

Model a Backbone

Procedure

- 1. Collaborate** Work with a partner to make a model of a backbone. A **backbone** is a series of bones that runs down the back of some animals.
- 2. Use Models** Bend one end of a pipe cleaner so the beads and washers will not slide off. Slide a bead, then a washer, onto the pipe cleaner.
- 3. Use Models** String beads and washers until there is a small space left at the end of the pipe cleaner. Bend this end so the beads and washers do not slide off.
- 4. Ask Questions** Examine pictures of a snake and a bird. On the lines below, write one question about the shape of each animal's backbone.

- 5. Communicate** Answer your question by bending your model to match each animal's backbone. Draw a picture of your model in the space below.



Conclusion

Write the answers to the questions below.

1. **Infer** How does a backbone that can bend help an animal to move?

2. **Predict** How might an animal's ability to move change if its backbone were rigid like a metal tube?

Investigate More!

Design an Experiment Model another backbone. Place three small rubber bands between each bead. Bend the back to match the snake's backbone. How do the rubber bands change the way the backbone moves?