

## Photo Description



This image shows a large spider resting on a person's hand. The spider has long, thin legs, a brown and tan colored body, and small eyes. You can see the detailed texture of the human skin and how tiny the spider looks compared to the hand, which helps us understand the spider's actual size.

## Scientific Phenomena

**Anchoring Phenomenon:** Why do spiders sometimes crawl on people, and how do they move so carefully?

This image captures a spider exhibiting natural exploration and movement behavior. Spiders are predators that actively hunt for food and new habitats. When a spider encounters a hand, it is simply exploring—trying to find food or a safe place to go. The spider can walk on the hand because its legs have tiny claws and sticky toe pads that grip surfaces, allowing it to move smoothly even on smooth, curved surfaces like human skin. The spider is not trying to bite or hurt the person; it is simply moving through its environment the way it normally does on leaves, rocks, and soil.

## Core Science Concepts

- \* **Adaptations for Movement:** Spiders have eight jointed legs with special claws and sticky pads on their feet. These adaptations allow them to climb, walk, and grip almost any surface, including vertical walls and smooth skin.
- \* **Sensory Abilities:** Spiders have multiple eyes (usually eight) and special hairs on their legs that detect vibrations. These help spiders sense their surroundings and find food, even in darkness.
- \* **Habitat and Behavior:** Spiders are found in almost every environment on Earth—gardens, homes, forests, and deserts. They actively explore and hunt to survive.
- \* **Predator Role in Food Chains:** Spiders eat insects like flies, mosquitoes, and other small creatures. This makes spiders important predators that help control pest populations in nature.

### Pedagogical Tip:

Many Third Graders have fear or misconceptions about spiders. Use this image as an opportunity to build scientific curiosity rather than fear. Emphasize that spiders are beneficial, usually harmless to humans, and fascinating to study. Invite students to observe spiders in their natural outdoor habitats with magnifying glasses rather than handling them directly—this builds observation skills while respecting the animal's safety.

### UDL Suggestions:

**Multiple Means of Representation:** Provide the image alongside a large diagram labeling spider body parts (head, thorax, abdomen, legs). Use color coding to help students distinguish structures. For kinesthetic learners, allow students to create spider leg movements using their arms and practice the eight-legged walk.

**Multiple Means of Engagement:** Connect spiders to student interests (e.g., "Spiders are like tiny superheroes with special powers!"). Offer choice in extension activities—some students may prefer drawing spiders, others may research them, and others may act out spider behaviors.

**Multiple Means of Expression:** Allow students to demonstrate understanding through drawings, verbal explanations, written sentences, or physical models rather than requiring only written work.

### Discussion Questions

- \* What special body parts does the spider have that help it walk on the person's hand? (Bloom's: Understand | DOK: 1)
- \* Why do you think spiders have eight legs instead of just four like many other animals? (Bloom's: Analyze | DOK: 2)
- \* How might a spider's ability to climb smooth surfaces help it survive in nature? (Bloom's: Analyze | DOK: 2)
- \* If you were a tiny spider, what would you find to eat in your classroom or house? How would you hunt for it? (Bloom's: Create | DOK: 3)

### Extension Activities

1. Spider Observation Hunt: Take students outdoors on a safe spider hunt using magnifying glasses. Look under leaves, on walls, and in corners for real spiders in their natural habitats. Have students sketch what they observe and describe the spider's size, color, and location. Discuss how spiders help the garden by eating pests.
2. Model a Spider's Legs: Provide each student with a paper cup (body), eight pipe cleaners (legs), and googly eyes. Students assemble a 3D spider model and practice moving all eight legs in coordination. Ask: "What happens if one leg doesn't work? Can the spider still walk?" This kinesthetic activity helps students understand the function of multiple legs.
3. Spider Web Investigation: Show students photos or real examples of different spider web types (orb webs, funnel webs, cobwebs). Discuss why different spiders build different webs and how the web design helps them catch food. Students can create a web design on paper or string and explain why they designed it that way.

### NGSS Connections

Performance Expectation: 3-LS1-1 Develop models to describe that organisms have unseen parts that help them survive, grow, and meet their needs.

Disciplinary Core Ideas:

- 3-LS1.A Structure and Function—Students observe that the spider's leg structure, claws, and sensory hairs are specialized parts that enable survival.
- 3-LS4.B Natural Selection—The spider's adaptations (sticky feet, multiple eyes, leg design) have evolved because they help spiders survive and find food.

Crosscutting Concepts:

- Structure and Function—The spider's eight legs and special foot pads have a specific function: movement on any surface.
- Adaptations—Spiders possess physical features that make them suited to their environments.

### Science Vocabulary

- \* Adaptation: A special body part or behavior that helps an animal survive and do what it needs to do.
- \* Predator: An animal that hunts and eats other animals for food.
- \* Arachnid: The group of animals that includes spiders, scorpions, and ticks—they all have eight legs.
- \* Thorax: The middle body section of a spider where the legs are attached.
- \* Abdomen: The back body section of a spider that contains the belly and is often the largest part.
- \* Silk: A thin, strong thread that many spiders make from their bodies to build webs.

## External Resources

### Children's Books:

The Very Busy Spider\* by Eric Carle—A classic picture book about a spider spinning its web (ages 3–7).

Are You a Spider?\* by Judy Allen, illustrated by Tudor Humphries—A nonfiction exploration of spider adaptations and life cycles (ages 4–8).

Spiders\* by Gail Gibbons—An informative illustrated guide to spider anatomy, behavior, and habitats (ages 5–10).

### YouTube Videos:

\* "Spider Anatomy for Kids" by National Geographic Kids—A 4-minute overview of spider body parts and how they function.

<https://www.youtube.com/watch?v=VyWmr6bBArY>

\* "How Do Spiders Make Their Webs?" by TED-Ed—An engaging animation explaining web construction and purpose.

<https://www.youtube.com/watch?v=H58C5Z8s3R4>

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Teacher Note: This lesson opportunity transforms a common "ick" moment into genuine scientific inquiry. By helping Third Graders see spiders as fascinating creatures with remarkable adaptations, you build both scientific thinking and environmental appreciation.