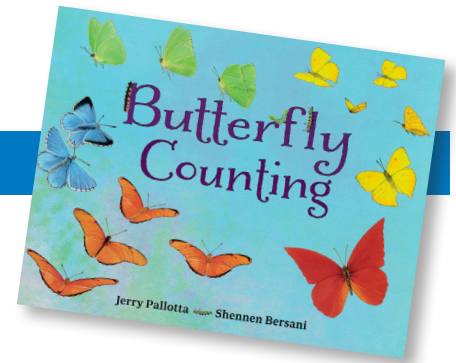


# Butterfly Counting

## RIF EXTENSION ACTIVITIES FOR EDUCATORS

STEAM-THEMED: SCIENCE, TECHNOLOGY, ENGINEERING, ART, MATH



### SCIENCE

#### MONARCHS, MILKWEED, AND MIGRATION

Visit [www.learner.org/jnorth](http://www.learner.org/jnorth) to learn about the Monarch butterfly, milkweed plants, and when and why these butterflies migrate to Mexico. You may want to:

- ◆ plant your own milkweeds in a school garden to attract Monarchs (**be careful**, since the plant is poisonous if eaten by humans!),
- ◆ create a symbolic Monarch to send to Mexico (see website for details), or
- ◆ observe and report any Monarch sightings you might have with your students.



### TECHNOLOGY, ART

#### BUTTERFLY BEGINNINGS

Materials: paper, crayons or markers

Watch this video on the life cycle of the butterfly: [www.youtube.com/watch?v=7AUeM8Mbalk](http://www.youtube.com/watch?v=7AUeM8Mbalk). Have students draw the process of development from egg to butterfly. Students should label their drawings and explain them to a partner.

### ART, SCIENCE

#### CHROMATOGRAPHY CREATURES

Materials: round coffee filters, markers, pipe cleaners, water, small containers

Cover the surface of a table with newspaper. Have students draw a thick, dark circle in marker around the center of the coffee filter. Write the color name in pencil in the center. Fold the filter in half two times to form a cone. Fill a small container with water. Pull apart the cone-shaped filter so it balances right on the glass with the tip of the cone just touching the water. (Do NOT let the marker circle touch the water—just the uncolored tip of the filter cone.) What happens to the color as the water absorbs up the filter? Why? Do students

see any new colors? Once filters have dried, use pipe cleaners to gather filters in the middle and create a body for the butterfly. The filter will be the wings.

### ENGINEERING, SCIENCE

#### COOL CAPILLARIES

In the activity above, water travelled *up* from the cup into the coffee filter. How? Liquids can flow in very narrow spaces even working against gravity. This is called *capillary action*. Can your students think of any other examples of capillary action in everyday life? (Hint: water travelling through a plant.) Can they think of any inventions that use this property of liquid? (Hint: fountain pens.)

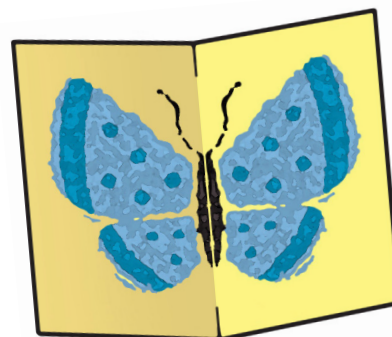
### MATH, ART

#### SYMMETRICAL SPECIALISTS

Materials: butterfly photographs, paper, paint, brushes

Show students photographs of butterflies (pictures from the text are excellent for this). Discuss the concept of *symmetry*, that there is a line dividing an object into two identical parts. Observe the butterflies and the symmetrical makeup of their wings. Fold sheets of paper to create a “line of symmetry.” Have students paint one half of the paper. Let them fold it over and press lightly to transfer the paint. Carefully unfold the paper. Can students see symmetrical patterns

in their paintings? Why do they think butterflies’ wings are symmetrical?



Reading Is Fundamental