

Topic: Reading Graduated Cylinders and Beakers

Teacher Information

Time Allowance

50 min.

Background

Reading lab equipment to make accurate measurements is an important scientific skill.

Materials

Measuring Liquids Student Sheet

5 graduated cylinders

5 beakers

food coloring

water

paper towel

label or adhesive note with station numbers 1-5

Preparation

1. Lead a discussion and demonstration on reading the volume of liquids from a graduated cylinder or beaker.
2. Discuss the distinction between graduated cylinders and beakers and merits of using one over the other.
3. Fill each graduated cylinder and beaker with various amounts of water.
4. Put one drop of food coloring in some of the containers, but not all.
5. Set up 5 stations with one beaker and one graduated cylinder on a paper towel at each.
6. Label each station with the adhesive notes 1-5.

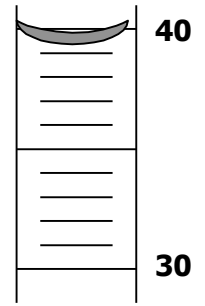
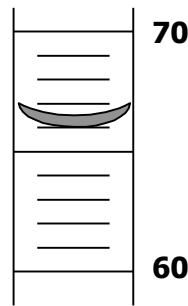
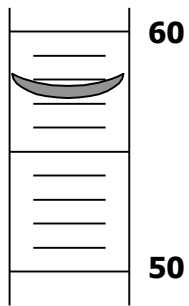
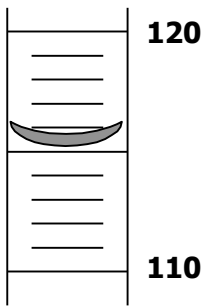
Reading Lab Equipment

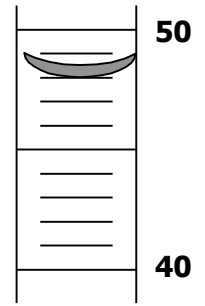
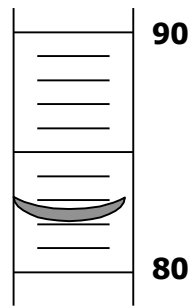
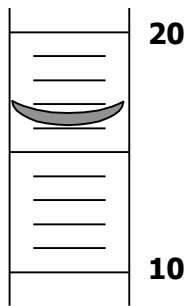
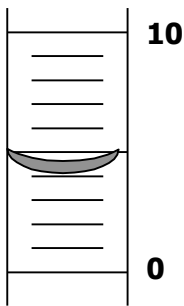
Student Worksheet

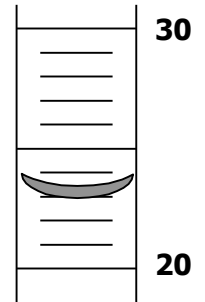
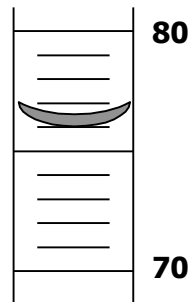
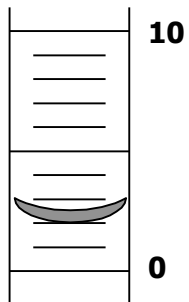
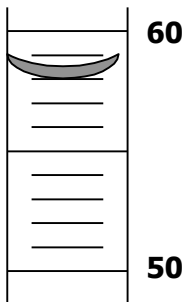
Water supplies on board the space station or a spacecraft must be tested frequently to make sure that they are safe for human use. Measuring the proper amount of liquids are part of the testing process.

Procedure

1. Measure the amount of liquid in each graduated cylinder below, using the bottom of the meniscus.
2. Record the measurement on the line below each graduated cylinder, making sure use one decimal place and label your units in mL.







Reading Lab Equipment

Student Worksheet

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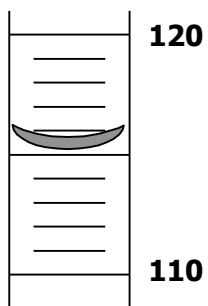
Procedure

1. Report to stations 1-5 and measure the amount of liquid in both the graduated cylinder and beakers.
2. Record the measurement in the boxes below, making sure use one decimal place and label your units in mL.
3. Finish by answering the questions at the bottom of the page.

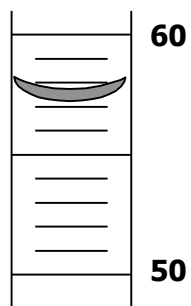
Station Number	Graduated Cylinder Reading	Beaker Reading
1		
2		
3		
4		
5		

1. Why is it important to label your measurements?
2. Why would a student use a beaker to measure a liquid instead of a graduated cylinder?

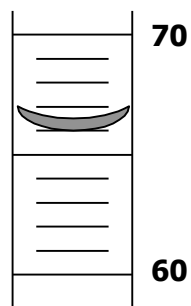
Reading Lab Equipment-ANSWER KEY



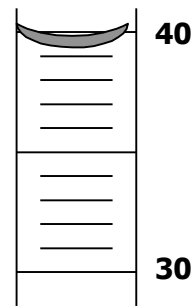
115.0 mL



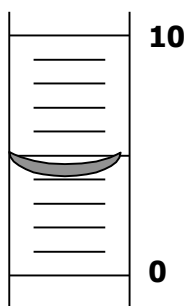
57.0 mL



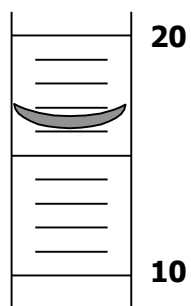
66.0 mL



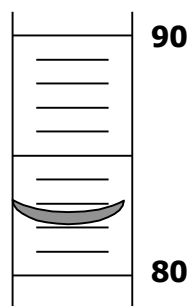
39.0 mL



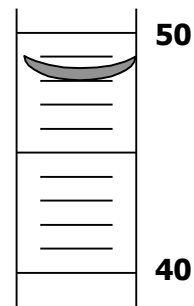
4.0 mL



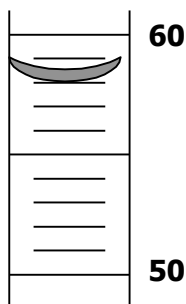
16.0 mL



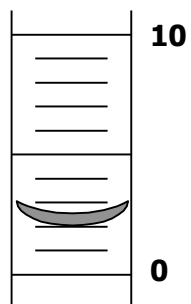
82.0 mL



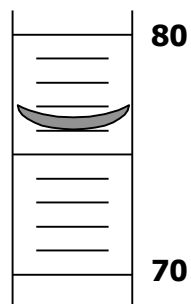
48.0 mL



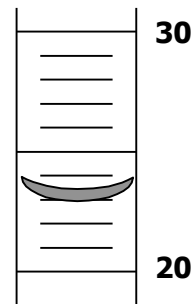
58.0 mL



2.0 mL



76.0 mL



23.0 mL