



Name: \_\_\_\_\_ Per: \_\_\_\_\_

## Forces of Nature

Fewer than 10% of all living things become fossilized. The forces of nature can later destroy those that do fossilize. Today we will test your fossil by mimicking the forces of nature to find out how resistant it really is.

- List the materials you used to make your fossil.
- What organism is your fossil a model of?
- Is your fossil a body fossil or a trace fossil?
- List 3 forces of nature that can destroy a fossil.

### **Test 1: The Water Bath**

- Describe how your fossil did when placed in water. Give evidence for your answer.
- Look around at other fossils. Describe one fossil that reacted differently than yours in water.

### **Test 2: Interior Earth Heat** (Some fossils might emit toxic gasses if we did this test.)

- What might happen to your fossil in a 500° oven?
- What materials might do better or worse in such an oven?

### **Test 3: The Crusher**

- Put your fossil in the vice. Describe how it performed under pressure. (If you prefer, just imagine this and describe what would happen.)
- Did you make your fossil out of brittle or flexible materials?

### **Test 4: The Hammer**

- Ask your teacher to hit your fossil with a hammer. What happened? (If you prefer just to imagine this action, that's fine.)

- Were any of the fossils unaffected by a hammer hit? Explain.

**Test 5: Erosion**

- Rub a piece of sandpaper over your fossil. Describe what happens.
- What material in nature would be the most resistant to erosion?

**Summary Questions:**

- Why are there gaps in the fossil record?
- What are the most desirable conditions for fossil formation?
- Name two biotic factors that could destroy a dead organism before it can fossilize.
- Name two Earth forces that could destroy a fossil in the Earth's crust.
- Pick a natural fossil to survive the following conditions:

<b>Water submersion</b>	<b>Intense Heat</b>	<b>Sustained Crushing</b>	<b>Blunt Forces</b>	<b>Erosion (wind, sand)</b>

**Rate Your Fossil**

1 = Likely to become sediment fragments soon



10 = Super resistant to the forces of nature

Your Rating = \_\_\_\_\_ Justify your rating: