

Lesson Plan: Exploring Earth and Space Sciences

Grade Level: Year 5

Subject: Science - Earth and Space Sciences

Duration: 60 minutes

Curriculum Links:

- **Australian Curriculum:** Science Understanding - Earth and space sciences
- **Learning Area:** Science

Lesson Objectives: By the end of this lesson, students will be able to:

1. Understand the concept of the Earth's rotation and its effects.
2. Explain day and night cycles based on the Earth's rotation.
3. Investigate and discuss the differences between natural and artificial satellites.

Materials Needed:

- Globe or model of the Earth
- Flashlight or lamp
- Small round object (e.g., ball or globe model)
- Whiteboard and markers

- Worksheets or journals for recording observations
- Pictures or videos of natural and artificial satellites (optional)

Lesson Procedure:

1. Introduction (10 minutes)

- Begin with a discussion about day and night. Prompt students with questions like: Why do we have day and night? What causes the changes in daylight and darkness?
- Introduce the concept of the Earth's rotation on its axis as the cause of day and night cycles.

2. Exploration Activity: Modeling Day and Night (20 minutes)

- Use a globe or a model of the Earth and a small round object to represent the Sun (or a flashlight/lamp).
- Demonstrate how the Earth rotates on its axis and how this rotation causes day and night.
- Have students observe and record their observations about how the light (Sun) affects different parts of the globe (Earth model) as it rotates.

3. Guided Discussion: Natural vs. Artificial Satellites (15 minutes)

- Introduce the concept of satellites orbiting the Earth. Explain the differences between natural satellites (moons) and artificial satellites (human-made satellites).
- Discuss the purposes of artificial satellites (e.g., communication, weather monitoring, navigation) and examples of natural satellites (e.g., Moon).

4. Group Activity: Satellite Research (10 minutes)

- Divide students into small groups and assign each group a specific satellite (natural or artificial).
- Ask groups to research and create a brief presentation or poster about their assigned satellite, including its orbit, purpose (for artificial satellites), and interesting facts.

5. Conclusion and Reflection (5 minutes)

- Summarize the key points learned about Earth's rotation, day and night cycles, and satellites.
- Discuss with students how satellites impact daily life and scientific exploration.
- Ask students to reflect on one thing they found most interesting or surprising about satellites.

Assessment:

- Informal assessment through observation of students' participation in activities and discussions.
- Review worksheets or group presentations to assess understanding of Earth's rotation, day and night cycles, and the differences between natural and artificial satellites.

Homework (Optional):

- Assign a task where students research and write about a specific natural or artificial satellite, detailing its role and significance in space exploration or daily life.

This lesson plan provides an engaging and interactive approach to exploring Earth and space sciences concepts aligned with the Year 5 Australian curriculum. It encourages inquiry-based learning through hands-on activities, discussions, and research about satellites and their roles. Adjustments can be made based on class dynamics and available resources to optimize learning outcomes.*****

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