

Grab a Gram

Description: Students work in teams and cooperate to pick up given materials in an amount not to exceed fifty (50) grams. Several substances will be used.

Age Group: Upper elementary.

Time Required: 15 minutes, estimated

Key Question: With what degree of accuracy can teams of two students estimate the mass of various materials?

Content Expectations Addressed: Inquiry involves generating questions, conducting investigations, and developing solutions to problems through reasoning and observation.

Inquiry includes an analysis and presentation of findings that lead to future questions, research, and investigations.

Reflecting on knowledge is the application of scientific knowledge to new and different situations. Reflecting on knowledge requires careful analysis of evidence that guides decision-making and the application of science through history and within society.

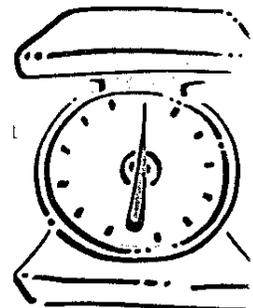
All objects and substances have physical properties that can be measured.

Teacher Information: The gram is the basic unit for measuring mass in the metric system. 28 grams equal approximately 1 ounce. A paper clip weighs about 1 gram.

Science Process Skills: Estimating, communicating, and measuring.

Materials: Plastic cups, balances, 50 gram weights, materials such as rice, dry macaroni, and unpoppered popcorn in plastic containers.

Procedure: Each team member picks up some of the given material and places it in the provided container for delivery to the judges for massing. The object of



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the activity is to come as close to 50 grams as possible when obtaining the samples.

Alternate procedure:

Have a balance set up with two containers of the same mass, one on each side. Have a 50 gram weight in one of the containers. If the sample is equal to 50 grams, the balance will remain in its original position when one container is replaced by the student sample.

Resources:

Bendick, J., *How Much and How Many*

Jones, Beau, *Technology: Causing Problems, Creating Solutions*, Zaner-Bloser Inc. 1992

Measuring and Sorting, a unit/kit written by the Baffle Creek Area Mathematics and

Science Center, 1999

Pluckrose, Henry, *Math Counts Weight*, Children's Press, 1995