

## Tiny Sparks: Science and Storytelling in Early Learning

Lesson Title: Starry-Eyed Explorers: A Preschool Journey to the Moon

Grade Level: Preschool

Lesson Length: 50 minutes

<b>AZ Science Standard:</b>	<b>K.E2U1.5</b> <i>Observe and ask questions about patterns of the motion of the sun, moon, and stars in the sky.</i>
<b>Learning Objective:</b>	<ul style="list-style-type: none"> <li>• <i>Students will be able to observe and describe the moon and its reflection using their senses.</i></li> <li>• <i>Students will be able to communicate their scientific findings through art and verbal descriptions.</i></li> </ul>

Vocabulary	Materials
<ul style="list-style-type: none"> <li>• <i>Astronomy</i></li> <li>• <i>Moon</i></li> <li>• <i>Reflections</i></li> <li>• <i>Floating</i></li> <li>• <i>Sinking</i></li> </ul>	<ul style="list-style-type: none"> <li>• <i>The book "Kitten's First Full Moon" by Kevin Henkes</i></li> <li>• <i>Black construction paper</i></li> <li>• <i>White paint</i></li> <li>• <i>Paint brushes</i></li> <li>• <i>Large container to hold water</i></li> <li>• <i>Provide various small objects (e.g., cork, marble, plastic toy)</i></li> <li>• <i>Sticky Pad paper and markers to write predictions</i></li> </ul>

### Costume Element:

Costumes play a vital role in storytelling by engaging children in immersive experiences, visually representing characters and concepts, and boosting cognitive skills through interactive play. They encourage creativity and support multi-sensory learning, making scientific concepts more accessible and memorable for young learners.

- *Astronaut Costume: Use official NASA patches to create a realistic astronaut look, fostering immersive experiences for children learning about space exploration.*
- *Planetary Costumes: Dress up as planets like Earth, Mars, or the Sun to visually represent different celestial bodies in the solar system.*
- *Alien Costumes: Engage children with creative alien designs, encouraging imaginative play and exploration of extraterrestrial life concepts.*
- *Galileo Galilei Costume: Embody the famous astronomer to introduce historical figures in astronomy and their contributions to scientific understanding.*

### Guiding Questions:

- *What do you think makes the moon look different on different nights?*

- *How do you think the kitten felt when she couldn't reach the moon? Have you ever felt that way?*
- *Why do you think some objects float in water while others sink?*
- *How is the reflection of the moon in water similar to or different from the real moon in the sky?*

### **Engagement/Introductory Activity:**

- *Gather children in a circle*
- *Introduce the book "Kitten's First Full Moon" by Kevin Henkes*
- *Show the cover and ask children what they think the story might be about*

### **Exploratory Activity:**

#### Story Time (10 minutes)

- Read "Kitten's First Full Moon" aloud
- Engage children by asking questions about the kitten's actions and the moon's appearance

#### Discussion (5 minutes)

- Ask children why they think the kitten mistook the moon for a bowl of milk
- Discuss the concept of reflections, relating it to the story

#### Science Activity: Sink or Float (15 minutes)

- Introduce the concept of sinking and floating
- Provide various small objects (e.g., cork, marble, plastic toy)
- Have children predict which items will sink or float
- Test each object in a clear container of water
- Discuss the results and why some objects float while others sink

#### Art Activity: Moon Reflection Painting (15 minutes)

- Provide black construction paper and white paint
- Demonstrate how to paint a large white circle for the moon
- Show children how to create a reflection by painting another circle below it
- Encourage them to add details like stars or a kitten silhouette

#### Conclusion (5 minutes)

- Display children's artwork
- Recap the story and science experiment
- Ask children what they learned about reflections and floating/sinking

### **Explain:**

- *"Tell me what happened when we put the [object] in the water. What did you see?"*
- *"How did your moon painting look different from the moon in the story? Why do you think that is?"*

- *"What surprised you most about our sink or float experiment? Was there anything you didn't expect?"*
- *"If you could do this activity again, what would you want to try differently? Why?"*

**Extension Activity/Questions:**

*Moon Phase Calendar: Create a simple moon phase calendar for the classroom. Each day, have students observe the moon (if visible) and draw its shape on the calendar. This activity helps students:*

- *Apply their understanding of the moon's changing appearance*
- *Practice observation and recording skills*
- *Recognize patterns over time*
- *Relate the story to real-world observations*

*Reflection Scavenger Hunt: Organize a guided scavenger hunt around the classroom or playground to find different reflective surfaces. Students can use small mirrors or flashlights to create reflections. This activity allows students to:*

- *Apply their understanding of reflections to various contexts*
- *Explore how different surfaces create different types of reflections*
- *Compare and contrast reflections with the moon's reflection in the story*
- *Develop vocabulary related to light and surfaces (shiny, dull, clear, etc.)*

**Evaluation Activity:**

Enlist the teacher's help to record the following data as needed:

*For observing and describing the moon and its reflection:*

- *Observe students during the art activity, noting their descriptions of the moon and its reflection*
- *Collect and analyze students' moon reflection paintings as work samples*

*For predicting and testing which objects sink or float:*

- *Use teacher-child interactions during the science activity to assess understanding*
- *Document students' predictions and observations in a simple chart or portfolio*
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*For comparing and classifying objects based on physical properties:*

- *Observe students during free play, noting how they sort and categorize objects*
- *Use hands-on manipulatives in a game format to assess sorting skills*

*For communicating scientific findings:*

- *Listen to students' explanations during the sink or float activity*
- *Engage in purposeful interactions, using questioning to elicit children's thinking*

*Additional Informal assessment methods can include:*

- *Observing students during activities and play*
- *Collecting anecdotal notes on students' behaviors and conversations*
- *Using a portfolio approach to document progress over time*