Dear Fido (or Max, or Sophie, or Buddy, or Molly),
How am I Like Thee?  Let Me Count the Ways

Introduction

Do you have a dog?  If so, how well do you know your dog *inside and out*?  How well do you know yourself *inside and out*?  In this activity we will investigate some of the similarities between dogs and humans, specifically as seen in the skeleton.

Materials Needed

Dog skeleton
Dog skull
Human skeleton
Human skull
Reference materials for looking up labeled diagrams of human skeletons and Dr. Kevin Hannon’s (Purdue Veterinary Medicine) dog anatomy computer simulation

Instructions

1. Notice that certain bones in the the human skeleton have labels on them numbered from 1 through 12. Notice also that the dog skeleton has labels on various bones from A through L. Study the two skeletons carefully, and match the correct dog bone with its human counterpart by placing the letter of the dog bone in the blank next to the human bone that it matches.

1. _________ pelvis

2. _________ cranium

3. _________ patella

4. _________ humerus

5. _________ ulna
2. What similarities do you see between the dog pelvis and the human pelvis?

3. What differences do you see between the dog pelvis and the human pelvis?

4. How many pairs of ribs do dogs have?

5. How many pairs of ribs do humans have?

6. Locate the 7 cervical vertebrae in the dog skeleton. How many cervical vertebrae are there in the human skeleton?

7. Locate the 12 thoracic vertebrae in the dog skeleton. How many thoracic vertebrae are there in the human skeleton?

8. Locate the 7 lumbar vertebrae in the dog skeleton. How many lumbar vertebrae are there
in the human skeleton?

9. Here’s a **THOUGHT QUESTION**. Do you think a dachshund would have more vertebrae than other breeds of dogs? Why or why not?

10. Check out the human and dog skulls. How many teeth are there in the dog’s skull?

11. How many teeth are there in the human’s skull?

12. How do the dog’s teeth appear to be adapted for the types of foods that dogs eat?

13. How do the human’s teeth appear to be adapted for the types of foods that humans eat?

14. Going back to the skeletons, how many phalanges per limb do you see on the human skeleton? How about on the dog skeleton?

15. Going back to the dog and human skull, find the hole at the base of the skull where the spinal cord enters. This hole is called the **foramen magnum**. What do you notice about the position of the foramen magnum in the human skull as compared to the dog skull?

16. Thinking about your answer to question 15 above, what do you predict you might notice about the position of the foramen magnum in a chimpanzee skull? **Explain**.
17. Now it’s time for you and your group members to really put your **craniums** together and do some **brain**storming!

Again, examine carefully the differences and similarities between the dog and human skeletons. Try to come up with and explain three characteristics of the human skeleton that allow our species to walk upright.