump high enough to reach outer space. Lamp teaches her about gravity and orbits, and reveals that Shawn's grandma worked at NASA as a mission specialist. Grandma helped Anna Lee Fisher, the first mother in space, on her special mission. As they continue training, Shawn leads the audience in transition from night to day to night to day… Lamp sings about being the Moon. Shawn defies gravity by throwing things in the air, accidentally hitting the light switch.

The room is dark. With a flashlight, Shawn shows how the Moon shines by reflected light. This is one fact Lamp did not know, and she is distressed, wanting to create her own light and float in space as the Moon. Shawn reminds Lamp that we are in space right now. Earth is orbiting the Sun and everything we do can be part of our space adventure if we imagine. The two countdown to lift off. Bubbles fill the space. Lamp becomes the Moon.

The door opens again, with Grandma on the other side. She declares naptime is over and in one month Shawn will visit her in D.C. to see a special exhibit about outer space at the Smithsonian Aerospace Museum. Shawn is very happy she made it through naptime and got her goodbye with Grandma. She and Lamp celebrate. Finally, Shawn lies down and falls asleep.

STATE LEARNING STANDARDS

The *Lamp is the Moon* touches on many themes and ideas. Here are a few we believe would make good **Discussion Topics:** Inspiration, Science, and Imaginative Play.

We believe that seeing the show and using our Active Audience Guide can help you address these **21st-Century Skills**:

- **Creative Thinking**
- **Critical Thinking**
- **Communication**
- **Collaboration**
- **Perseverance**
- **Growth Mindset**

We also believe that seeing the show and using the AAG can help educators meet many of the Washington State Learning Standards. Below are some that might fit in well. Where more than one standard within a specific area applies, we selected one example. In a few instances, we refer to specific AAG articles.

Standards are grouped by the AAG articles and activities they connect to. Descriptive text of chosen standards is on the following page.

ATTENDING A PERFORMANCE OF THE LAMP IS THE MOON

Arts

Theatre Arts
Anchor Standards 1 – 11

Physical Education
Anchor Standard 1

WRITING, BY KIRK LYNN; ABOUT THE SET; ABOUT THE COSTUMES

These articles by theatre artists detail their roles and processes in creating The Lamp is the Moon.

Arts

Theatre Arts
Anchor Standards 1, 7, 8, 9, 11

FAMILY RITUALS; YOU ARE A SCIENTIST; YOUNG SCIENTISTS – LOOKING FOR ANSWERS, MAKING A DIFFERENCE; THE WORLD OF A CHILD'S IMAGINATION; JUST IMAGINE; A CHAT WITH HALEY SHARP, PLANETARIUM DIRECTOR

These articles connect thematic elements found within The Lamp is the Moon *to real-world concepts.*

English Language Arts

Reading Standards for Informational Text
RI.3, RI.4, RI.8

Speaking and Listening Standards
SL.2

WORDS AND PHRASES THAT MAY BE NEW TO YOU

English Language Arts

Language Standards
L.4

Reading Standards: Foundational Skills
RF.2, RF.3

JUMP START

Arts

Dance
Anchor Standards 1, 7, 11

Music
Anchor Standards 1, 7, 8, 11

Theatre Arts
Anchor Standards 1 – 11

Physical Education
Anchor Standard 1

English Language Arts

Speaking and Listening Standards
SL.5, SL.6

Writing Standards
W.1, W.2, W.7, W.8

DRAMA IN ACTION

Arts

Theatre Arts
Anchor Standards 1 – 11

Physical Education

Four-year-old Vivian Segerson visiting the Steven F. Udvar-Hazy Center Air and Space Museum in Virginia. Photo courtesy of the Segerson family.

WASHINGTON STATE K-12 LEARNING STANDARDS

English Language Arts

Language Standards

Vocabulary Acquisition and Use

- **L.4:** Determine or clarify the meaning of unknown and multiple-meaning words and phrases based on age appropriate level reading and content.

Reading Standards: Foundational Skills

Phonological Awareness

- **RF.2:** Demonstrate understanding of spoken words, syllables, and sounds (phonemes).

Phonics and Word Recognition

- **RF.3:** Know and apply grade-level phonics and word analysis skills in decoding words.

Reading Standards for Informational Text

Key Ideas and Details

- **RI.3:** Describe the connection between two individuals, events, ideas, or pieces of information in a text.

Craft and Structure

- **RI.4:** Ask and answer questions about unknown words in a text.

Integration of Knowledge and Ideas

- **RI.8:** With prompting and support, identify the reasons an author gives to support points in a text.

Speaking and Listening Standards

Comprehension and Collaboration

- **SL.2:** Confirm understanding of a text read aloud or information presented orally or through other media by asking and answering questions about key details and requesting clarification if something is not understood.

Presentation of Knowledge and Ideas

- **SL.5:** Add drawings or other visual displays to descriptions as desired to provide additional detail.
- **SL.6:** Speak audibly and express thoughts, feelings, and ideas clearly.

Writing Standards

Text Types and Purposes:

- **W.1:** Use a combination of drawing, dictating, and writing to compose opinion pieces in which they tell the reader the topic or the name of the book they are writing about and state an opinion or preference about the topic or book (e.g., My favorite book is…).
- **W.2:** Use a combination of drawing, dictating, and writing to compose informative/ explanatory texts in which they name what they are writing about and supply some information about the topic.

Research to Build and Present Knowledge

- **W.7:** Participate in shared research and writing projects (e.g., explore a number of books by a favorite author and express opinions about them).
- **W.8:** With guidance and support from adults, recall information from experiences or gather information from provided sources to answer a question.

Arts

Dance

- **Anchor Standard 1:** Generate and conceptualize artistic ideas and work.
- **Anchor Standard 7:** Perceive and Analyze artistic work.
- **Anchor Standard 11:** Relate artistic ideas and works with societal, cultural, and historical context to deepen understanding.

Music

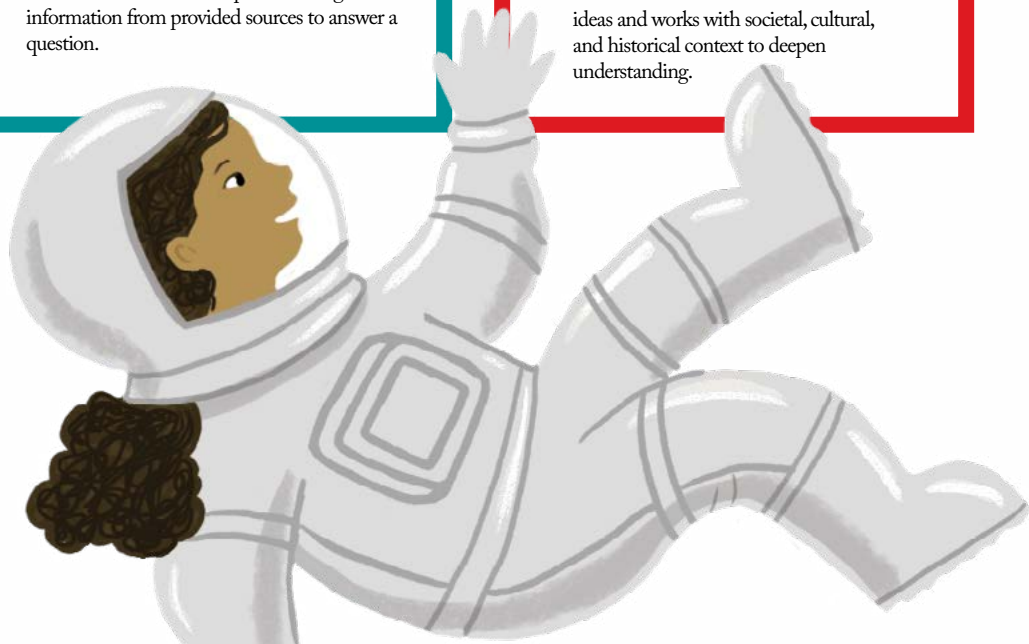
- **Anchor Standard 1:** Generate and conceptualize artistic ideas and work.
- **Anchor Standard 7:** Perceive and Analyze artistic work.
- **Anchor Standard 8:** Interpret intent and meaning in artistic work.
- **Anchor Standard 11:** Relate artistic ideas and works with societal, cultural, and historical context to deepen understanding.

Theatre Arts

- **Anchor Standard 1:** Generate and conceptualize artistic ideas and work.
- **Anchor Standard 2:** Organize and develop artistic ideas and work.
- **Anchor Standard 3:** Refine and complete artistic work.
- **Anchor Standard 4:** Select, analyze, and interpret artistic work for presentation.
- **Anchor Standard 5:** Develop and refine artistic techniques and work for presentation.
- **Anchor Standard 6:** Convey meaning through the presentation of artistic work.
- **Anchor Standard 7:** Perceive and analyze artistic work.
- **Anchor Standard 8:** Interpret intent and meaning in artistic work.
- **Anchor Standard 9:** Apply criteria to evaluate artistic work.
- **Anchor Standard 10:** Synthesize and relate knowledge and personal experiences to make art.
- **Anchor Standard 11:** Relate artistic ideas and works with societal, cultural, and historical context to deepen understanding.

Physical Education

- **Anchor Standard 1:** Students will demonstrate competency in a variety of motor skills and movement patterns.



WE ARE ALL ON THE SAME TEAM

THEATER ETIQUETTE

The fantastic thing about going to see live theater is that it is a shared community event where everyone plays an important part. You hear pre-show announcements about theater etiquette every time you come to SCT. Happily, the vast majority of our audience members help us make the theater-going experience better for everyone by complying with the requests. But if you or the kids in your life have ever wondered why we ask the things we do, here are some explanations:

Please completely turn off all electronic devices including cell phones, cameras and video recorders.

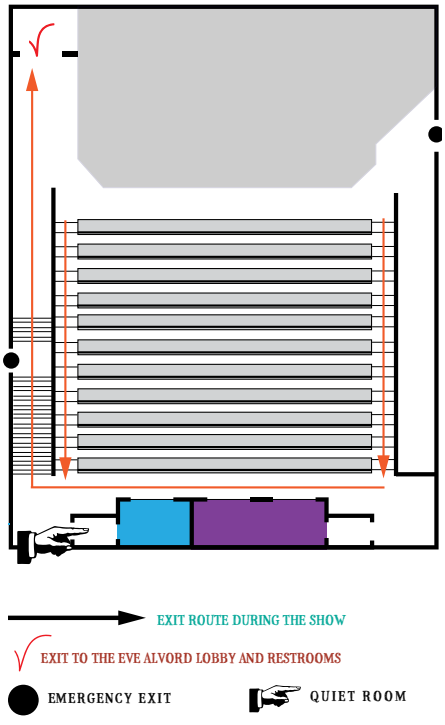
Why turn them completely off? So they won't get used. Airplane mode will stop incoming calls and messages, but it won't stop people from using their devices to take pictures, record audio or video, read books or play games during the show.

Phone calls and texting are a distraction to the audience and performers, and can pose a safety hazard as well as interfere with our sound system.

The distraction factor is an easy one to explain. It is very difficult for people to ignore a lit screen. Walk through a room where a TV is on and you are going to at least glance at it. In a darkened theater, eyes are drawn to the light. Everyone sitting anywhere behind someone looking at a lit phone will turn their attention to that phone. And the actors on stage can see the screen lighting up the holder's face. A ringing phone or text message alert takes everyone in the theater, on stage and off, out of the moment.

How does this create a safety hazard? Distraction can be a problem for actors and crew whose focus needs to stay on doing their work safely, especially when working on, with or around moving scenic pieces or as scenery is being lowered to the stage.

Do electronics in the audience really interfere with the sound system? Yes. You would not notice it over the speaker system in the house, but our crew is on wireless headsets, and electronic devices in the audience can cause interference. If crew can't hear cues and communicate with each other, they can't do their job safely or efficiently.



Also, taking pictures or video is not allowed.

We are fortunate to work with very talented performers, designers, playwrights and directors at SCT. One of our responsibilities to these artists is to help protect their work from illegal distribution or piracy. Contractually, the use of images of their designs and recordings of their work is very specifically controlled. We appreciate that people want to capture a memory to enjoy later, but it is actually a violation of contract, and of trust between the artists and the audience.

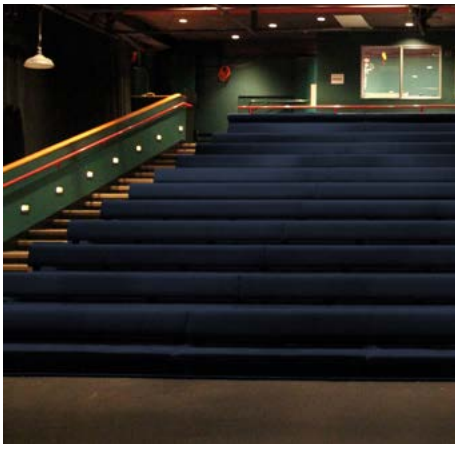
You are welcome to take pictures in the lobby, of family and friends in their seats before or after the show, or when talking to the actors at autographs after the show, with their permission. If you are not sure if a photograph is permitted, please ask.

If you are with someone who becomes noisy or restless, please be kind to your neighbors and use our quiet room which is located in the back of the theater over your left shoulder.

We love our audiences and want them to express themselves during the show—laughing, clapping, shouting in amazement. It's part of the community experience. But everyone has moments when they just don't want to be where they are. And sometimes they express this quite loudly. The quiet room offers a place to see and hear the show, while having a chance to settle in private. Please keep in mind that although it is called the "quiet room" it is not completely soundproof.

If you need to exit during the performance, please go around the back of the seats and down the staircase on the other side of the partition.

We're pretty sure no one wants to become part of the show if they need to run out of the theater to use the restroom or get a drink of water. The Alvord is a wonderfully intimate space. Exiting during the show will always draw some attention, but using the suggested path behind the partition avoids crossing directly in front of the stage.



Kirk enjoying watching someone else's play

WRITING

BY KIRK LYNN, PLAYWRIGHT

Six-year-old Kirk

I like to read. I used to have a special way of hiding a desk lamp behind my headboard so my parents wouldn't catch me reading late into the night. I think once you read a whole lot, it occurs to some of us to start copying what we read. Not copying other people's stories word for word, but copying the way other people capture their ideas and the rhythm of their thoughts in words.

I used to write a lot of stories in imitation of Norse myths. I liked the way Thor and Loki spent so much time with each other even though one was strong and brave and the other was so troublesome and chaotic. I think I felt like the Loki in my family but I'm glad they let me stick around and join them for adventures.

And I liked to write poetry (i especially liked to copy e.e. cummings Who doesn't capitalize his Words in the right way). Poetry for me was less about laying out a clear beginning, middle and end, but instead offered a great freedom to capture a feeling or a mood or an image in my old tattered notebooks full of inky scribbles.

I think writing is a form of magic. Not the kind of magic that makes fluffy, white rabbits come out of silky, big, black hats. But I think spending a lot of time trying to describe your ideas with words ends up helping you focus on those ideas and hold them in your mind longer. For instance, I like thinking about rabbits and hats and in this paragraph I spent a little extra time making the rabbit in the second sentence fuzzy and then I changed it to fluffy and I thought a little extra about what makes top hats so great… so while these words haven't given me an actual rabbit or a hat, the work of capturing these ideas gave me some extra time with both. And when you really like a character, the way I like Shawn in The Lamp is the Moon, writing is a kind of magical friendship.

Writing can be a way of traveling to space or going back in time or meeting Joan of Arc or creating a new best friend or trying to imagine what it's like to be a different kind of person yourself.

And writing can actually change you. I've become a morning person. I used to sleep late, but now I wake up at 5 a.m. so I can write for at least an hour before my wife and kids wake up. The house is so quiet and no one needs anything at that hour. I think if you pick a time to write when no else wants to be awake you can have it all to yourself. A little bit like being an astronaut or an explorer. Almost every day I am a time-pioneer, settling the day's frontier.

One of the best things I ever learned about writing is: just start working. Don't worry about making things perfect on the first try. You can work on it over and over again.

Another thing I think about a lot is how much writing is like playing a game. It can be like playing charades, but instead of acting things out, you're using words to try to help people guess what might happen in a story. Or it can be like volleyball, where you are trying to keep one idea bouncing around, going back and forth, never letting it crash, keeping people thinking about different aspects and angles of a single idea. It can be like a game of Hide and Seek, where you leave clues for the readers to search through to find out what you really mean. Or it can be like a good game of pretend, in which you just want to see what happens if there was a five-year-old astronaut who wanted to get from her room to the Moon in a single naptime.

I never write alone. My mother is usually with me (in my mind). My mom is a teacher and she taught me to read. I remember cuddling up with my brother and sister every night and having her read stories to us. So when I am working on a story or a play I often think of those stories and that cuddly feeling and how to get that feeling into my own

CONTINUED FROM PREVIOUS PAGE...

work. My father is also usually with me (in my mind). He's a barber and he tells a lot of jokes. Sometimes he tells the same joke all day long to different customers and each time he tells it, he improves it. So when I'm writing I often think of how my dad works on his jokes and how I can use some of his same techniques to make my stories better. And I have a lot of friends and students I keep with me in my mind. Some of my friends like to argue with me and I like to argue with them and that keeps the writing interesting. My wife is also a writer and she helps me out a lot. My wife is both in my mind where I can imagine what kind of stories will delight her, how I can make her laugh, how I can make her cry—but I can also walk down the hall and simply show her what I'm working on, talk to her about it and ask for her advice and opinions.

This play may seem to be about a little girl, but I think it's also about me. Usually my characters have some aspect of my personality or are asking a question I have about the world. Like Shawn I hate waiting. I am very impatient and I love reading. But of course, I also stretch the character a little. Shawn is better behaved than I was at her age. She doesn't throw as many fits as I did. Not once does she cry or kick the wall. I remember kicking the wall in my bedroom so hard once that I put a little hole in it. I got in so much trouble. Uh, sorry wall.

I like to try to write the way people talk. I use phrases like "I wanna eat a hamburger," and "I'm gonna eat a hamburger," even though "wanna" and "gonna" aren't in every dictionary. I, uh, think once you like listen to how, uh, people actually talk, you'll see that language and noise and, uh, uh, uh, just like human sounds are actually doing all kinds of things! People use "uh" and "um" to give them time to think. And people use the word "like" and all sorts of other words to spice up their language just the way they like it, the same way people use salt and hot sauce to make their food taste just the way they like it. Grammar rules and spellings are made up and change over time. I think these rules can often help people understand each other. But sometimes people get obsessed with these made-up rules and overvalue grammar's importance. It's like if someone like uh got more excited about NBA referees than the game of basketball itself. I'm sure the refs are great, but I've played plenty of games without 'em.

I love writing. I do it all the time. I have a passion for it. And once you find your life's passion, it's sort of all you do. It doesn't matter if you're passionate about writing or science or teaching or driving a bus. For me, no matter what I'm doing, I'm really writing. A lot of times this means I'm thinking about a story even while

Actor Annelih Hamilton and Kirk during a script workshop in December 2017

I'm riding on a bus, or in a class, or talking to a scientist, or even when I'm writing something else besides the story with which I'm currently obsessed.

I also write all the time, even when I'm not writing, because I'm open to inspiration. Ideas for stories can come from anywhere, if you're paying attention, from a bus ride, or a science class, or from a strange new word like: logorrhea!

I think words are beautiful and not just when they are used in stories. I think people's names are beautiful. And names are often just sounds that might not even have a meaning. I also like lists: shopping lists, grocery lists, lists of planets and things in the night sky…

Words often tell you what to write. The more time you spend with them the more you understand how they wanna walk across the page and what other words they wanna be grouped with. Like kids lining up to go to the playground there are some words who are best friends who want to stand next to each other and some words who like to be near the front and some who wanna be in the back of the line so they can goof off and surprise us all with a huzzah!

I think the most important thing for anyone who wants to be a writer is to read a lot and just start writing.

A CHAT WITH
HALEY SHARP, PLANETARIUM DIRECTOR

Haley representing her museum at an eclipse viewing event in Salem, OR, where they got to experience an incredible 1 minute 53 seconds of totality

Please tell us about your job and your working process.

As planetarium director, I present planetarium shows to school groups and public audiences throughout the year. A planetarium is a unique place, sort of like a classroom meets a theater. A planetarium has many seats like a theater but no stage at the front of the room. Instead of a regular ceiling, planetariums have giant domed ceilings—my planetarium has a dome that is 40 feet wide! Modern planetariums, like the one I work at, have digital projectors that project pictures of the night sky up onto the dome.

When I present planetarium shows, I sit in the back of the room at a set of computers that are connected to the digital projector. Using software on those computers, I can control what is projected onto the dome. The software is a lot of fun to play with. I can change many things, like the date and time and see how the night sky changes throughout the night or over the course of a year. This software also lets me turn on all the constellations' lines and pictures to teach my audiences how to find their way around the real night sky.

Using this software, I can give audiences a guided tour of the night sky or take them on a virtual journey to visit the planets of the solar system, and beyond, answering their questions along the way.

A big part of my job is making sure that I am keeping my scientific knowledge as up-to-date as possible, which means I am always learning. I like this part a lot because I have always been fascinated by the universe and our place within it. With all of our modern technology, scientists and astronomers are constantly making new discoveries. It is important that I know about upcoming NASA launches, exciting sky events like eclipses, and other scientific discoveries so that I can share this information with my audiences. My goal is to inspire children and adults toward a lifelong love of learning about science!

What is a particularly interesting or unusual challenge about your job and how do you approach it?

One challenge that I face as planetarium director is that I have to keep my audiences interested to learn more when they come to see a show. A good planetarium show is both entertaining and educational, and it can be tricky to find the perfect balance of both. In a lot of ways, it is similar to creating a wonderful play. First, a planetarium show needs a theme—an overall objective or story that my audiences would be interested to learn about. Maybe it is about a new rover that is being built and sent to Mars to search for signs of past life that may have once existed there. A good planetarium show needs a well-written script to move the story along in a captivating way.

In addition to a story and a script, a planetarium show needs visual content—something for audiences to look at during the show so they aren't just sitting in the dark!

Once I have all of these aspects, my job isn't quite done. A truly great planetarium show needs an enthusiastic presenter. When I convey my passion for astronomy to my audiences, they can feel the excitement as well. Just like actors who perform the same play day after day, I have to make sure that it feels fresh for every new group of people who come to see a show.

Dressed as the Hubble Space Telescope on Halloween

What in your childhood got you involved in science and to where you are today?

Astronomy has been a lifelong interest of mine. I can't really point to a specific experience or moment in my childhood that started me down the path of becoming a scientist. The BIG questions have always been so fascinating to me: how big is the universe? What is it like on other planets? Is there other life out there? I have always wanted answers to these questions. In addition, I had phenomenal science teachers all the way from elementary school to high school that made learning about science fun. So when I went to college, I studied physics and then continued my education as a graduate student in astronomy.

In addition to my lifelong love of astronomy and science, I spent a lot of time on stage as I was growing up. This included taking classes in the drama school at SCT and performing in SCT's Summer Stage!

There was certainly a time in my adolescence where I felt that I should become a professional actor. Ultimately, I went down a quite different path, but there are so many skills I learned in my theater training that I use every day as the director of a planetarium. Being comfortable speaking in front of a large audience and being able to improvise and think on my feet are just a couple of the skills that I learned on the stage that I use so often now. If you think about it, art and science seem like two very different subjects, but it turns out they have many more similarities than differences. I couldn't do my job without meshing art and science, and I feel very fortunate to find myself using both skill sets on a daily basis.

Haley Sharp has been the planetarium director at Eugene Science Center in Eugene, OR since July 2014. Haley was born and raised in Renton, WA and despite frequent cloud cover, she has had a lifelong interest in space science. Haley also spent much of her youth taking classes at SCT! She earned her B.S. in physics from the University of San Francisco and her M.S. in astronomy from San Diego State University where she studied eclipsing binary stars. While she wasn't named after the comet, she certainly doesn't mind being associated with it.

ABOUT THE SET

FROM CAROL WOLFE CLAY, SET DESIGNER

The very first thing that came into my mind when I read the title of this new play was my own imaginative play in the bedroom I shared with my sister long ago—I'll be the captain… you be the teacher… we can dress up our stuffed animals and teach them songs… this blanket can be the tower…. oh, and the lamp is the moon! We spent hours and hours together creating worlds using everyday objects… blankets, pillows, doll furniture, toys, paper, crayons, fabric and cardboard. We were interested in playing school, making puppet shows and creating magical treehouses. And we grew up to become teachers, designers, artists.

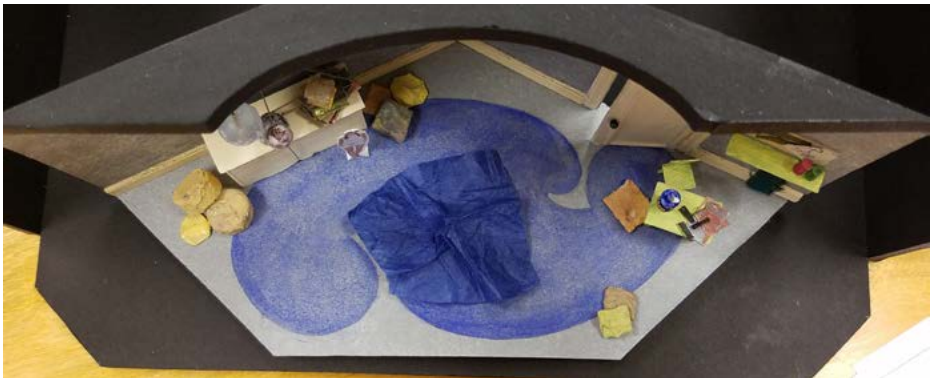
In The Lamp is the Moon, Shawn is interested in science, exploration and discovery about the world. She imagines outer space. She has a grandmother who encourages her exploration and parents who give her books and craft supplies. But she creates through her own imagination. I wonder what Shawn might grow up to become?

The set for this play is an everyday little girl's bedroom with lots of potential. The first thing you will probably notice is a typical bedroom with walls, a door, a dresser, a table, sheets and pillows, a light switch on the wall. But there are items in the room that give hints to something more.

I stacked books and craft supplies on the floor and added a small table and chair for Shawn to make her creations. I imagined that she might want to create a model of the solar system, so I added Styrofoam balls with strings tied to the ceiling and held down under books to show that Shawn was still in the process of creating this work.

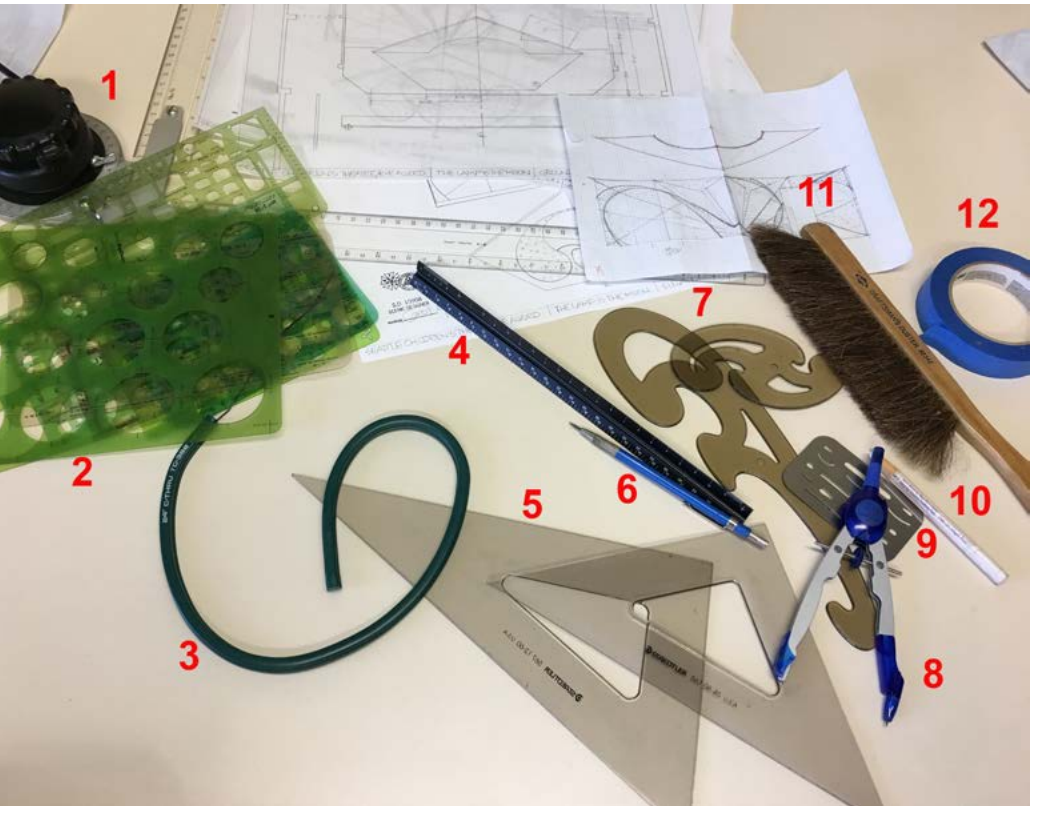
Preliminary model of the set. Carol made this simple model so she and the director would have something to work with as they discussed the design.

Finished model showing furniture placement ideas for props



Overhead view of the model

French curve that inspired the floor pattern



TOOLS CAROL USED TO DESIGN THE SET

1 – Drafting machine allows you to draw lines at any angle. The two clear rulers to the right of it are attached to the machine. You push down on the black knob to set the rulers at any angle you need.
2 – Templates of circles, squares and a variety of shapes. Used to draw furniture.
3 – Flexible curve can be bent into any shape you need to copy or trace.
4 – Architecture scale is basically a three-sided ruler with different scales (ratios) marked on each edge. Carol designed the set in ¼ inch scale, which means that ¼ inch on the ground plan equals 1 foot on the set. To keep her drawing correct, she used the ¼ inch marks on the architecture scale for her measurements.
5 – 30˚, 45˚ and 60˚ triangles to draw angles
6 – Lead holder is like a mechanical pencil, but it holds thicker pieces of lead (graphite).
7 – More French curves
8 – Compass
9 – Erasing shield is placed with one of the small openings over what needs to be erased to protect the surrounding drawing from being erased at the same time
10 – Fine point eraser
11 – Brush used to brush off eraser bits, clean the work surface of excess graphite after drawing and keep the paper flat
12 – Painter's tape to hold the drawing in place on the table

I used math to adjust the size of the room so that the adult actor playing Shawn would appear to be the size of a five-year-old. First, I did some research to find out that the average five-year-old girl is about 42" tall and the average adult woman is about 63" tall. The comparison of these numbers is called the ratio and the math looks like this: 63/42 = 1.5. This means that an average woman is about 1.5 (or 1 ½ times) the height of a five-year-old. This information tells me that my room should be 1 ½ times taller than an average room, which is 8' tall. 8' x 1 ½ = 12'. Using math and ratios, I've learned that if I make my stage bedroom 12 feet tall, then the actor playing Shawn will look like the size of a five-year-old.

Like Shawn, I repurposed objects for new uses—a technical drawing tool that I use when I design, called a French curve, became an interesting shape on the floor.

I used other engineering tools—triangles, flexible curve, compass, architect scale—to create the design for an explosion of light and color that is revealed through the walls of the bedroom when Shawn is at the height of her imaginative powers. My drawing of these walls shows the location of lights, steel and plywood supports and a mixture of curves and diagonal lines.

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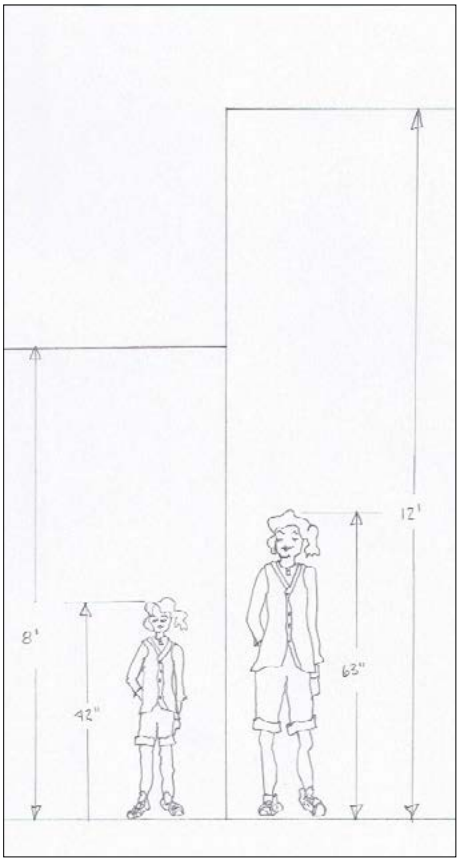
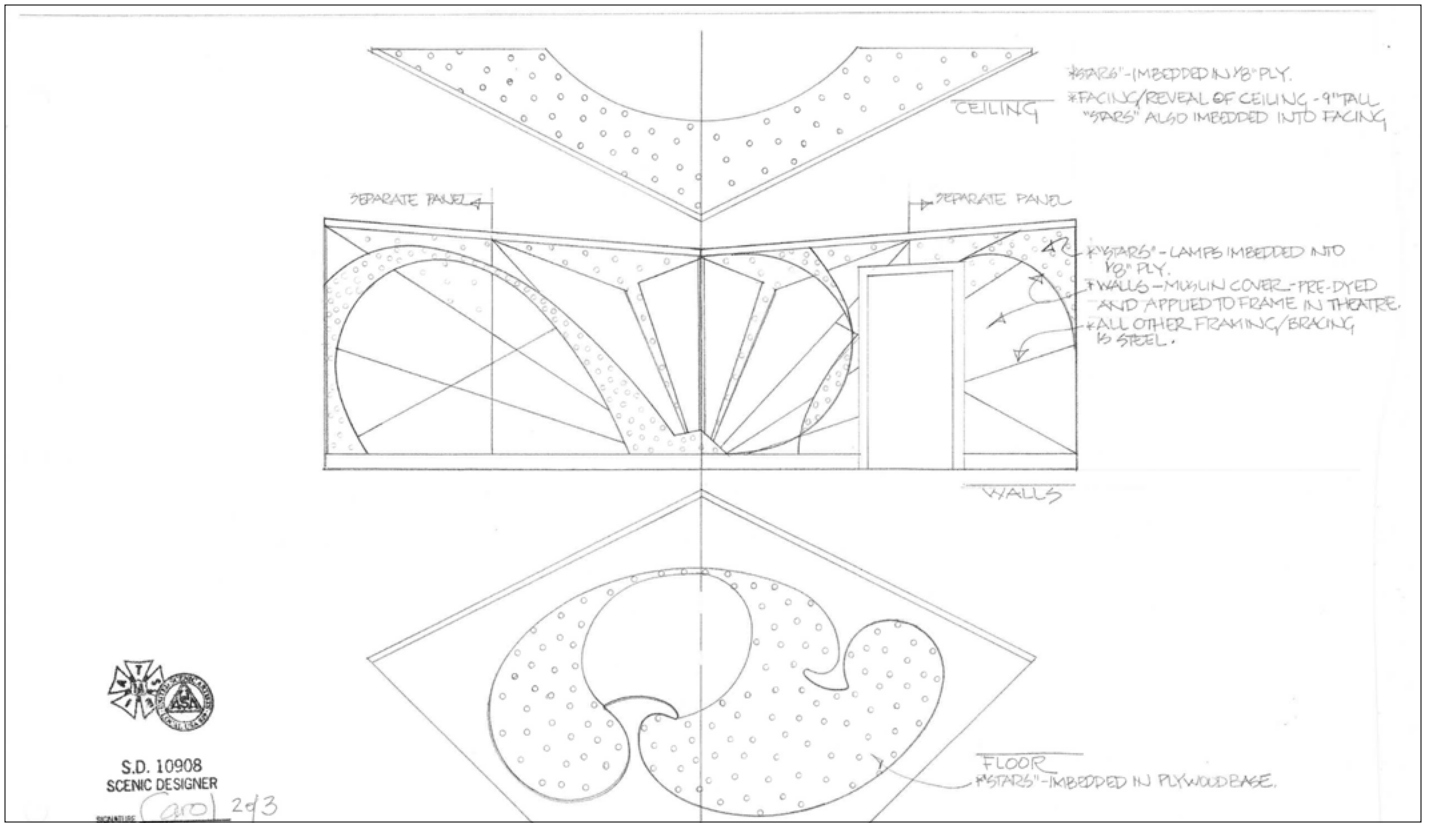
Inspiration for the pillow design



This is what the math Carol used to figure out the height of the walls showed her. On the left is an average height five-year-old girl in an eight-foot-tall room. On the right is a figure the actor's height and how tall the wall needs to be to keep that ratio the same as on the left.

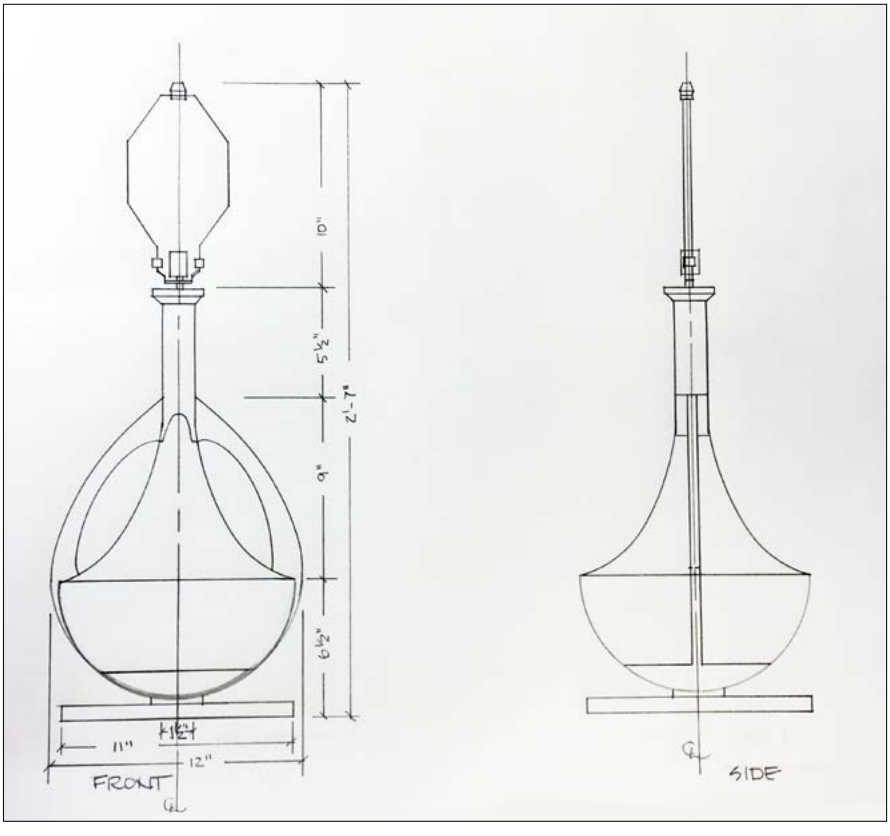


Technical drawing of the walls, floor and ceiling showing positions of tiny lights and flowing shapes under the surface that will be revealed to the audience at special moments in the play

CONTINUED FROM PREVIOUS PAGE...

Some things changed along the way. Whenever designers work on a new play, things change as the playwright and director consider what works well and what is needed to tell the story. For example, the pillows changed many times. In an early version of the script, the pillows were yellow, shaped liked stars, and Shawn kicked one of them out of the room! At another point, the playwright wrote that Shawn spins eight pillows through the air on ropes! But eventually the pillows settled down into the practical and real objects they are now. I happened to see a picture of an artist's beautiful work making tiny pillows using crisp cotton covers over a fluffy down filling and I knew this would be the inspiration for the pillows Shawn uses to tell her story.

I designed in a bit of magic, to highlight the times when Shawn uses all of her powers of science and imagination, so that we might be able to see into the world she has created in her mind. The walls become translucent, which means you can partially see through them, revealing color, pinpoint lights, dynamic energy through diagonal lines and organic natural curves—the power of the universe!



Technical drawing of the lamp, a very important character in the play, with measurements for how it should be built

ABOUT THE COSTUMES

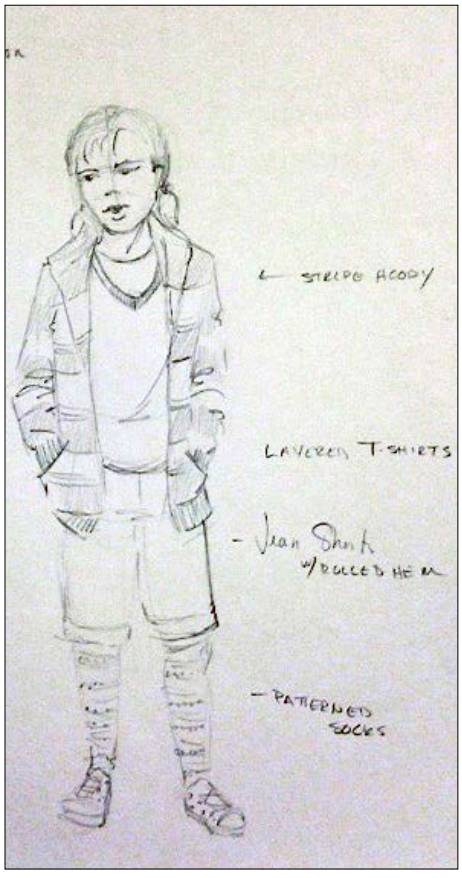
FROM NANETTE ACOSTA, COSTUME DESIGNER

Research images of kid's clothing

This is such a fun and imaginative show, so I was very excited when asked to design the costumes for it. I love how Shawn is so independent, creative, energetic, silly, loud, loving, smart and inquisitive. I wanted to try and incorporate all those things in how she is dressed, but sometimes less is more.

I started by looking at pictures of real kids and how they dressed themselves. Shawn is just that, a "real kid." She's not too girly but she's not a tomboy, she's smart but not nerdy, creative but not crazy. It was really important that she not look like a stereotype or cartoon of a kid, especially since an adult actor would be playing her. I wanted every kid in the audience to see a bit of themselves in Shawn. In my research, I saw how kids pulled different things from their closet and wore them all together just because they liked them. It was so uninhibited and unselfconscious. They didn't have to match perfectly or make any sense. But somehow they are great together. I loved the unexpected mix of colors and prints together and embraced that for Shawn.

I found a wonderful variegated stripe fabric to make her sweater out of and it was a great jumping-off point. Rita, our director, liked it because it reminded her of the rings of Saturn. It has a lot of blues in it, and our set designer, Carol, was going to be using lots of blues in the set. So, I knew that I would want to pull out all the other great colors in the sweater to make sure Shawn stood out against the set. I found out that our actor loves to wear yellow, so I chose that as her base shirt color. Then I picked up different colors from the striped sweater for her pants, socks, etc. Practically speaking, I knew that our actor would need to be very comfortable and unrestricted. The play requires that she run around, jump on things and crawl around on the floor, so I needed to make sure everything she wears allows for that. She needs full range of motion (so I am using lots of knits) and also stability (so she's in fun sneakers).



Nanette's first idea for Shawn's costume

Nanette's first idea for Shawn's costume

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Final sketch with swatches of color for the sweater trim and Shawn's shirt attached

Most of Shawn's costume pieces will be purchased, but the costume shop will build her sweater. These swatches were some fabric options for it.

The fabric Nanette decided to use. Which one would you pick?

Another fun challenge is figuring out the clothing items that Shawn will use to create her "spacesuit." I wanted fun items that most kids would have around that could be used in unintended ways. The playwright, Kirk Lynn, gave us such a great jumping-off point with Shawn using a pair of underwear on her head like a helmet, just like he did when he was a kid. Over the course of the script development workshops the items he first suggested for the rest of her spacesuit changed, but the underwear helmet stuck. There are many different things I need to keep in mind for these pieces. The actor needs to put them on over her costume and take them off easily, they need to be not too hot, they need to accommodate lots of movement, and just as important, they need to look right. Rita and I talked about what we think we want, but since it's so important that they work with the action of the play, we are going to try lots of things in rehearsal just to make sure they work. We will make the final decision based on that. A lot of great ideas come out of rehearsal so it's always good to stay flexible.

It can be a challenge when costuming an adult actor playing a child. In the same way an actor needs to not be too broad and over the top, I need to do the same with the costume. Even things that would seem perfect if this was really a kid end up being too on the nose or too much. I like to leave room for the actor to make her real and I just help her along.

Research images for pieces Shawn can use to create her spacesuit

FAMILY RITUALS

She could have used a nap before playtime.

The Lamp is the Moon centers around a daily contested ritual in so very many families—naptime. Like kids everywhere, five-year-old Shawn has a huge imagination and more energy than she knows what to do with. How dare her parents expect her to interrupt her exploration of the universe for one hour during prime playtime! Like parents everywhere, they know that kids don't always have the best perspective on what's good for them. And they know to help their kid succeed, they have to balance the letter of the law with the spirit of the child. So they strike a deal with Shawn—she doesn't have to sleep, but she does have to stay in her room quietly for an hour, and if she makes enough noise that they need to come and check on her three times, there will be consequences. Like the time they took away her trash can because she was using it as a bongo drum to count out the number of times her heart beat in a minute. Now Shawn has to carry her garbage all the way to kitchen.

Every family has their own way of doing things. Most have rules of some kind for how they expect children to behave and how they are encouraged to contribute to the life of the family. Some of those rules, like naps, take the form of daily routines or rituals. These daily actions, custom fit to each family, are part of a family's culture and express their values. Even a special song at bath time could be considered a ritual. Rituals, no matter how formal or informal, offer us a sense of security, identity and home.

Naptime is a paramount ritual for young children. Crucial mental and physical development occurs in early childhood and naps provide much needed down time and rejuvenation. Often when children miss a nap they can become cranky and easily irritable. When children partake in naptime or quiet time in the middle of the day they tend to be happier, healthier and able to better concentrate. Napping is also great for adults. Even historical figures like Thomas Edison and Winston Churchill were known for taking power naps long into their careers, resulting in more creativity and better focus.

Rituals can be particularly powerful in the morning. Getting up in the morning after a long night's sleep can be a challenge for both children and adults. However, starting with a familiar structure can help set the tone for the rest of the day. Waking up at the same time every day encourages consistent sleep. Rituals around the breakfast mealtime, taking the time to eat together, assure that we do not rush or put ourselves in a state of frenzy. Morning is a critical time to establish routine for the remainder of the day.

Playtime and play activity are perhaps the most fun of daily rituals. Play allows us to develop our cognitive, emotional and physical strength. We are also able to engage multiple generations with play. Children can play with peers, parents, grandparents and those younger than them. Through play, children interact and understand the world around them. In the last decade, scientists have increasingly endorsed the value of play. The benefits of collaboration, creative problem solving and self-advocacy are all evident in play that should be an integral ritual for any child.

Meaningful rituals in life help us remember what is important. When we repeat actions daily we have a clear sense of expectation and draw deeper connections with our family and community. Our sense of belonging and our ability to cope with change strengthens.

RESOURCES*:

KIDSHEALTH.ORG:
Naps
KIDSHEALTH.ORG:
What Sleep is and Why All Kids Need It
HEALTHYCHILDREN.ORG:
The Importance of Family Routines
BABYCENTER.COM:
Family Ritual Ideas

**Active links can be found on the interactive version of this AAG, free for download at sct.org*

YOU ARE A SCIENTIST

Science is all about discovery. It is so fun to observe what is around us and learn from it. You learned as a baby that water can be cool or hot to the touch. You figured out that sounds can be loud, soft, jingly or thumping. You learned that grass can be tickly, itchy or soft. You learned that some foods are sweet, and some are sour. You used your natural curiosity and your senses to learn how to tell them apart by combinations of look, smell, sound, taste and touch. You are still always learning about your surroundings, which makes you a scientist!

Scientists study the world around them. They observe things and ask themselves questions like how or why things happen the way they do. They come up with possible explanations and experiment with ways to prove them or show their explanations are wrong. Having a wrong idea teaches them as much as a right one. As Lamp tells Shawn in The Lamp is the Moon, "Science is all about making the best guesses you can then testing those guesses, and guess what: finding out you're wrong can lead you to a better guess next time."

When you look out the window, you are observing the weather. You can see if it is sunny or rainy, can feel if it is hot or cold, or see if it is windy or still. It is fun to go outside after it rains to see if there is a rainbow. You may ask yourself why there isn't one every time it rains. You can observe what else is happening in the sky when there's a rainbow. Is the Sun out? Could that be the difference? You can keep observing to see if that's true every time you see a rainbow, and you are on your way to making a discovery. While you are out looking for rainbows, being in the Sun lets you play with your shadow. You notice it isn't always the same size. Why is that? When does it change? Sunlight causes your shadow, so maybe changes in something about the Sun changes your shadow. How can you test that possibility?

Every time you look at an animal, you are a scientist. You observe their shape, size, fur or scales, eyes, tongues, teeth and tails. You may wonder why some animals' tails are short and some are long, so you watch those animals to see how they use their tails. You notice what kinds of flowers birds with long, thin beaks go to. As you observe more animals, you start to sort the animals into groups based on their characteristics or behavior and you understand the world a little better. That is exactly what scientists do.

Observation keeps our lives exciting. It lets us learn new things every day and helps us appreciate everything around us. Never stop being curious. Never stop asking why. Fill your life with awesome discoveries and joy!

RESOURCES*:

WIRED.COM: 8-Year-Olds Publish Scientific Bee Study
DUCKSTERS.COM: The Scientific Method
PBS.ORG: Science Games for Preschoolers and Kindergarten
PEEPANDTHEBIGWIDEWORLD.COM: Games! Videos!
KINDERGARTENKINDERGARTEN.COM: We Are All Scientists
ACTIVE WILD: What is Science for Kids
SCIENCEKIDS.COM: Science Experiments for Kids
SCHOLASTIC.COM: 40 Cool Science Experiments on the Web

**Active links can be found on the interactive version of this AAG, free for download at sct.org*

MORE SCIENCE PLEASE

Links to information about the topics Shawn introduces in *The Lamp is the Moon*
Some are kid-ready, some will need interpretation, all are fascinating. Science!
Thanks to Rich Lienesch, Associate Director of the William A. Helsell Education Department at The Museum of Flight for providing the bulk of these resources.

UNLESS OTHERWISE SPECIFIED, LINKS ARE FROM NASA.GOV.*

GENERAL SPACE EDUCATION SITES FOR KIDS AND FAMILIES

NASA Kids' Club
NASA Space Place
NASA Knows! For Students K-4
NASA's Picture Dictionary

THE MOON

Earths' Moon: Our Natural Satellite
About the Moon: Misconceptions
SciJinks: What Causes tides?

SPACE MISSIONS

Kennedy Space Center: History of Human Space Flight
Humans in Space: ISS, Future Exploration Plans, Past Missions
Train Like an Astronaut
What is a Spacesuit?
Interactive Spacesuit Experience

ROCKETS

What is a Rocket?
Rocket Fuel: The Tyranny of the Rocket Equation
Lasting Propulsion and High Speeds for Deep Space Missions

ASTRONAUTS

Yuri Gagarin: First Man in Space
CollectSpace.com: Anna Lee Fisher: First Mom in Space

GRAVITY

Gravity and Related Links
What is Microgravity?
What is an Orbit?

STARS

The Sun
Stars
Constellations
IAU.org: The Constellations

PLANETS

Planets
Cassini at Saturn
Juno Spacecraft in Orbit Above Jupiter
Jupiter Images

COMETS

Comets
Stardust: NASA's Comet Sample Return Mission
Deep Impact: Mission to Comet Tempel 1

SPACE EXPLORATION

Solar System and Beyond

WHAT'S BEEN EXPLORED

Hubble Space Telescope
Hubble Space Telescope Images
Mars Exploration: Spirit and Opportunity
Mars Science Laboratory: Curiosity Rover

WHAT HASN'T BEEN EXPLORED

The Search for Life
20 Intriguing Exoplanets
Kepler and K2

OLD THEORIES OF THE UNIVERSE

KidzSearch.com: Heliocentrism
Planetary Motion
Smithsonian.com: Galileo's Revolutionary Vision and Modern Astronomy
UniverseToday.com: Geocentric and Heliocentric Models of the Solar System

**Active links can be found on the interactive version of this AAG, free for download at sct.org*

LOOKING FOR ANSWERS, MAKING A DIFFERENCE

In The Lamp is the Moon, Shawn is a young girl who is fascinated by science. Her curiosity and imagination take her off on an exciting adventure. But what is this thing called science, anyway? Well, science is simply a way of asking questions about how things work, why they behave the way they do and what we can do to change things for the better. Shawn finds ways to explore the world (and even out of this world) with Lamp during the play, but you might be interested to meet some young people who are putting their love of science to good use in real life.

An 11-year-old girl from Colorado, Gitanjali Rao, spent two years following news reports about the water crisis in Flint, Michigan. The city's water system became contaminated with lead, a chemical that is toxic when consumed and was causing people to become very sick. Gitanjali was curious to discover a quick way of testing water to see if it was safe to drink. "I was surprised that there wasn't a fast, reliable way of testing water for lead," she said, and that was what prompted her to investigate. After five months of many tests and experiments, she created a small capsule that was treated with a carbon chemical compound that could be dipped in water. A tiny signal processor in the capsule could then send the details electronically to a cellphone app where the level of lead in the water could be immediately identified. Her invention showed the results much faster than any other available method, including chemically-treated paper strips or sending the samples to the Environmental Protection Agency for processing. "I've always been interested in science because it's all about providing real-world ways to solve problems in the world."

For her breakthrough invention, Gitanjali Rao was named America's Top Young Scientist at the 2017 Discovery Education 3M Young Scientist Challenge competition. She named her innovative device the Tethys ("She's the Greek goddess of clean water," explained Gitanjali). And this isn't her first invention, either. She previously developed a method to determine the severity of snakebites by identifying the exact type of snake venom in the bite. Using a thermographic camera, a camera that uses infrared rays to show multicolored images, she found that different snakes' venom show up differently on each photo. Once she could identify the characteristics of each strain of venom, it was easier and faster to determine how dangerous the bite was.

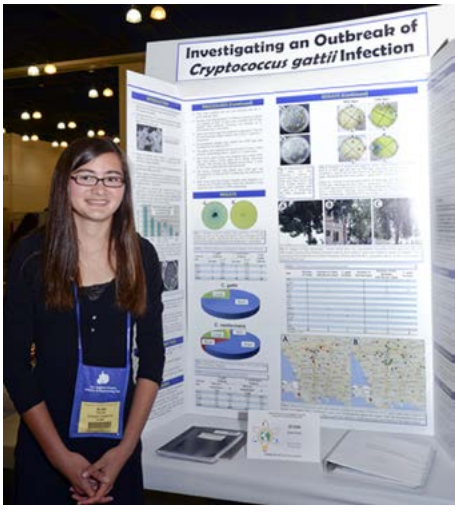
Gitanjali Rao

When she was asked what she wanted to say to other kids about science she said, "Don't be afraid to try it. When I was working on my experiments I failed a lot and got frustrated. But I learned a lot from those mistakes. Failing is just the first attempt at learning."

Elan Filler was a seventh-grade student in Los Angeles who was looking for a science project to enter into a local science fair. She read reports about people who were becoming sick from a fungus in Southern California. Scientists were not sure where it was coming from, but many thought it might be from trees or plants. Elan's father, a doctor who specialized in infectious diseases, suggested that she do research to see if there were specific trees that might be hiding the virus and passing it on to people when they came in contact. So Elan conducted a series of tests and experiments on a number of trees in the area. She took samples from all types of trees and then grew the fungus in petri dishes to see if the fungus contained the virus that was making people sick. After many tests, she was able to identify at least three trees that were carrying the virus. Her findings were included in a report on the infectious disease that was published by Duke University in North Carolina and Elan was listed as a co-author along with Deborah Springer, a post-doctoral fellow at the university who said, "We had a good idea that the fungus was associated with trees, we just didn't know which ones. We were fortunate that Elan was willing to do the hard work to identify where the virus was coming from."

But Elan didn't stop there. She continued her work on identifying infectious viruses and won the top prize at the Los Angeles County Science and Engineering Fair in 2014. Her project extended her research on the tree fungus and developed a method for determining why specific viruses become resistant to treatment. She focused her work on a particular virus that is usually not harmful to most humans, but it was causing problems for people who had weakened immune systems due to other diseases. It was discovered that some patients who were being treated with a particular drug were not being protected from the usually less-harmful virus and Elan's study helped to explain what was happening.

These are just two examples of the many students around the country who are using their curiosity and love of science to do great things. Most schools have science fairs and science clubs that can help you explore the many different areas of science, from biology, chemistry and physics to many more. Like Shawn in The Lamp is the Moon, everyone can explore, imagine and find out some answers to the questions, "How does that work," "Why does that happen," or "How can this be better?" Remember, part of the challenge is that it can take lots of time, dedication and hard work and it doesn't always provide successful results the first time you try. But, as Gitanjali Rao said, "Failing is just the first attempt at learning."



Elan Filler at the LA County Science and Engineering Fair with her project on Cryptococcus gattii

RESOURCES*:

YOUTUBE: Young Scientist Invents Device That Detects Lead in Water
NPR.ORG: California Trees Nailed as the Source of Mystery Infections
LIVESCIENCE.COM: 7 Awesome Discoveries Made by Kids
ELSEVIER.COM: 5 Women Scientists Tell Their Stories of Hard-Earned Success
YOUNGSCIENTISTLAB.COM: Annual Challenge: Are You America's Top Young Scientist?

Active links can be found on the interactive version of this AAG, free for download at sct.org

JUST IMAGINE

"USE YOUR IMAGINATION" IS A PHRASE WE'VE ALL HEARD WHILE GROWING UP. IT ISN'T ALWAYS A NATURAL INSTINCT; YOU MAY HAVE TO GIVE IT A PUSH. HERE ARE SOME ACTIVITIES YOU CAN USE TO ENCOURAGE YOUR CHILDREN'S IMAGINATIONS. AND YOURS.

Go outside! Let the kids loose with magnifying glasses, a small jar and a net. See what they collect and listen to what stories they create with their findings.

Supply the kids with blankets, chairs, pillows and a flashlight. Maybe they will create a fort, pirate ship or a treehouse.

Give the children watercolors and play different styles of music to inspire their artistic side.

Start a verbal story and let your child add to it. Take turns to create an outlandish tale.

Loan your child a recording device and let her create a movie. There are many child-friendly apps for movie making.

Throw some scarves on the floor and play music. Watch the children create dances and try their hands at juggling.

Suggest that a jungle gym is a circus ring. Children innately will create tricks and want to perform them for you.

Leave a cardboard box or two in the living room. Provide markers. Chances are, when you come back later, you will have a rocket ship, boat or a new house to read in!

Provide a picnic basket with plastic dishes and utensils. Leave a stuffed animal nearby. Your child's imagination might lead him to round up more stuffed animals and take them on a picnic.

Allow your children to take their toy cars and trucks outside. Take them to a dirt patch with a bucket of water. Let them create roads and bridges with rocks and twigs.

Dump out a bucket of Legos and ask them to make a new holder for their tablet, crayons, books or anything else for organization.

Give your child an empty egg carton, toilet paper tubes, cotton balls and tape. Suggest they make a weather or time machine.

THE WORLD OF A CHILD'S IMAGINATION

Do you talk to yourself? About what you're going to do on your vacation? Do you rehearse imaginary conversations with co-workers, your boss or spouse—if not out loud, then just under your breath, or maybe just inside your head? Actually, we all do to a degree, and so do children. It is critical for their emotional and cognitive development. And it is a part of imaginary play.

In The Lamp is the Moon, Shawn struggles with her imposed naptime and creates an imaginary friend inspired by a real object to help her deal with the frustration. As she gets to know Lamp, she finds a way to put herself in charge of naptime and transcend the confines of her room by creatively preparing for a journey to outer space.

Children begin to use their imaginations at a very young age. They can play with a block as if it is a cake or a phone during their second or third year. They begin by using the objects around them to imitate what they see adults doing. At this age they cannot articulate what is real and what is pretend. But as language skills develop in the third and fourth years they will take verbal charge of their fantasy play. They will go back and forth between real and pretend and will say when they are "just pretending." Because it is so much fun, they will become intensely engaged, often not wanting to stop. Still influenced by what is around them, this will seem like "stream of consciousness" play, depending on what grabs their attention.

Around the fifth year, planning their play becomes important. This is when playing with friends is sought out. This is when they can say, "let's pretend that…" Sometimes the planning can take up all the playtime!

What has caught increasing notice from researchers over the past several decades are a couple of aspects of imaginary play that formerly seemed odd if not outright worrisome—playing with imaginary friends and creating imaginary worlds.

We now know from studies and surveys that by age seven, two-thirds of children have had an imaginary friend. This could be a doll, a stuffed animal or a favorite toy. However, for 37% of those children the imaginary friend was visible only to them. Many children keep this kind of play secret from their parents. Parents who discover it are sometimes supportive, and sometimes quite unsure of what to do.

The older interpretation of imaginary friends pegged them as negative—a replacement for playmates the child was unable to have, possibly due to some kind of deficit. But now we know that imaginary friends do not take the place of real friends, they supplement them. And they are seen as an actual benefit.

Young children begin to talk out loud to themselves around the age of three while engaging in fantasy play. You can hear this when they carry out pretend activities or role-play characters. This is called private speech. It becomes even more private—internalized—as they grow older. It becomes inner speech and verbalized thought. It is critical in developing higher level thinking skills. We continue to use it as adults.

One study shows that children who have access to an imaginary friend develop better internalized thinking, which is related to planning and problem solving skills. The theory is that access to an imaginary friend creates more opportunity for a child to engage in private speech and role-playing. They can plan play and role-play even when real friends are not around.

Related to imaginary friends is a type of play called "world play." This is when a child creates an imaginary world, not just in the moment, but one that they return to over and over again. Some world play is connected to

the real world, like a fort or playhouse in the backyard or bedroom, or a set of blocks. Some takes place mostly in the imagination. Is this a symptom of not being able to cope with the real world? Well, some historical figures who have admitted to world play as children include C. S. Lewis, Robert Louis Stevenson, Gertrude Stein, Peter Ustinov, Claes Oldenburg and all three Brontë sisters. More currently, a survey of recipients of the MacArthur Fellows "Genius Award" showed a higher proportion reporting having engaged in world play as children than did a control group.

World play peaks at age 9 and 10 but can continue much longer. Imaginary friends were thought to disappear in the middle grades, but we now find that they may continue into and through adolescence. Some studies show that children who engage in these kinds of play have higher measures of creativity. And these creativity measures are a stronger predictor of adult emotional and occupational success than IQ scores.

Children faced with overwhelming emotions often project them onto characters in the stories that they create. Feelings of frustration, hostility, anguish and disappointment can be acted out and worked through in a safe place without the consequences encountered among real playmates or family members. Imaginative play is also crucial for helping children appreciate the perspectives of others. They learn to negotiate, share and develop empathy. They imagine how it is to "walk in another person's shoes."

How can adults supportt this kind of imaginary play? By letting the child be in charge. Make time and materials available. Many children will want it kept secret. Avoid prying or judgment, but show you are open if they want to share. You might try asking a question, and even set a place for an imaginary friend at the table if it seems proper. Discourage siblings and peers from interfering and allow it to continue as long as the child wishes to pursue it.

If imaginary play crosses boundaries, be clear about it. "I don't care who made this mess, it needs to be cleaned up." "Grandma is coming in the car with us, so Mr. Miff will have to move over for her." And any kind of play should not detract from household chores, schoolwork or proper manners.

What about imaginary worlds on electronic media or role-playing in video games? Here it is important for parents to check in. These worlds are not being created by your child, but by someone else. Parents have the right and the obligation to know the content of those worlds and the identities of online "friends." Monitor how and whether these arenas offer outlets for stress, and how your child behaves afterwards. Be aware of how much time they are taking from other activities that offer children more authentic creative play.

HOW CAN ADULTS SUPPORT THIS KIND OF IMAGINARY PLAY? BY LETTING THE CHILD BE IN CHARGE.

RESOURCES*:

PSYCHOLOGY TODAY: Should You "Evict" Your Child's Imaginary Friend?
PSYCHOLOGY TODAY: Imaginary Worldplay as an Indicator of Creative Giftedness
NEWSWEEK: The Creativity Crisis
SCIENCEDIRECT: Individual Differences in Children's Private Speech—The Role of Imaginary Companions
SCIENTIFIC AMERICAN: Imaginary Worlds are Early Sign of Highly Creative Kids

**Active links can be found on the interactive version of this AAG, free for download at sct.org*

WORDS AND PHRASES

THAT MIGHT BE NEW TO YOU

And no ***monkey business*** *from my stuffed monkeys wherever they may be.* – goofing around causing trouble

I know, dresser, you can close your ***gaping*** *mouth.* – wide open

Grandma thinks we can do something with it—maybe with some glitter or glue or ***googly eyes****?* – small plastic craft-supply eyes

I'm gonna be an ***astronaut*** *someday.* – person trained to travel in a spacecraft. Astronaut comes from the Greek words for "star" and "sailor."

SHAWN: *We get three warnings before we get* ***busted****!*
LAMP: *"****Busted****?!" Do you know what that means to someone made out of* ***ceramic****?*

busted – Shawn means caught.
Lamp means broken.
ceramic – clay that has been heated to a very high temperature so that it becomes hard

*I made a "Mom-and-Dad-****deal****."* – agreement

If they have to come check on us three times my mom says, "there will be ***consequences****!"* – results that follow an action

But I can be ***subtle****.* – not obvious

Last nap I used it as a ***bongo drum*** *to count the number of times my heart beats in a minute and it got* ***confiscated****.*

bongo drum – small drum played with the fingers
confiscated – taken away

And you're ***essential*** *TO THE* ***MISSION****!*

essential – needed
mission – job

You've got to be ***precise*** *if you want my help.* – exact

We have to get quiet and ***dodge*** *the consequences.* – avoid

Act cold. ***Shiver*** *and say brrrr.* – shake your body slightly
Okay, these ***wadded up*** *pieces of paper…* – crumpled into a ball

Step Two: ***Proper Preparation.*** – getting ready the right way

You're ***drifting*** *from the mission…* – slowly moving away

And I'm afraid I'm gonna have to insist we keep it ***realistic****.* – as things really are

The bright glowing buttons inside the rocket ships were first ***witnessed*** *by monkeys.* – seen

They used to think the stars were screwed in the sky like light ***fixtures*** *in our ceilings.* – things attached as a permanent part

But you have to keep ***predicting*** *and testing.* – guessing what will happen

They find them ***appealing****.* – interesting, attractive

Now let's invite your monkeys to say the mission ***pledge****.* – promise

We needed to get ***suited up*** *to meet the Moon.* – dressed in special clothing

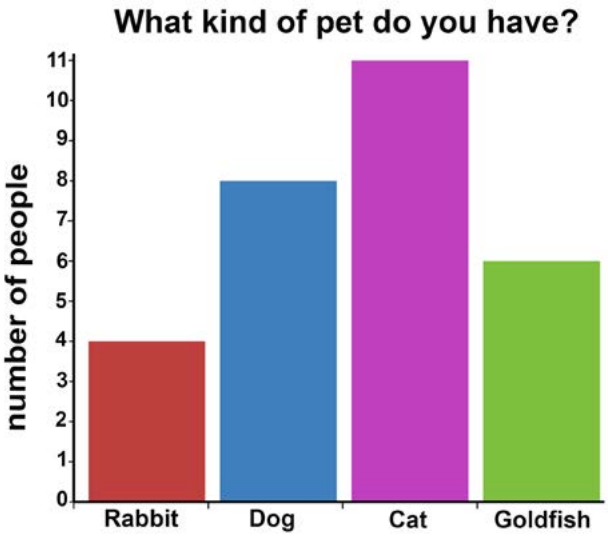
Now let's ***fire up*** *this rocket for the first time.* – start

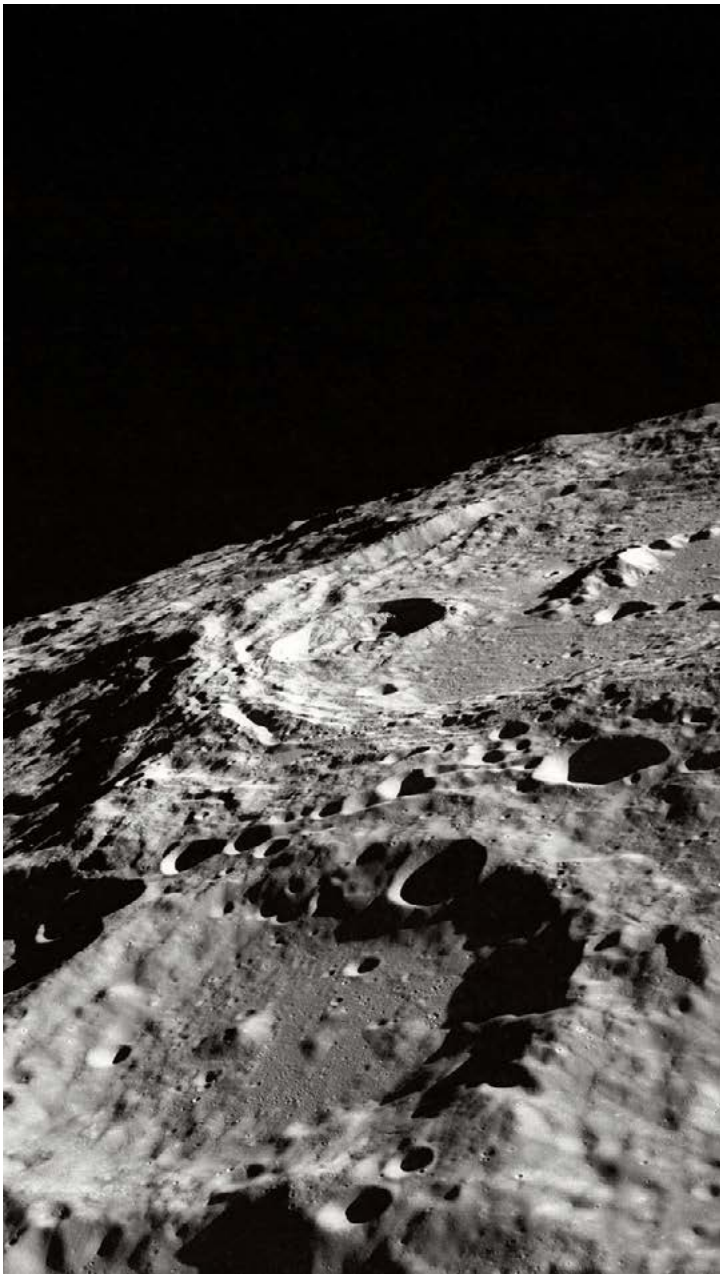
And way up, in the upper corner of the Earth is a big, rocket fuel ***tanker****.* – large vehicle designed to carry liquids

Your grandma worked at ***NASA*** *as part of the team that prepared a mission.* – The National Aeronautics and Space Administration, the civilian government agency responsible for the non-military U.S. space program and aerospace research

Cuz grandma read you tricky ***technical manuals****.* – books with detailed mechanical or scientific information or instructions

Naptime's over by ***special decree*** *of* ***Mission Specialist*** *Grandma.*
special decree – official order
Mission Specialist – a position held by certain NASA astronauts. Mission specialists usually have a strong scientific, engineering, or medical background and are primarily responsible for operating scientific experiments on the mission.





SCIENTIFIC TERMS

Extended information about these terms and more can be found in the More Science Please links on page 14

I like to ***reflect.*** – to think deeply about something; to bounce light or an image back from a surface

Like, start out ***revolving*** *in place then also* ***orbit*** *in a circle.*
revolving – spinning in place
orbit – curved path a planet, satellite or spacecraft follows around another body

You're not gonna be able to handle space travel if you get this excited about what's essentially ***a bar graph!*** – chart that uses bars of different lengths to show and compare information

There is approximately six times less ***gravity*** *on the Moon.* – the force by which all objects in the universe are attracted to each other

Okay, these wadded up pieces of paper can be ***planets.*** – large objects in space that move around the Sun or another star

And my sock can be ***Halley's comet.*** – a comet last seen in 1986 that returns every 76 years. Comets orbit the Sun and are made up of dust and gas, and sometimes form a long, bright tail.

You mean like make ***constellations?*** – a group of stars in the sky that is thought to look like, and is named after, an animal, object or person

Saturn and ***black holes…*** – a region or body in space with gravity so strong that neither light nor matter can escape it

Satellites *and…* – a spacecraft that is sent into orbit around a planet or other celestial body to gather or send back information. Also refers to a body that moves around a planet or another larger body, for example, the Moon is a satellite of Earth.

And oh, oh, people used to think the Earth was the ***center of the universe*** *and everything spun around us.* – everything that exists, including the Earth and stars

Sound travels by pushing one air ***molecule*** *into the molecule next to it.* – the smallest unit of a substance that has all the properties of that substance, made up of a single atom or group of atoms. For example, each molecule of water (H2O) has one oxygen and two hydrogen atoms.

Stand up and ***rotate*** *where you are.* – turn in a circle around a center point

Give me a kiss as big as an ***impact crater.*** – a large round hole on the surface of a planet, moon or other solid body created by a smaller body smashing into it

JUMP START

Ideas for things to do, wonder about, talk about or write about before or after you see *The Lamp is the Moon*

How do you feel about naps?

What do you want to be when you grow up?

Act out a trip to the Moon starting with your rocket launch. What do you find when you get there?

Do you talk to any of the things in your room the way Shawn does

Do you sometimes get so excited about something that you can't sleep? What do you do?

Would you like to travel to outer space? Why or why not?

Do you think Shawn will end up doing something that has to do with outer space when she grows up? What else might she like to do?

What kind of jobs do you imagine people on a rocket going to outer space have? What would you like to be in charge of?

Draw a brand new spacesuit for yourself. Make it as fancy as you want, but remember it needs to keep you safe in space.

If the Sun were as tall as your front door, the Earth would be the size of a nickel. The Moon would be the size of a coffee bean. Look around the room. Pick something that isn't a door to be the Sun. What things in the room would be the size of Earth and the Moon?

Think of a way to launch a rocket without fuel. Draw up a plan for that.

Shawn and Grandma have a very special relationship. Does it remind you of someone in your life? What do you share that's special with them? Write or draw about it.

Make up a song about the Earth and the Moon being friends. What do they do for fun?

If you were on the Moon with a really powerful telescope, what would you want to look for on Earth?

Imagine you are visiting a new planet you have just discovered. What is it like? What is its name? Draw it. Write about it.

Pretend you're on the Moon and trying to fix something on your spaceship with a friend. You can't hear each other because sound doesn't travel there. Use no sounds, only facial expressions and gestures to communicate and get the job done.

Dance, race your friends or pretend to play your favorite sport like you are on a planet with gravity half as strong as Earth's. Then do it like gravity is two times stronger than Earth's. Then six times stronger than Earth.

What do you like to learn about as much as Shawn loves outer space?

Build a model spaceship out of things in the recycling bin. Ask permission before you use anything.

How would this story have been different if Shawn shared her room with a little brother or sister?

Do you think Shawn would have been interested in space if Grandma wasn't a mission specialist? What if Grandma was a teacher, an artist or a truck driver?

Draw what you think it looks like on the far side of the Moon. Tell a story about an adventure that happens there.

Do you have a favorite thing in the sky or somewhere else in nature that you want to learn more about? Tell somebody about it and they can help you out.

Write or act out a story about someone from another planet coming to visit you on Earth.

Play Outer Space Freeze Tag. It's like regular freeze tag, but when you get frozen you can't unfreeze until another player comes and shines on you like the Sun.

Write or tell a story about something in your home that wants to be something else. Like maybe a toaster that wants to be a firefighter.

DRAMA IN ACTION

THIS IS A CUSTOMIZED THE *LAMP IS THE MOON* DRAMATIC CONNECTION WORKSHOP EXERCISE FOR YOU TO TRY.

EXERCISE: Lunar Movement

GRADES: 1st and up

TIME: 15 minutes

SET-UP: This exercise works best in an open space.

SUPPLIES: None

In The Lamp is the Moon, *Shawn and her lamp go on an out-of-this-world adventure and learn about space. The Lamp shares what it knows about the Moon, gravity and planetary orbits. In this exercise, students will build their theater movement vocabulary while exploring new environments with their imaginations.*

INSTRUCTIONS:

Have students find a space in the room where they can move around without bumping into each other. Ask students to act out what you describe from the following sections of this guided imaginative play.

EARTHLINGS: Start the class moving around the room at a normal pace. We will call this their Earth pace. Students can change direction whenever they wish as long as they are aware of their surroundings and moving safely. When the students have mastered their Earth pace, play with the variables of fast and slow.

BLAST OFF: Ask students to stop in place. It is time to blast off from Earth and into outer space! Ask students what they will need to prepare for their journey. As students respond, have them pack a space-pack, mime putting on space clothing, or mime building their rocket. When it is time, ask students to get into their rocket ships, count down and blast off. Ask students to call out what they see in their rocket windows. When they are ready, have them land on the Moon.

ZERO GRAVITY: Gravity on the Moon is about one-sixth what it is on Earth. Gravity is like a magnet that keeps us stuck to the ground. Before they get out of their rocket ships, ask them to guess how their bodies will move on the Moon. When they get out of their ships, they should move differently than they would on Earth. Using their bodies and imaginations, have them explore what it would look like to be on the Moon. They should consider floating, having trouble staying on the ground, or moving quickly versus slowly. Have students mime making a sandwich in low gravity, brushing their teeth or walking a pet.

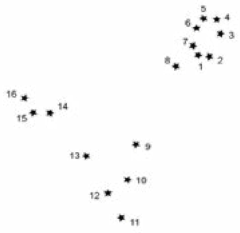
ORBITS: The Moon orbits around the Earth. Its gravity helps creates tides in the ocean, its phases help us mark time, and the light reflected off its surface brightens our night. Ask students to find a partner. One partner will be Earth and the other will be the Moon. The Earth spins on its axis. Ask the student who is Earth to slowly spin in a circle. Remind students to spin slowly to reduce dizziness. As the Earth spins, the Moon should carefully circle, or orbit, around the Earth. The Moon also spins on an axis while it orbits. Ask the Moon to stay in place and slowly turn in a circle. See if the student can continue to turn in a circle while orbiting the Earth. Remind students to move carefully!

SOLAR SYSTEM: The Earth is part of the solar system, or a group of planets and other objects that orbit around the Sun. Have the educator go to the middle of the open area and be the Sun. Ask just the planets (students who were Earth) to form a line where they are more than an arm's length away from each other. Planets stay in a consistent pathway, and never crash into each other or the Sun. Ask students to slowly move in a circle around the Sun. One by one, add a moon to a planet as they orbit. If your class is up for the challenge, have every moon and planet turn on its axis as it orbits. Together you have made a solar system.

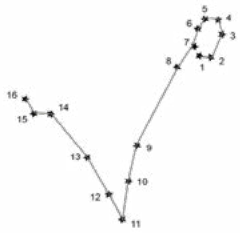
Bring the SCT experience back to your classroom! Expand your experience of watching *The Journal of Ben Uchida* with a Dramatic Connection Workshop all about the production. Engage your students' bodies, voices and imaginations while deepening their knowledge about the themes, characters, historical context and production elements of the play. Dramatic Connection Workshops can occur either before or after seeing the play, and can be held at SCT or at your location. To learn more about our outreach programming and to reserve a workshop for your class, contact educationoutreach@sct.org

connect the stars

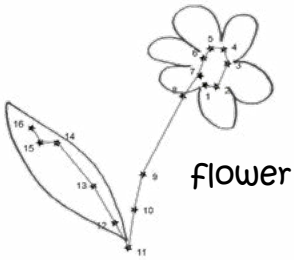
A constellation is a group of stars in the sky that is named after an animal, object or person it looks like.



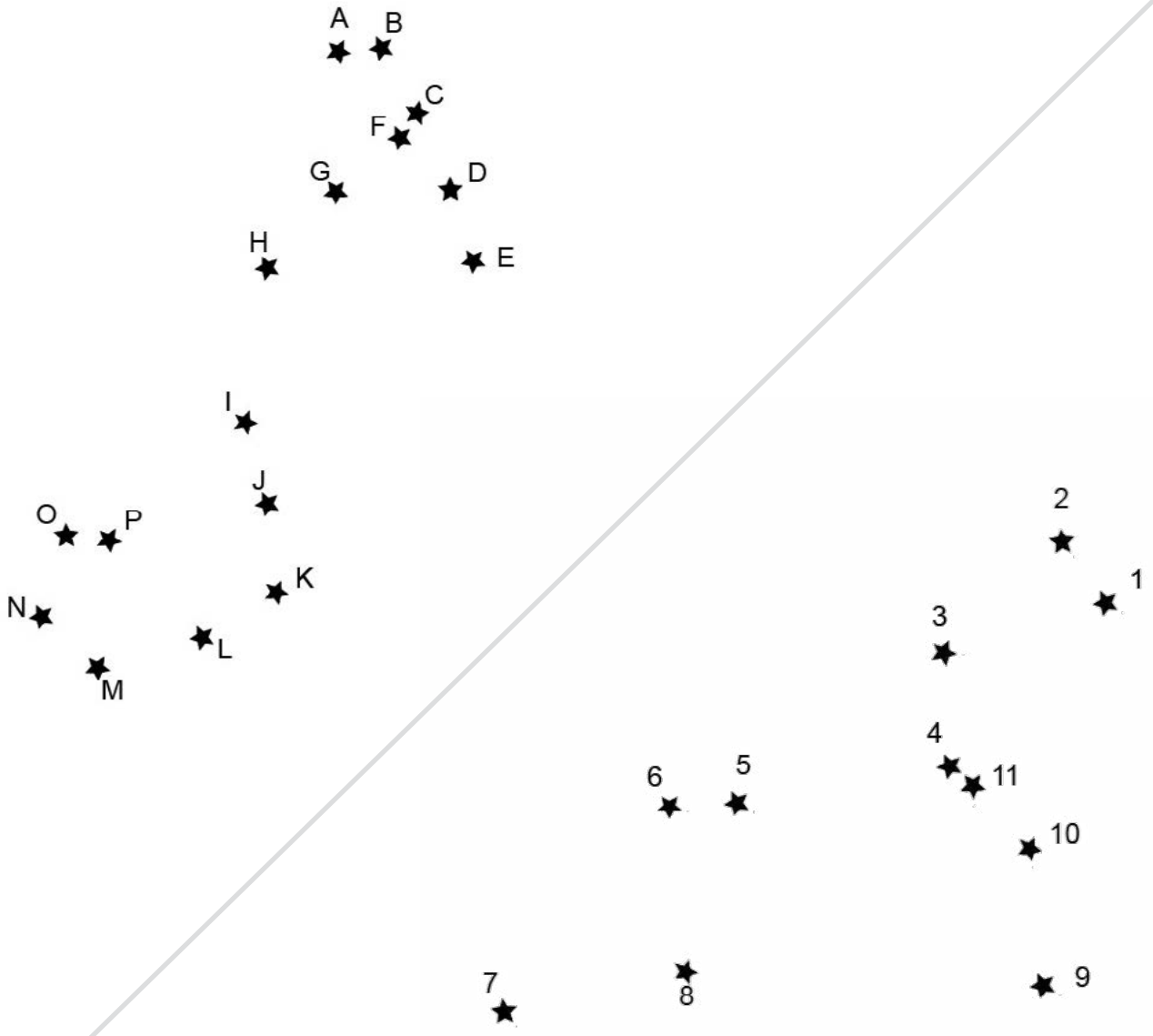
Connect the stars in the constellations below by number or letter order.



Complete the pictures by drawing what you think the constellations looks like.



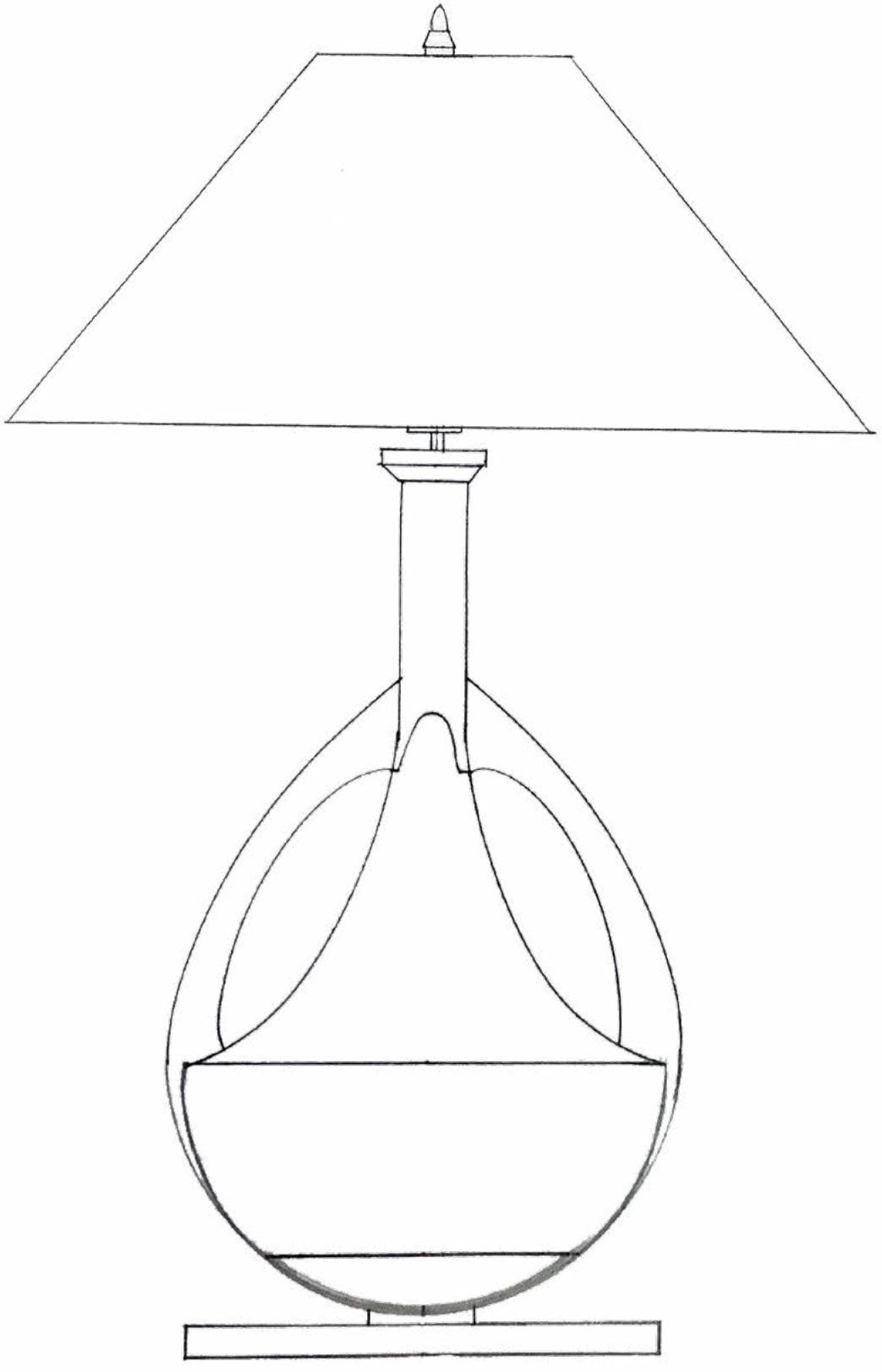
Give them names.



Lamp Dress Up Time!

Like sets and costumes, many props are built especially for a play. That means they need to be designed. This is the set designer's sketch of how Lamp looked before she came to live with Shawn.

Decorate Lamp to show off her personality. She doesn't need to look the way you saw in the play. You can use crayons, stickers, markers, glitter, pipe cleaners…anything you like.



BOOKLIST

FOR CHILDREN : FOR ADULTS WORKING WITH CHILDREN:

FICTION:

Click!
Jeffrey Ebbeler

Not a Stick
Antoinette Portis

Violet the Pilot
Steve Breen

The Full Moon at the Napping House
Audrey Wood

Ada Twist, Scientist
Andrea Beaty

The Darkest Dark
Chris Hadfield
A young boy dreams of becoming an astronaut, but is afraid of the dark. While watching the moon landing on TV, he learns that the unknown can be wondrous to explore. Inspired by the childhood of astronaut Chris Hadfield

NONFICTION:

Margaret and the Moon: How Margaret Hamilton Saved the First Lunar Landing
Dean Robbins

Space Encyclopedia: A Tour of Our Solar System and Beyond
David A. Aguilar

Gravity
Jason Chin

***Hidden Figures* (Young Readers' Edition)**
Margot Lee Shetterly

I, Galileo
Bonnie Christensen

Mae Jemison
Laurie Calkhoven
A biography of physician and engineer Mae Jemison, the first female African-American astronaut.

The Artful Parent: Simple Ways to Fill Your Family's Life with Art and Creativity
Jean Van't Hul
In this wordless graphic novel, a man leaves his homeland and sets off for a new country, where he must build a new life for himself and his family.

Junk Drawer Engineering: 25 Construction Challenges That Don't Cost a Thing
Bobby Mercer

MathArts: Exploring Math Through Art for 3 to 6 Year Olds
MaryAnn F. Kohl

Mindful Discipline: A Loving Approach to Setting Limits and Raising an Emotionally Intelligent Child
Shauna Shapiro and Chris White
Drawing from mindfulness and neuroscience research, this book outlines a relationship-centered approach to parenting that nurtures emotional intelligence and self-esteem.

BOOKLIST PREPARED BY TAMARA SAARINEN AND HOLLY SMITH
PIERCE COUNTY LIBRARY SYSTEM

On board the International Space Station. Clockwise from top left, Dorothy Metcalf-Lindenburger, Japan Aerospace Exploration Agency astronaut Naoko Yamazaki, Stephanie Wilson and Tracy Caldwell

pictured: Annelih GH Hamilton. Photos by Elise Bakketun

SHARE YOUR THOUGHTS

Your input is very valuable to us. We'd love to hear your feedback about the guide.

Please take a moment to go online and answer this brief survey, where you can also enter to win two tickets for any performance in the 17-18 season:

SCT Audience Survey*

You can also email your comments to us at info@sct.org.

Seattle Children's Theatre, which celebrates its 43rd season in 2017-2018, performs September through June in the Charlotte Martin and Eve Alvord Theatres at Seattle Center. SCT has gained acclaim as a leading producer of professional theatre, educational programs and new scripts for young people. By the end of its 2017-2018 season, SCT will have presented 263 plays, including 113 world premieres, entertaining over four million children.

*All active links can be found on the interactive AAG, free for download at sct.org

Engaging young people with the arts is what we are all about at SCT. We hope that the Active Audience Guide has helped enhance and extend the theater experience for your family or your students beyond seeing the show.

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