

Title: Stretch Wrap Forms

Topics: anatomy, art

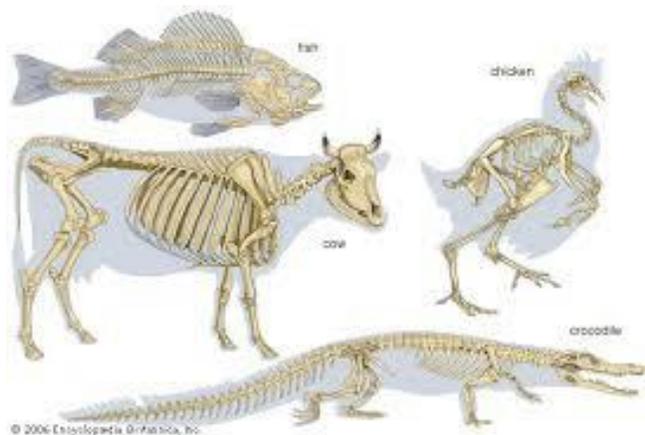
Related Disciplines: biology, art

Objective: Learn how inner structure determines outward appearance.

Lesson:

A. Introduction (20 mins)

Why do animals have different body shapes? All animals have some form of internal support system that helps them maintain their shape and move. For vertebrates, this consists of bones and cartilage connected to muscles. This inner skeletal system also helps explain why animals have a variety of different shapes. Birds have long wing feathers and short necks, while giraffes have long necks and no wings. Both of these animals must support themselves and resist the force of gravity to survive in their environment. The goal of this lesson is to explore how this inner skeletal structure affects the outward appearance of animals.



B. Class Project (60 minutes)

Materials: wooden sticks, hard plastic or PVC pipe, hot glue, screws, or nails, flexible plastic wrap, tape

Steps:

1. Give students a little bit of time to think about the form they want to make. The form does not necessarily need to resemble an animal skeleton.
2. Have the students build a frame using wooden sticks, hard plastic or PVC pipe, and hot glue, screws, or nails.
3. Use wadded up plastic pieces and tape to pad any sharp edges so they do not poke holes in the piece later.
4. After the 'skeleton' is assembled, start wrapping the entire skeleton in plastic, going over it multiple times until everything is covered. The skeleton should still be apparent in the form of the piece, but the form should be completely enclosed, similar to the way internal organs are covered by the skin of an animal.

C. Conclusion (10 minutes)

To conclude the class, ask for the students' input on the following questions:

1. What did you learn about how internal skeletal structure impacts outward shape of organisms?
2. Why might animals not look exactly the same as their skeletal structure might suggest? (Answer: They also have other internal organs/tissues.)
3. Do you think fossils (preserved skeletons) might be useful in learning what prehistoric animals looked like?

Homework:

1. How is it that we can tell what animals like dinosaurs looked like from only their skeletons?
2. What animals would you expect to have similar skeletons? Very different skeletons?
3. What do you think scientists can learn from studying skeletons of extinct animals?
4. Did your final structure look exactly the way you thought it would? Why or why not?
5. Beyond skeletal structure, how else can scientists learn about extinct animals?