

**Unit A: Experimental Design**  
**Types of Error in Experiments**

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

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

**Purpose(s):**

1. To *determine* potential types (sources) of **error** that can occur in a **scientific investigation**.

**Instructions:**

- Go online to **Projects-> Scientific Method-> Six types of Error (Prezi presentation)** and fill in the Data Table below.
- Next, answer the following questions regarding sources of error in complete, quality, & correct sentences.

<b>Data Table 2 - Some Examples of Sources of Error in an experiment</b>	
<b>Types of Error</b>	<b>Example(s)</b>
<b>Experimental Design Error</b>	<ul style="list-style-type: none"><li>•</li><li>•</li><li>•</li><li>•</li></ul>
<b>Operator Error</b>	<ul style="list-style-type: none"><li>•</li></ul>
<b>Observation Error</b>	<ul style="list-style-type: none"><li>•</li></ul>
<b>Recording Error</b>	<ul style="list-style-type: none"><li>•</li></ul>
<b>Calculation Error</b>	<ul style="list-style-type: none"><li>•</li></ul>
<b>Measuring Tool Error</b>	<ul style="list-style-type: none"><li>•</li></ul>

**Sources of Error:** Use Data Table 1 above to help you identify the type of error in each statement below. Next, write the type of error occurring in each situation.

1. A group of students were talking and did not follow the lab procedure correctly.
  
2. A group of students had two manipulated variables in their experiment.
  
3. While analyzing results, a student realizes the balance the team was using was not accurate.

4. The student added the results for an experiment incorrectly.
  
5. Students gathered data on Red-Legged Frog tadpoles when they should of collected data on Adult Red-Legged Frogs.
  
6. The lab team forgot to save their data on the computer and lost it all.
  
7. The student used a meter stick to measure the whale's length instead of a tape measure.
  
8. Write down your own Error situation and then explain what type of error the situation represents.
  
  
9. What types of error were present in Dr. Goldberger's experiment? *Explain.*