Topic: Identifying and Reading Lab Equipment

Teacher Information

Time Allowance
45 min.

Background
Students will test meteoroid samples and plant samples to make sure they are safe for use. Testing these samples requires using several pieces of basic lab equipment. Students will practice reading basic laboratory equipment and recording data on a data log sheet similar to what will be used during their mission at the Challenger Learning Center.

Materials
6 graduated cylinders
6 beakers
electronic balance
rulers
6 general items to be massed (pencil, paper clip, scissors, etc...)

Preparations
1. Prior to students arrival, set up stations according to the list below:
   - Station 1 graduated cylinders
   - Station 2 electronic balance
   - Station 3 beakers
   - Station 4 rulers
2. Fill graduated cylinders and beakers with varying levels of water and label them A-F. (You can use food coloring to color the water to make it easier to see.)
3. Create an answer key.
4. Divide Students into pairs or have them work individually.
5. Students should rotate through the stations recording their findings and data.
Identifying and Reading Lab Equipment
Student Worksheet

Read the following
You will rotate from station to station in order to record the necessary data.

Station 1

1. Draw a picture of a graduated cylinder.

2. Read the volume of the following graduated cylinders. Label your answers with mL for milliliters. Example: 10 mL
   A. \[\text{___________}\] B. \[\text{___________}\] C. \[\text{___________}\]
   D. \[\text{___________}\] E. \[\text{___________}\] F. \[\text{___________}\]

Station 2


4. Find the mass of the items. Label your answers with g for grams. Example: 10 g
   A. \[\text{___________}\] B. \[\text{___________}\] C. \[\text{___________}\]
   D. \[\text{___________}\] E. \[\text{___________}\] F. \[\text{___________}\]
Identifying and Reading Lab Equipment
Student Worksheet (continued)

Station 3

5. Draw a picture of a beaker.

6. Read the volume of the following beakers. Label you answers with mL for milliliters. Example: 10 mL

   A. ______________  B. ______________  C. ______________
   D. ______________  E. ______________  F. ______________

Station 4

7. Draw a picture of a ruler.

8. Measure the following items in both inches and centimeters. Label answers “ for inches and cm for centimeters. Example 11” and 28 cm.

   Floor tile ____________________     ___________________
   Brick ____________________     ___________________
   Notebook ____________________     ___________________
   File Cabinet ____________________     ___________________
Questions

1. Why is it important to label each answer with its corresponding form of measurement?

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________________________________________________________________________________________

2. List some things you would measure with a graduated cylinder.

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________________________________________________________________________________________

3. List some things you would measure with a beaker.

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________________________________________________________________________________________

4. Why would a scientist use a graduated cylinder instead of beaker?

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5. Why do astronauts take measurement readings in centimeters and not inches?

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