The lessons and activities in this guide are driven by the Common Core State Standards for English Language Arts & Literacy in History/Social Studies, Science and Technical Subjects (2010) which help ensure that all students are college and career ready in literacy no later than the end of high school. The College and Career Readiness (CCR) Standards in Reading, Writing, Speaking and Listening, and Language define general, cross-disciplinary literacy expectations that must be met for students to be prepared to enter college and workforce training programs ready to succeed.

21st century skills of creativity, critical thinking and collaboration are embedded in process of bringing the page to the stage. Seeing live theater encourages students to read, develop critical and creative thinking and to be curious about the world around them.

This Teacher Resource Guide includes background information, questions, and activities that can stand alone or work as building blocks toward the creation of a complete unit of classroom work.

Before the Show
- About the Performance
- About the Creators
- Notes from the Director
- Coming to the Theater
- Before Moon Mouse
- History of Puppet Theater
- Types of Puppets
- Did You Know?
- Phases of the Moon

Pre-Show Activities
- Stargazing
- Puppet Tales

Post-Show Activities
- Show and Tale
- Moon Phases
- The Moon Song
- Critical Response Questions
- Resources

The Ohio Arts Council helped fund this organization with state tax dollars to encourage economic growth, educational excellence and cultural enrichment for all Ohioans.

Playhouse Square is supported in part by the residents of Cuyahoga County through a public grant from Cuyahoga Arts & Culture.
ABOUT THE PERFORMANCE

Marvin the Mouse wants to be popular. Constantly bullied and picked on by the “cool” rats, he is labeled a loser and a geek. As respite from the continuous badgering, Marvin retreats into his science books and a world of fantasy. He longs to have adventures and to be the hero.

Join Marvin is on the space adventure of a lifetime: a trip to the surface of the moon on his homemade rocket where he meets a strange cast of misfit creatures, learns of infinite peril and views awesome beauty. His journey of self-acceptance is portrayed with both humor and honesty as he teaches us the important message that being different is “cool.”

ABOUT THE CREATORS

Corbian Visual Arts and Dance

Creators Ian Carney and Corbin Popp met while dancing in Twyla Tharp’s Broadway show Movin’ Out. An immediate connection was made as they discovered their mutual love of art, theater and technology. After coming across a product called electroluminescent wire, or “EL wire” for short, the possibilities seemed endless. EL wire is powered by batteries used mostly to illuminate walkways, signs and instrument panels on cars. Carney and Popp quickly built rudimentary characters and, with the help of their wives Eleanor Carney and Whitney Popp (who are also dancers), they began to build the rest of their puppetry-based creatures. Their first performance work, Darwin, was the recipient of the prestigious Jim Henson Foundation Grant. Utilizing the talents of four cast members, they strap on EL wire puppetry to their entire bodies and bring the creatures to life through movement and dance.

Lightwire Theater

Ian and Eleanor Carney founded Lightwire Theater and, in conjunction with Corbian Visual Arts and Dance, began pre-production on their first project, The Ugly Duckling and The Tortoise & the Hare, in January 2011. Using Corbian’s signature electroluminescent puppetry, Lightwire Theater has adapted these classic tales for the stage.

Why is Lightwire Theater Unique?

Each Lightwire Performance is a unique interpretation of a story told by dancers and glow-in-the-dark puppets. These stories are told solely through movement and puppetry without words, so it is up to your creative imagination to determine what is happening on stage!

How are the characters created?

The EL wire is attached to a battery pack that the actors wear. The characters are made from struts and joints and then covered with black cloth lined in EL wire. The actors must remain invisible during the performance; therefore they will be seen due to the EL wire backlighting their bodies. Considering this is a show without words, the characters are brought to life by the actors through movement and dance set to music.

ABOUT THE PERFORMANCE

Moon Mouse: A Space Odyssey is Lightwire Theater’s 5th full length show!

The musical score includes a wide variety of styles from pop to classical as well as original compositions.

There are more than 40 luminous characters that will be operated by five performers in the hour-long show.

Look for the expansive moon set with craters and caves and a warped perspective flight through space!
Coming to the Theater

Playhouse Square is an exciting field trip destination! As the country's largest performing arts center outside of New York, the not-for-profit Playhouse Square attracts more than one million guests to 1,000+ performances and events each year. Playhouse Square thus acts as a catalyst for economic growth and vitality within the region. When you visit, be sure to note the GE Chandelier, the world's largest outdoor chandelier, and the retro Playhouse Square sign with its 9-foot-tall letters!

As audience members, you and your students play a vital role in the success of the performances. You are part of a community that creates the theater experience. For many students, this may be their first time viewing a live theater production. We encourage teachers to discuss some of the differences between coming to the theater and watching a television show, attending a sporting event or viewing a movie at the cinema. Here are a few points to start the discussion:

- Students are led into the theater and seated by an usher.
- Theaters are built to magnify sound. Even the slightest whisper can be heard throughout the theater. Remember that not only can those around you hear you; the performers can too.
- Appropriate responses such as laughing or applauding are appreciated. Pay attention to the artists on stage; they will let you know what is appropriate.
- There is no food, drink or gum permitted in the theater.
- Photography and videotaping of performances is not permitted.
- When the houselights dim, the performance is about to begin. Please turn your attention toward the stage.
- After the performance, you will be dismissed by bus number. Check around your seat to make sure you have all of your personal belongings.

An exciting destination for field trips and more!
While the precise birth date of puppets is unknown, puppetry dates back more than 3,000 years. Probably originating in Egypt, puppets are mentioned in writing as early as 422 B.C.E. Following Egypt, puppetry became popular in India, Indonesia, Japan, and Europe. India used stick puppets to depict epics such as Mahabharata and Balakanda. Indonesian puppets were and still are considered sacred and part of ritual ceremonies. In Japan, puppets were used more for entertainment with ornate designs and on a larger scale in street theater. In Europe, puppets acted out morality in plays, behaving in ways that would have been unacceptable for humans to portray. By the 19th century, string puppets had upgraded from two strings to controls that included as many as eight strings. Shortly thereafter, puppetry would be divided from actor theaters and began to compete with vaudeville and music hall theater. In the 20th century, a resurgence of popular puppetry was seen with the introduction of “The Muppets,” created by Jim Hensen, and the musical The Lion King, based on the classic Disney tale. Puppets continue to appeal to children and families on television, in movies and on stage, and are seen as a way to relate moral messages about childhood concepts.

Bunraku Puppetry – based in Japan, a life-sized wooden puppet is illuminated by focused light; however, puppeteers can be seen by the audience.

Carnival (Body Puppetry) – these puppets are seen in Lightwire Theater’s shows, street spectacles, sporting games or the Lion King. Puppets are worn as a full-body suit.

Hand Puppetry – puppets are controlled by the puppeteer’s hand fitting directly inside the puppet.

Marionette (String Puppetry) – puppets are suspended by strings from a horizontal bar held in the puppeteer’s hand. By manipulating the tilt of the bar, puppeteers make the puppet move.

Shadow Puppetry – a paper cutout on a stick is illuminated onto a piece of white fabric, producing shadows that are viewed by the audience and allow for puppeteers to be hidden.

Two-Man Puppetry – larger puppets are controlled by two puppeteers, typically one operating the head while the other operates the body.
The Moon is much smaller than the Earth, with a diameter of 2,159 miles. It is airless, waterless and lifeless.

The Moon is the Earth’s only natural satellite. A natural satellite is a space body that orbits a planet, a planet-like object or an asteroid.

The average distance from the Moon to the Earth is 238,857 miles.

The Moon orbits the Earth every 27.3 days.

You can see the surface of the Moon by using a pair of binoculars or a small telescope. The Moon’s surface shows the damage caused by large pieces of rock hitting it billions of years ago. The surface is covered in craters, pits and scars.

From the Earth, we can only see one side of the Moon; the other side is always turned away from us. Photographs from space show a similar scarred surface on the other side.

The Moon has no atmosphere and so we can still see the damage caused billions of years ago.

If you look at the Moon when it is nearly full, you can see the dark areas which are known as the seas. These are not really seas but are huge expanses of smooth dark lava.

All parts of the Moon are lit in turn by the Sun. As it rotates round the Earth, we see different fractions of the sunlit half, or hemisphere, of the Moon. These are known as the phases of the Moon, or lunar phases. The Moon changes from a thin crescent to a full moon and back again to a crescent in one month (actually 29 days, which is a lunar month).

The waxing Moon. “Waxing” means growing. After the new moon appears in the sky as a tiny sliver of light, the moon waxes. It grows into a crescent, curving to your left as you look at it and then into a half moon. This takes a week and so the period is described as the Moon’s first quarter.

The waxing gibbous Moon. Gibbous means humped and describes the shape of the Moon as it grows from a half moon to a full moon. Another week has passed and this is the Moon’s second quarter.

The waning Moon. “Waning” means shrinking. Now the Moon begins to get smaller again – it “wanes.” The third quarter takes us from a full moon to a half moon again, but this time it is the right hand side of the moon that shines.

The waning crescent Moon. The last quarter takes us from a half moon back to a crescent moon, facing right, and to a point where the moon disappears.

When the Moon is a crescent and only the crescent is being illuminated by the Sun, you can often see the shadow of the rest of the Moon. This is caused by reflection of sunlight from the Earth. It is sometimes called “the old moon in the new moon’s arms.”

The gravity of the Moon, the pull which it exerts on the Earth, causes two high tides on the Earth every day – one every 12 hours and 25 minutes.
**Pre-Show Activities**

**STAR GAZING**

Kindergarten  
Earth and Space Science (ESS)  
Topic: Daily and Seasonal Changes  
This topic focuses on observing, exploring, describing and comparing weather changes, patterns in the sky and changing seasons.

Content Statement: The moon, sun and stars can be observed at different times of the day or night. Content Elaboration: Concepts Related to Solar System

**PreK-2:** The moon, sun and stars can be observed at different times of the day or night. The observable shape of the moon changes throughout the month, the sun's position in the sky changes in a single day and from day to day and the sun is the principal source of energy. Earth's atmosphere is discussed.  
**Grades 3-4:** All objects are made of matter and light is a form of energy. Earth's surface is discussed and gravitational forces are introduced.
A woman named Callisto was turned into a bear by an angry goddess, Hera, and was put up in the sky, where she still lives today. The orange stars are known as the Big Dipper.

The little bear is Arcas, Callisto’s son. He was also turned into a bear and put up in the sky. The orange stars are known as the little Dipper. Polaris (the north star) is the tail of the little dipper, an important star that hunters and travelers can use as a compass to find north.
Orion

Orion was a hunter in ancient Greek mythology. After he was killed by a scorpion, the gods put him up in the sky. Orion’s Belt – The three brightest stars in the Orion constellation.

Sirius (the dog star)

Orion’s hunting dog Sirius is the brightest star in the sky!
Cassiopeia was a very vain, self-centered queen. The gods hung her upside-down in the sky as punishment.

Cepheus, the king, was Cassiopeia’s husband.
Lyra/Lyre

The lyra was a stringed instrument that Orpheus used to charm wild animals. When he died, the lyra was placed in the sky to honor him.

Aquila

Aquila was an eagle of the gods. He did many things for the gods, such as carry Zeus’ thunderbolts.
PUPPET TALES

Build Background

Puppets & Puppeteers
- Have you ever seen a performance using puppets?
- Have you ever used puppets to tell a story?
- Where do puppets perform?
- Is a puppet’s stage different from a stage for people?
- How do puppets move?
- What is a puppeteer?

Puppeteer Tips
- Know your story well.
- Create a simple sock puppet or stick puppet for practice.
- Initially, work with only one or two characters.
- Concentrate on the puppet showing through action what is happening.
- Practice in front of a mirror.
- Get honest feedback.


Read, View and Write

Read from the novel Manxmouse: the Mouse Who Knew No Fear. View a film or animated version of the story. In what ways are the stories similar? After seeing the performance, ask students to write a story about their favorite animal in the play.
- Draw a story in pictures about an animal you know well.
- Write an adventure story from an animal’s point of view.
- Write an animal character to develop human characters.
- Use a photo of your favorite pet or animal and create a story or adventure based on the picture.
- Create your own animal and write a fantasy story about your animal. What’s your animal’s name? Where does your animal live? What does he/she look like? What’s your relationship with him/her? Does he/she have magical powers? What are they?
Post-Show Activities

SHOW AND TALE

College and Career Readiness Anchor Standards for Reading

College and Career Readiness Anchor Standards for Writing
W.K-2.3

As a class, have students re-tell the story of *Moon Mouse: A Space Odyssey*. Or, you may choose a new book to read with an animal as the central character such as:
- *Corduroy* by Don Freeman (K),
- *The Knight and the Dragon* by Tomie dePaola (K-2),
- *The Ugly Duckling* by Hans Christian Anderson (K-3) or
- *Mouseheart* by Lisa Fielder (5).

Break students into small groups. Each group will recreate a chapter or sequence from the story using puppetry, ordinary classroom objects and narration.

- Ask groups to select a character or a few characters and write the script of the puppet story they will tell. Limit the story to one action and 200 words.
- Each group selects one narrator. The rest of the group enacts the story using Puppeteer Tips above.
- Puppet stages can be desk or table tops, with a drape covering the desk so the puppeteers are invisible; a sheet strung across a clothesline held up with clothespins; a large box with the back and front cut out can be used as a puppet stage. Or puppeteers can remain visible throughout the performance.
- Rehearse the puppet show in the stage space with narration. Ask groups to observe others rehearsals. Film a rehearsal then use reflection questions to problem solve, rehearse and improve.

Reflection after Rehearsal

Reflection questions help stimulate creative changes and encourage problem solving in puppetry:

- Did the puppets stay in character?
- Did the puppets move like the characters would?
- How did the puppet action help tell the story?
- Was the narration clear and connected to the puppetry?
- What happened? What action occurred? What changed?
- Did we tell the important part of the story?
- What can we change to tell the story better?
MOON PHASES

Grade Band Theme: Observations of the Environment
Earth and Space Science (ESS)
Topic: Daily and Seasonal Changes

Overview
In this hands-on lesson, students learn about and discuss the phases of the moon through a variety of activities, including making their own moon flipbooks and cookie moons.


Learning Goals:
After completing this lesson, students will be able to:
- Describe the fact that the moon has different phases.
- Explain that the moon looks different to us on different days throughout the month.
- Discuss the different ways the moon looks throughout the month.
- Explain that phases of the moon make it look a little different every day, but it looks the same again about every four weeks.

Key Facts about Space and Space Exploration/The Moon:
- There are different phases of the Moon that make it appear a little different every day, but it looks the same again about every four weeks.
- The Moon can sometimes be seen at night and sometimes during the day.

- “Moon Phases Cards”
- “Moon Phases Flipbook”
- scissors (for “Moon Phases Cards” and “Moon Phases Flipbook”)
- Oreo cookies (or similar cookies with black cookie and white filling) and popsicle sticks, spoons or other tool that students can use to scrape the Oreo filling into moon shapes.
- plates or trays to place cookies on.
- stapler (for “Moon Phases Flipbook”)
- pencil or crayons (for “Moon Phases Chart”)
- “Moon Phases Chart”

Preparation:
- Print out one “Moon Phases Chart” per student.
- Print out one “Moon Phases Flipbook” per student. If possible, print the flipbook onto firm paper to make it easier for students to flip the pages.
- Print out one copy of the “Moon Phases Cards” handout for every 3-5 students.
- Gather enough cookies so that there is about 1 for each student in your class. (Each group of 3-5 students will need 4 cookies each.) Place the cookies on plates, 4 cookies on each plate.
Lesson Activities:

Activity 1: Moon Discussion

1. Explain that today you will begin a discussion about the moon.
2. Ask students to describe when the best time is to see the moon (at night). Ask students if the moon can also be seen during the day (Yes, it can be seen during the day too. At different times of the month it is easier to see).
3. Ask them if the moon looks the same every time they look at it. Ask them to explain how it changes. (Sometimes you can only see a little white sliver and sometimes you can see the whole moon.)
4. Explain that it takes the moon 29 days (about 1 month) to travel around the earth and the different phases that we see are when the moon is at different points in that orbit.
5. Hold up the “Moon Phases Cards” and point out the different phases that the moon goes through.

Activity 2: Cookie Moons

1. Divide students into groups of 3-5 students each. Give each group four cookies and a copy of the “Moon Phases Cards” handout.
2. Ask students to twist open their cookies and put both sides down on the table, with the cream side facing up.
3. Ask each group to recreate the eight phases of the moon, using the eight cookie halves and by scraping the cream onto or off their cookies with a popsicle stick, spoon or other tool, to make them look like the shapes featured on the “Moon Phases Cards.” (Students may need to scrape some of the cream off of one cookie and add more to another to create their phases.)
4. Each group should place their eight moon phases in the order shown in the cards.
5. After each group has placed its cookie moons in order, ask them to check their moon cookies with the phases in the “Moon Phases Cards” to make sure they have their phases in the right order.
6. Have students observe the creations of the other groups.

Tip: For an example of what the moon phase cookies could look like check out the following website: http://www.sciencebob.com/blog/?p=828

Moon Phases Lesson Plan
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The Moon Song

Author: unknown
Tune: “I’m a Little Teapot”

I’m a little new moon. You can’t see me. Now I’m a crescent shining in the sea. Then you see a half of me in the dark sky. Look, I’m a full moon Shaped like a pie. I’m like shining silver Lighting the skies, Until I shrink to half my size. Than I start to fade And that is when, The moon song starts all over again.
Critical Response Questions

We can better understand any complex work or experience when we slow down and first pay attention to what we notice, remember, wonder about and feel.

Critical Response is a structured process that allows responders to pay close attention to a particular piece of art, text or a performance. Through the guidance of a facilitator or teacher, a group responds to these questions:

1. What was your favorite part of the play and why?
2. What does the show remind you of? How can you connect this work to your own life? (Examples may include a memory, music or other experience that this work triggers. When students access and share their prior knowledge they build more connections to the work. There are no wrong answers or associations.)
3. What did you think about the puppets? How did they help tell the story?
4. What emotions do you feel as you respond to this work? Describe feelings using one or two words. People tend to remember those things that they can connect to an emotion.
5. What questions does it raise for you? (“I wonder…”)
6. What meaning or understanding is intended or conveyed in this work? What do you think was the artist’s intent?
7. What was the moral of the story? How might you apply this lesson in your own life?
8. Talk about a place you feel accepted.
9. Has anyone spoken to you unkindly? Have you ever spoken to someone unkindly? How did you feel? How do you think they felt?
RESOURCES

Web Links

www.lightwiretheater.com
http://www.moonconnection.com
www.planetsforkids.org
www.puppetsnow.com
www.sciencekids.co.nz
http://www.space.com
www.theaterseatstore.com

Story Arts, Inc. is a non-profit organization which focuses on storytelling and the diverse ways that storytelling can enrich multi-cultural understanding, interpersonal communication and literacy. The site includes activities and lesson plans based on storytelling in the classroom. http://www.storyarts.org

Books

Description: Chloe and her friends won’t play with the new girl, Maya. Every time Maya tries to join Chloe and her friends, they reject her. Eventually Maya stops coming to school. When Chloe’s teacher gives a lesson about how even small acts of kindness can change the world, Chloe is stung by the lost opportunity for friendship, and thinks about how much better it could have been if she’d shown a little kindness toward Maya. Grade Level: Kindergarten - 3rd

Stand in My Shoes: Kids Learning About Empathy by Bob Sornson, Ph.D (Author)
Description: When Emily asks her big sister what the word empathy means, Emily has no idea that knowing the answer will change how she looks at people. But does it really matter to others if Emily notices how they’re feeling? Stand in My Shoes shows kids how easy it is to develop empathy toward those around them. Empathy is the ability to notice what other people feel. Empathy leads to the social skills and personal relationships which make our lives rich and beautiful, and it is something we can help our children learn. This book teaches young children the value of noticing how other people feel. We’re hoping that many parents read it along with their children. Grade Level: 1st and up.

App Resources

This Is My Story (And I’m Sticking To It)
This Is My Story (And I’m Sticking To It) is an early learning app that helps kids get the hang of simple sentence structure. Kids get to make their own storybooks by tapping and dragging labeled images (featuring common sight words like “hat” and “cow”) into the blanks of each page. Sentences like “The (blank) played with the (blank)” can become “The cat played with the ball.” Finished stories can be saved and will be read aloud by the narrator. Age Range: 4-6 Years

Thomas Was Alone
Thomas Was Alone is puzzle/platformer that has players controlling little rectangles as they hop around small, two-dimensional environments. More than that, it employs a narrator to tell a story rich with humor and emotion and filled with basic but enduring lessons about friendship and human relationships. It does so innocuously, without resorting to sexual themes, graphic violence or even harsh language. However, while this game has little that might be considered inappropriate for younger players, some parts of the story may be too abstract or emotionally complex for younger kids to fully grasp. Age Range: 8-10 Years

Toontastic
Toontastic provides a stunningly easy way to create your own animated films. Kids choose the characters and setting for each scene, then just move the pieces around like they were playing with action figures, providing their own dialogue as the iPad records it all. They can then add a musical score with the appropriate emotional tone. The app doesn’t just allow kids to make their own cartoons, it also teaches the fundamentals of storytelling. Kids can share their videos with the Toontastic community and enter them in film contests, so it’s important that they do not reveal personal information in their videos. Age Range: 5-6 Years