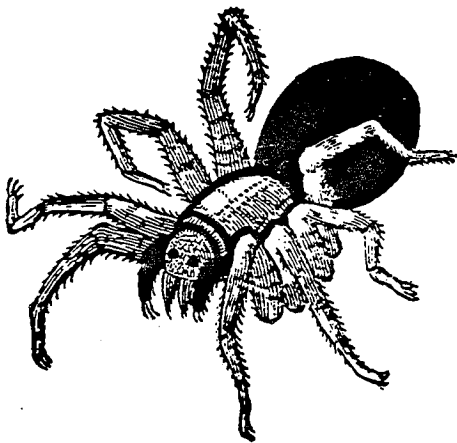
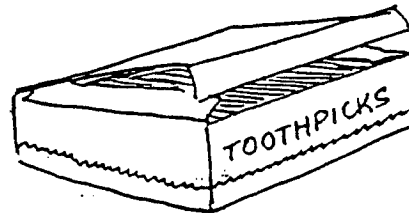


TEACHER MATERIALS - Insect Anatomy

CONCEPTS: Life Science - 2.1, 2.4, 2.6, 2.7
Art

OBJECTIVE: The students will make their own insects with anatomically correct eyes, antennae, wings, and legs.

MATERIALS: pipe cleaners
construction paper - black
- yellow
tooth picks
styrofoam peanuts
newspapers
tissue paper
egg cartons
markers
paint
papier mache



BACKGROUND: Although considered an annoyance by the average person the insect, spider, and bug population is of enormous importance to humans and other animals. Most of our fruits and vegetables rely on the honeybee for pollination (3rd grade). Birds, frogs, fish, bears, and spiders are some examples of animals which rely totally or in part on insects for nutrition. Even the mosquito is crucial in the food web. This lesson assists students in learning that insects differ from spiders and that caterpillars may or may not have many legs (only 3 sets required).

INFORMATION: The tiny animals commonly referred to as bugs may actually be insects, bugs, beetles, or spiders. There

are more than 50,000 kinds of bugs in the world alone. Bugs have an **X** marked on their backs. Ladybugs and lightning bugs are not bugs at all, they are beetles. This lesson focuses on insects, caterpillars, and spiders and the differences between each.

INSECTS HAVE:



- 3 body segments
 - head
 - thorax
 - abdomen
- 2 antennae
- 1 pair wings - 2 wings
- 1 set eyes - 2 eyes
- 3 pair of legs - 6 legs

SPIDERS HAVE:

- 2 body segments
 - head/thorax
 - abdomen
- NO antennae
- 4 pair of legs - 8 legs
- 8 eyes

CATERPILLARS HAVE:

- 3 pair of walking legs in front (other legs may or may not be present throughout the rest of the body) - 6 legs
- head and many segments
- eyes are small
- NO antennae

BUTTERFLIES HAVE

- 3 pair of legs - 6 legs
- 3 body segments head, thorax and abdomen
- 1 set of eyes - 2 eyes
- 2 antennae
- 2 pair of wings - 4 wings

ACTIVITIES:

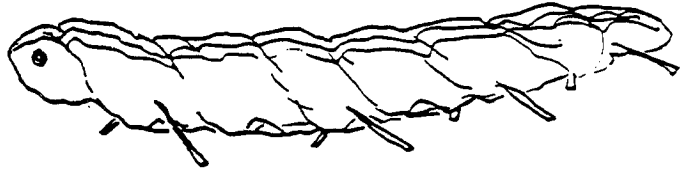
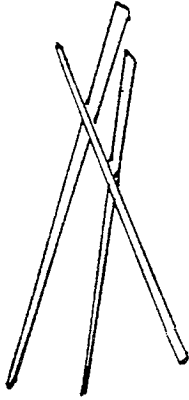
1. Have the students make a papier mache insect, spider, or caterpillar.

- A. Crumple used newspapers into the shape desired note the correct shape of an insect, spider or caterpillar in the information section.



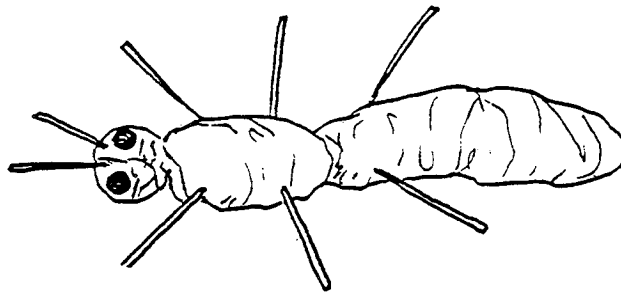
- B. Coat the shape with papier mache mixture (see pumpkin lesson p. 1-81.)

- C. Cover with colored tissue paper.

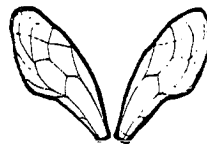


- D. If insect add:

- antennae and legs with pipe cleaners or toothpicks.
- eyes with paint or marker.

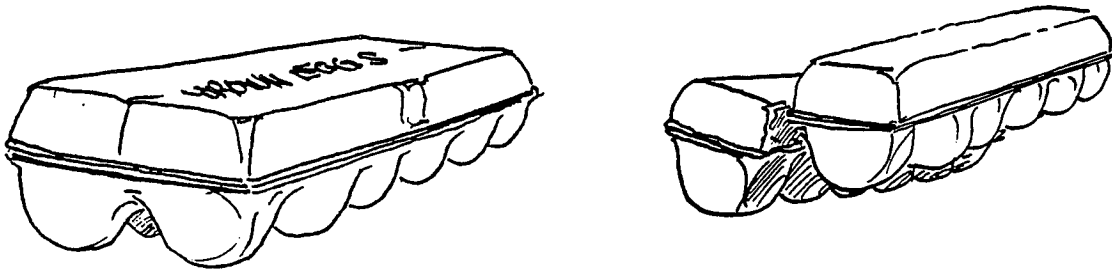


- wings - cut from construction paper, add veins drawn with marker and tape onto body.



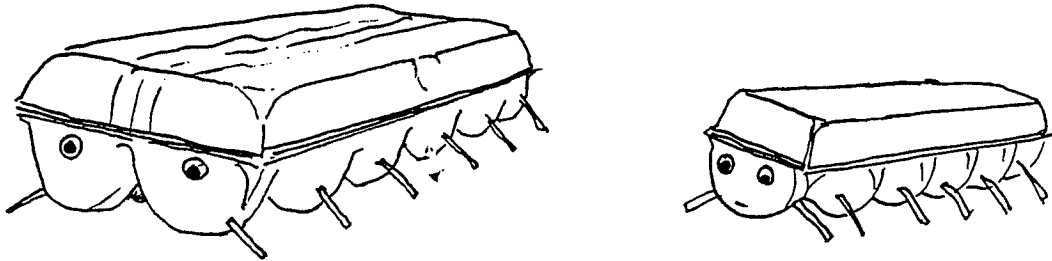
2. Have the students make a caterpillar from either a

whole or half egg carton. Please make sure they are anatomically correct.



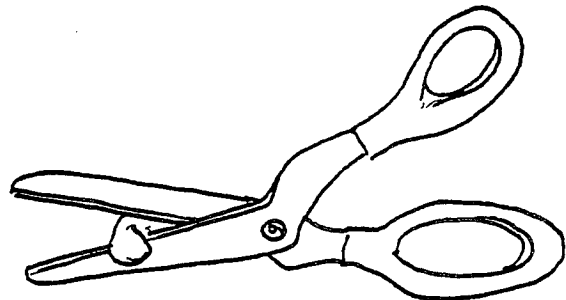
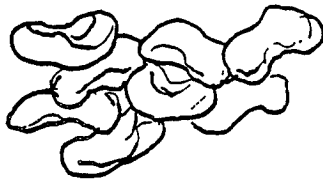
- A. Paint with tempera paint
- green
 - black
 - orange
 - yellow

B. Add small eyes in front.



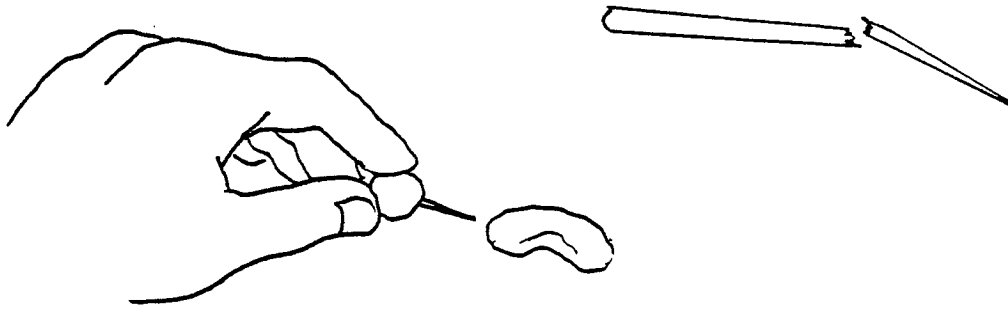
C. Add legs made from pipe cleaners taped to each segment (one per egg cup).

3. Have the students make caterpillars from styrofoam peanuts.



A. Using 3 "peanuts" cut one with scissors to make a round head.

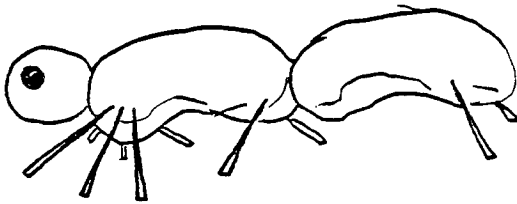
B. Attach "head" to body using a broken tooth pick - 3/8 to 1/2 inch long.



C. Join another peanut to this with the other half of the tooth pick.



D. Add small pieces of toothpicks (3/8 inch) to body for legs -- at least 3 pair of legs in front.



E. If you would like to color this caterpillar, coat it with a glue such as Elmer's and allow to dry (markers will "eat" into the styrofoam and paint may or may not adhere).

The styrofoam peanut idea was contributed by Carolyn Klass.

4. Or, have the students make a caterpillar from clay. Please make sure the caterpillars are anatomically correct.
5. Have each student fill out the chart on insects or design one as a class project.

The idea of the chart was contributed by a piloting teacher.

6. Complete the next lesson on butterflies as well as the Language Arts lesson on caterpillars, moths and butterflies on pages 1- 9 through 1- 15.

	<u>NUMBER</u>			<u>YES OR NO</u>	
	Parts of the body	Legs	Eyes	Antennae	Wings
INSECTS	3	6	2	Yes	Yes
SPIDERS	2	8	8	No	No
CATERPILLARS	2 (+)	6 (+)	2	No	No
BUTTERFLIES	3	6	2	Yes	Yes

Name- _____

NUMBER

YES OR NO

	Parts of the body	Legs	Eyes	Antennae	Wings
INSECTS					
SPIDERS					
CATERPILLARS					
BUTTERFLIES					