



The Science Zone  
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### Daily Dose of Science: Wild Wednesday: Tarantulas

As the world's largest spiders, tarantulas are both feared and beloved. There are more than 850 species of these often hairy, nocturnal arachnids. Tarantulas live primarily in the tropical, subtropical, and desert areas of the world, with the majority found in South America.

In the United States, tarantulas are found in southwestern states. Despite their fearsome appearance, tarantulas are not threatening to humans. Their venom is milder than a honeybee, according to National Geographic, and though painful, their bites are not harmful. In fact, tarantulas have become a popular pet for arachnophiles around the world.

According to the National Wildlife Federation, female tarantulas can live up to 30 years, while males live for a much shorter time, around seven years.

Tarantulas' size and coloring can vary wildly depending on location and species. From front right leg to rear left leg, tarantulas range from 4.5 to 11 inches in length. They weigh from 1 to 3 ounces and have strong jaws and fangs. "The position of the fangs is distinctive as they are parallel to each other and face downwards like a vampire's," said Jo-Anne Nina Sewlal, an arachnologist at the University of the West Indies in Trinidad. While many tarantulas are dull brown or black, some species are brilliantly colored or striped.

"Probably [tarantulas'] most distinctive physical characteristic is that they possess very hairy legs and bodies," said Sewlal. She explained that some species use these bristly hairs, called urticating hairs, as a defense mechanism. If the attacker makes physical contact with the spiders, the hairs can be "rubbed off on . . . [or,] flicked toward potential attackers. These hairs are quite irritating if they land on the eyes or mucus membranes."

Tarantulas periodically molt, shedding their exoskeletons to grow. According to the Saskatchewan Science Centre, while tarantulas are molting, they can also replace internal organs — including female genitalia or stomach lining. They can even regrow lost legs or pedipalps (short sensory appendages).

Tarantulas are by no means tiny, but if they are threatened, they will raise their front two pairs of legs in the air. This makes them look bigger and scarier to dissuade predators. Works on me!

Tarantulas primarily eat insects, though some species enjoy larger game like frogs, mice and small lizards. At the Science Zone, Charlie eats crickets, superworms, and waxworms.

Most terrestrial species of tarantulas are burrowers. Unlike many spider species, tarantulas do not use webs to catch their prey. They do, however, spin silk. If a tarantula lives in a place with dry soil, it will burrow into the ground and line the walls of the hole with silk to help keep sand and dirt out. If a tarantula does not burrow, it might spin a burrow out of silk, or live under a log or rock. Sometimes, tarantulas spin a line of silk near the entrance to a burrow, which, reports National Geographic, acts as a trip wire, alerting the spider to prey that is nearing its home.

According to the San Diego Zoo, when prey comes close, tarantulas ambush it, seize it with their legs, paralyze it with venom, and then kill it with their fangs. They can also crush prey with their strong jaws. After the prey is dead, tarantulas inject digestive enzymes into the prey to liquefy the body and suck it up through their straw-like mouths.



ACTIVITY:

### Pinecone Spider Craft

Supplies:

Small to medium sized pinecones

Googly eyes

Brown pipe cleaners

Scissors

Hot glue, glue gun



Directions:

1. Begin by snipping out 8 legs for each spider. They can all be the same size, or you can vary them. It is completely up to you and will also depend on the size pinecone you are using.
2. Bend the end of each pipe cleaner to create "feet" that will help support the pinecone.



3. Add a dab of glue to the opposite end of the pipe cleaner and insert into the side of the pinecone. Hold in place until secure. Keep adding legs until you have 4 on each side.



4. You can now assemble the eyes of the spider. Add a dab of glue to the back of the googly eyes and press to the front of the pinecone. Add several because spiders typically have multiple eyes. For ours we chose 3, but you can add as many as you wish!

Just bend the pipe cleaner legs of your spider so they can stand. Display and enjoy!



