

Beautiful Butterflies



VIRGINIA
AQUARIUM
& MARINE SCIENCE CENTER

Students will learn about the life cycles of a butterfly and their unique coloring and symmetry.

Duration

Preparation: 20 minutes (*some steps to be completed the night before)

Activity: 10-15 minutes each

Supplies

- construction paper
- bow tie pasta, spiral pasta, large shell pasta
- dried peas (one per student)
- glue
- markers/crayons
- M&M's
- candy corn
- plastic bowl
- bread (four slices)
- food coloring (red, blue, yellow, green)
- tempera paint
- pipe cleaner
- scissors
- green yarn
- small twigs
- From Caterpillar to Butterfly by Deborah Heiligman (optional)

Instructions

Activity 1: Guided Imagery

Read from Caterpillar to Butterfly by Deborah Heiligman or a similar book about the life cycle of a butterfly. While reading the book the students should be allowed to ask questions about how the butterfly is developing. After the book has been read the students should be questioned about the information in the book.

Activity 2: Construct a "Life Cycle of a Butterfly"

1. Cut a sheet of construction paper into strips that are 3x8 inches wide and divide the paper into four equal sections.
2. Punch one hole in the top of the paper and tie a piece of yarn through the hole.
3. Cut a leaf shape from green construction paper.
4. Glue the leaf to the first box and glue one pea to the leaf (egg).
5. Glue some bits of green yarn in the second section for grass.
6. Glue one piece of spiral pasta onto the yarn (caterpillar).
7. Glue on small twig to the third section.
8. Glue one piece of shell pasta to the twig (chrysalis).
9. Color one piece of bow tie pasta with a marker, tie a small piece of pipe cleaner around the pasta, and glue two wiggle eyes to the front of the pasta.
10. Glue this piece of pasta to the bottom section of the paper (butterfly).
11. Discuss with the students the life cycle that the butterfly goes through.

Activity 3: Protective coloring

*The instructors will complete this part of the activity preparation the previous day.

1. Peel off and discard the crust of four slices of white bread.
2. Break each bread slice into 20 small pieces.
3. Leave the pieces of one slice white, color the other three slices red, blue, and green.
4. For each color mix together 1/4 cup water and 10 drops of food coloring.
5. Soak pieces of bread in colored water.
6. Spread pieces of bread onto cookie sheet and allow to air dry (overnight).

Day of the activity:

1. Choose an area with short grass where many birds are seen.
2. Let students place each different colored bread pieces together in a circle of about 12 inches in diameter, each circle about 6 feet apart.
3. Ask students to think about why we have done this, and what they think will occur to the bread over the next few hours.
 - a. The bread will be gathered later in the afternoon.
 - b. When the bread is gathered the students should discover that more of the red, white, and blue colored bread is gone (the green will be left because it will not be easily seen in the grass)
 - c. Extend this into a discussion: "What if the bread were insects or butterflies which would have been eaten by the birds?" "How could this help to extend the life of the insect or butterfly?"

Activity 4: M&M Camouflage Game

1. Before the activity is begun the instructor will mix together in a bowl M&M's and candy corn so that the yellow and orange M&M's are camouflaged.
2. Allow each student to pick out of the bowl the first five M&M's that they see.
3. Instruct the students to NOT eat the M&M's until the activity is concluded.
4. Once each student has chosen their candy make a tally of the number of each color.
5. In most circumstances the orange and yellow M&M's will have lower numbers because they blend in with the candy corn.
6. Discuss why some colors were chosen more often than others have students relate this to nature and how this could be helpful to insects.

Activity 6: Symmetric Painting

1. Class discussion about symmetry of butterflies
2. Each student will be given a sheet of paper that has the outline of a butterfly printed on it
3. The students will be instructed to fold the paper in half (like a hot dog), and then unfold it so that there is a line down the middle
4. Students will have a variety of paint to choose from and they will be instructed to place several different colors on only one side of the butterfly
5. After putting paint onto picture, it should be folded in half once again so that the paint will spread to the other side
6. Now the paper can be unfolded and both wings of the butterfly will look the same
7. The paper should be laid to dry
8. Once the picture has dried the students can cut out the butterfly shape and place antennae on the butterfly

At this time, the protective coloring activity should be completed by picking up the remaining bread pieces.

