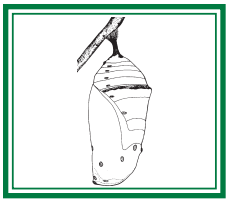


Lesson 5: How Much Do Caterpillars Eat in One Day?

Key Concepts:

- Quantitative observations are an essential component of scientific inquiry.
- Filling in a data sheet with recorded quantitative data is a task most scientists must perform regularly.

Skills:

- Trace leaves on paper and cut them out.
- Make quantitative observations and fill in a data sheet.
- Compare the quanties of milkweed eaten over several days.

Materials:

- Stiff paper or card stock (for tracing milkweed leaves)
- *How Much Does a Caterpillar Eat?* (student data sheet)
- Individual caterpillar containers
- Caterpillars and milkweed
- Scissors and art supplies

Objective

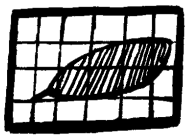
Trace milkweed leaves onto card stock in order to make quantitative observations of the milkweed consumed by a monarch caterpillar in one day. Fill in a data sheet and compare the quantities of milkweed eaten over several consecutive days.

Background

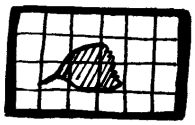
Scientists often collect detailed numerical data on aspects of their observations. These are called *quantitative* oberservations (as opposed to *qualititative* observations). For example, a monarch scientist may be interested in recording *how much* milkweed one caterpillar can eat in one day or in a set amount of time (quantitative) instead of simply noting that the caterpillar ate some milkweed (qualitative). In this lesson, students will practice making measurements of how much milkweed is eaten and then record their measurements on a datasheet.

Procedure

1. Trace a milkweed leaf onto card stock and cut it out to make a pattern.



Beginning of day



End of day

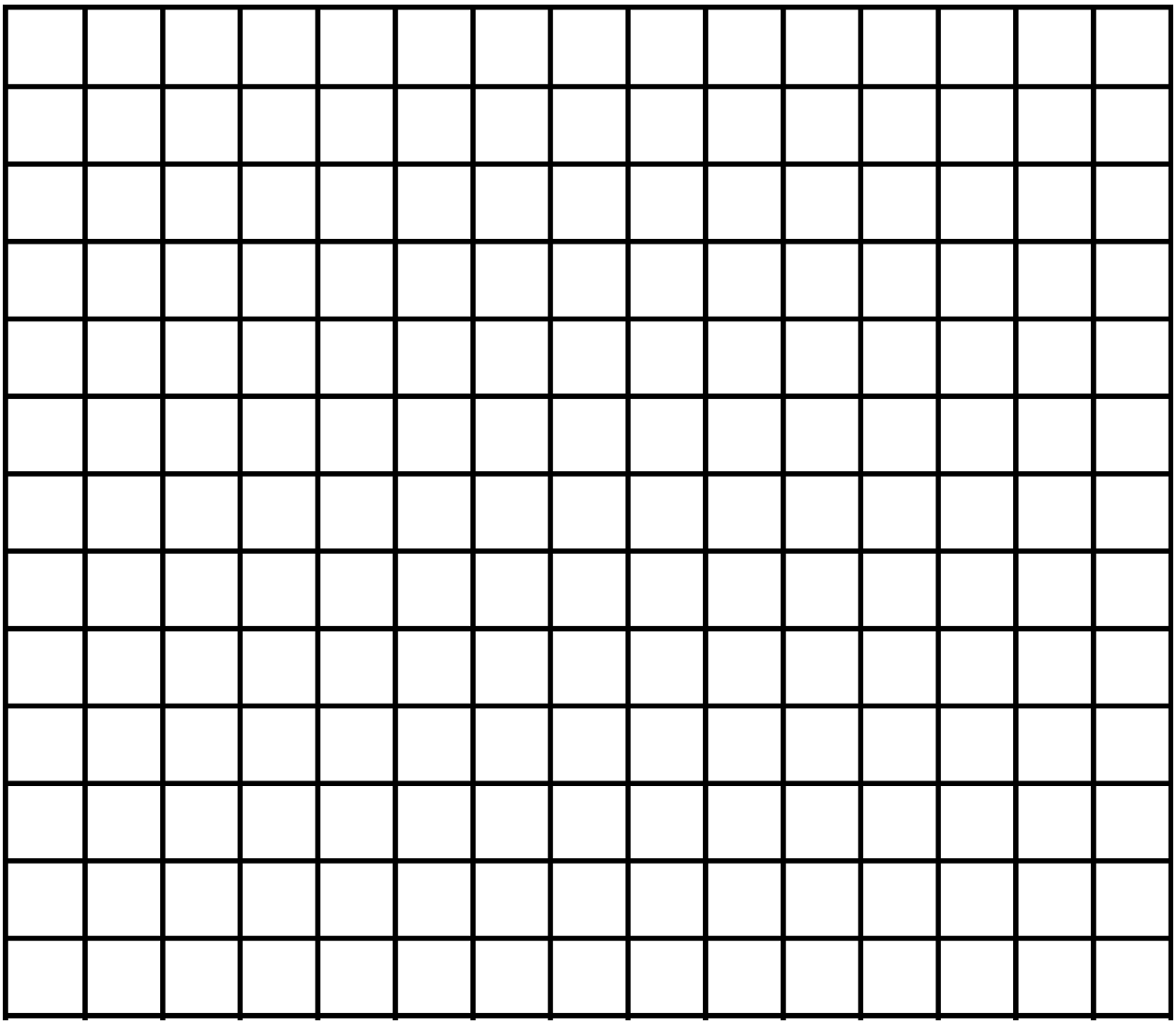
2. Give each child a data recording sheet and have them trace the pattern onto the graph paper and count the number of squares the leaf takes up. Fill in the numbers on the recording sheet.
3. Put 1 caterpillar and the milkweed leaf (that was just traced) in a container.
4. Have students predict how many squares the caterpillar will eat and record their prediction.
5. At the end of the day, retrace the eaten leaf on the original pattern and cut out the eaten portions.
6. Have students trace the new pattern on top of their drawing on the graph paper and color the part that was left. Students may then count how many squares of leaf were eaten and record this amount on the sheet.
7. Compare the amount of milkweed eaten each day as the caterpillar grows. The long term results could be shown on a picture graph (see below). This is similar to what is done in Lesson 6. Children could

also include a picture of their results on their daily journal (Lesson 3) or calendar (Lesson 4).

Monday	Tuesday	Wednesday	Thursday	Friday
Part of a leaf 	Part of a leaf 	Rest of leaf  Plus 1/2 	1 1/2 leaves  	2 leaves  

Picture graph showing how much one larva ate each day during a week (dark parts were eaten).

How Much Does A Caterpillar Eat?



Name _____ Date _____

The leaf is _____ squares.

I think the caterpillar will eat _____ squares of leaf.

The caterpillar ate _____ squares.