



Similar Skeletons: Studying School Forest Mammals

Nutshell

In this lesson, students will compare and contrast the human body to the skeletal structure and resulting behaviors of mammals found in the school forest.

Objectives

Students will be able to...

- Compare an identified human skeletal structure (arm, leg, head, vertebrae, etc.) to a similar skeletal structure of 3 different mammals found in the school forest
- Identify at least 5 mammals found in the district's school forest
- Observe mammal behavior and interaction at the school forest
- Research the skeletal structures of 3 school forest mammals
- Describe how each mammal's skeletal structure is similar or different from the similar human skeletal structure.
- Sketch and color code the similar bones between the human and 3 mammals
- Explain how the anatomical skeletal design of the school forest mammals compliments their daily life functions.

WI State and Cores Standards

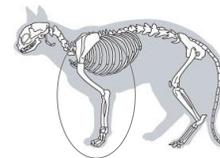
Science: A.12.7, C.12.1, C.12.5

Literacy in All Subjects 6-12: WHST.7, WHST.8, WHST.9, WHST.10, RST.3, RST.7, RST.8, RST.9

Information Technology: A.12.1, A.12.4, B.12.3, B.12.4, B.12.5, B.12.6

Materials

- Clipboards
- Copies of the student worksheet
- Writing utensil
- Computer



Teacher Preparation

- notify the main office that you will be gone
- schedule a bus and substitute if needed
- be sure students are appropriately dressed for the weather
- gather all needed materials for the activity
- be sure to have permission slips for all students attending field trip
- remind students that classroom behavior guidelines are expected to be followed at the forest



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Procedure

1. Students should be familiar with the skeletal structure of the human body
2. Students will complete the Pre-field trip activity at school. They will study a specific part of the human skeleton, list mammals found in the school forest, and research the skeletal structure of 3 selected school forest mammals.
3. During a field trip to the school forest, student will observe how school forest mammals use their skeletal features and take field notes on how the skeletal structure is used while performing certain behaviors.
4. In the Post-field trip activity, students will compare and contrast the behavior and skeletal structures observed in mammals at the school forest with the human body. Students will then compare field notes with other students in class.

Further Enrichment

- Students could make models of the different human and school forest mammal skeletal structures for display in the classroom or by using poster paper to hang in the hallway.





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Name: _____

Date: _____

Instructions:

This lab contains 3 different parts. All instructions for each part are listed below. Follow through the procedure step by step. The pre-field trip activity will be done in school before going to the school forest. The post-field trip activity requires you to analyze all of the data you recorded from your pre-field trip research and observations while at the school forest. Record all information for each part of this lab on a separate piece of paper entitled 'Similar Skeletons: Studying School Forest Mammals Lab'.

Procedure

A. Pre-Field Trip Activity

1. Choose a specific part of the human skeleton to study. This could be a structure such as an arm, leg, vertebral column, or even simply the hand and foot.
2. Identify all of the bones located in the chosen skeletal structure.
3. Make a list of at least 15 different mammals found in the school forest.
4. Choose 3 different mammals from your list to compare skeletal structures
5. Research the chosen skeletal structure from Step 1 in each of the 3 selected mammal species. Identify similar bones and bone functions in the mammal bodies and then directly compare and contrast them to the similar human skeletal structures.
6. Sketch and color the similar skeletal structures of the human and 3 school forest mammals to show a visual comparison/contrast of the bones. Use a different color for each different bone type found within this part of the skeleton.

B. Take a field trip to the school forest.

1. Quietly sit and observe mammals in the forest.
2. Pay close attention to how they are utilizing their skeletal features in daily activities.
3. Make a list of the animals observed.
4. Take field notes on what behaviors the mammals are performing and which bones are being utilized to perform that specific behavior.

C. Post-Field Trip Activity....Analysis and Conclusions

1. Mimic appropriate behavior observed by mammals in the forest and determine which human bones are used to perform that same function.
2. Describe the behavior and list the human skeletal bones which perform that function. Is the human skeletal design able to perform the same functions with the same ease? Why or why not?
3. Compare field notes with others in class. Were other students able to notice the same behaviors? Did they identify the same bones which performed those behaviors? Is the human skeleton able to perform the appropriate behaviors as easily or with greater difficulty compared to the mammals in the forest? Explain why you developed this conclusion.

