

Ozobot Science Lesson Plan

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Standards/Performance Indicators/Skills

Identify the state and national standards, performance indicators, and skills addressed by the lesson.

MS-ESS1 Earth's Place in the Universe

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Students who demonstrate understanding can:

MS-ESS1-1. Develop and use a model of the Earth-sun-moon system to describe the cyclic patterns of lunar phases, eclipses of the sun and moon, and seasons. [Clarification Statement: Examples of models can be physical, graphical, or conceptual.]

5.VA.ARCM.1.2 Make connections between visual art and other domains of learning.

Learning Objectives/Goals

Describe the lesson's objectives and the learning outcomes that are appropriate for meeting curricular/classroom needs.

Students will identify the 8 phases of the moon.

Assessment (the type[s] of assessment used throughout the lesson)

Identify the assessment that occurred before, during, and after the lesson.

Phases of the moon worksheet

The teacher will also observe students throughout the activity to check for understanding of coding and phases of the moon.

1. What action does the moon take around the moon?
2. Can you recall how many days it is before the moon repeats the phases?
3. What are the 8 phases of the moon?
4. Which is the best answer to restate the
5. Which portion of the moon can be seen from Earth?
6. Which of the following images shows the correct phases of the moon in the correct order?
7. How can you determine which phase of the moon you see from Earth?

Rubric: [Moon Phase Model Rubric](#)

Lesson Structure and Procedures

Describe the sequence of events of the lesson elements, including the before, during, and after of the lesson (i.e., the engagement/opening, the procedures used, the activities for guided practice, and the conclusion).

Engage: To engage students in the lesson, the teacher will bring out one Ozobot to show the class what they will be using for their activity. The teacher will demonstrate how it is used and how the Ozobot knows to follow the line. Then, the teacher will show a presentation over phases of the moon and use direct instruction to teach the students the 8 phases of the moon.

Explore: The students will be given a laminated sheet of paper that has circles with the different shades of the moon phases. An Earth will be put in the middle of the sheet with a flashlight representing the sun at the bottom of the paper. The Ozobot will follow the line around the earth to show the phases of the moon.

Explain: The students will participate in discussion about what they observed during the phases of the moon activity as the moon traveled around the earth.

Elaborate: The students will build a model representing the phases of the moon to show their knowledge of the moon phases.

Evaluate: To determine if the students gained knowledge of the moon phases, their model of the moon phases will be evaluated.

For this lesson, a cross-curricular lesson could be to incorporate art into the lesson to have students make visual representations of the phases of the moon. This will show the teacher what the students have learned based on the model they build. Building a model connects what was learned to a visual representation. Students will use black paper and chalk to draw the phases of the moon. They will then put the phases of the moon in order and label them to create a visual that they can refer to.

Instructional Strategies

Describe the teacher's approach to achieving the learning objectives and meeting the students' needs.

The teacher will use direct instruction to teach the students about moon phases and how to use the ozobots to complete the activity.

The teacher will use guided practice when doing the activity to help the students work through the phases of the moon.

Learning Activities

Describe the opportunities provided for the students to develop the skills of the objective.

The students will use the Ozobots, the worksheet, and their coding skills to make a model that represents the sun, earth, and moon and observe the phases of the moon.

Resources and Materials

List the materials used to plan and deliver the lesson.

Phases of the moon worksheet

1 Ozobot per group

1 Ozo goes to the sun, earth, and moon steam kit per group

Canva Presentation

https://www.canva.com/design/DAFRNNajK3U/fVbdkhLG10xUjGS2qA0r0A/edit?utm_content=DAFRNNajK3U&utm_campaign=designshare&utm_medium=link2&utm_source=sharebutton

Technology

Describe the instructional and/or assistive technology that was incorporated into the lesson to enhance instruction and student learning.

The Ozobot will be used to represent the phases of the moon.

The teacher will use a presentation from to teach the students about phases of the moon.

Differentiation/Accommodations/Modifications/Increases in Rigor

Describe the modifications made to meet the needs of all learners and to accommodate differences in students' learning, culture, language, etc.

Focus Student #1 does not receive Special Education services, but scored near the bottom of the pre-test for the lesson. She has little confidence in her abilities in this subject. The cross curricular activity could help boost her confidence by giving her a visual representation of the phases of the moon. She would be doing an engaging, hands-on activity that would give her a visual to help her with other moon phase activities. She would also label and put the phases in order. This activity would be done in pairs or small groups so she would also have the opportunity to learn

Focus Student #2 is learning English as a Second Language. He understands spoken English better than reading the textbook, and quickly catches on to new learning once explained within his language abilities. The teacher will provide vocabulary for the student in their language that particular students speak in as their first language. That way the student can learn the definitions of the phases of the moon and what they all mean.

Classroom Management

Identify the strategies used that are consistent with the learning objectives of the lesson and that also met student behavior needs to help keep the students on task and actively engaged.

Extensions

Describe the activities for early finishers that extended the students' understanding of and thinking about the learning objectives/goals by having them apply their new knowledge in a different way.

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Follow-Up Activity to the Lesson

Describe a quick activity for review or for building on the lesson that will deepen student understanding and interconnect concepts. (The activity may be incorporated in class the next day or throughout the unit.)

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Additional Information

Identify any area or lesson component that was not covered by this lesson plan format but that you feel is vital to include in a description of the lesson.

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