

Activity—Bone Identification

Standard IV

Objective 1

Connections

Standard IV

Students will understand how fossils are formed, where they may be found in Utah, and how they can be used to make inferences.

Objective 1

Describe Utah fossils and explain how they were formed.

Intended Learning Outcomes

1. Use science process and thinking skills.
4. Communicate effectively using science language and reasoning.

Background Information

Once students have dug the “fossil” bones, mapped and labeled them, they have the opportunity to do another part of the objectives for this standard. They may now compare the bones to the bone structure of living organisms. Students will identify what part of the animal the bones that they found came from by comparing them with bone structure charts for mammals, reptiles, and birds.

As they identify ribs, femurs, skulls, etc., they need to be able to explain why they identified them as they did. What is it about the appearance of the bone that made them identify it as they did? (The bones are from modern animals and the identification should be fairly easy, but they will have to make good observations and be able to explain them.)

Invitation to Learn

You have collected bones from your fossil dig box. What kind of animal do you think they came from? Can you tell what part of the animal your bones came from?

Instructional Procedures

Materials

- Bones taken from the fossil dig boxes
- Mammal bone structure chart
- Reptile bone structure chart
- Bird bone structure chart

1. Have the same teams that worked together on the Digging for Fossils Activity work together on bone identification.
2. Give each team a mammal, reptile, and bird bone structure chart. The team will work together to identify the type of bones and what part of the animal they came from.
3. The team will write a one-sentence explanation for each of the bones that they identify and give the reasons for their identification.

Possible Extensions/Adaptations

Place copies of the book *Fossils* by Walker and Ward on a table with some real fossils. Have the students use the pictures in the book to identify the fossils. The book contains a fossil identification key and a visual guide (photographs) to more than 500 species of fossils from around the world.

Assessment Suggestions

Read the identification sentences and check for thinking that went into making the identifications. Were the reasons for making the identification valid?

Set up a matching test – have students match pictures of bones with bones shown on bone identification charts.

Additional Resources

See the attached Additional Resources list.

THE LOCOMOTOR SKELETON.

MAIN MOTION.
 ROTATION.
 FLEXION./EXTENSION.

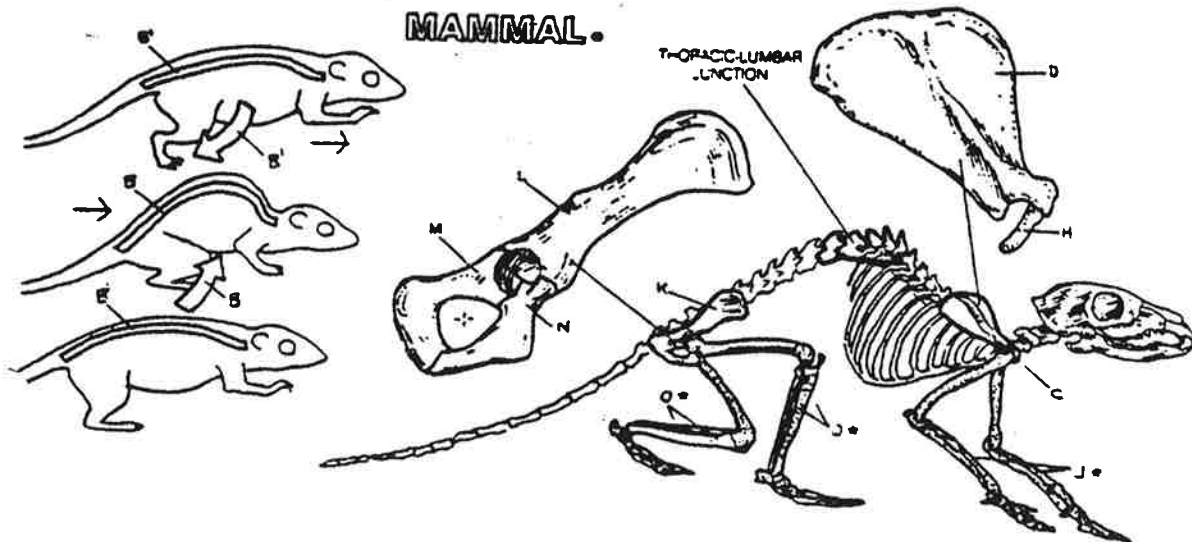
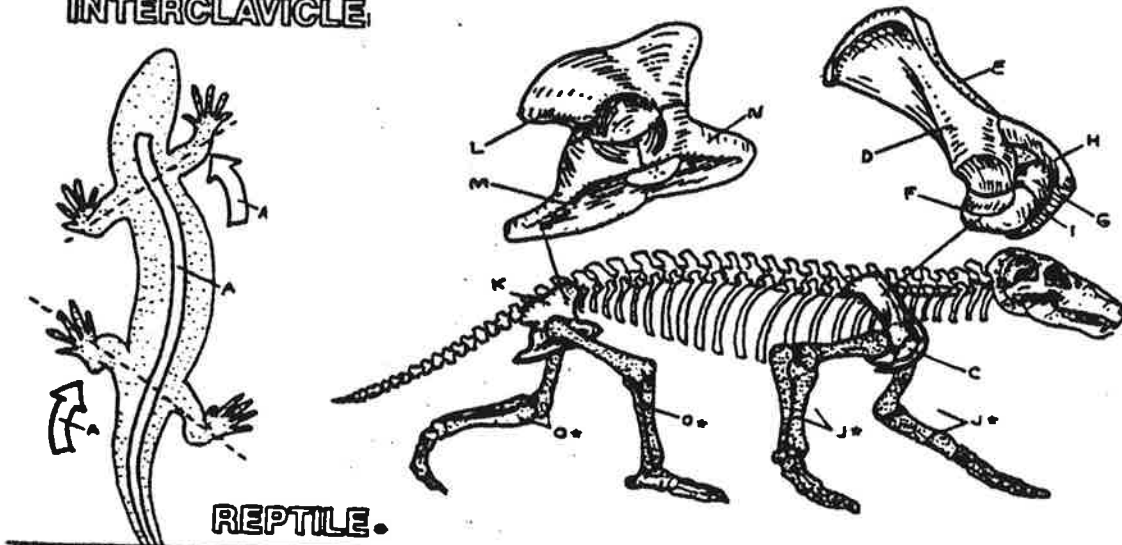
BONES OF THE
 FORELIMB.

APPENDICULAR SKELETON.

PELVIC GIRDLK
 INNOMINATE.
 ILIUM.
 ISCHIUM.
 PUBIS.

PECTORAL GIRDLK:
 SCAPULA.
 CLEITHRUM.
 CORACOID.
 PROCORACOID.
 CLAVICLE.
 INTERCLAVICLE.

BONES OF THE
 HIND LIMB.



Rodent Skeleton

