

# Intro to Insects

## Activity Packet



Minnesota Valley National Wildlife Refuge

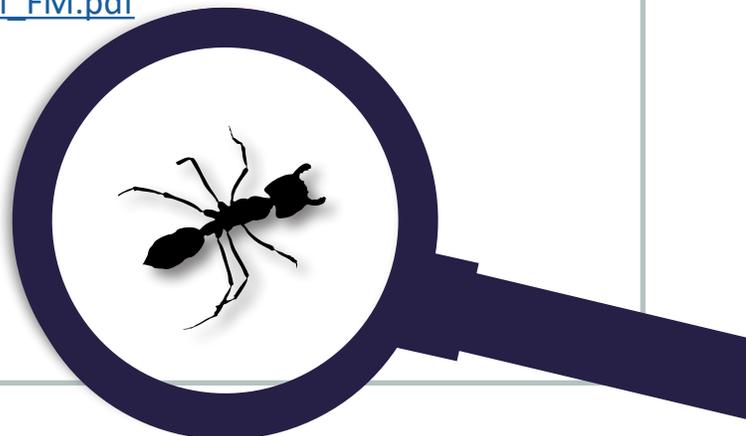
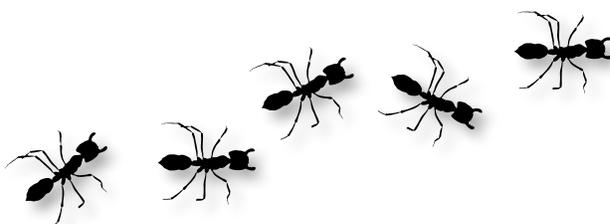
*Grade Levels: K-2*

### *Activities in this packet:*

- [Parts of an Insect, pages 2-4](#)
- [Monarch Butterflies, pages 5-7](#)
- [Make a Bug Jar, page 8](#)
- [Build an Insect Sweep Net, page 9](#)
- [Go Explore, pages 10-12](#)

### *Coloring Pages Available Online*

- Monarch life cycle coloring page from Monarch Joint Venture: [https://monarchjointventure.org/images/uploads/documents/monarch\\_life\\_cycle\\_coloring\\_page.pdf](https://monarchjointventure.org/images/uploads/documents/monarch_life_cycle_coloring_page.pdf)
- The Legend of the Parakata  
English: [https://monarchjointventure.org/images/uploads/documents/Monarch\\_Coloring\\_Book\\_English\\_FM.pdf](https://monarchjointventure.org/images/uploads/documents/Monarch_Coloring_Book_English_FM.pdf)  
Spanish: [https://monarchjointventure.org/images/uploads/documents/Monarch\\_Coloring\\_Book\\_Espa%C3%B1ol\\_FM.pdf](https://monarchjointventure.org/images/uploads/documents/Monarch_Coloring_Book_Espa%C3%B1ol_FM.pdf)



# Intro to Insects

## Parts of an Insect

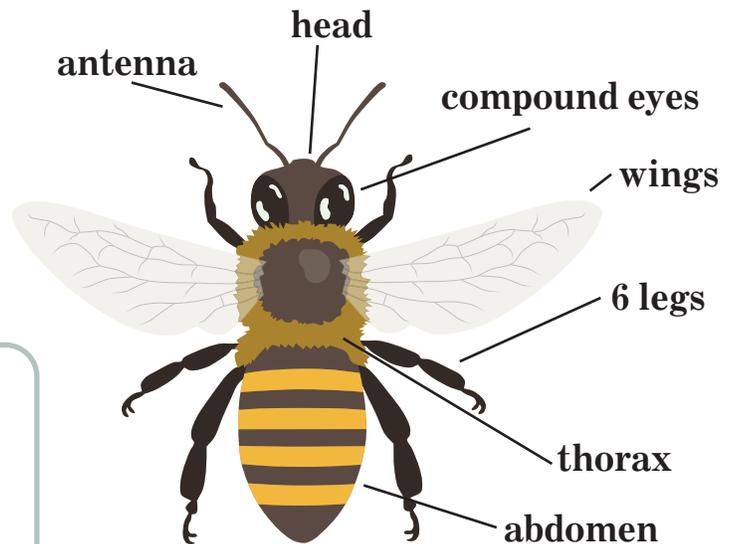
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### *What makes an insect an insect?*

You may know insects as bugs, but there are special characteristics that separate insects from other bugs. All insects have these parts:

- an Exoskeleton
- 6 legs
- 3 body parts: head, thorax, abdomen
- 1 or 2 pairs of wings (as adults)
- compound eyes



### *Vocabulary to know:*

**Thorax:** a part of an animal's body that is between the head and the abdomen, or the middle of the 3 body part sections.

**Abdomen:** the largest part of the 3 body part sections and contains the insect's stomach, just like your abdomen does.

## Parts of an Insect, continued from page 2

Insects look different when they are young and may not have all of the same body parts as their adult form. This is because all insects go through a life cycle, such as a caterpillar changing (metamorphosing) into an adult butterfly that has all of the characteristics listed on the previous page.

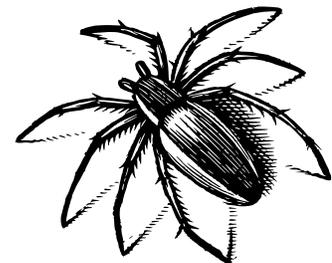
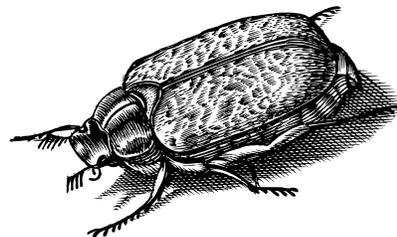
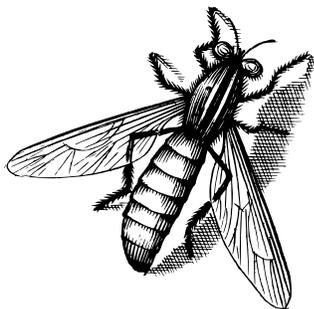
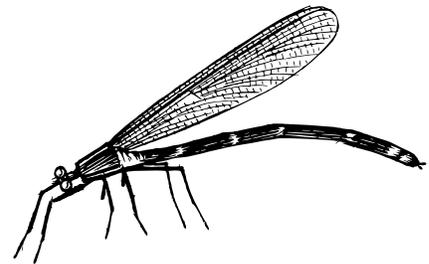
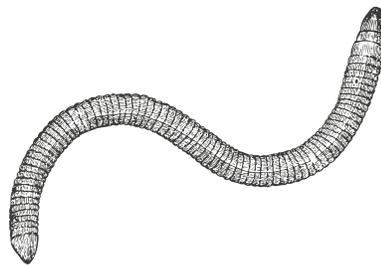
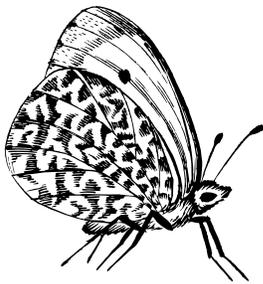
### Vocabulary to know:

**Metamorphosis:** a physical change some animals go through to become adults. Many insects go through four stages of metamorphosis: egg, larva, pupa, and adult.

**Exoskeleton:** Insects do not have bones, but have a hard exoskeleton instead. 'Exo' means outside, so that means that the skeleton is on the outside of the insect's body instead of on the inside like in our bodies.

### Is it an insect?

Circle all of the bugs on the page that are an insect. Flip the page upside-down to reveal the answers at the bottom.



1. Moth- insect 2. Earthworm- not insect 3. Damselfly- insect 4. Fly- insect 5. Beetle- insect 6. Spider- not insect

# Sing Along: Parts of an Insect

**Lyrics to Parts of an Insect** (Sung to the tune of “Head, Shoulders, Knees and Toes”)

Video available online: Dr. Jean- Insect’s Body- Sing and Learn about Bugs with Dr. Jean

[https://www.youtube.com/watch?v=6pe\\_p5FXE2g](https://www.youtube.com/watch?v=6pe_p5FXE2g)

Head (Point to head.)

Thorax (Point to chest.)

Abdomen – abdomen! (Point to stomach.)

Head, thorax, abdomen – abdomen!

And eyes (Point to eyes.)

And mouth (Point to mouth.)

And antenna, two (Stick 2 fingers up.)

Six legs (Wiggle 3 fingers on each hand.)

And there’s an insect for you!

(Leave off a verse each time you sing and hum.)



# Intro to Insects

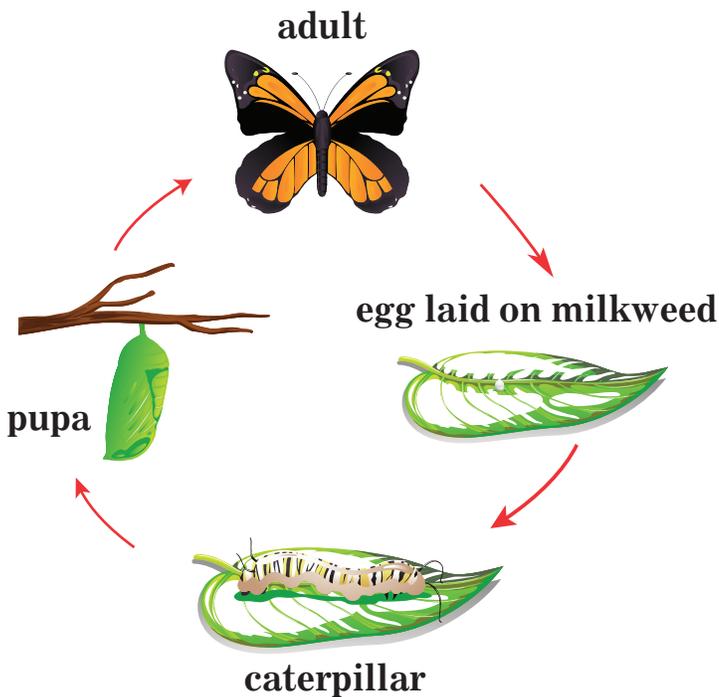
## Monarch Butterflies



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### Explore the Monarch Life Cycle

The monarch's life cycle is like a circle. Once a female monarch reaches the adult stage of her life cycle, it is time for her to lay eggs to continue the cycle. Find lots of resources about the monarch life cycle online at <https://journeynorth.org/tm/monarch/indexCurrent.html>



Watch these educational videos online:

Monarch butterfly life cycle by the American Museum of Natural History: [https://www.youtube.com/watch?v=WVAEoPC\\_hUU](https://www.youtube.com/watch?v=WVAEoPC_hUU)

Monarch butterfly emerging from its chrysalis by US Fish and Wildlife Service: <https://www.youtube.com/watch?v=OM-ptuFr-zc&t=4s>

Monarch Butterfly Migration by ABC news: <https://www.youtube.com/watch?v=AN8-pNnvJ5s>

# Make a Life Cycle Circle Book

## *Gather these materials:*

- 1 blank 8.5 X 11 inch piece of paper
- pencil, crayons, markers

## *Instructions:*

- Fold your piece of paper in half.
- Label the front cover "Egg," draw a monarch butterfly egg.
- Open your booklet and draw a monarch butterfly larva or caterpillar on the inside left, this is page 2.
- On the inside right, draw a chrysalis, this is page 3.
- On the back cover draw a monarch butterfly adult, this is page 4.
- On each page, write a fact or a sentence about each stage of the monarch butterfly life cycle.
- Because it is a circular book, the book will end with an adult but begin again with an egg when you flip the book.

## *Monarch Butterfly facts:*

- Adult butterflies lay eggs on milkweed.
- Monarch eggs are very small.
- Caterpillars hatch from the eggs and are called larva.
- Young caterpillars are very small. They eat a lot of milkweed and grow very fast.
- When caterpillars grow they shed their skin.
- Caterpillars create a chrysalis around them. This is the pupa stage.
- After 8-15 days the adult monarch emerges from the chrysalis.
- The change from larva to adult is called metamorphosis.
- An adult is orange, black and white.
- A larva is yellow, black and white.
- The new adults will lay eggs on milkweed just like their parents did.
- At the end of the summer, the last generation migrates to Mexico.



# Monarch Migration

Every fall, adult monarchs leave Minnesota on a journey to Mexico where they will spend the winter in the in Mexico's oyamel fir forest. Come spring, they will return North to the United States to continue their life cycle and lay eggs.

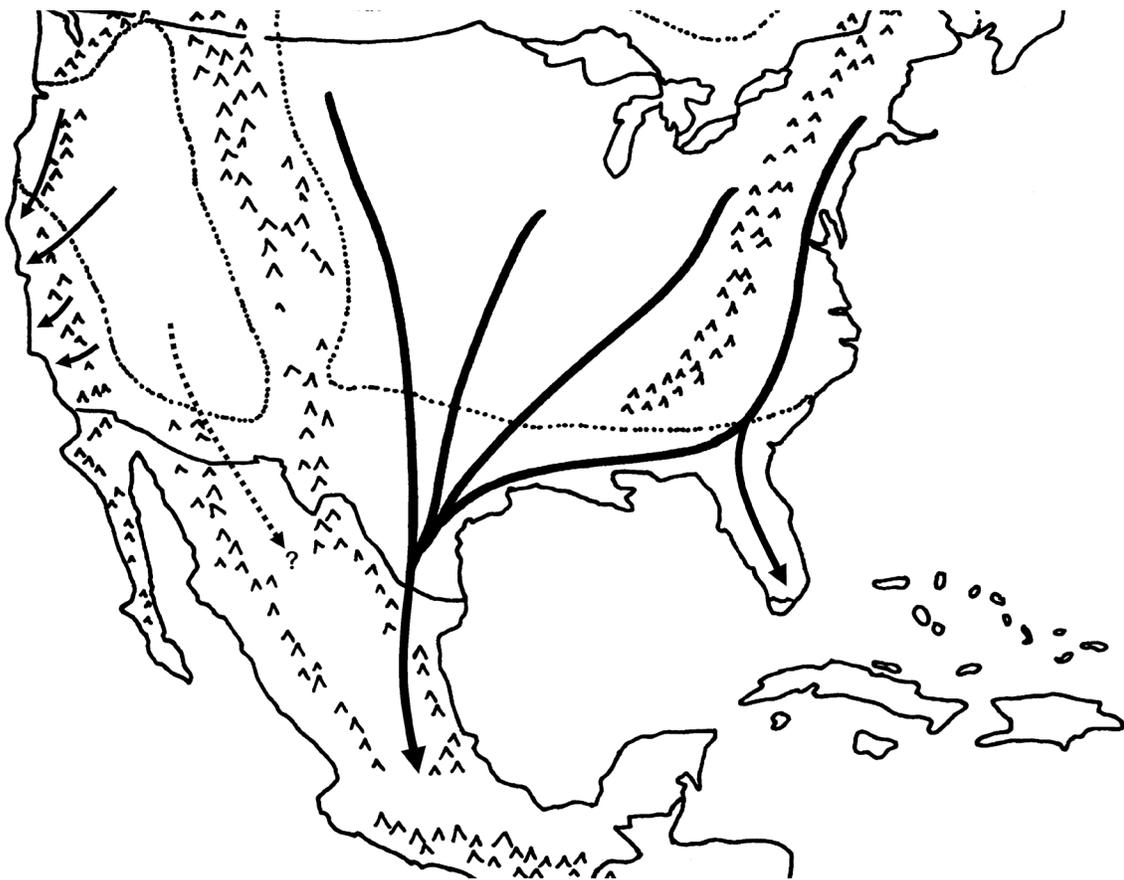
## Instructions:

- Draw and color in Minnesota on the Monarch Butterfly Migration map below.
- How many miles do you think Monarch butterflies have to fly to go from Minnesota to Oyamel, Mexico? Flip the page upside down for the answer.

## Vocabulary to know:

**Migration:** the movement of animals from one region to another in response to changing of the seasons.

## Monarch Butterfly Migration Map from Monarch Joint Venture



Answer: Successful monarchs travel 2,250 miles from Minnesota to the oyamel fir trees in Michoacán, Mexico.

# Intro to Insects

## Make a Bug Jar

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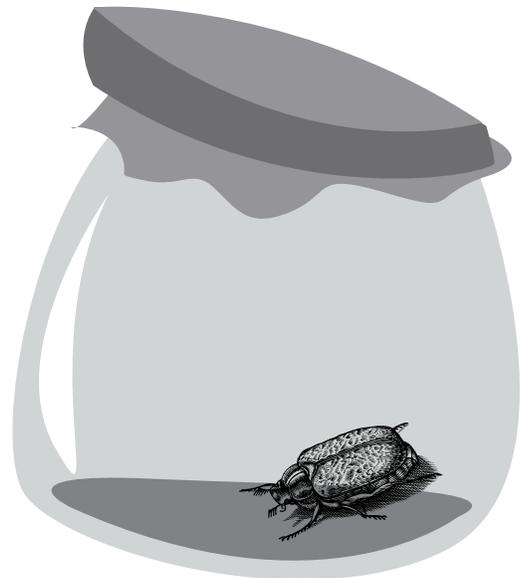


### *Gather these materials:*

- Clear recycled container such as a cleaned plastic peanut butter jar
- Napkin
- Rubber band

### *Instructions:*

- You can make a temporary home for insects from things you already have at home, like a clear plastic container or jar.
- Add a napkin on top secured with a rubber band to ensure they don't escape while you make your observations.
- Use your insect jar to catch and observe insects for a short while until releasing them where you found them.



### **Naturalist Reminder:**

Treat insects with respect. Insects are living creatures with homes, families and important insect work to do! Respect insects by handling them gently, observing them briefly, and never hurting them or disturbing their homes.

Avoid catching bees or wasps. They could mistake you for a predator and sting. If you accidentally catch a bee or wasp, hold the jar or net far away from your body with the opening facing the sky until the bee or wasp flies away.

# Intro to Insects

## Build an Insect Sweep Net



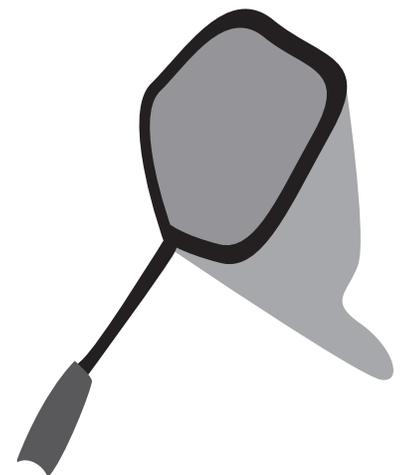
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#### *Gather these materials:*

- An old pillow case (light colored is best)
- Old wire hanger
- One 1/2 inch dowel or a stick about 4 ft long
- Lots of duct tape!

#### *Instructions:*

- Cut a slit in the inside hem of the pillowcase (this is the “open end”.)
- Undo the wire hanger and form it into a hoop.
- Thread the wire hanger through the pillowcase until both ends extend out of the slit.
- Adjust the hoop so that about 4 inches of the wire rest along each side of the dowel rod and attach it **SECURELY** with the duct tape.
- Sweep your net along tall grasses or shrubs to capture some insects. Look inside to see what you’ve found.
- Add insects to your bug jar to make observations about their behavior.



# Intro to Insects

## Go Explore!



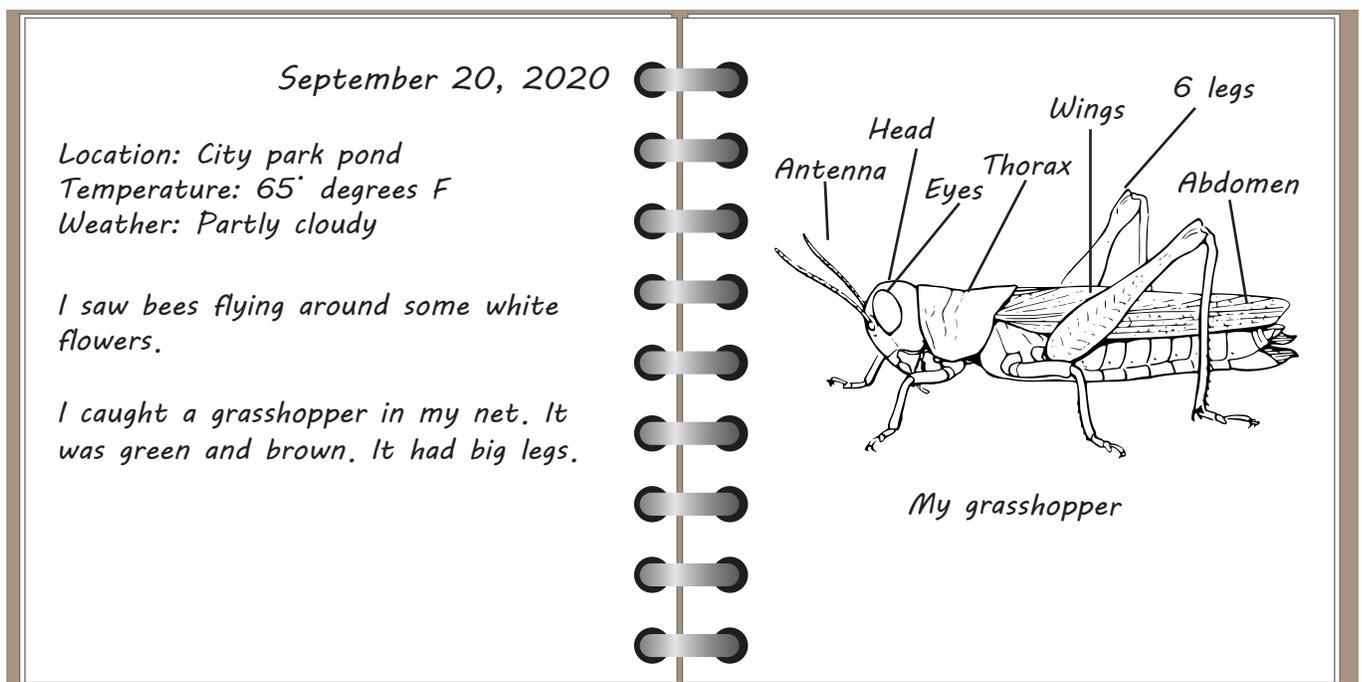
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#### *Gather these materials:*

- Bug Jar
- Sweep net or a butterfly net
- Journal or blank sheet of paper
- Pencil

#### *Instructions:*

- Capture of few insects using the instructions from the Make a Bug Jar and Build a Sweep Net activities.
- Set up your journal page. Add your name, the date, today's weather (temperature, cloudy, rainy ect.).
- Record the number of insects you collected or observed and identify them if you can. Or, just list they types of insects: fly, bee, dragonfly, grasshopper, butterfly, beetle.

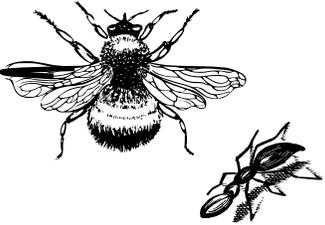


# Insect Scavenger Hunt

Date: \_\_\_\_\_

*Check the box when you find an item below*

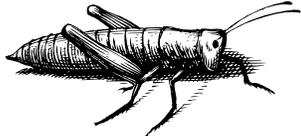
*Bee or Ant*



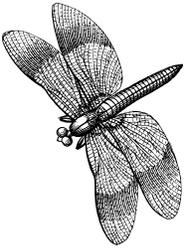
*Fly*



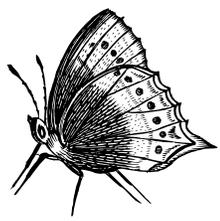
*Grasshopper or Cricket*



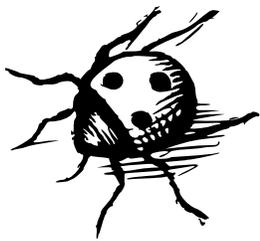
*Dragonfly*



*Butterfly or Moth*



*Beetle*



*My favorite insect is:*



# Insect Games



Some insects have super powers to help them survive in the wild. Due to their small sizes it is hard to tell just how amazing some of their powers really are. Accept this challenge and see if you have the same super powers as insects:

## Grasshopper jump:

Jump as far as you can, measure it, and see how many times your body length (height) it is. Grasshoppers can jump 30x their length!

Length of jump \_\_\_\_\_

Your height \_\_\_\_\_

Length of jump  $\div$  your height = \_\_\_\_\_

## Cockroach breath:

Time how long you can safely hold your breath. Cockroaches can hold theirs for 40 minutes!

I can hold my breath for \_\_\_\_\_ seconds.

## Ant weight lifting:

Ants can lift 50x their body weight! How heavy is 50x your body weight? Do 10 push ups 5 times.

My body weight \_\_\_\_\_

My body weight  $\times$  50 = \_\_\_\_\_

## Bee talk:

Honey bees tell each other where nectar is with a special dance called the waggle dance. Make up a dance to try to tell someone where an object is located.

Describe your dance below in words or pictures.