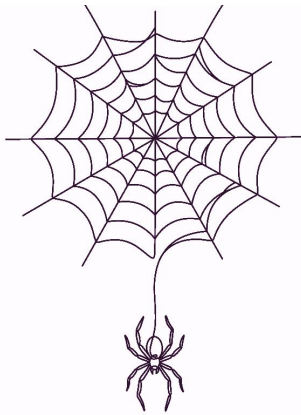


October invites us to look a little closer at the creatures around us. This month, you'll explore the science behind the animal kingdom's often misunderstood residents, including those that creep, crawl, slither, and burrow.

You'll get to research the field of entomology, fact-check claims about animals, and create a masterpiece using the beauty of nature. You'll also get a chance to encourage others to see a misunderstood creature in a different light and create a fun treat inspired by critters that help keep our soil healthy.



This packet includes the following activities:

- Wild Reads
- Entomology 101
- Fact Detectives: Critter Edition
- Critter Craft
- Creepy-Crawler PR Campaign
- Dirt Cup
- Creepy-Crawly Hand Art
- Creepy Critters + Coloring

Explore More



Watch a documentary about critters in nature that interest you! Search for a nature documentary about bees, butterflies, snakes, or another animal!



Talk to an expert at a local county, state, or national park about the wildlife in the area. Try to learn a few facts that you can teach to others, too!



Explore the career path of a wildlife biologist, herpetologist, beekeeper, ecology consultant, or other critter-related job. Do an internet search to find the required education, the typical salary, and where people in that field work.



Explore the stranger, darker, and more dangerous side of the natural world with these nonfiction reads about predators, mysterious creatures, extreme environments, and human-wildlife encounters. Then, turn your own reading adventure into an article for our October Newspaper Contest!

Book List



Bear Attacks: Their Causes and Avoidance, by Stephen Herrero

Using real encounters and scientific research, this nonfiction book explores why bears attack, how they behave, and what people can do to stay safe in bear country.



American Wolf: A True Story of Survival and Obsession in the West, by Nate Blakeslee

Follow the true story of O-Six, a remarkable Yellowstone wolf, while exploring survival, pack life, conservation, and the complicated relationship between wolves and humans.



Creatures of the Deep, by John Woodward

Journey into the darkest parts of the ocean to meet bizarre deep-sea creatures with enormous teeth, glowing bodies, unusual defenses, and incredible adaptations for extreme environments.



Death at SeaWorld: Shamu and the Dark Side of Killer Whales in Captivity, by David Kirby

This investigative nonfiction book examines killer whales in captivity, animal welfare, and the debate surrounding SeaWorld following the death of a trainer.

October Newspaper Contest

This October, our Newspaper Contest theme is “Reading Adventures”!

Write about a book that fascinated, surprised, challenged, or inspired you. You could recommend a favorite read, explore a new author or genre, describe a memorable reading experience, or respond to one of the books on this page.

How to participate: Select **Newspaper Contest** as your category, include “**Reading Adventures**” in your title, and submit your approved entry by **October 31**.

Three winners from each site will receive a special Contest Feather and 1,000 Gold/\$coops! Remember to follow all Site Rules and Community Guidelines.



Read the following information about entomology, then complete the research activity on the next page.

What Is Entomology?

Of the 2,000,000 species scientists have discovered and named, over half are insects. Insects affect many parts of human life. While some are harmful, many more help us by pollinating plants, eating harmful insects, and cycling nutrients through the soil. Because there are more species belonging to the insect class than any other class, entomology is vitally important.



Entomology is the study of insects. More specifically, entomology is the study of insects and their relationship to humans, the environment, and other living things. An **entomologist** is a scientist who studies entomology. What exactly an entomologist does depends on what area of entomology they focus on.

What Do Entomologists Study?

There are many different types of entomology that focus on an insect's interaction with other organisms, whether that includes a farmer's fields or the forest floor. Many entomologists choose instead to study a particular type of insect, like lepidopterologists, who study butterflies, or apiologists, who study bees.



Agricultural Entomology

Studies the positive and negative impacts of insects in farming



Medical Entomology

Studies insects and arthropods that carry disease, like mosquitoes and ticks



Forensic Entomology

Helps investigators solve crimes by studying the insects that live in or near human remains



Specialized Entomology

Studies one type of insect, like beetles, flies, butterflies, ants, or bees

Want to learn more about entomology? Continue to the research activity on the next page!



Choose an area of entomology to research. You can choose one of the areas from the previous page or choose another one. With your instructor's permission, use the internet to research your chosen topic. Use the brainstorming questions below to guide your research, and use the space at the bottom to keep track of what you've learned.

Research Questions

- Which area of entomology will you be researching?
- Why did you choose this area of entomology?
- What do these entomologists study?
- What is the purpose of the research conducted by entomologists in this field?
- How do these insects interact with their environment?
- How do these insects impact humans?
- How does this area of research benefit humans?

Part of the scientific method is sharing your findings with others. Consider making a video, article, or poster to summarize what you learned during your research, then sharing it with the online Mia community.



Choose a claim, then predict and investigate to build your case.

What Makes a Claim Stick?

Whether a claim catches on often has less to do with whether it's true and more to do with its shape. A claim that's vivid, simple, and easy to repeat can spread widely even if it's false, while a claim that sounds too strange, or too unremarkable, can get dismissed even when the evidence supports it. Truth and spread aren't the same thing, and mixing them up is exactly how misinformation survives contact with people who consider themselves skeptical.

Your task is to select one claim about a critter, investigate what the evidence actually shows, and explain not just whether the claim is true, but why it spread the way it did.

Step 1

Choose a Claim To Investigate!

Check the box next to the claim you want to investigate, or write your own below.



☐ Armadillos are naturally resistant to rabies because of their unusually low body temperature.



☐ Opossums eat thousands of ticks a season, single-handedly reducing the spread of Lyme disease.



☐ Bats drink blood as their main food source and sometimes will even attack humans to feed.



☐ All you need to tell whether a snake is venomous is to check its head shape and eye shape.

☐ Think of a claim you've heard about an animal that may or may not be true.



Step 2

Predict and Investigate

Before you research, state your position. Then, investigate and build your case.

Is this claim true, false, or misleading, and why do you think so?

Now, investigate. Find at least two credible sources on this claim.

What did each source say specifically about this claim? Briefly summarize what's relevant, not everything the source covers.

Why do you think this is a credible source? Consider who is providing the information and what authority they have.

Which piece of evidence affected your thinking the most, and why?

Research further: Can you trace where this belief came from or how it started, whether it turns out to be true, false, or somewhere in between?

Ecosystem Role: Separate from the claim itself, dig into the real ecological role your critter plays. What does it do to help keep its ecosystem healthy and balanced? Research its ecological function and cite your source.



Step 3

The Reveal

Write your verdict as a fact-check article.

Fact Busters: Verdict Report

Headline:

Critter:

Rating:

True

Misleading

False

The Claim

The Evidence For or Against It

Why This Claim Spread

This Critter's Ecological Role

The Bottom Line

One light closing statement — no new information, just your final take



For this project, you'll collect leaves from trees and other plants. The kinds of leaves you're able to find will depend on where you live. This might even include deciduous leaves that are just starting to change to their fall colors or green leaves from houseplants.

If leaves aren't available to you at all, you can still complete this activity by tracing other objects instead, such as coins, the base of a water bottle, an earbuds case, or anything else you can think of.

Supplies needed:

- | | | |
|---|-----------------------------------|---|
| ☐ 10+ leaves | ☐ Scissors | ☐ Markers, colored pencils, or |
| ☐ Paper or cardstock | ☐ Glue | crayons |

There are two versions of this craft. Choose Version A, Version B, or both!

Version A: Create Your Own Critters

1. **Glue** leaves on your paper or cardstock.
2. **Draw** legs, heads, eyes, or other body parts to create your own critters.
3. **Color** some of the critters on the following page. **Cut** them out and **glue** them on.



Extra Challenge: Create a critter using four or more different kinds of leaves, and without using a marker at all.

Version B: Color Your Critters and Make a Leaf Frame

1. **Color** the critters on the following page.
2. **Cut** along the dashed lines where indicated by the scissors symbol.
3. **Glue** leaves around the border to create a frame.



Extra Challenge: Create a pattern on your frame using three or more types of leaves.

Tip: Place a heavy object, like a book, on top of your artwork overnight so it lies flat as it continues to dry.

Looking for inspiration? Ready to try a new technique? Click or scan the QR code to see creative examples for how to make this craft.





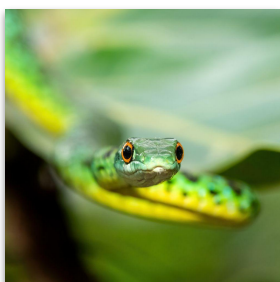


PR, or public relations, refers to how something is seen by the world at large, and many critters would benefit from a positive PR campaign! Create a poster or video that takes an often misunderstood creepy-crawler and presents it in a better light.



Spiders

A large number of people are arachnophobic, meaning they are afraid of spiders. A common concern when encountering a spider is that it might be venomous, but did you know that of the 4,000 species of spider in North America, only two are venomous to humans? Spiders do a lot more good than harm by catching and eating harmful insects.



Snakes

Like spiders, snakes are often feared, with many being wary of being bitten by a venomous snake. While there are more venomous snakes in the U.S. than venomous spiders, most venomous snakes live in the wilderness, away from human-made structures. Nonvenomous snakes help us keep pests away by scaring rodents that want to eat plants found someone's garden.

Directions:

1. Choose an animal that is often misunderstood, like spiders, bees, snakes, frogs, worms, or bats.
2. With your instructor's permission, use the internet to research what ways they can be helpful to humans.
3. Use what you discover to create a poster, video, or other piece of media that shows these creatures in a new light.

Brainstorming Questions

- What **animal** do you want to research?
- What are some common **misconceptions** about your chosen animal?
- What are some ways your animal actually **helps** humans?
- If your chosen animal does have the potential to hurt humans (stinging, biting, etc.), **why** does it hurt humans, and what can people do to **avoid** this?

What To Include

- ☐ An **introduction** that **describes** your chosen animal and **explains** why they are often misunderstood
- ☐ A correction of any **misconceptions** about the animal
- ☐ A description of how your chosen animal is **helpful** to humans, other animals, or the environment
- ☐ Any other information you feel is **important**



Cooking Activity

Dirt Cup

Creepers, Crawlers, and Critters
9-12 Activities

Create a delicious treat that celebrates a classic crawler! This sweet treat mixes chewy, creamy, and crunchy all in one place! The best part? No cooking or baking is required!



Did you know that earthworms aren't just wiggly garden dwellers? They're also nature's best soil engineers, have five pairs of hearts, and can regrow parts of their own body!

Earthworms burrow through soil, **creating tunnels that let air and water reach plant roots.**

Their castings are packed with nutrients, making them **one of the best natural fertilizers** around.

Earthworms don't have just one heart — they have five pairs, though they're more like pumping vessels than true hearts.

If an earthworm loses part of its tail, **it can often regenerate it over time.**

Ready to make some dirt cups? Make sure to ask an adult for help with this activity!

Tools You May Need



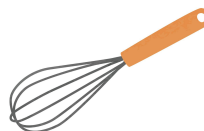
Rolling pin



Resealable bag



Bowl for mixing



Whisk



Mixing spoon or rubber spatula



Measuring cups and spoons



Clear cups for serving



Dirt Cups (Serves four)

Ingredients

- ❑ 8 chocolate sandwich cookies
- ❑ 2 cups of cold milk
- ❑ 1 3.4-ounce box of instant chocolate pudding mix
- ❑ ½ a cup of frozen whipped topping, thawed
- ❑ 12 plain gummy worms



Steps

1. Place the chocolate sandwich cookies in the resealable bag. Make sure it is closed all the way! Use your rolling pin to gently crush the cookies to your liking.
2. Add the cold milk to a mixing bowl. Empty the box of pudding mix into the milk and whisk until smooth. Set aside for five minutes to thicken.
3. Stir the whipped topping into the pudding until combined.
4. Set out your four serving cups. If you have clear cups, you can see the layers of the treat, but any cup or bowl will do!
5. Fill each of your four serving cups with ⅓ cup of the pudding mixture.
6. Sprinkle a heaping tablespoon of the crushed chocolate sandwich cookies.
7. Repeat for a second layer, using the remaining pudding mixture and crushed chocolate sandwich cookies.
8. Decorate each cup with three gummy worms, laying them on the top or digging them into the soil!

Want to get creative with your dirt cups? Here are some potential substitutes!

- Oats or granola for sand
- Raisins for beetles
- Cut-up grapes, strawberries, or blueberries for winged bugs
- Sprigs of mint for plants in the dirt



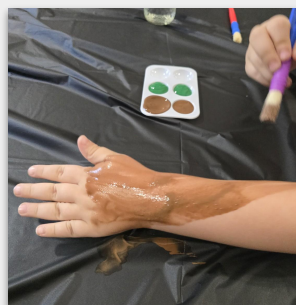
With just a little color, bring your hands to life by creating ASL critters!

Supplies Needed: Paint, brushes, paint tray, and a covered working area



1. Choose Your Critter

Choose a critter and find the ASL sign for that animal on the next two pages. Think about the colors you'll need for your design.



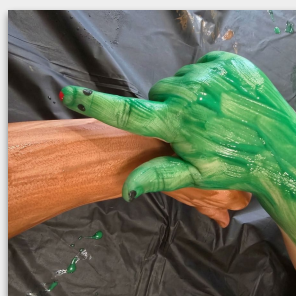
2. Paint Your Hand(s)

Paint the parts of your hand and arm needed for your design, starting with your critter's main color.



3. Add the Details

Add spots, stripes, eyes, patterns, or other features to make your hand look like your creepy-crawly.



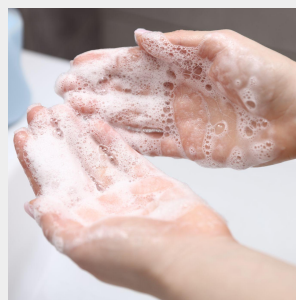
4. Make the ASL Sign

Put your hands into the correct handshape and show off your creepy-crawly sign!
*Use the next two pages for support with this step!



5. Share It

Take a photo of your hands to share with your family and friends to show them your critter hand(s)!

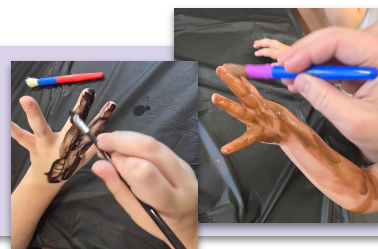


6. Clean Up!

Wash the paint off your hands with soap and water. Rinse out your brushes and clean your work area.

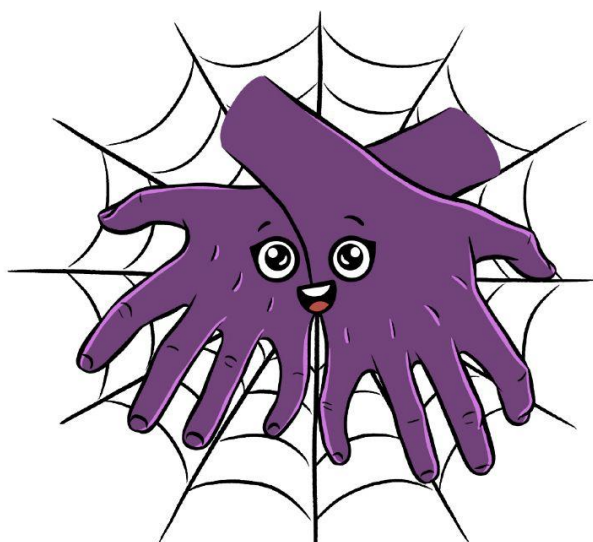
Tips:

- Use a smaller brush to paint around your fingers, knuckles, and other small spaces.
- Ask someone for help with areas that are hard to reach.



Not sure what to paint? Check out the next two pages for colorful creepy-crawly ideas! You can choose any critter shown, not just the spider or lizard in our examples.

Don't want to paint your hands? That's OK! Use the blank hand pictures to design and color your own creepy-crawly hands instead.



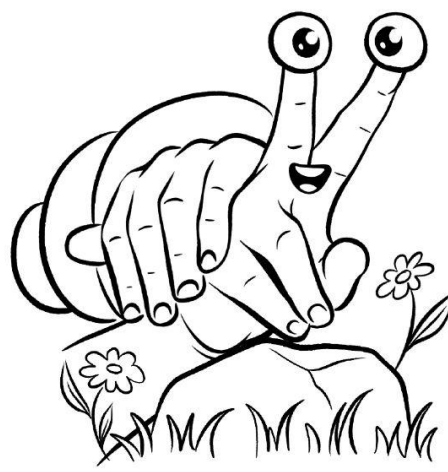
Spider



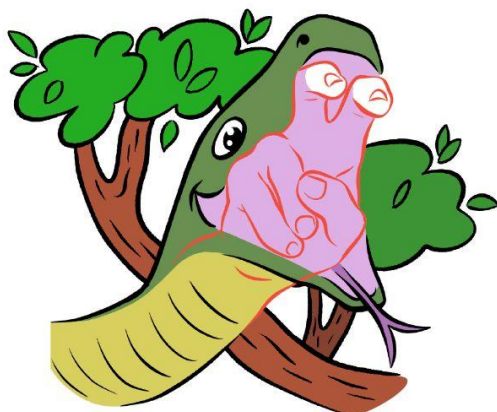
Spider



Snail



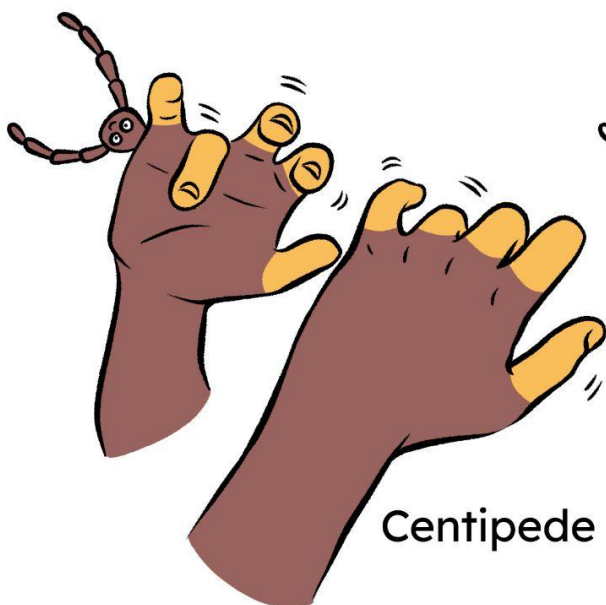
Snail



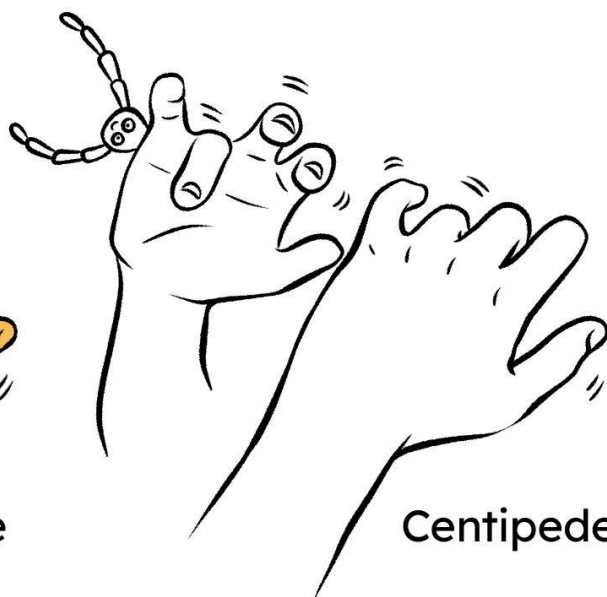
Snake



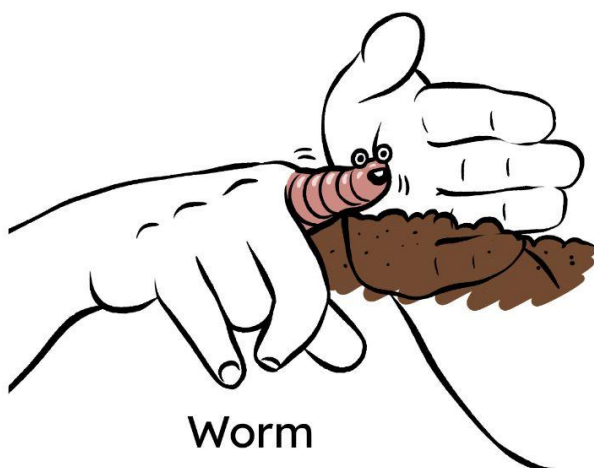
Snake



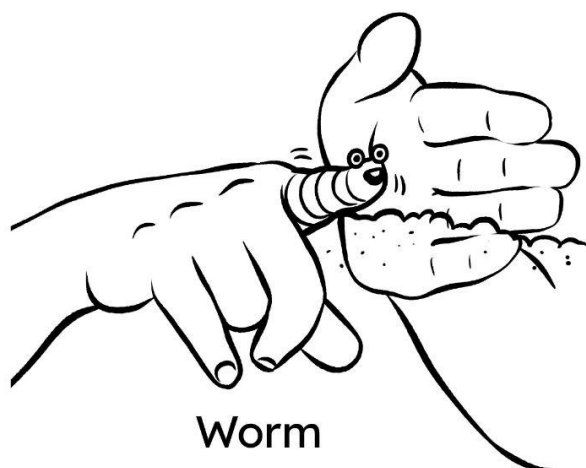
Centipede



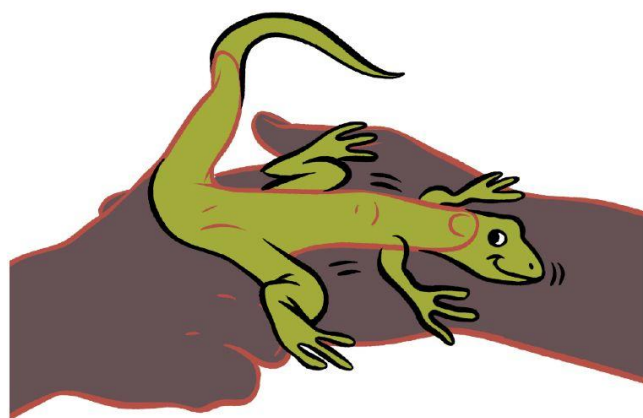
Centipede



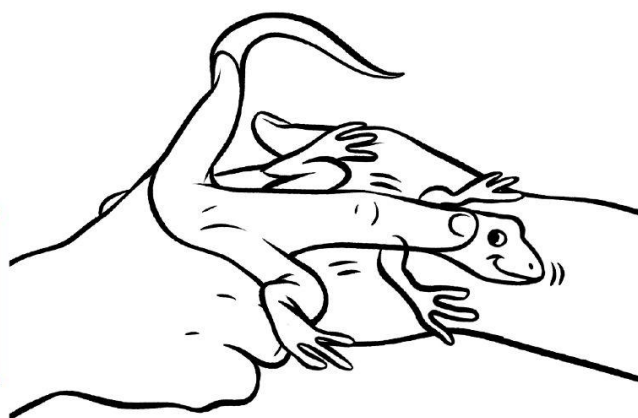
Worm



Worm



Lizard



Lizard