

Which Leaf Shape Can Hold the Most Butterfly Eggs?

A Carolina Essentials™ Activity

Student Worksheet



Overview

Butterflies undergo complete *metamorphosis*, a change in their form. They have 4 life stages: egg, larva, pupa, and adult. Female painted lady butterflies lay their eggs on leaves. The butterflies like hollyhocks, daisies, and asters for laying their eggs. The eggs are attached to the leaves with a liquid that hardens and protects the eggs. Most of the eggs hatch in 3 to 5 days. When the temperature is cooler, hatching may take longer. To see the eggs clearly, you must use a magnifying glass.

MATERIALS

100 eggs (paper circles)
Leaf outlines
Metric ruler



Hollyhock



Daisy



Aster



Lily

Essential Question

Does the shape of a leaf change the number of eggs butterflies can lay on the leaf?

Activity Objectives

1. Count the number of eggs that can be laid on each leaf type.
2. Decide if the leaf shape determines the number of eggs laid.

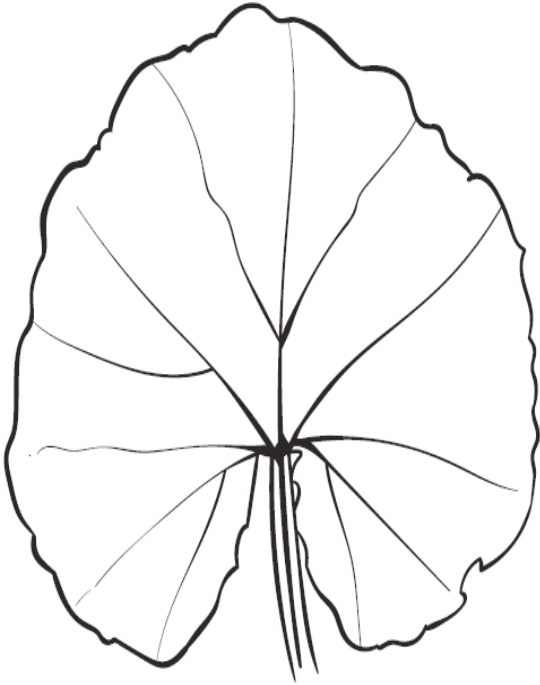
Which leaf do you think will hold the most eggs? _____

Procedure

1. Measure the length of each leaf. Use the line in the center of the leaf as a guide for the ruler.
2. Write your answer in the blank.
3. Cover each leaf with the green butterfly eggs. The eggs should be close together, but they should not touch or overlap. Eggs cannot hang over a leaf.
4. Count the number of eggs on each leaf.
5. Write down the number of eggs on each leaf.

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Leaves



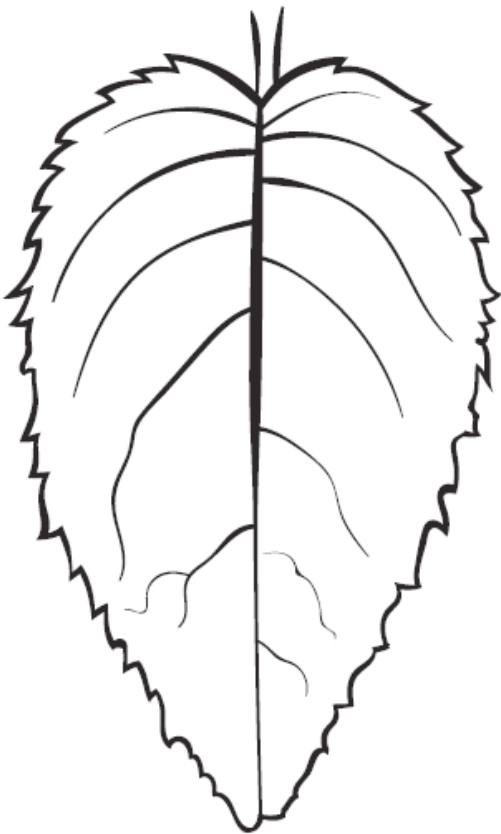
Hollyhock length _____ cm

Eggs _____



Daisy length _____ cm

Eggs _____



Aster length _____ cm

Eggs _____



Lily length _____ cm

Eggs _____

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Analysis

1. Were the lengths of the leaves alike or different?
2. Which leaf held the most eggs?
3. Which leaf held the fewest eggs?
4. Look carefully at the shapes of the leaves. If the lengths are the same, why can some leaf shapes hold more eggs?
5. Why do you think it is beneficial for painted lady butterflies to lay eggs on aster, daisy, and hollyhock leaves?
6. Why is it not beneficial for butterflies to lay eggs on lilies?
7. Draw a leaf shape that could hold many butterfly or insect eggs.

