

Sandia Mountain Natural History Center

Ecology Field Program

Winter Ecology Scavenger Hunt

Lesson plan

Your Name:	
Grade Level: 5th	Subject Area: Life Science
Lesson Title: Winter Ecology Scavenger Hunt	Lesson Length: 30-40 minutes

The Teaching Process

Lesson Overview

Focusing on biotic and abiotic parts of an ecosystem, students will explore the outdoor area around them and learn to look for and identify various parts of the ecosystem. Students will make connections about how each part of the ecosystem functions in the winter. Further, students will practice developing hypotheses and modeling.

Lesson Objectives

1. Students will discover evidence of life/energy flow during winter.
2. Students will utilize evidence to hypothesize how parts of the ecosystem function.
3. Students will make connections between the biotic and abiotic parts of an ecosystem.
4. Students will model ecosystem parts by illustrating evidence they discover.

Standards addressed

NMSS: NM I- Scientific Thinking & Practice, BM I- Scientific Method 1; Scientific Thinking & Practice, BM III- Measurement & Data 3; NM II- Life Science, BM I- Ecosystems 1

NGSS disciplinary core ideas: LS 2.A, LS 2.B

NGSS crosscutting concepts: Cause & Effect; Systems & System Models; Energy & Matter

NGSS science & engineering principles: Engaging in Argument From Evidence

CCSS: RI 5.4, RF 5.3, L 5.1, L 5.2, L 5.4, SL 5.1, W 5.10

List of Materials

Winter Ecology Scavenger Hunt, notebook, pencil. Optional: monoculars, quadrats, magnifiers, field guides.

Instructional Sequence

Phase One: Engage the Learner

Through questioning, the instructor directs students to think about life and activity during the winter. Directing questions should focus on what the students see now and lead them to consider what they have not paid close attention to such as, animals that do not hibernate and signs of their activity, trees that are dormant vs. trees that are, evidence of decay, and so on. Introduce them to the scavenger hunt and give instructions regarding what they need to find and record.

What's the teacher doing?

- Guides students through questioning and simple observation to understand what is happening in the area.
- Prompts students to think outside the box about life in winter.
- Assists students with understanding various items on the scavenger hunt list.
- Models how to engage in the scavenger hunt.
- Assists students with understanding their roles.

What are the students doing?

- Actively listening and asking questions.
- Making connections to their surroundings.
- Use prior and/or recently gained knowledge to actively participate in discussion.
- Prepare for the activity by learning what evidence to look for in a winter ecosystem.

Phases Two-Four: Explore the Concept; Explain the concept and define terms; Elaborate the Concept

Set exploration boundaries, give students roles and expectations (recorder, photographer, etc.), and put students into groups sized 2-3. During this portion of the activity students explore the designated area looking for parts of the ecosystem that match the scavenger hunt items.

What's the teacher doing?

- Explains directions and describes boundaries for activity.
- Actively monitors students by checking for understanding, guiding students and discussing finds.
- Encourages students to closely explore living and nonliving parts around them.

What are the students doing?

- As partners and with *Winter Ecology Scavenger Hunt*, students explore the area and determine which parts of the ecosystem may fall under each description.
- With close observation, students make predictions and conclusions regarding the different parts of the ecosystem and how they relate to each other during the winter.
- Students may explain, describe, or draw processes and parts found.

Phase Five: Evaluate students' Understanding of Concept

While sharing with the group, students may reference the guide, but must provide evidence to support their claim as well as use their observations to determine how the parts found match the items on the scavenger hunt.

What's the teacher doing?

- Gathers students back to meeting area.
- Leads students in sharing their finds and citing evidence.
- Assesses student understanding of the items found and their role in the ecosystem through questioning and discussion.

What are the students doing?

- As a group, students share some of the parts and processes they've observed and explained. Students must back up their claim with evidence.

Discovery Education Science

5-E Lesson Plan Template



Revised by H. Perry, Feb., 2018

Original by Paul Mauermann

