Name\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Period \_\_\_\_\_\_\_\_\_\_\_\_\_ Date \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_



**Lesson 4: Battery Types**

When choosing a battery, it is important to consider the pros and cons of each battery type. Zinc batteries, for instance, do not last as long on the shelves as alkaline batteries do. However, zinc batteries are often cheaper than alkaline batteries.

**Doing the Science**

1. Transfer the applicable data (Battery Type and mWh/Cost) from Lesson 1 Table 1 and Lesson 3 Table 1 into the table below.
2. Find the average mWh/Cost for all of the Zinc batteries by adding up the values of mWh/Cost for each Zinc battery and then dividing that total by the number of Zinc batteries.
3. Repeat step 2, this time with the Alkaline batteries.

**Table 1.**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Battery** | **mWh/Cost**  | **Battery Type** |  | **Battery** | **mWh/Cost** | **Battery Type** |
| **A** |  |  | **N** |  |  |
| **B** |  |  | **O** |  |  |
| **C** |  |  | **P** |  |  |
| **D** |  |  | **Q** |  |  |
| **E** |  |  | **R** |  |  |
| **F** |  |  | **S** |  |  |
| **G** |  |  | **T** |  |  |
| **H** |  |  | **U** |  |  |
| **I** |  |  | **V** |  |  |
| **J** |  |  | **W** |  |  |
| **K** |  |  | **X** |  |  |
| **L** |  |  | **Y** |  |  |
| **M** |  |  | **Z** |  |  |

**Do You Understand?**

1. What is the average mWh/Cost for the Zinc batteries? For the Alkaline batteries?
2. Which battery type is better for more mWh/Cost? Is the difference significant or negligible?