

Lesson Plan: Understanding and Investigating Birds of Arizona

Grade: 6

Duration: 1 Week

Objectives:

- Students will learn about the diverse bird species found in Arizona.
- Students will generate questions or wonderings related to Arizona birds.
- Students will design and execute a project or experiment based on their questions.

Day 1: Introduction to Arizona Birds

Engage:

1. **Activity:** Show a slideshow or video highlighting the diversity of birds in Arizona, including habitats, behaviors, and adaptations.
2. **Discussion:** Ask students what they found most interesting or surprising. Create a KWL chart (Know, Want to know, Learned) to capture their prior knowledge and curiosities.

Time: 45 minutes

Day 2: Research and Question Formulation

Explore:

1. **Activity:** Provide resources (books, websites, articles) for students to research Arizona birds.
2. **Discussion:** Have students work in pairs to list questions or wonderings that arose during their research.
3. **Activity:** Guide students in refining their questions into investigable projects or experiments.

Time: 45 minutes

Day 3: Project Planning

Explain:

1. **Activity:** Introduce the scientific method and project planning steps.
2. **Activity:** Students will outline their project or experiment, including their research question, hypothesis, materials needed, and procedure.

Time: 45 minutes

Day 4: Project Workday

Elaborate:

1. **Activity:** Provide materials and resources for students to begin their projects or experiments.
2. **Activity:** Circulate to assist students, ensuring they are on track and addressing any issues.

Time: 45 minutes

Day 5: Project Completion and Presentation Preparation

Elaborate:

1. **Activity:** Students finalize their projects or experiments.
2. **Activity:** Students prepare a presentation (poster, digital slideshow, report) to share their findings.

Time: 45 minutes

Day 6: Presentations

Evaluate:

1. **Activity:** Students present their projects to the class.
2. **Activity:** Classmates provide feedback and ask questions about the projects.

Time: 45 minutes

Day 7: Reflection and Extension

Evaluate:

1. **Activity:** Students reflect on their learning experience by writing a brief report on what they learned about Arizona birds and the process of scientific inquiry.
2. **Activity:** Discuss as a class the different findings and insights gained from the projects.

Time: 45 minutes

Materials Needed:

- Computer and projector for videos/slideshows
- Books and articles on Arizona birds
- Internet access for research
- Poster boards, markers, and other presentation materials

- Science experiment materials (dependent on student projects)

Assessment:

- **Participation:** Active involvement in discussions and activities.
- **Project Plan:** Clarity and thoroughness of the project outline and research question.
- **Final Project:** Quality and scientific accuracy of the project or experiment.
- **Presentation:** Effectiveness of communication and ability to answer questions.
- **Reflection:** Depth of understanding demonstrated in the written reflection.

Standards Addressed:

- 6.L2U1.14: Construct a model that shows the cycling of matter and flow of energy in ecosystems.
- 6.L2U3.14: Develop a model to describe the movement of matter among plants, animals, decomposers, and the environment.

Crosscutting Concepts:

- Systems and System Models
- Cause and Effect
- Stability and Change

Science and Engineering Practices:

- Asking Questions and Defining Problems
- Planning and Carrying Out Investigations
- Analyzing and Interpreting Data
- Constructing Explanations and Designing Solutions
- Engaging in Argument from Evidence