"HOLLOW STRENGTH" Experiment
Materials needed:
4 sheets of 8 1/2 x 11 paper
paper plate
wooden blocks

1.Students will roll up a sheet of paper (8 1/2 x 11) about 1 in wide into a cylinder. They will make 3 of these (paper bones).

2.Students will stand the bones up on their ends, placing a paper plate on top of the bones.

3.Teacher will ask students to tell what is happening - the hollow rolls will support the plate.

4.Students will begin to add weights (wooden blocks) to the plate.

5.Students will count how many blocks the plate can hold before it collapses the bones.

6.Students will roll 3 more sheets of paper as tightly as they can so that there is no hollow section.

7.Students will stand these "bones" up as before placing the same plate on top of them.

8.Students will place weights on top of the plate until they collapse.

9.Students will deduce what happened. Teacher will explain that hollow bones were able to support more weight. Teacher will also explain that having a hollow center gave the bones a better design and made them stronger.

10.Teacher will continue explaining that the large bones in our body are also hollow, which makes them strong so they can support more weight, but light, so it takes less energy to move them.