



Math Activities

Title: **Rechenka's Eggs**

Author: **Patricia Polacco**

Illustrator: **Patricia Polacco**

Math Concepts:

- patterns
- weight
- geometric shapes
- graphing
- size
- estimation

Finding and Creating Patterns

After viewing the program, obtain a copy of the book and look for patterns in Patricia Polacco's illustrations. For example, there are patterns on the eggs, quilts, rugs, clothing, tablecloths, domes and buildings of Moskva, even on Babushka's chamber pot. Give students a strip of paper (such as cash register tape) and some colorful markers and have them create patterns using the traditional pysanky designs of triangles, circles, stars, and flowers. Polacco's illustrations will give them ideas for colors to use. Display their patterns in the room, as bulletin board borders, edge trim for bookshelves and table tops, door and window borders, frames for student work, and the like.

Investigate the weight of an egg in the following ways:

Estimation

Have students estimate the weight of a raw egg in different sizes (small, medium, large, extra-large). Record their estimates. Weigh the eggs and compare the actual weights with the estimates.

Prediction

Display an assortment of common classroom objects, such as pencils, pens, markers, erasers, rubber stamps, scissors, etc., and have students predict which ones approximate the weight of an egg. Record their predictions and make comparisons by weighing the objects.

Graphing

Set up a series of simple graphs to explore problems such as these: What is the heavier part of an egg—the shell or the insides? Which is heavier—a raw egg or a hard-boiled



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egg? Which is heavier—a hard-boiled egg or a scrambled egg? Which is heavier—a hard-boiled egg or a soft-boiled egg? Pose one question a day. To make the graph, set up egg cartons and a basket of small plastic eggs with the heading, “Which is heavier?” Label egg cartons for each side of the problem (e.g., “raw egg” and “hard-boiled egg.”) Working on their own throughout the day, students indicate their answer by placing an egg in the appropriate carton. Tabulate the results at the end of the day and conduct an experiment to resolve the problem.

Do-at-Home Activity

Copy the “Elliptical Shapes” worksheet on the next page for students to take home. Have students search their homes room by room to find elliptical objects and record the information on their worksheets. After students bring their worksheets back to school, cut out the large ellipses, and put them together in an ellipse-shaped book.

Name: _____ Date: _____

Elliptical Shapes

An egg most closely resembles the shape of an ellipse. Search your home to find other things that are an elliptical shape. Draw and label each object you find in the big ellipse below.

