

SPIDERS

SPIDERS HAVE BEEN ON EARTH FOR ABOUT 350 MILLION YEARS!

SPIDER STRUCTURE

- Spiders have 8 legs with 48 'knees' (6 joints on each leg)
- 6–8 simple eyes (jumping spiders have the best eye-sight)
- Hairs on their body that taste food and detect vibrations, air currents and humidity
- An external skeleton that is tough but does not stretch. In order to grow, spiders must shed their exo-skeleton, then expand rapidly before the new soft skeleton becomes rigid.
- The ability to regenerate a lost leg when they next moult. Adult spiders, which are fully grown and do not moult, cannot regenerate body parts.



WORLDWIDE DISTRIBUTION

- There are more than 42,750 spider species in the world (but only 9000 bird species and 4000 mammals). Spiders live on all continents except Antarctica. More spider species live in the tropics than in cooler regions. Spiders are land dwellers — there can be up to 4–5 million spiders per hectare.
- Despite being land dwellers, one group can trap bubbles of air (like a diving bell) enabling them to stay underwater for up to 30 minutes or float on the water surface.

NEW ZEALAND SPIDERS

- New Zealand probably has about 2500 spider species, many of which are found nowhere else in the world. Virtually all of our native spiders live in natural native environments – the spiders in your house and garden are usually exotic or foreign species.
- Some spiders, such as the katipō (New Zealand's most poisonous spider) and the cave spider (New Zealand's largest spider), are rare and endangered.



FOOD

- Spiders only eat live prey.
- Spiders can increase their body weight by 50% after a good meal. They can also survive long periods without food.
- Some spiders live in or next to webs with which they catch prey, some live in tunnels and pounce on passing prey, and some spiders actively stalk and hunt their prey – a jumping spider can jump up to 25 times its own body length giving its victim a serious surprise!
- The weight of insects eaten by spiders every year is greater than the total weight of the entire human population.



SPIDER SILK - THE TOUGHEST MATERIAL KNOWN

- Spiders have 2–7 silk glands. Each silk gland produces a different type of silk, e.g.. silk for trapping prey, dragline silk to act as a safety line or bungee cord if the spider falls or jumps off something, and egg silk to protect its egg nest.
- The combined length of thread in a spider's web is about 20–60 metres and it can take the spider up to 3 hours to make an orb web.
- On an equal weight basis, spider silk is twice as strong as steel but very elastic. It is this combination of strength and stretch that makes the spider silk so tough.

WALKING UPSIDE DOWN

- Hunting spiders have a brush of special hairs on each leg that allows them to stick to walls and ceilings.
- Web spiders have special oil on their legs that prevents them sticking to their own web.

