

Title: Observing and classifying garden creatures

Grade: 1st and 2nd	Date of Delivery: August 29, 2017
Unit: Natural Systems	Time: 3- 50 mins lesson each

Unit overview and background information:

First and second grade students will gain skills and habits of scientists through these lessons to prepare them for science classes when they get to third grade. Students will gain hands on, real life, in person experience with making observations, classifying animals, and identifying insects. These lessons will work quite nicely to prepare for habitats and the life cycles of different organisms. Hopefully these lessons will help student overcome fears of certain insects or animals and they will see the benefit and the beauty of having these in our gardens.

ESYNOLA Garden Core Concepts:

- **Natural Systems (Animals)**
- **Garden Skills (Animal and Garden Ecosystem Care)**
- **Edible Values (Interconnectedness)**
- **Scientific Inquiry (Observation, Inquiry)**

Animal Observation: SWBAT

Day 1:

- Act out or describe an animal behavior
- Record or represent (in drawing or writing) physical differences of two different animals based on their own observations

Day 2:

- identify insects as small, six-legged, animals with three main body parts
- Identify and describe the three main body parts of insects: head, thorax, and abdomen
- Identify the placement and/or purpose of an insect’s body parts

Assessment plan (formal or informal):

Day 1- observe students carefully observing worms, check drawing of two different worms

Day 2- Students will draw an insect, making sure to include all the body parts needed to define an animal as an insect.

Academic component:

Insects are the largest group of animals. There are significantly more insects than humans. Without them, we would not be here. From providing food for humans with their important work of pollination, to being actual food for many, helping to decompose decaying materials, and keeping a balance of pests versus predators, bugs play a great role in our lives, and we should be grateful to them.

1st& 2nd Key Academic	Secondary Vocabulary	2nd grade Scaffold
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Vocabulary		
Zoologist Behavior Observation	Similar Compare	

Key Preparation/Materials:

- Whiteboards, pint containers with red worms, buckets or digging space with earthworms, journals, pencils, crayons

Day 1

Lesson Flow

Driving Question: What creatures live in our garden? How can we use our observations to describe them.

Lesson Intro- Engagement/ Inquiry: Be a zoologist-study animals and their behavior

Animal Charades: Today we will all become a special kind of a scientist- we will all become zoologists! Students repeat zoologist. Zoologists travel all over the world studying animals and their behavior- the things they do. Think..if you could study any animal in the world what would it be. (Play animal charades in pairs or as a team to introduce the ideas of animals having characteristics and behaviors) partners share out what animal their partner would study as a zoologist.

Body - Exploration: (min)

Earthworms- Move to station with earthworms in soil and magnifying glasses. Model safe treatment of worms. Students work in partners.

Model handling and observing using senses first if necessary. Describe the animal and its behavior. As you observe, ask for hypotheses as to what causes worms to wiggle. Write down class observations.(visit partners and write down observations), then share out.

Red wiggler worm observations-Describe the animal and its behavior.

Write down class observations.(visit partners and write down observations), then share out.

Red worm/Earthworm comparison- Compare the 2 types of worms side by side. Challenge students to find 2-3 differences in the animals' bodies. (Color, thickness, length). Challenge students to find 2 similarities in behavior. Ask students to create a name for each type of worm.

Closing/Journal Entry: Draw the 2 worms in the creature feature section of your journal, include the names you gave the worms. Try to use your observations of the differences when you draw each worm. (You may need to model this)

Day 2

Lesson Flow

Driving Question: What is an insect?

Lesson Intro - Engagement/Inquiry: (12 min)

Welcome back zoologists! Today we will continue our study of garden animals!

Guess the garden creature game: In your envelope there is a picture of a secret creature. You will have 1 minute to describe the creature's body or its behavior to your partner. Your partner is listening and guessing the creature. Don't show them the picture until time is up or they guessed right. When you've got it tell your partner which clues helped you the most. then we'll switch. Ready go>>>

Teacher models how to give clues without giving away the name of the animal.

Relate Classification: Wow! You really are scientists! You just did something else that scientists do- they sort or classify animals by what they have in common. Does anyone know what the largest group of animals scientists have classified on earth is? (Whisper in your hand guess) Insects! Let's move into the garden so we can find some insects and learn more about them

Body:

Does anyone know what characteristics or body parts all insects have..? What makes something an insect? List characteristics with kids.

Define and draw insect: I am going to draw the body parts that all insects need. Help me label the diagram, as I draw it, you name the parts.

- **Head**
- **Thorax-** the middle section which holds the legs and sometimes wings
- **Abdomen-** the last section of an insect, holds the belly

Define the different body parts and exoskeleton. Quick compare exoskeleton to our skin, and a snails shell. Then show diagrams/actual examples of insects that like our garden. Keep this on a whiteboard as you travel through the garden.

Song, sung to the tune of Head Shoulders Knees and Toes:

Head, thorax, abdomen, abdomen,
Head, thorax abdomen, abdomen,
They have six legs and an exoskeleton,
Head, thorax, abdomen

Insect search

In small groups student head out into the garden to hunt for insects. Each group will be given a plastic container to hold any insects they find, and a popsicle stick to help pick up insects.

Bring back found insects to tables/benches. Allow students to share what they found where. (Have some already prepared insects in case not many insect are found). Teachers will also

have some non-insects to observe thrown into the mix (grub, spider, worm, roly polly). Spend time with students looking at insects with magnifying glasses, making and recording similarities and differences on a chart that will show the different characteristics of an insect that were discussed. Note which creatures are insects by having three body parts, an exoskeleton and 6 legs.

Students will trade insects so everyone gets a chance to see all the different kinds. Teachers open up discussion on what they saw and observed. Ask if they saw only insects? Or did they see anything else? Students will hopefully see that there were other creatures besides just the insects.

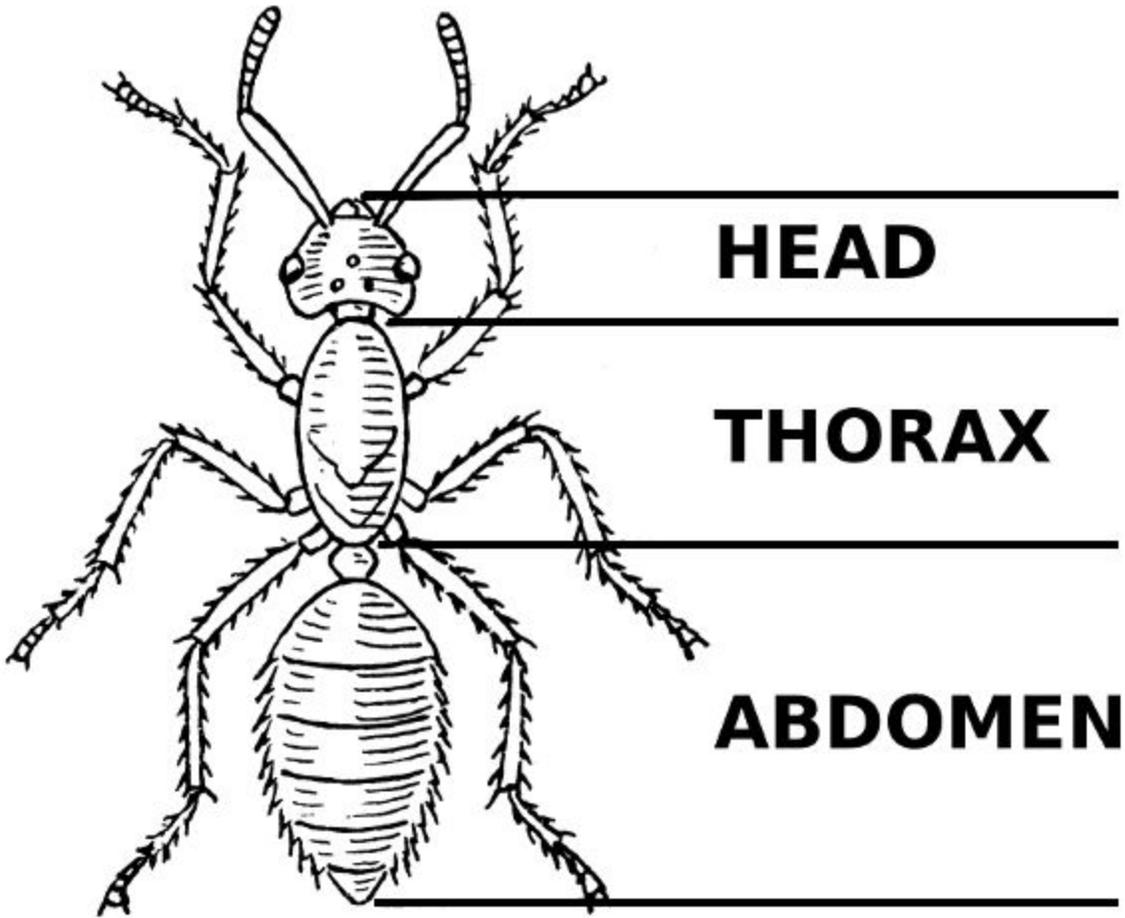
Journal Entry: Creature Feature

Circle or color in any creature on the page that is an insect.

On the back (or bottom), using what you know about insects, draw an insect of your own. Make up a name for it, what colors it will be, and think about what will make it an insect.

Closing - Final check for Understanding/Summarization: (8 min)

Have students share with each other the insects they created in their journals. Have them explain to each other what makes them an insect (3 body parts, exoskeleton, 6 legs).





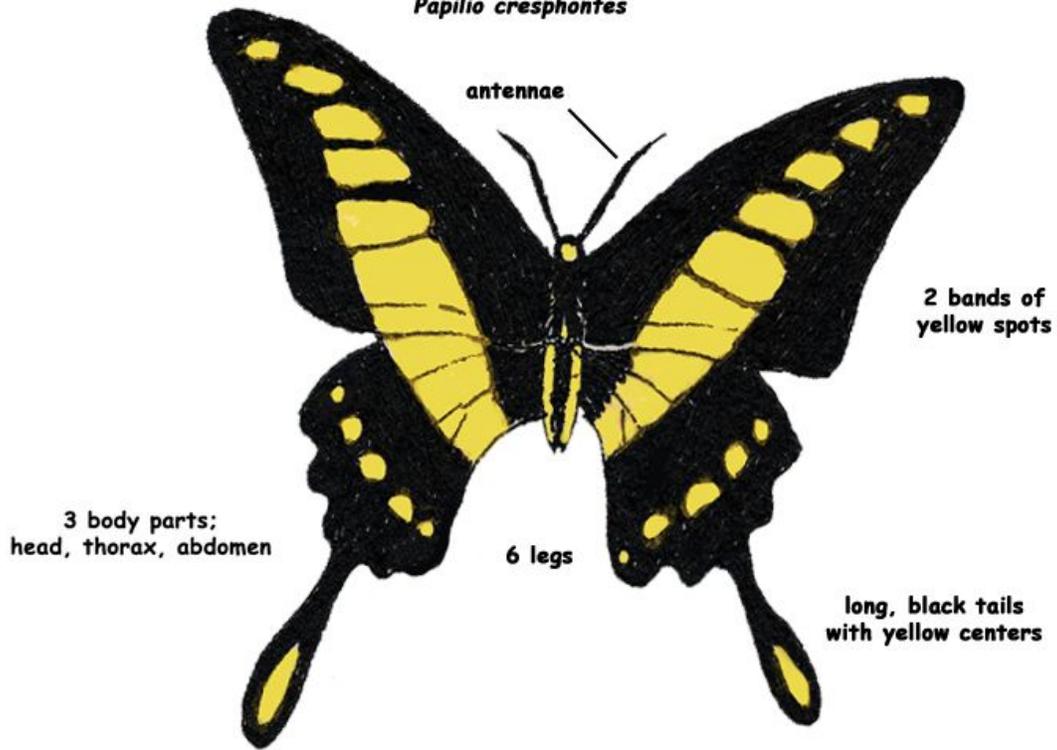
Adult insects have three main body parts:

head, thorax and abdomen



Butterfly (*Giant Swallowtail*)

Papilio cresphontes



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