SCIENCE READ AND LEARN: BONES

Name: _____ **Date:** _____

Bones are an important part of the human body. Without them, the human body would be a floppy sack of skin and muscle. Bones make it possible for us to move. Bones also protect our inner organs from injury.

Bones at Birth and Beyond

When babies are born, they have over 300 bones. Some of these bones will join together as the baby gets older. Bones continue to develop during a person's childhood and early adulthood. As a matter of fact, bones do not fully develop until the age of 25. When bones are fully developed, the human body will have 206 of them.

What's in a Bone?

Bones are made of bone marrow, compact bone, cancellous bone, and periosteum. Bone marrow is a sponge-like material that is located inside the bone. Bone marrow contains cells that help your body function. Compact bone is very strong and hard. The compact bone is made of calcium and minerals which gives the bone its hardness. When you squeeze your arm, this is what you feel. Cancellous bone is inside the compact bone and often referred to as spongy bone. Lastly, periosteum covers the compact bone. Periosteum is a tough membrane that contains nerves.

Bones are very valuable. Your body would not be able to function without them.

1.) What evidence from the text suggests that bones cannot be bent?

2.) What part of a bone do you think would need to be modified in order to be able to bend the bone?

BENDING BONES DEMONSTRATION

Name: _____ **Date:** _____

Materials:

bowl
vinegar
various sizes of chicken or turkey bones

Directions:

1. Start with clean chicken or turkey bones. Use various sizes. Wing and leg bones tend to be the best for this experiment.
2. Pour vinegar into a bowl.
3. Place the bones into the vinegar.
4. Cover the bowl with a lid or plastic wrap.
5. Leave the bowl alone for at least 48 hours.
6. Remove the bones from the vinegar and rinse them in warm water.
7. Are you able to bend them? If not, place them back into the vinegar for another 24 hours.

Have fun showing off your "super strength" to your friends and family.

What Causes This?

Vinegar is a mild acid and is able to dissolve the calcium in the bones. Calcium makes bones strong, so after the calcium is dissolved, all that is left is soft tissue.

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Thanks!
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