

# Sandia Mountain Natural History Center

## Ecology Field Program

### Scat Chat Lesson plan

<b>Your Name:</b>	
<b>Grade Level:</b> 5th	<b>Subject Area:</b> Life Science
<b>Lesson Title:</b> Scat Chat	<b>Lesson Length:</b> 15-20 minutes

#### The Teaching Process

##### Lesson Overview

Using preserved and replica animal scat from a variety of local animals, the instructor leads a discussion to help students make connections between the producers and consumers of an ecosystem.

##### Lesson Objectives:

1. Examine consumers' role in an ecosystem
2. Students will examine animal scat specimens to determine the animal that produced it.
3. Students will analyze its contents to determine the animal's diet.
4. Students will be able to infer the species of plants and animals in the area.

##### Standards addressed

**NMSS:** NM I- Scientific Thinking and Practice: BM I- Scientific Method 1, BM III- Measurement & Data 3; NM II Life Science: BM I- Ecosystems 1, BM I- Ecosystems 2, BM III- Structure & Function 3

**NGSS disciplinary core ideas:** LS 1.C, LS2.A, LS 2.B, ESS 3.C

**NGSS crosscutting concepts:** Patterns; Cause & Effect; Energy & Matter; Stability & Change

**NGSS science & engineering principles:** Asking Questions & Defining Problems; Analyzing & Interpreting Data; Constructing Explanations; Engaging in Argument From Evidence

**CCSS:** SL 5.1, 5.3, 5.4, 5.6; L 5.1

##### List of Materials

A collection of preserved local animal scat (preferred) or replica scat; open area for students to be seated.

## Instructional Sequence

### Phase One: Engage the Learner

Discussion and questioning lead the students to the topic of using animal scat to collect information about an ecosystem.

#### What's the teacher doing?

- Gathers and seats students
- Prompts students to consider types of animal evidence in the wild, leading to scat
- Continues questioning, focusing on what can be learned from studying it
- Listens carefully to student responses, guiding if necessary

#### What are the students doing?

- Actively participate in discussion while using prior knowledge and making inferences

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

Students make observations about multiple preserved scat specimens as they are passed around the group. Samples from one or more species may be used, with bear scat the most common. Students are encouraged to examine the specimens and determine the animal's diet.

#### What's the teacher doing?

- Assures students the specimens are preserved and harmless and to handle them carefully, or not at all if they are uncomfortable.
- Encourages students to examine details
- Circulates and elicits descriptions
- Asks questions

#### What are the students doing?

- Examine specimens
- Determine what the animal's diet may have been
- Make inferences from the evidence

## Phase Five: Evaluate students' Understanding of Concept

Students combine evidence from their scat observation and voice conclusions about the animal's diet, seasonal food availability, local tree species, etc., while connecting the consumer to producers as well as the rest of the ecosystem.

### What's the teacher doing?

- Leads students in sharing their observations and making connections and conclusions based on the evidence
- Through questioning, assesses student understanding
- Ensures through discussion and clarification that students are making connections
- Reminds students to wash hands upon return to the center

### What are the students doing?

- Share insights and conclusions based on evidence and prior knowledge
- Through discussion, make connections between producers and consumers

