# **My Desert Sponge**

Name:

Period:\_\_\_\_\_

## Purpose:

The small sponge you have been given represents your own desert organisms. Organisms need water to sustain life. In the desert animals have adapted to conserve water. You must conserve the water in your sponge. Over a 24 hr period you must take care of your creature in a manner that will best achieve this goal using only natural materials. Your creature must be out in the open for at least 4 hrs during the 24 hr period to feed.

### Materials:

sponge balance water

Independent variable:

**Dependent variable:** 

Hypothesis: (If and then)

**Experimental Design:** (pictures and your plans and modifications)

#### Procedures:

- 1. Obtain a small sponge from Mrs. Davidson
- 2. Weigh your sponge on a triple-beam balance
- 3. Record mass in grams
- 4. Make modifications to your creature
- 5. Record observations every 2 hrs
- 6. Record any changes you make to your creature
- 7. Mass your sponge at the end of 24 hrs and record

# **Data and Observations:**

Quantitative Data

Beginning mass: \_\_\_\_\_ Ending mass: \_\_\_\_\_

## Qualitative Data

Time (hrs)	Observations
Initial	
2	
4	
6	
8	
10	
Before you go to bed at night	
When you wake up	
Final Observations in class	

# Analysis:

1. List 3 adaptations you made to your sponge and explain your reasoning behind each one.

- 2. Explain the success or failure of each of your adaptations.
- 3. Explain 3 reasons why water is important to organisms?

4. Explain 2 consequences to an organism if it could not obtain enough water?

5. Compare your observations of your "creature" as compared to a real organism. What does each observation correspond to in real life? (Example: sponge drying up: organism dehydrating)

6. What are 4 important properties of water? Why are each of these so important?

7. How is this lab similar and different to animals in a real environment? Explain 4 ways.

8. How can water act as a limiting factor in an ecosystem?

**Conclusions:** (3 concepts you learned in complete sentences)