LETTER TO PARENTS

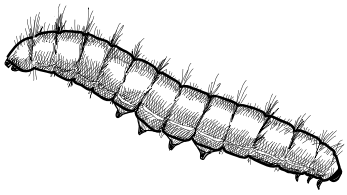
Cut here and paste onto school letterhead before making copies.

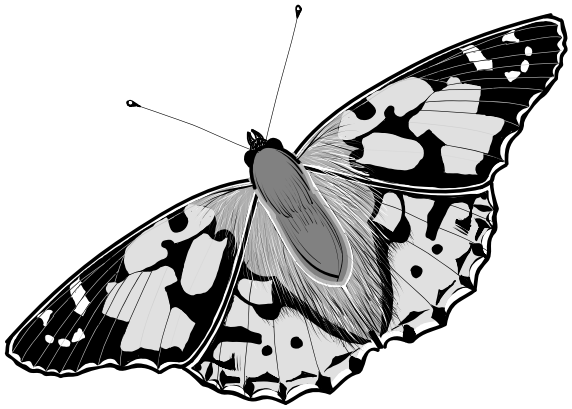
SCIENCE NEWS

Dear Parents,

Our class is beginning a scientific study of insects. We will be caring for and investigating several different insects to discover secrets of their lives. Some of the insects that will be visiting our class undergo complete metamorphosis, as in the classic case of the butterfly—egg to caterpillar to chrysalis to butterfly. Other insects reach maturity by growing through a less dramatic sequence of stages in a process known as simple metamorphosis. Your child may demonstrate a heightened interest in insects over the next several weeks.

One goal of our work with insects is to help the children develop a deeper appreciation for the diversity of life and to cultivate a sense of respect for all living things. If your child wants to catch an insect in a jar, please invite your child's insect friend into your home for a short time, and encourage him or her to return the insect to the wild after a short captivity. If you are interested in seeing what we have going on, as usual, you are invited to visit and take part in the excitement. We're looking forward to lots of fun and lots of learning as we explore a world full of insects!





MULBERRY TREE ALERT

WANTED: MULBERRY TREES

Mature leaves

Early-season young leaves

Do you know of any fruitless mulberry trees in your area? Our class is about to embark on a study of insects. We would like to raise silkworms, but they live entirely on a diet of mulberry leaves! Please let me know if you know of a source of fruitless mulberry leaves for us. Thank you,

Name _____
Date_____

MATH EXTENSION A

INVESTIGATION 1: MEALWORMS

Problem: Both people and mealworms have body parts. Look at the mealworms and people at your table. Answer the questions below.

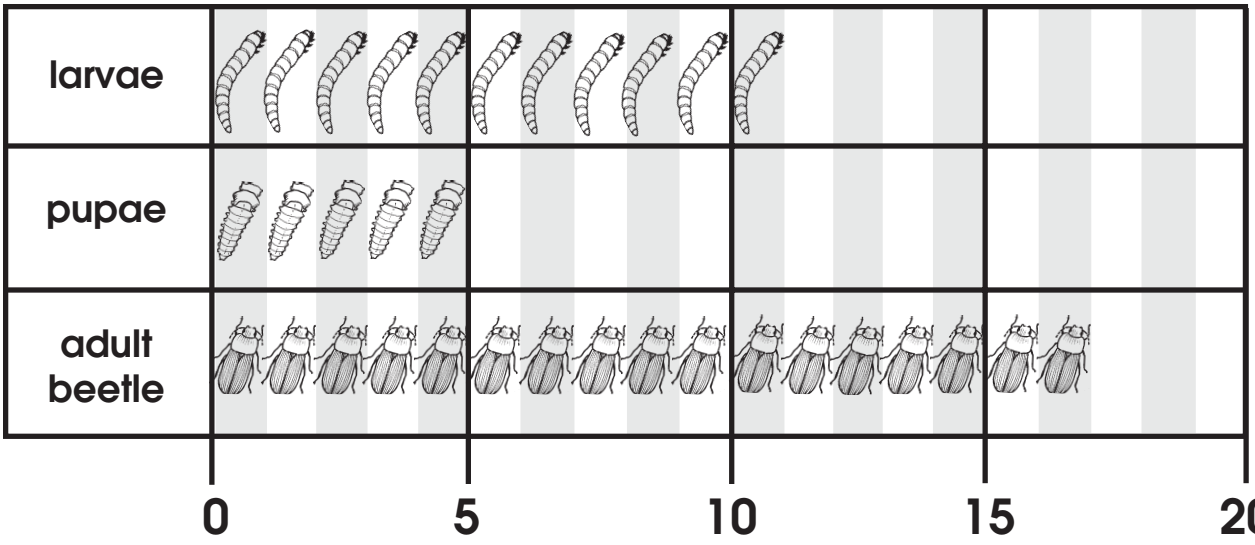
- How many legs are at your table today? _____
- How many arms are at your table today? _____
- How many heads are at your table today? _____
- How many antennae are at your table today?_____

Name _____

Date _____

MATH EXTENSION B

INVESTIGATION 1: MEALWORMS



A class made a graph to show how many larvae, pupae, and adult mealworms they had.

1. How many more adults were there than larvae? _____

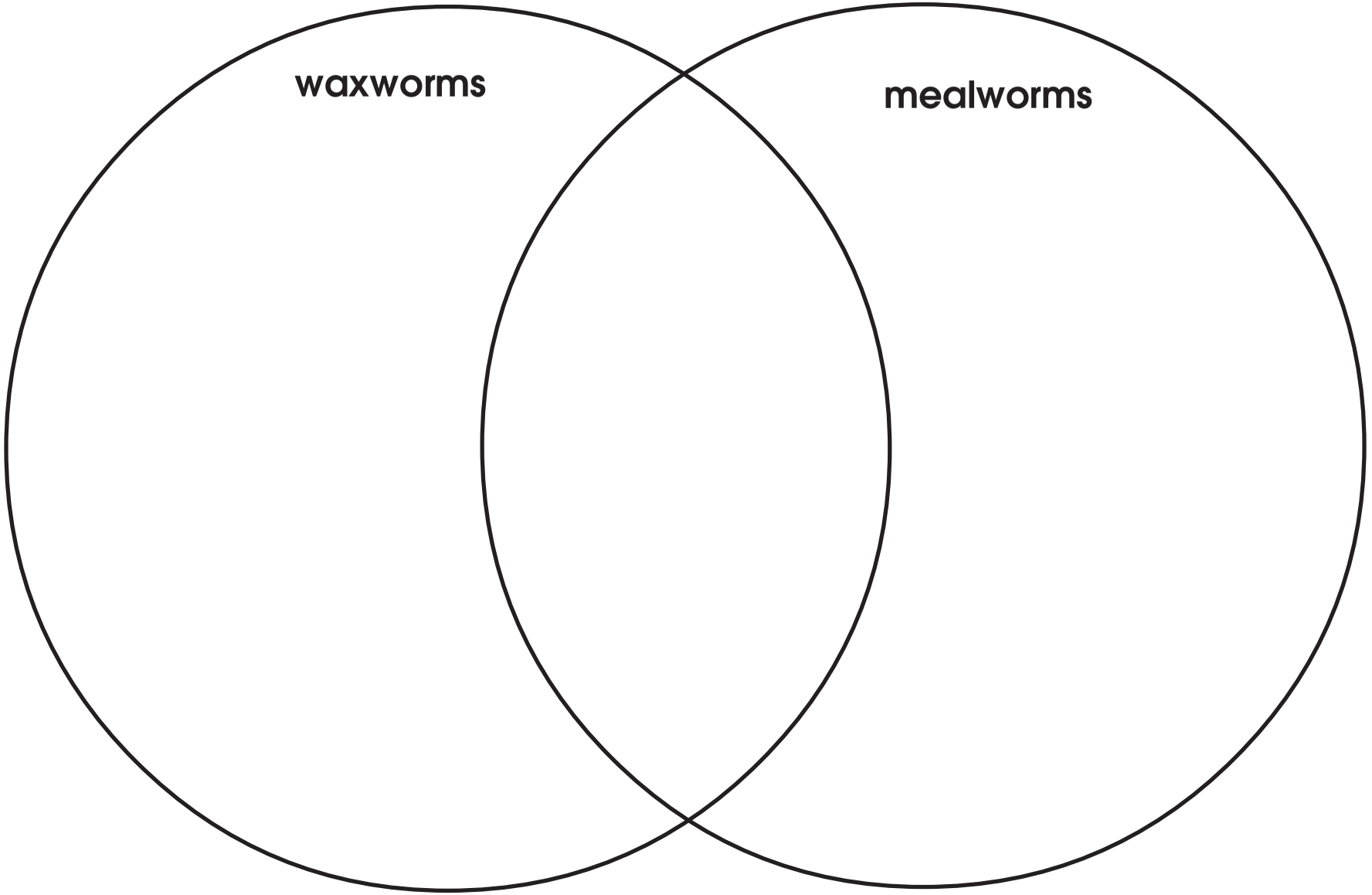
2. How many insects did they have all together? _____

3. The next day, 8 larvae changed into pupae.
   Change the graph to show what happened.
   How many larvae do they have now? _____

Name _____ Date _____

MATH EXTENSION

INVESTIGATION 2: WAXWORMS



Name _____

Date _____

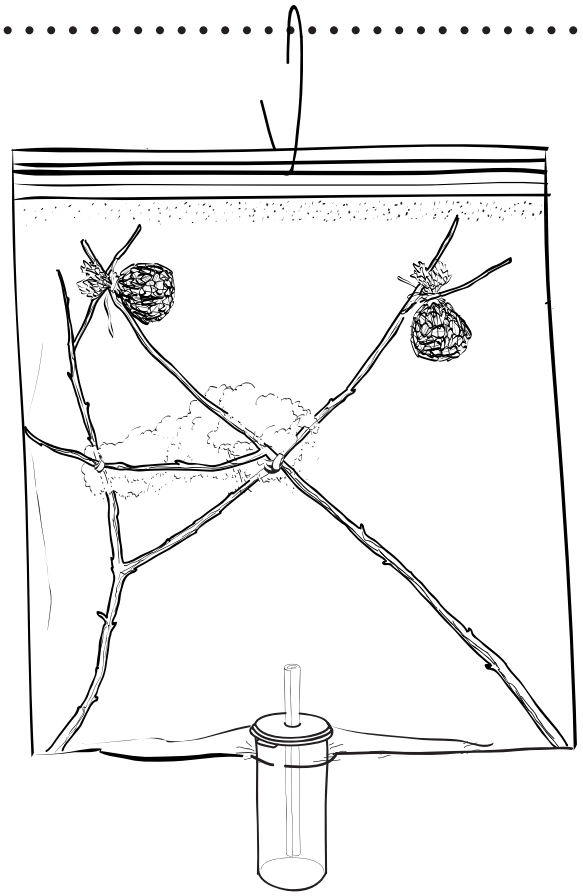
MATH EXTENSION A

INVESTIGATION 3: MILKWEED BUGS

25 sunflower seeds

100 air holes

2 sticks



Mr. Jay wants his students to make habitats for milkweed bugs. He has 6 groups in his class.

1. How many sticks will he need for all 6 groups?

2. How many sunflower seeds will the class need?

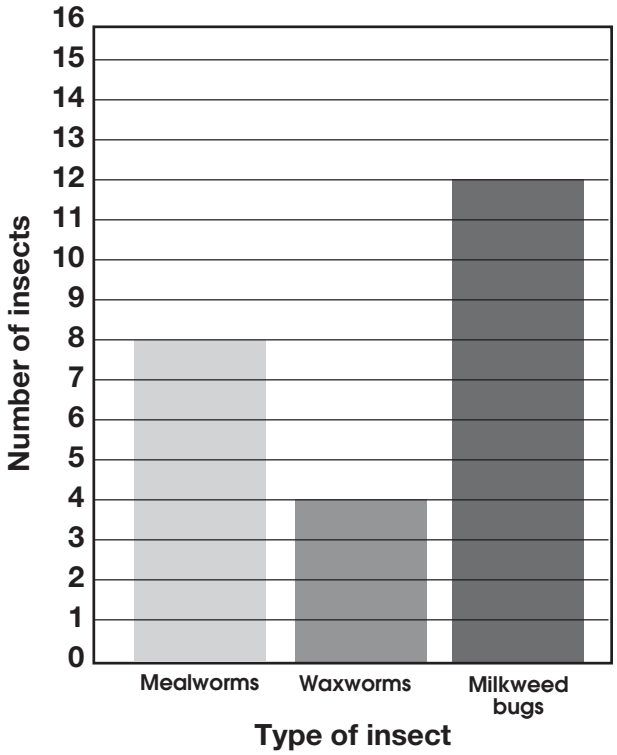
3. How many holes will all the groups punch all together?

Name _____
Date _____

MATH EXTENSION B

INVESTIGATION 3: MILKWEED BUGS

Amador's group made a bar graph of all the insects they are taking care of.



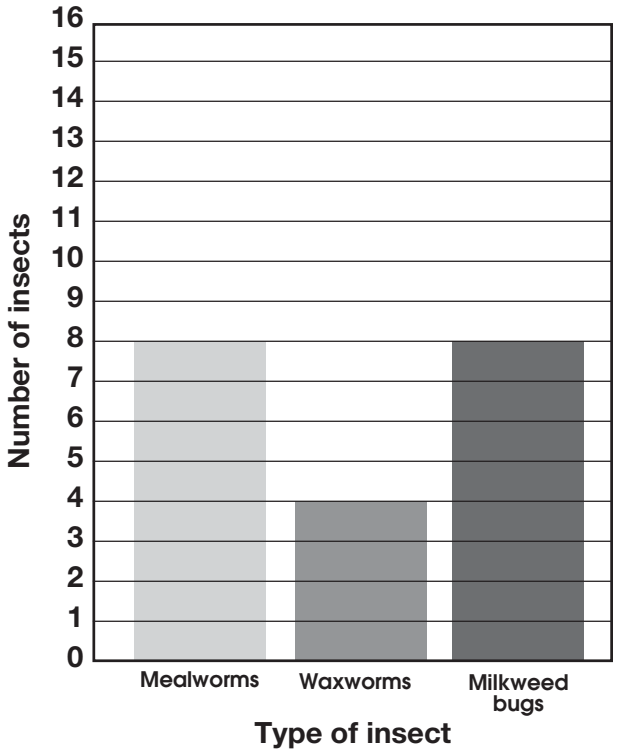
1. Which insect do they have the most of? _____

2. Which insect do they have the least of? _____

3. How many insects do they have?

   _____

Jennifer's group also made a bar graph of their insects.



4. Who has more insects, Jennifer's group or Amador's group?

   _____

Name _____

Date _____

MATH EXTENSION A

INVESTIGATION 4: SILKWORMS

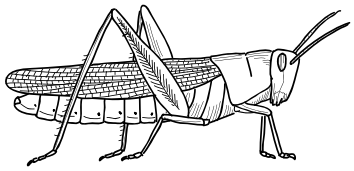
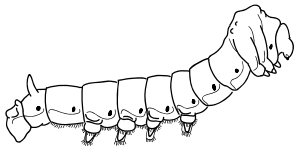
1¢

5¢

10¢

25¢

Draw the coins to show how you would pay for:

grasshopper	butterfly	silkworm
		
54¢	32¢	16¢

Name _____

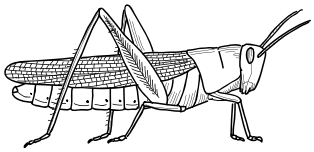
Date _____

MATH EXTENSION B

INVESTIGATION 4: SILKWORMS

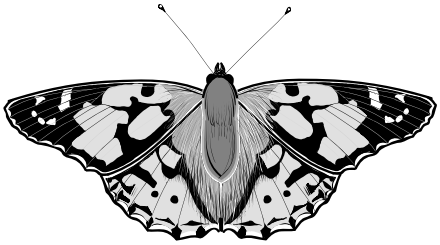
Insects cost

grasshoppers 25¢

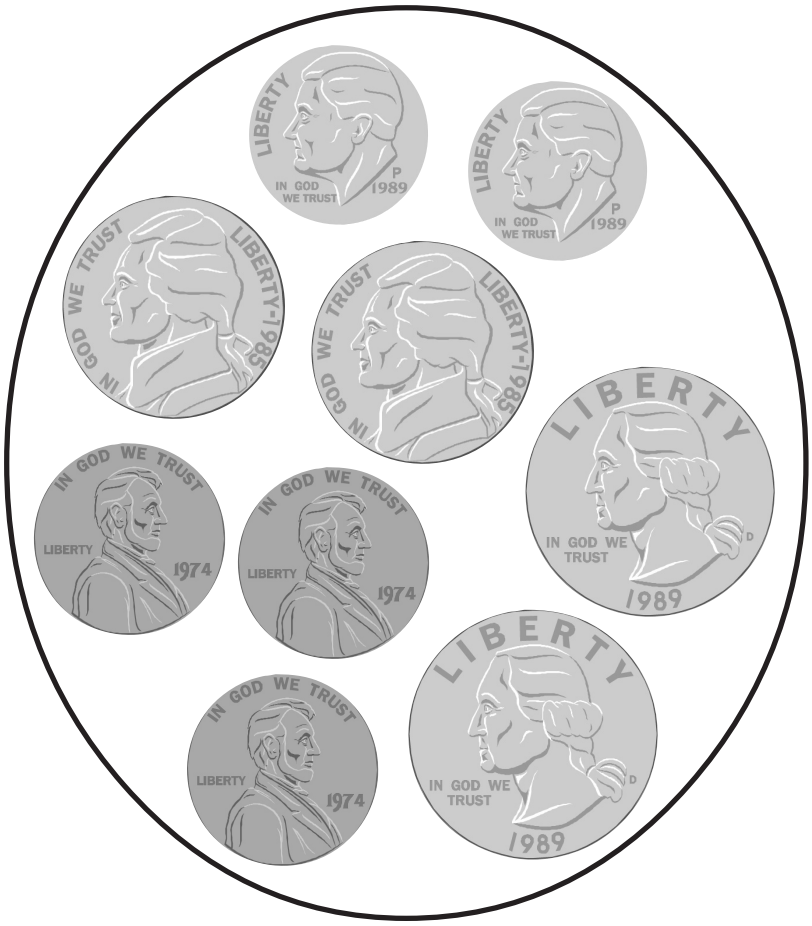


ants 6¢

butterflies 50¢



You have these coins

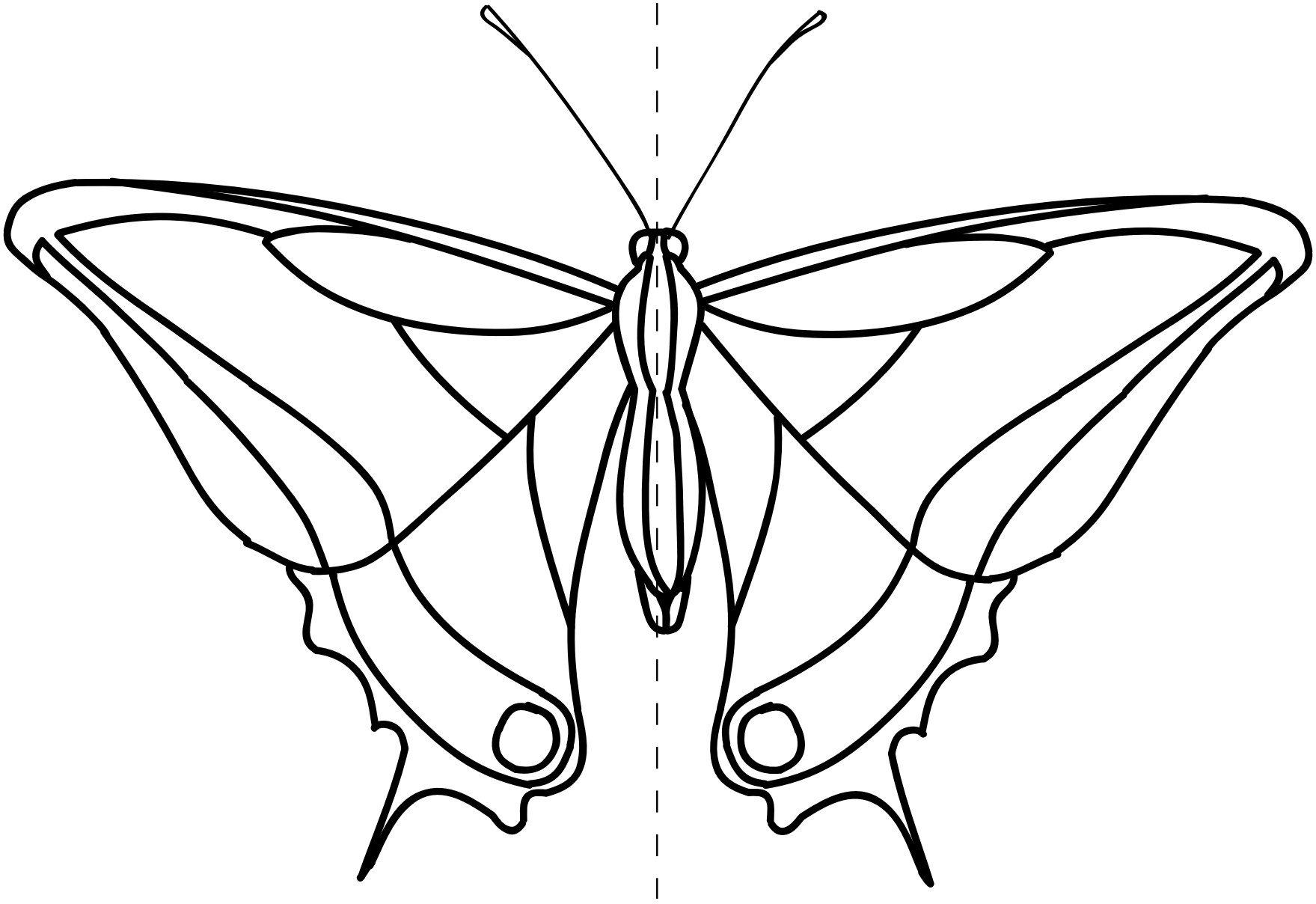


Can you buy	3 ants?	yes	no
	2 grasshoppers?	yes	no
	2 butterflies?	yes	no
1 butterfly + 1 ant + 1 grasshopper?		yes	no

Name _____ Date _____

MATH EXTENSION A

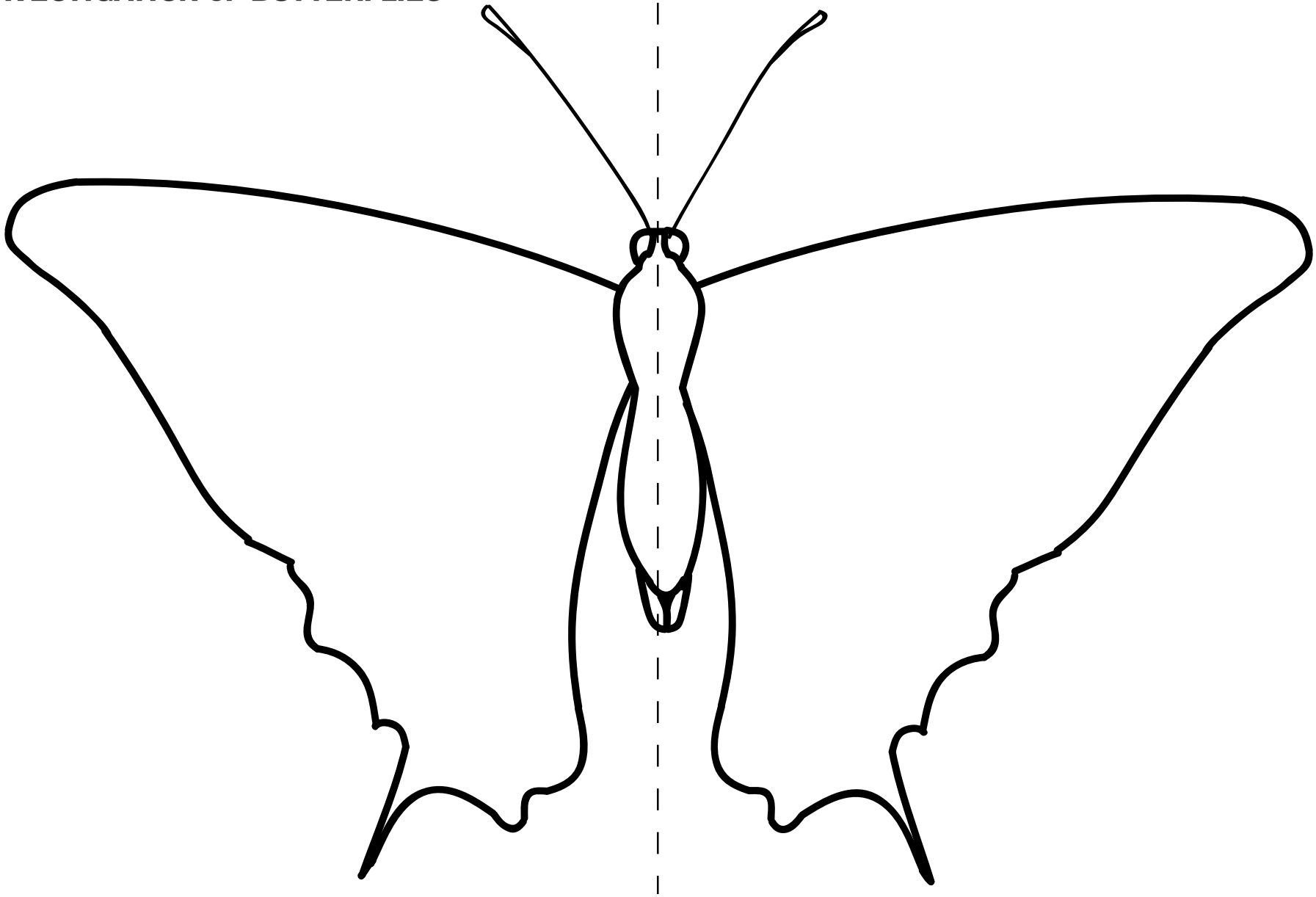
INVESTIGATION 5: BUTTERFLIES



Name _____ Date _____

MATH EXTENSION B

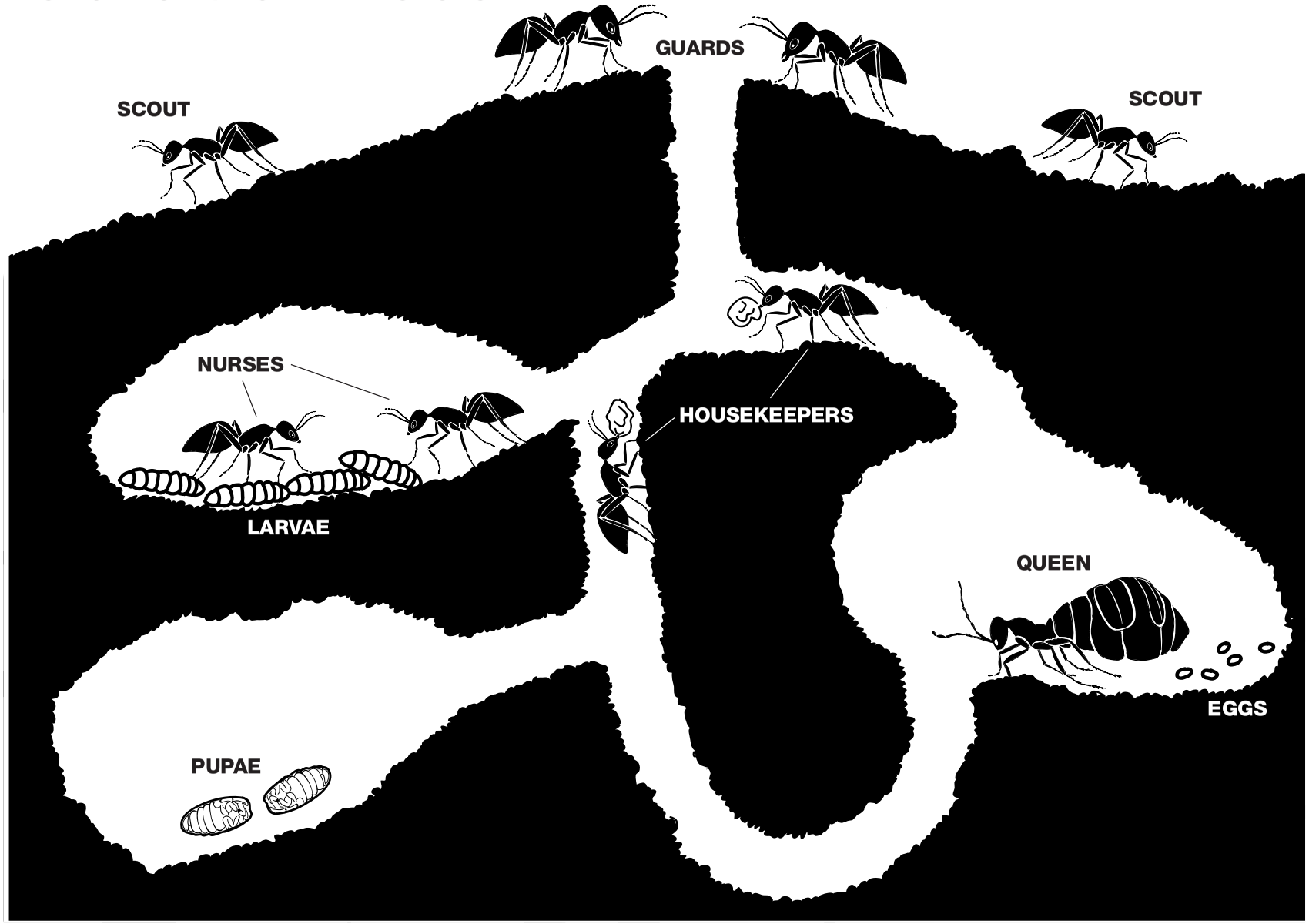
INVESTIGATION 5: BUTTERFLIES



Name _____ Date _____

MATH EXTENSION

INVESTIGATION 6: OTHER INSECTS

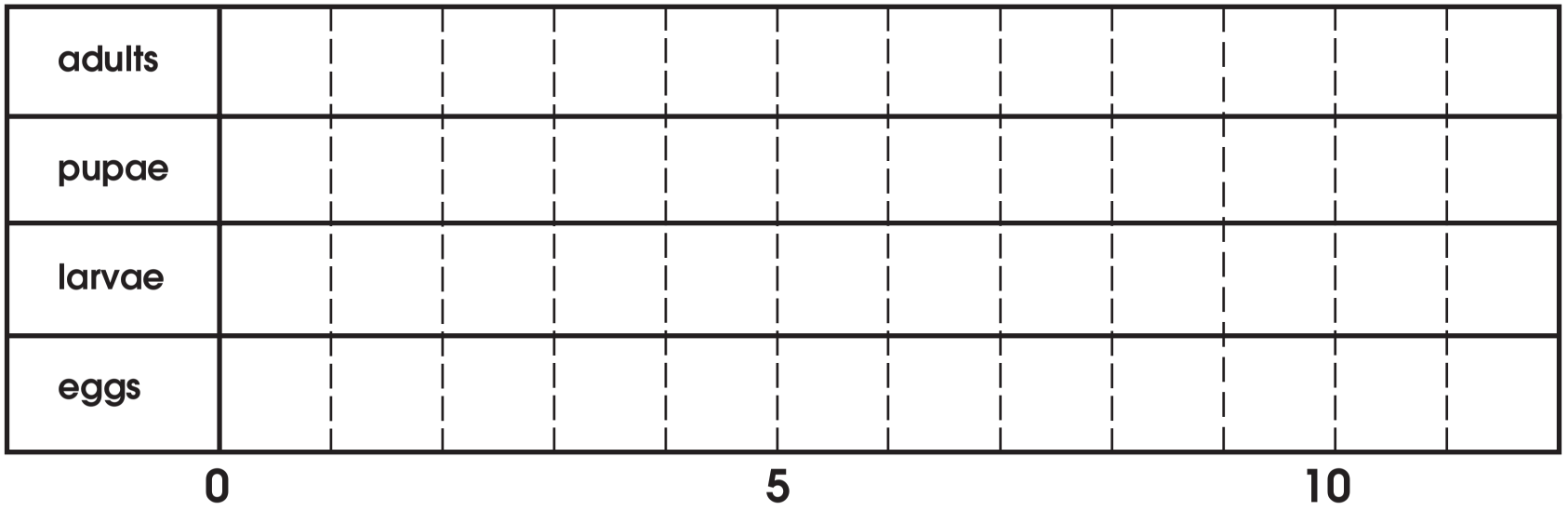


Name _____ Date _____

MATH EXTENSION

INVESTIGATION 6: OTHER INSECTS

ANTS



Use the anthill picture to find out how many eggs, larvae, pupae, and adult ants are in the hill.

1. Are there more eggs or larvae? Circle the answer. **eggs** **larvae**

2. How many more adults are there than pupae? _____

3. When all the eggs hatch, how many larvae will there be? _____

Name _____

Date _____

HOME/SCHOOL CONNECTION

INVESTIGATION 1: MEALWORMS

NEWS FLASH!

Today we received a new insect. It is a _____.
Here are three facts about it.

1. _____

_____

2. _____

_____

3. _____

_____

(scientific drawing)

Parent initials _____

Name _____
Date _____

HOME/SCHOOL CONNECTION

INVESTIGATION 2: WAXWORMS

NEWS FLASH!

This week my _____changed in this way!

_____

_____

_____

before:	after:

Parent initials _____

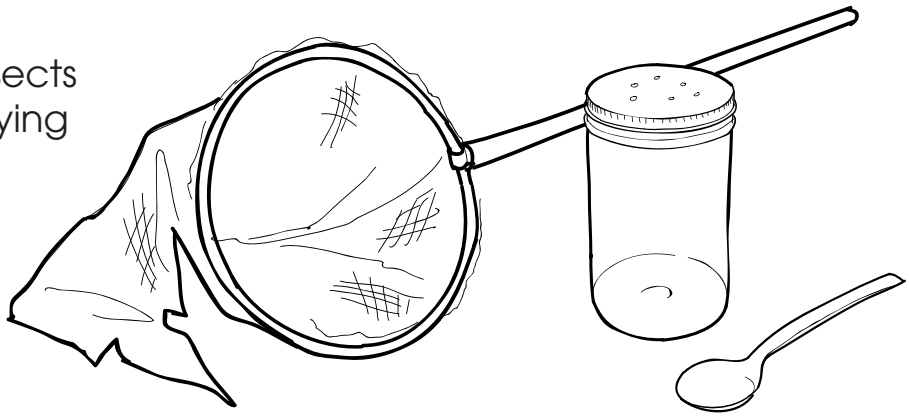
HOME/SCHOOL CONNECTION

INVESTIGATION 3: MILKWEED BUGS

How to Collect and Release Insects

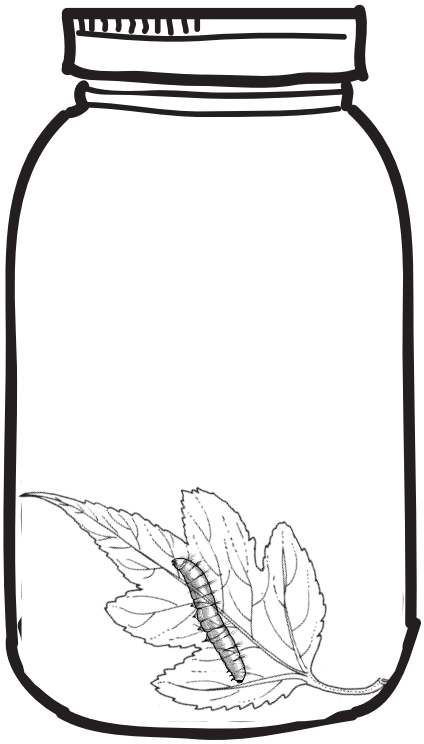
Insects are everywhere! Look outside on the ground, under water, and in the air. Here are some useful tools.

- a spoon for crawling insects
- a net for swimming or flying insects
- a jar to hold insects



Insects need space.
Some insects will bother other kinds of insects. Keep them in separate jars.

Insects need food.
Most insects eat plants, and only a few kinds of plants. Most likely, the plant you found the insect on is the kind of plant it eats. Include a leaf or two from the plants that are closest to the insect.



Insects need air.
Cover the jar with cheesecloth or part of an old nylon stocking, or use a nail to make holes in the lid of the jar.

Insects need water.
Some insects get water from sucking the juice from seeds or plants. Some get it from the dew. Spray the inside of your jar with water, or add a slice of apple or orange.

Insects are fascinating to watch. However, they will not live for long in a jar. Plan to release them after a few hours or a day. If possible, put them back on the same plant you found them on, so they'll have the right food to eat.

HOME/SCHOOL CONNECTION

INVESTIGATION 4: SILKWORMS

Insects (and their relatives, like spiders) sometimes leave evidence that they have been at work around your home and neighborhood. Take a field trip to look for evidence, such as holes in leaves, cocoons, webs, and the like. Make a list of your discoveries.

Insect evidence	Evidence of other animals

HOME/SCHOOL CONNECTION

INVESTIGATION 5: BUTTERFLIES

Round up a collection of craft materials, such as sticks, wire, paper cups, rubber bands, expanded polystyrene, and foam rubber if you have some. Use the craft materials to make a model insect. You can choose to make a real insect or make up an insect of your own. Remember to include all the parts that make an insect an insect. Will your insect fly or just crawl around?

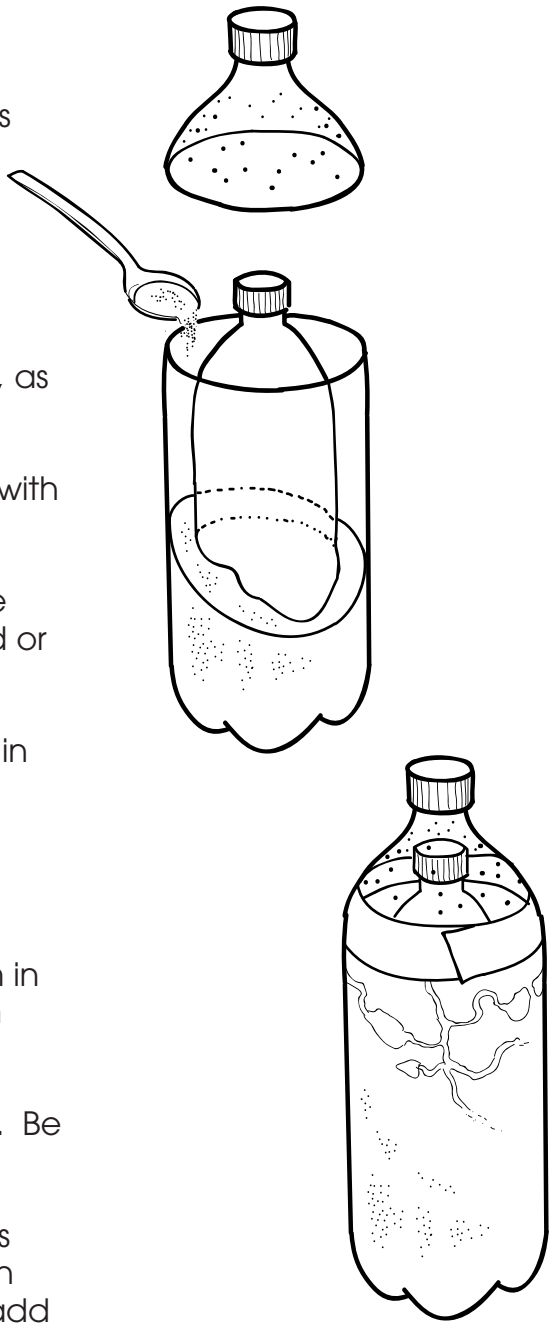
HOME/SCHOOL CONNECTION

INVESTIGATION 6: OTHER INSECTS

Homemade Ant Farm

Materials

2-liter clear soda bottle
1-liter soda bottle
Scissors
Strong tape
Spoon or paper funnel
Soil or sand
Seeds, bread, or vegetable scraps
Water
Pushpin
Container with lid
Ants (NOT red ants)



Directions

1. Cut the top off the 2-liter soda bottle, as shown. Keep the cap on.

2. Place the smaller soda bottle inside, with the cap on it.

3. Use a spoon or paper funnel to fill the space between the bottles with sand or soil. Leave space at the top.

4. Use the pushpin to make 25 pinholes in the top part of the 2-liter bottle.

5. Add 1/2 cup of water to the soil. It should be moist, but not soggy.

6. Gather ants in a container. Put them in the freezer for 1 minute, to slow them down. Then pour them into the soil.

7. Tape the top of the bottle to its base. Be sure to tape it completely.

8. Tiny bits of vegetable or bread scraps can be added to the habitat through the cap of the large bottle. Do not add oily items, meat, or fish. A few grains of bread or a few seeds will feed the ants for a week.