The WVU Insect Zoo presents

An Insect Scavenger Hunt

For Grades K – 5

Insects are amazing creatures! We see them around us every day. We can find them flying or crawling over rocks and trees. They can be all different colors, shapes, and sizes, from bigger than our thumbs to too small to see!

Insects are special because they have 6 legs, antennae, and grow by shedding their hard outer shell or skin.

Directions: Look for the following insects with your parents and friends. When you find one of them, either draw it in the box or take a picture.

- ☐ Ladybug
- ☐ Bee
- ☐ Butterfly
- ☐ Ant
- ☐ Grasshopper
- ☐ An insect that can fly
- ☐ Lightening bug

Ladybug

Ladybugs are beetles. They are round with black spots, and are usually red, but can be orange, yellow or pink! Ladybugs can help your garden grow by eating other insects that eat all fruit and vegetables. Fun Fact: Ladybugs can release a yellow goo that other animals find stinky protect themselves from being eaten by birds and other bugs.

Find a ladybug and take or draw a picture!

Touch the back of the lady beetle – what does it feel like?

Why do you think this lady beetle has hard shell?

1st grade: NGSS K-2-ETS1-2; WV NXGEN S.K-2.ETS.1

Bees

Bees are a type of wasp that are fuzzy and often yellow with black stipes. Some bees live in colonies together, but many raise their babies alone. Do you like honey? Honeybees live in hives where they turn pollen and nectar from flowers into honey to feed to their babies. The bees you see on flowers are all girls! Most bees won't sting you unless you are too close to their hive or nest or try to squish them.

Fun Fact: The reason that bees making a buzzing sound is because they beat their wings super fast.

Find a flower with a bee on it.

Follow the bee and see where it lands next! Draw these flowers and how the bee moves between them.

Use your fingers to split a flower open – draw a diagram of the inside of the flower. What structures do you see in the flower?

Bee moving between flowers	Inside of a flower

2nd grade - NGSS 2-LS2-1; WV NXGEN S.2.GS.5; *4th grade* - NGSS 4-LS1-1; WV NXGEN S.4.GS.9

Butterflies

Butterflies are moths with big colorful wings that fly during the day. Butterflies also have a very long tongue that they use like a straw to suck nectar from flowers. Butterfly and moth babies are caterpillars!

Fun fact: Butterflies, like many insects, have taste receptors on their feet. Imagine if you could taste food with your feet!

Find a beautiful butterfly and draw or take a picture of it

Find a second different butterfly – How do you think the color differences on their wings helps them?

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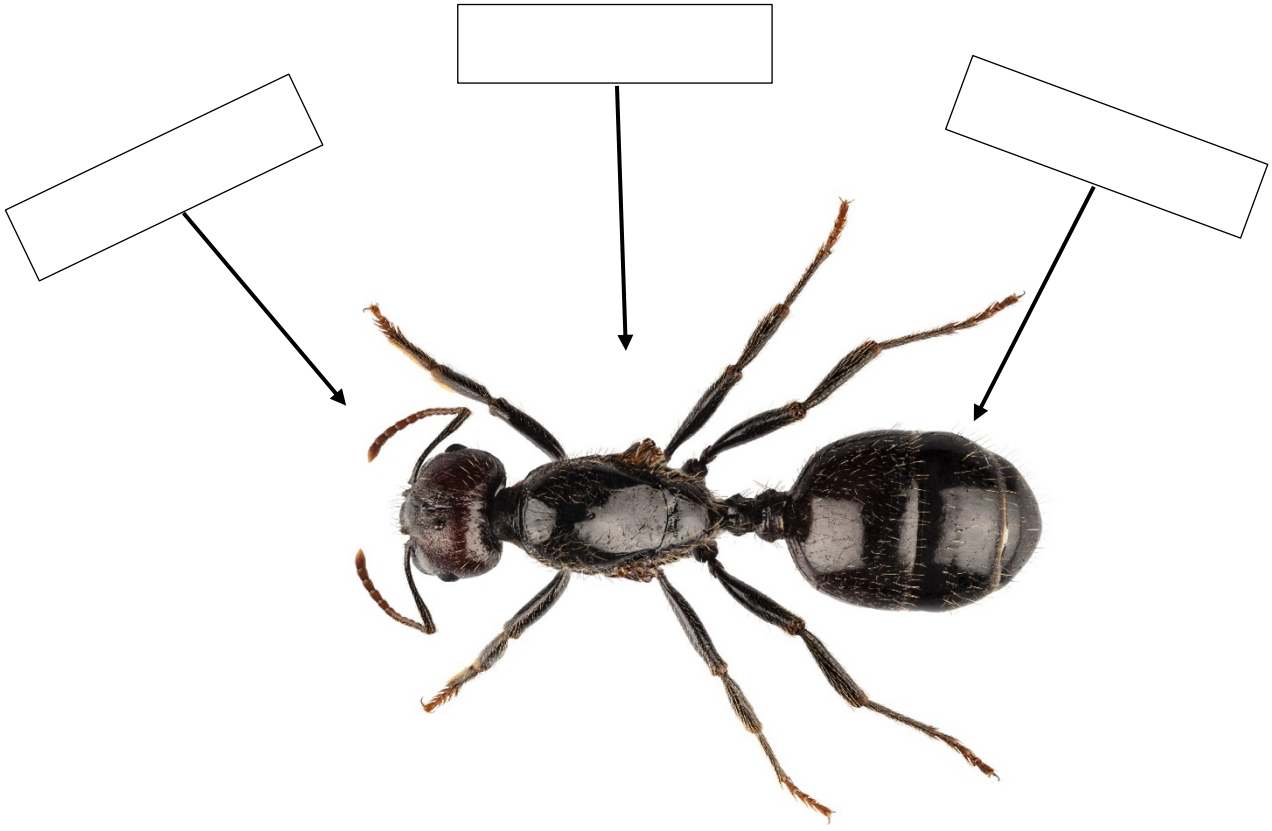
3nd grade - NGSS 3-LS3-2; WV NXGEN S.3.GS.11

What are the body parts of an insect?

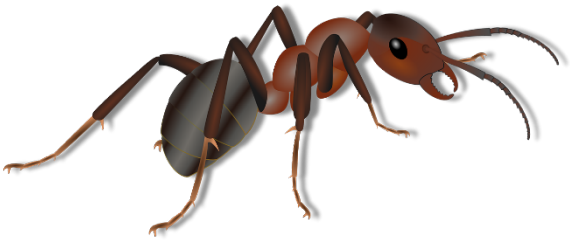
All adult insects have three body parts. The **head** is where the insect's eyes, mouth, and antennae are located. The **thorax** is the middle section. The thorax has a lot of muscles because it is where all the legs and wings connect to the body of the insect. The **abdomen** is the last segment of the insect. Inside the abdomen are the insects' guts and how they lay eggs and poop!

Fun fact: Insect antennae are the insect's nose and help them smell the world around them

Label the **head**, **thorax**, and **abdomen** of this ant



Ants



Ants live with other ants in colonies. They work together to get food and raise their babies. In most colonies, there are three different types of ants. There are worker, soldier, and queen ants. The queen lays all the eggs in the colonies, while the solider ants protect the colony. Worker ants find food and bring it back for the rest of the colony, so if you have ever seen an ant in your kitchen, it was probably a worker ant!

Fun Fact: Some ants can sting: the **bullet ant** has the most painful sting of any insect! Thank goodness the bullet ant is only found in forests of Central and South America.

Look for ants. Where have you seen ants before?

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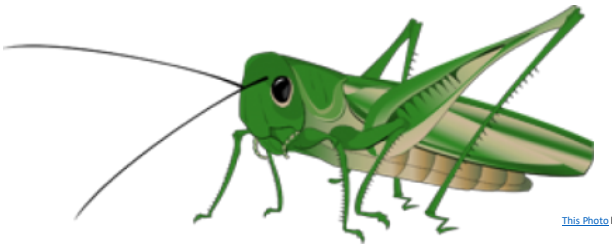
Draw or take a picture of an ant you have found.
Follow the ants find their nest. Imagine what an ant nest might look like inside! Where might you find different types of ants?

Ant	Ant nest

Kindergarten: NGSS K-ESS3-1; WV NXGEN S.K.GS.5

Grasshoppers

Grasshoppers have big back legs. What do you think they use those for?



Grasshoppers spend most of their time eating plants like grass and are found in meadows and fields. Grasshoppers sing by rubbing their back legs against their wings and some will snap their wings loudly in the air. Fun Fact: Grasshoppers are tasty too! Many people around the world eat grasshoppers. They are delicious once you take the wings and legs off and fry them.

Find a grasshopper and try to take a picture or draw it before it hops away!

What happens when a grasshopper poops?

Grasshopper	What happens to grasshopper poop?

5th grade NGSS 5-LS1-1; WV NXGEN S.5.GS.7

Flying Insects

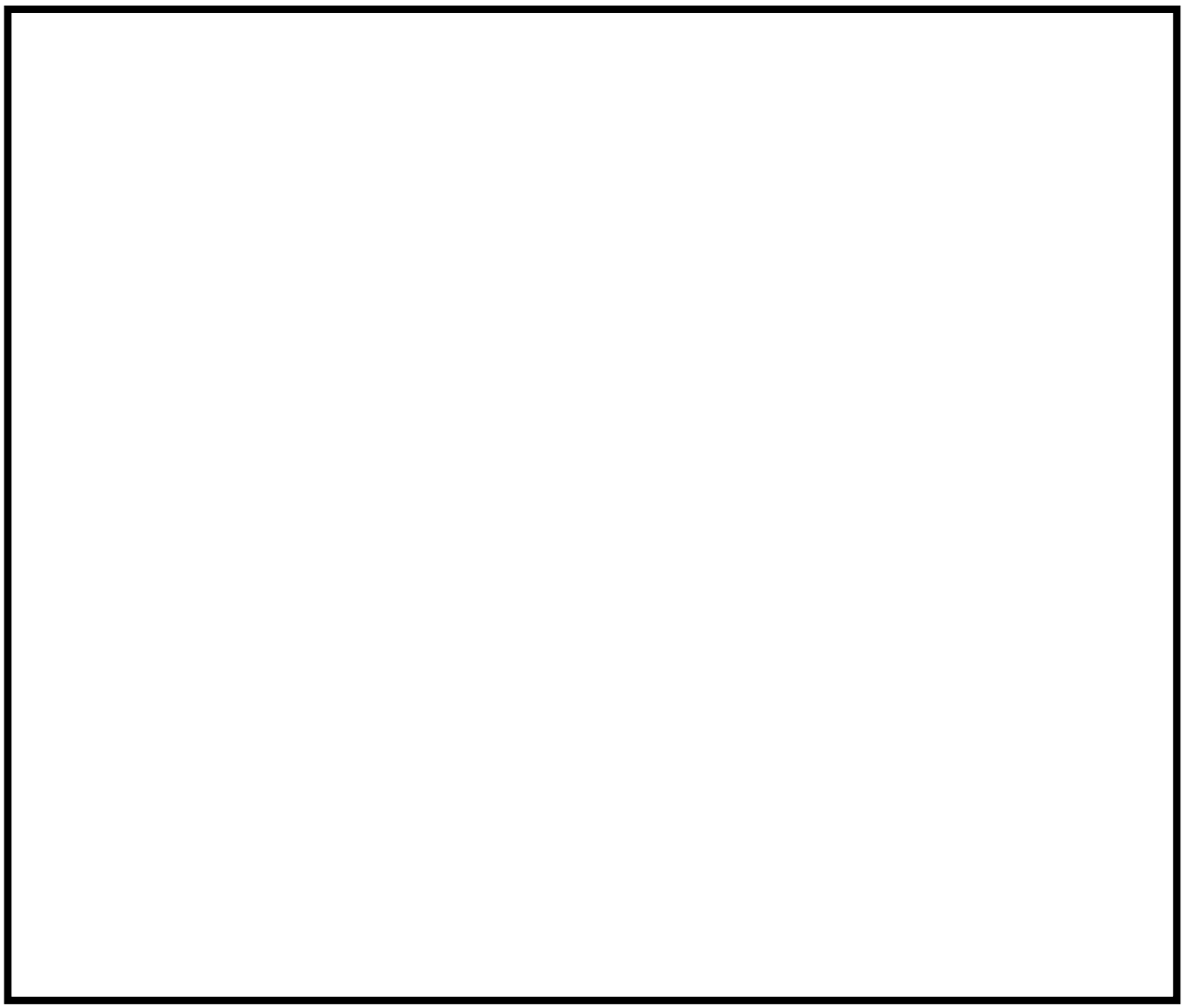
Not all insects have wings. Insects usually have 2 pairs wings (4 total!), and use them to get away from predators, to look for food, and to find new places to live. Insect wings can have different shapes, sizes, patterns, can be smooth or fuzzy. Insects with big wings are not always the best fliers! Here are some examples of different types of insect wings.

Flies have only one pair of wings. Instead of a second pair, they have special flying organs called **halteres**, that make them super good fliers. Without these **halteres**, flies can't keep their balance in the air, or land upside down

Butterflies are a type of moth that keep their wings straight over their body, while most moths fold them flat against their backs. Both moths and butterflies have super fuzzy wings because they have tiny scales on their wings.

Beetles have two pairs of wings, but the top pair are hard and shell-like and are called **elytra.** The **elytra** help protect the more fragile pair of wings underneath so that beetles can crawl through dirt or tree trunks.

Find or take a picture of two of your favorite flying insects. What about their wings are the same, and what are different?



Lightening Bug

Lightening bugs also known as fireflies are beetles. Fireflies can make the bottom half of their abdomen glow. To find lightening bugs, look just after the sun sets to see them flashing their lights!

Fun Fact: Lightening bugs find other bugs of their species by flashing in unique patterns that help them recognize each other in the dark. A common pattern in WV is the J shaped flash of the Eastern firefly. Look for them between 8:30 and 9:30 pm in the summer.

Find a firefly – is it flashing? What pattern is it flashing in? Draw or take a picture of this beetle and try to draw its flashing pattern.

Why do you think fireflies light up? _____

Turning-in scavenger hunt

To turn in your child's scavenger hunt, please send us a picture of the front page with all the insects checked off.

Send to:
elizabeth.rowen@mail.wvu.edu
or mail to
Elizabeth Rowen
3313 Agricultural Sciences Building
Morgantown WV, 26501

If you would like to receive a sticker and coloring book as a reward for completing the hunt, include your name and address.

We'd also love any pictures of you completing the scavenger hunt to feature on the insect zoo website! We will send you a **media release** form for your photos.

For Teachers

The objective of this scavenger hunt is to increase observation and critical thinking skills of students about the natural world. It aims to primarily fulfill the 3 dimensions of Next Generation Science Standards including the Scientific Practice (2) "developing and using models", the Crosscutting Concept (6) "structure and function", and the Life Science Core Idea of (LS1) "structures and processes". In addition, we note specific grade level tasks for certain organisms that fulfill the WV standards.

The WVU insect zoo

The WVU Insect Zoo opened in 2007 at WVU. The Zoo is part of the WVU Entomology under the Division of Plant and Soil Science, Davis College of Agriculture, Natural Resources, and Design. It is located in the Agricultural Sciences Building in the Evansdale campus of WVU.