

Tools of the Trade

3rd Grade

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1. References

Columbus Public School District Curriculum Guide, Science, Grade 3, January 2005 Printing.

2. Benchmarks

GLI: SI-1, SI-2, SI-3, SI-5, SI-6

3. Objectives

Assess students ability to discern what tools can be used to measure length, mass/weight, and volume. Demonstrate the proper use of the tools necessary to measure the desired feature in the English and Metric systems. Demonstrate the proper safety procedures when using certain tools of the trade.

4. Materials

- Ruler, yard stick, meter stick
- Balance scale, triple beam balance
- Graduated cylinder(s)
- Lines of varying length
- Things to measure mass of (ball)
- Known units of mass to offset the balance
- Liquids of different color to measure volume

5. Demonstration

Discuss the necessity to be able to measure things in different units. Show students how to properly measure the length of lines drawn to various lengths. Also demonstrate the difference between the English and metric systems. Measure the mass of things with a balance scale and a triple beam balance. Also discuss how the balances used are different than the bathroom scale they use at home or different than the scale in the nurse's office. Measure the volume of different liquids. Use both the metric and English systems.

6. Target Objectives

The students should be able to see that certain tools are used in different ways. The students should also recognize that the tools tell us different information about what

we are doing. The students should also see that the same sample can be measured with all the tools that were demonstrated.

7. Target Model

- Length, mass, and volume are tangible properties that one can measure.
- There are two scales that can be used to measure length, mass, and volume.

8. Procedure

Have the students show that they understand the demonstration and use the tools of the trade that were demonstrated to measure length, mass, and volume.

9. Summary

This lesson is mainly a demonstration of the tools used to measure length, mass and volume. The target objectives and models are to show that we can measure length, mass, and volume readily using the English and metric scales. It is also important for the students to understand that knowing these properties of an item can be very useful, not only in science, but in the everyday life as well.