

CHICO CREEK NATURE CENTER – Skulls Identification (1st Grade)

Focus:

Examine a collection of skulls. Draw conclusions about what animals eat from observing their teeth.

Pre-visit Activities:

Types of teeth. Information, vocabulary and diagrams for coloring

NATURE CENTER VISIT: (Time: 45 minutes)

Pre-visit assessment: What is a skull? Where did it come from? What do you expect to see and learn from studying a skull?

FIELD: not applicable

LAB:

Observe a series of skulls from animals: carnivores, omnivores, and herbivores

Look at eye socket placement and what can be inferred from them.

Look at muscle insertion points and bone structures to infer muscle composition and use.

Observe and draw teeth and jaw bones and suggest animal's possible diet.

End-of-visit assessment:

Present one skull that has not been previously observed and ask the class to suggest what can be observed. Suggest what the animal may have eaten.

What information can you gather from observing skulls?

Science Content Standards – Grade 1:

Life Science:

- c) Animals eat plants or other animals for food
- d) Infer what animals eat from their teeth

Science Investigation and Experimentation skills:

Ask questions, conduct investigations

- a) Draw pictures from features observed (jaws, teeth)
- e) Look for discrepancies in similar objects

CHICO CREEK NATURE CENTER – Skulls Measurement and Keying (5th Grade)

Focus:

Examine and measure a collection of skulls. Draw conclusions about what animals eat from observing their teeth and inferring facial muscle size. Determine the type of vision the animal has based on eye socket placement.

Pre-visit Activities:

Information, vocabulary and diagrams for labeling (and coloring - optional).
Diagrams of skulls – students to add labels.
Bones, fusions, muscle insertion points. How muscles work to move bones.

Post-visit Activities:

Make a jaw using cardboard, brad and rubber bands.

NATURE CENTER VISIT: (Time: 45+ minutes)

Pre-visit assessment: What is a skull? Where did it come from? What do you expect to see and learn from studying a skull?

LAB:

Observe a series of skulls from animals; carnivores, omnivores, and herbivores

Look at eye socket placements, direction of eye orientation (front, side, 45 degree angle) and what can be inferred from them.

Use calipers and rulers to measure.

Observe the characteristics of the orbits, zygomatic arch and cranial ridge.

Look at muscle insertion points and bone structures to infer muscle composition and use.

Observe, identify the different types of teeth (small, large, sharp, flat) and draw teeth and jaw bones and suggest animal's possible diet.

Complete a data grid to consolidate learning and to form the basis of a key to animal skulls.

End-of-visit assessment:

Present one skull that has not been previously observed and ask the class to suggest what can be observed and measured. Suggest what the animal may have eaten.

Science Content Standards – Grade 5:

Life Science:

- a) Specialized structures
- c) Roles of teeth

Science Investigation and Experimentation skills:

- a) Classifying,
- f) Appropriate tool for quantitative observation,

h) Draw conclusions from scientific evidence and indicate need for further information