

Do You Mind If I Bug You For A Minute?

3rd-5th Grade

Introduction

Did you know that there are more insects in the world than all the other animals in the world? Students in this lesson will learn about the body parts and life cycle of insects while also learning how insects can be helpful but also harmful for humans. Enjoy a fun activity outside looking for insects and their current life cycle.

Objective

- Students will understand the impact of insects on our life.
- Students will be able to label the major parts of an insect.
- Students will understand complete metamorphosis.

Materials

- Pen
- Paper
- Camera (Optional)
- Magnify Lens
- Insect Worksheet

Background

In nature, springtime is known for being when babies are born. During April and May deer, raccoons, possums, coyotes and many more wild animals are having babies. Fish and frogs are laying eggs. Many insects are laying eggs too!

Have you ever noticed all the insects on a warm spring day? Bees, flies, butterflies and many more. That's because they have a lot of work to do to survive and to make more insects.

Did you know that there are more insects in the world than any other animals? Way more!!! The human population is over 7 billion. That's a seven followed by nine zeros. But there are over 10 quintillion insects on earth. That's a 10 followed by 18 zeros! The weight of all the ants in the world is equal to the weight of all of the people in the world.

Most insects are considered good. They do many things that are helpful for our planet.

Butterflies and bees help our crops pollinate.



Honeybees produce honey.



There are insects that eat harmful insects.



Insects that are food for wildlife.



There aren't nearly as many bad insects, but we know more about them because they are always bothering us.

Bees sting us.



Chiggers bite us and cause us to itch.



Some caterpillars eat our crops.



Mosquitoes, ticks and other insects can spread diseases.



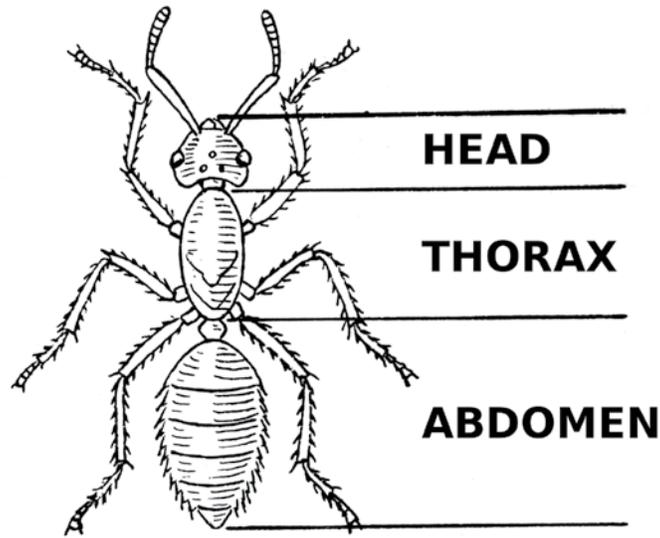
Termites can damage our homes.



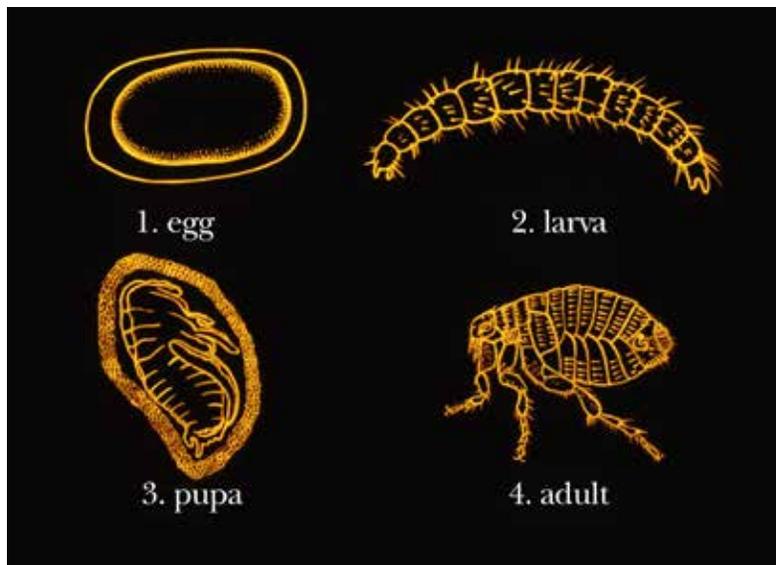
There are even insects that will eat and damage our clothes.



Insects can come in many shapes and sizes, but most insects have three major body parts: Head, thorax and abdomen. Like us, the brain, mouth, eyes and other parts are located on the head. The thorax is where the legs and wings are attached. All insects have six legs. The heart, digestive organs and many other organs are located in the abdomen.



Insects have different types of life cycles but the most common one is complete metamorphosis. Below is a diagram of this:



Many insects spend the winter as a pupa. When it warms up, the pupa comes out of hibernation and the adult emerges to start the lifecycle.

Insects affect our lives every day. They have a huge impact on the production of our food. Farmers try to control the insects to keep them from harming our food supply and they do their best to avoid hurting the insects that are

helpful. Understand that insects may bug us but our planet depends on them for life!

Activity

Go outside and see how many different types of insects that you can find. Turn over rocks, get on your knees and look in the grass, and look at the bottom of leaves. See if you can find all stages of complete metamorphosis: egg, larva, Pupa and adult!

1. Draw one of the insects that you find and see if you can label the parts.
2. Draw the life cycle stage(s) of an insect that you found. Which stages did you find and which stages did you not find?

Complete the Insect Worksheet to test your knowledge about insects.

Supplemental videos

- <https://www.youtube.com/watch?v=V5RSpMQQOpw>
- <https://www.youtube.com/watch?v=kVm5k99PnBk>

Resources

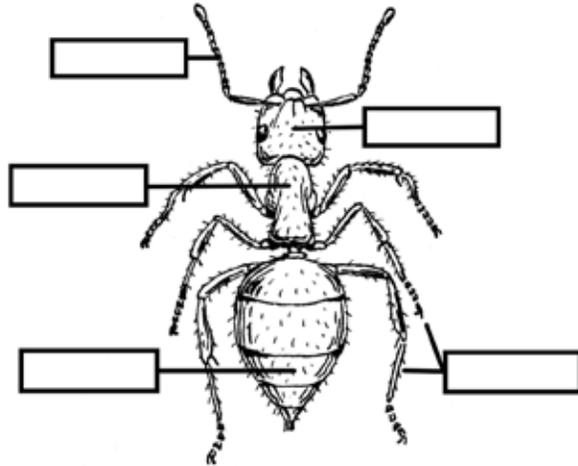
- <https://fivethirtyeight.com/features/the-bugs-of-the-world-could-squish-us-all/>

Insect Worksheet

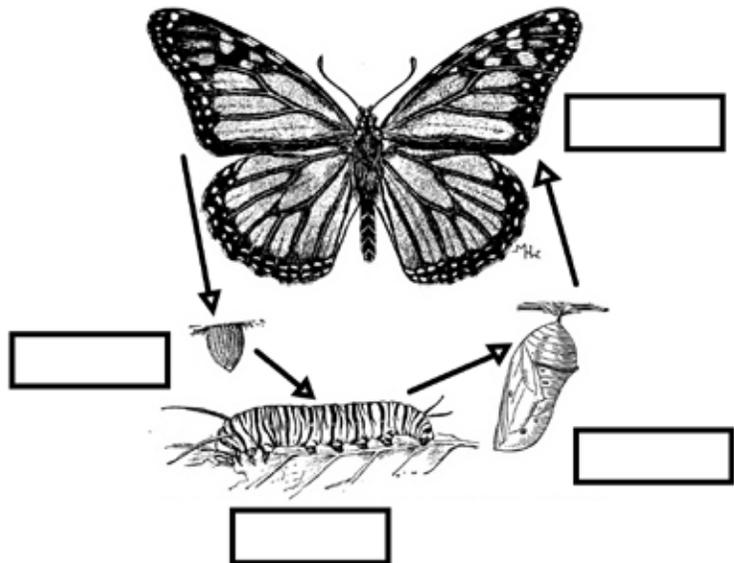
1. There are over 7,000,000,000 people on earth. How many insects are there (write out the number)?

2. Label the parts of the insect:

- Head
- Thorax
- Abdomen
- Antennae
- Legs



3. Label the life cycle of the butterfly:



4. List ways that insects are helpful?

5. List ways that insects are harmful?

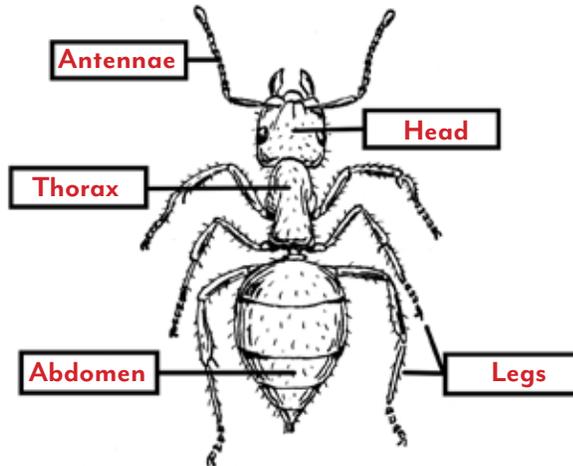
6. Can you name one insect that does good things part of their life and bad things part of their life?

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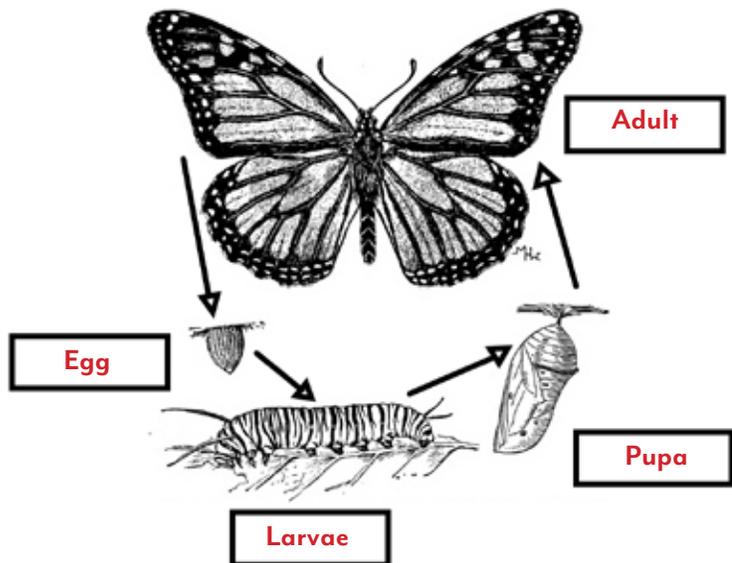
10,000,000,000,000,000,000

2. Label the parts of the insect:

- Head
- Thorax
- Abdomen
- Antennae
- Legs



3. Label the life cycle of the butterfly:



4. List ways that insects are helpful?

Pollinate, produce honey, eat harmful insects, food for wildlife, etc

5. List ways that insects are harmful ?

Bites, stings, eat plants, poisonous, damage homes (termites), spread disease

6. Can you name one insect that does good things part of their life and bad things part of their life?

- Butterfly – the caterpillar eats plants. The adult pollinates plants.
- Bees – they can sting but also produce honey.
- There are several others.