

POWERHOUSE SCIENCE CENTER

3615 Auburn Blvd., Sacramento 95821 (916) 674-5000

Topics

Insects

Grades

K-1

Duration

45 minutes

Vocabulary

metamorphosis, carnivore, herbivore, adaptation, camouflage, mimicry, nocturnal

Next Generation

Science Standards

Practices

Obtaining, Evaluating & Communicating Information

Core Ideas

K-LS1-1: Use observations to describe patterns of what plants and animals (including humans) need to survive.

K-ESS2-2: Construct an argument supported by evidence for how plants and animals (including humans) can change the environment to meet their needs.

1-LS3-1: Make observations to construct an evidence-based account that young plants and animals are like, but not exactly like, their parents.

Incredible Insects

Overview

There are so many different kinds of insects living on Earth. They can be found on every continent from the Americas to Antarctica. The Incredible Insects program allows students a chance to get a closer look at some of these insects, both preserved and living.

Objectives

- Create a hands-on environment for students to observe insects.
- Learn about the similarities shared by all insects in regards to their body parts (head, thorax, abdomen).
- Introduce students to a variety of insects from all over the world.

Teacher Preparation

- Programs are designed to be presented in the classroom.
- Educators are able to break down materials, move to the next classroom and set-up again for the next presentation.
- Set-up usually takes about 5-10 minutes.
- Educators greatly appreciate access to your room before the program, especially if the program starts immediately following a recess or lunch.
- Student seating can be at your discretion (chairs or floor), as you know your classroom's personality and preferences best.
- The teacher is required to remain in the class at all times.
- Educators will need 4-5 stations to set up. Student desks may be joined or large tables will work as stations.

POWERHOUSE SCIENCE CENTER

3615 Auburn Blvd., Sacramento 95821 (916) 674-5000

Crosscutting Concepts

Patterns

Systems & System Models

Vocabulary

Metamorphosis: the process of transformation from an immature form to an adult form in two or more distinct stages

Carnivore: an animal that feeds on flesh

Herbivore: an animal that feeds on plants

Adaptation: a change or the process of change by which an organism or species becomes better suited to its environment

Camouflage: a defense or tactic that organisms use to disguise their appearance, usually to blend in with their surroundings

Mimicry: when one animal displays physical or behavioral traits that copy those of a different species, and incur a survival advantage on account of it

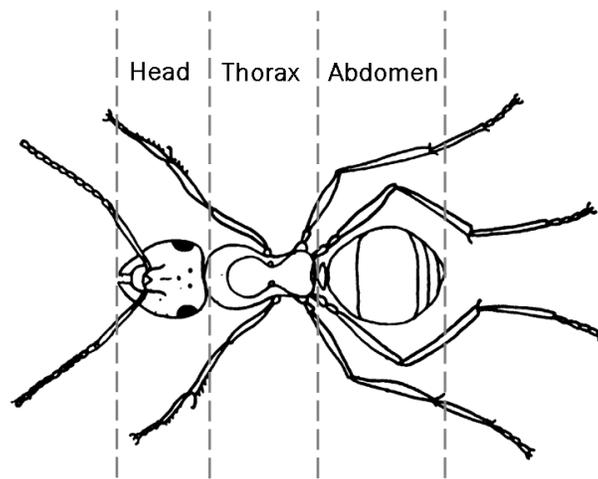
Nocturnal: done, occurring, or active at night

Incredible Insects

Extended Learning Activity

BYO (Build Your Own) Insect

Insects bodies can be broken into three major parts: **head** (*antenna, eyes, mouth parts*), **thorax** (*6 legs, and sometimes wings*), **abdomen**.



In this activity students will build their own insects using egg cartons and pipe cleaners. You will need the following material:

- Egg Carton (1 dozen sized cut into 4 equal parts)
- Glue
- Tempera Paint
- Pipe Cleaners (full sized & cut in half)
- Buttons/Googly Eyes/Fuzz Balls
- Construction Paper
- Body Part Labels

Preparation:

Cut the lid off a dozen sized egg carton. Cut the bottom part lengthwise. Then cut the bumpy bottom part into 4 equal parts. Each of these parts should be made up of 3 bumps. This will be the body of the insect. With a hole-punch, make 6 holes (3 on either side) of the middle bump of the egg carton. Then make 2 holes in one of the top of 1 of the end egg carton bumps. Repeat with each set of egg carton pieces.

POWERHOUSE SCIENCE CENTER

3615 Auburn Blvd., Sacramento 95821 (916) 674-5000

Incredible Insects

Extended Learning Activity

BYO Insect (Cont.)

Construction:

Students will need: 1 egg carton piece, 3 full sized pipe cleaners, 1 half sized pipe cleaner.

Step 1) Depending on time students can paint their egg cartons to personalize their insects. Allow time for the paint to dry before assembling.

Step 2) Thread the 3 full sized pipe cleaners through the holes in the middle bump (thorax) of the egg carton insect, so that they stick out on either side.

Step 3) Thread the half sized pipe cleaner through the holes in the top of the end bump (head) of the egg carton insect, so they stick up out of the top.

Step 4) Using glue attached 2 of the buttons, googly eyes, or, fuzz balls, one on either side of the head bump of the front bump (head) of the egg carton insect.

Step 5) Mount the insect on a piece of construction paper, cut out the body part labels and using glue place them around the egg carton insect.

Resources

<https://www.natgeokids.com/nz/discover/animals/insects/15-facts-about-bugs/>

Interesting Fact:

A single honeybee colony can produce around 100kg of honey each year – that's 220 jars.

Did you know?

Dragonflies have been on earth for 300 million years.

Quote:

"Time flies like an arrow,
fruit flies like a banana."

-Groucho Marx

POWERHOUSE SCIENCE CENTER

3615 Auburn Blvd., Sacramento 95821 (916) 674-5000

Incredible Insects

Extended Learning Activity

Insect Journal

To keep track of their discoveries scientist sometimes create books called field guides or journals. These journals can be used by other scientist when they are out in the field.

Now that the class has seen examples of different types of insects, it is their turn to be the scientists. Using the *Insect Journals* worksheet, each student will create a page of your very own classroom field guide. Each Insect Journal has space for a drawing of an insect as well as space to write down; the color, location found and size of the insect.

Talk as a class about places around school where insects may be found. Make a list of these places and break the class into groups (2-4 students each) so a group is assigned to each location. Then as a class go out and see what sort of insects you can find.

After exploring the school searching for insects take some time back in class to allow students to finish filling out their journals. Once finished gather up the pages and display them some where in the classroom; either individually hung on the wall, or bound together in to a book.

Alternate Procedure:

- For younger students this activity may make a better take home activity, where they can search for insects around their home and have an adult help them fill out the writing portions. If this is the case once they return the pages you could even have them share their finding with everyone.
- If your classroom has a camera you could switch out the drawing portion of the journal. Have each student take a picture of the insect, then research it using a computer to figure out exactly what kind of insect it is.

Resources:

<https://www.insectidentification.org/identifying.asp>

Interesting Fact:

All insects hatch from eggs. The babies are called larva.

Did you know?

Insects don't have bones or a backbone like us. They're called invertebrates. That means they have a hard exo-skeleton, or shell, on the outside of their bodies that protects them.

Name: _____

MY INSECT JOURNAL

Draw the insect you found:



What color is it? _____

Where did you find it? _____

How big is it? _____

head	antenna
eyes	abdomen
legs	thorax

head	antenna
eyes	abdomen
legs	thorax