

Lesson: Math, Grades K-3
Topic: Measuring



Treasure Measure

Overview

Students will use a variety of digging tools to measure the amount of dirt each tool takes out of "the hole" while digging for "buried treasure".

Learning Outcomes

Ohio Standard – Measurement

Students estimate and measure to a required degree of accuracy and precision by selecting and using appropriate units, tools and technologies.

Ohio Outcomes

Identify and select appropriate units for measuring

Materials

- Dirt
- Spoons
- Garden trowels
- Shovels
- Scale or balance
- Containers to hold the dirt after it has been scooped so it can be measured.

Vocabulary

- Weight / mass
- Ounce / gram
- Pound / kilogram
- Scale / balance
- Estimate
- Predict

Lesson

Set Up

- Prepare an area in the classroom or outside where the students may use different tools to dig dirt. *Note* - If you use a garden shovel, it may be a good idea to do this activity outside.
- Before students start the activity, teacher should weigh the containers that will be used to measure the amount of dirt each tool holds. That way the weight of the container may be subtracted from the overall weight and leave only the weight of the dirt.

Activity

- Have a short discussion about ounces, pounds and weight. Give some examples of items that would be weighed in ounces. Give some examples that would be weighed in pounds.

- Ask each student group to make two piles of dirt. In one pile they should estimate what they think an ounce of dirt is and in the second pile they should estimate the amount of dirt that would be a pound.
- Then weigh the dirt.
- Make a class graph that shows the number of groups that had not enough dirt, those that were very close, and those that had too much dirt.
- Give each group a set of tools (a spoon, a garden trowel, and a garden shovel). If you do not have enough tools for each group to have a set, then rotate tools between groups throughout the activity.
- Each student group will estimate and record the amount of dirt each tool will hold as they dig for treasure. Each estimate should include a number as well as the unit (ounces / grams or pounds / kilograms) they feel the tool will hold.
- After the estimate is made and each tool is used to scoop the dirt, the dirt should be weighed and its weight should be recorded.

Extensions

Use the System International or the metric system and include grams, kilograms and balances.

Handouts

- Treasure Measure data sheet
- Treasure Measure question sheet

Evaluation

Use the treasure measure question sheet that includes questioning techniques from recall to evaluation.

Treasure Measure

Data Sheet



	Estimate		Actual	
Spoon	_____	ounces	_____	ounces
		pounds		pounds
Trowel	_____	ounces	_____	ounces
		pounds		pounds
Shovel	_____	ounces	_____	ounces
		pounds		pounds

Treasure Measure

Questions



Which one is heavier? ounce pound

Draw two piles of dirt. One pile will be an ounce. One pile will be a pound.

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Name an object that is about the same size as an ounce of dirt.

Name an object that is about the size of a pound of dirt.

Which tool would you want to use if you were digging for treasure: spoon, garden trowel, or shovel? Explain why.

METRIC

Treasure Measure

Data Sheet



	Estimate		Actual	
Spoon	_____	grams	_____	grams
		kilograms	_____	kilograms
Trowel	_____	grams	_____	grams
		kilograms		kilograms
Shovel	_____	grams	_____	grams
		kilograms		kilograms

METRIC

Treasure Measure

Questions



Which one is heavier? gram kilogram

Draw two piles of dirt. One pile will be a gram. One pile will be a kilogram.

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Name an object that is about the same size as a gram of dirt.

Name an object that is about the size of a kilogram of dirt.

Which tool would you want to use if you were digging for treasure: spoon, garden trowel, or shovel? Explain why.
