

Spiders 1

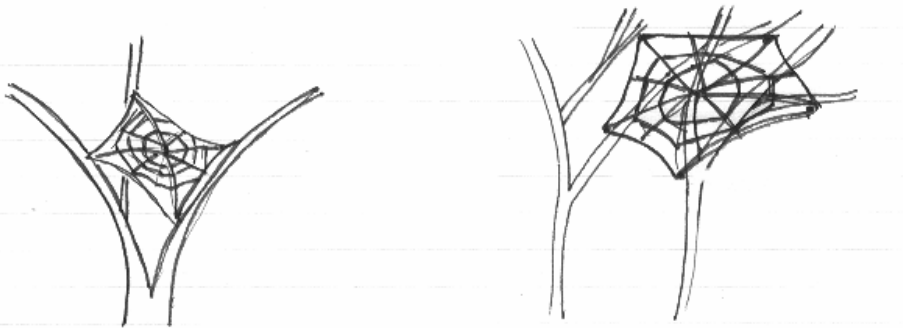
A good place to build a web

God has given the spider the ability to make the web, but the way she does it is left to the spider to decide.

A spider builds her home on the things she finds around her. Here are some of the things spiders build their webs upon. Write down any others that you can think of.

- twigs and branches
- leaves
- window frames
- ceilings and walls

Now draw some spiders webs built upon these things, and write the heading, "A good place for a spider's web".

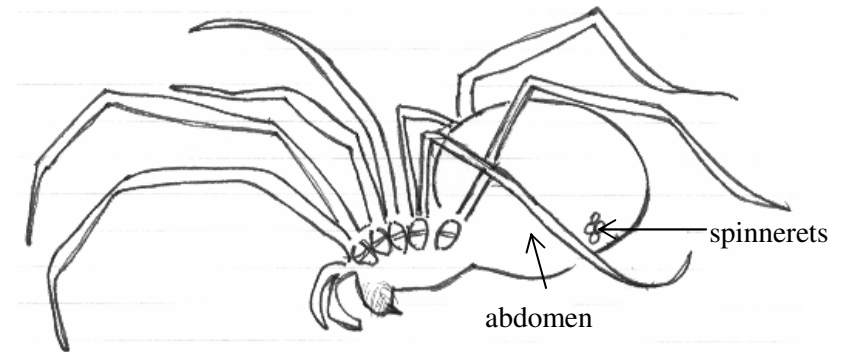


Spiders 2

Spider webs are sticky

The threads for the web come from the spider's body. Spiders' webs are built for catching flies or other insects for food. The spider waits in hiding and it feels if anything touches the web. When a fly is caught, the spider may wrap it up in sticky threads to take to its hiding place.

1. Why do you think spider's webs need to be sticky?
2. How does a spider catch its food?
3. At the end of a spider's abdomen is a factory for making silk. There are several nozzles called spinnerets. Draw a spider showing the spinnerets.



Spiders 3

Patient and diligent

If you brush away a spider's web from the corner of your ceiling, what will the spider do? Soon you will have to do your cleaning all over again. A spider never gives up building her home. We can learn from the example of a spider.

It is important to keep trying, even when you think you have failed.

A spider doesn't take long to build a web. As soon as the web is damaged it eats the old one and spins a new one. It doesn't give up.

A spider works with patience and diligence. This means it puts in a lot of effort. We can learn about diligence from the spider. It is important to do a job well and keep going right to the very end of the job, just like the spider.

Have you ever seen two spiders working on the one web? No, this doesn't happen. A spider works by herself with patience and diligence.

1. How can we learn from the spider?
2. Write down something that *you* need to keep trying at.
3. Name a job that you have to finish on your own.

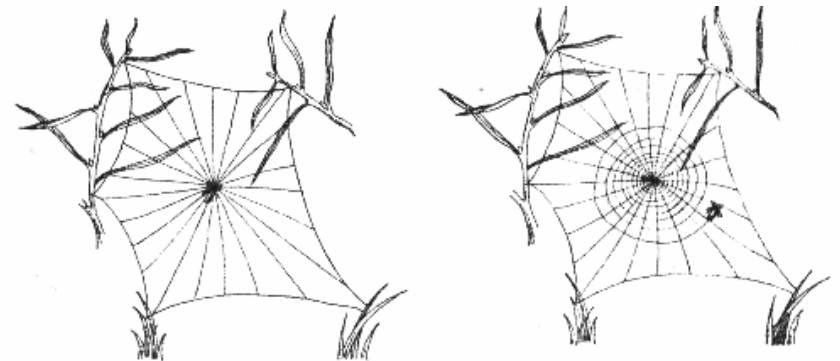


Spiders 4

How does a spider build a web?

Spiders' webs are strong and sticky. It is the lady spider who builds the web. First she chooses a good spot, and here she attaches the beginning of her web. Dangling on the end of the first thread, she now drops to the ground, or to a blade of grass, or a branch. Then she climbs back again, and waits for some wind to help her get across to something else, and so on until she has an outline for her web. Then she fills in the outline with threads running up and down, in every direction, all of them crossing one another like the spokes of a wheel.

Then she goes to the centre and takes the thread round and round in a spiral. Lastly, she goes over it again with a new sticky thread.



1. Two words to describe the spider's web: st and st
2. Who builds the web? Male or female?
3. After she chooses a good spot she dangles on the end of a _____ coming from her body.

Spiders 5

Designed by God

Do you know how many legs a spider has? A spider has eight legs. Spiders are not insects because all insects have six legs. Spiders are in a special family of their own called arachnids. There is another difference too. Insects have three parts to their bodies, but spiders have only two. Nearly all insects have wings but spiders have none.

Insects change in some way before they take their adult shape. Think about a caterpillar and how it changes to a butterfly. Little spiders, however, hatch straight away from the egg.

Although spiders do not change shape, they do grow bigger. To do this, they burst out of their hard skins, and grow new ones.

1. What is the difference between spiders and insects?
2. What happens to a spider's skin when the spider grows?

We read in the Bible: *Ask the animals, and they will teach you that God's hand can be seen in all His marvelous creation.* (Job 12:7)



Spiders 6

A house for spiders

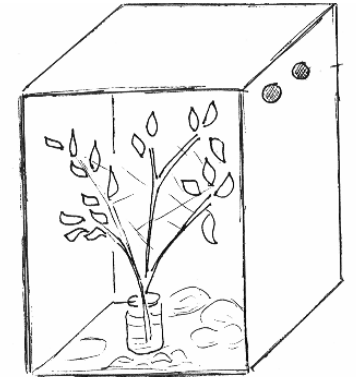
You can easily keep a house spider for a short time in a big glass container with air holes in the lid. Give it some water, somewhere to shelter and some insects for food.

What spiders eat

Spiders like their food to be alive when it is caught in the web, so you will have to catch small flies for them. They need water too, so sprinkle some spots of water on the home occasionally. Spiders are carnivorous. That means they eat meat, and might even eat each other!

The spider sucks juices from the insects and leaves the bodies. It can last a long time without food. You might see your spider spin a web. It is a good idea not to put two spiders together in the same jar, because female spiders will eat male spiders if they get a chance!

1. What do you need to make a spider house?
2. What do spiders eat?
3. How do they eat their food?
4. Why shouldn't you put two spiders in the same jar?



Spiders 7

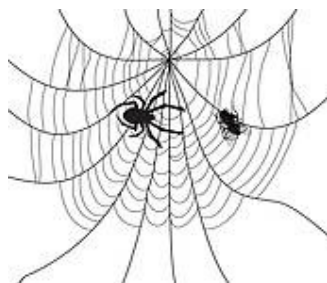
Spiders help us.

Spiders seem rather nasty creatures because they eat insects, but really, they are a help to gardeners. The spiders keep down the insect population, which would otherwise eat our flowers and vegetables. If there were no spiders, there would be too many insects.

Spiders also help us because they eat many insects that are harmful to humans. Think about flies, which eat our food and carry germs, and also insects which suck our blood and can carry disease.

Do you think that spiders had poisonous bites and ate insects when God first created them? No. In God's perfect creation, there was no killing. It was only when people disobeyed God, that killing began. Let's think about how the spider lived at the very start of creation. All spiders and insects must have eaten plants, but maybe not the ones that humans ate, because all creation was in perfect balance and there were no pests and diseases.

1. How do spiders help us?
2. Did spiders kill insects in God's perfect creation?
3. When did spiders start to kill insects?



Spiders 8

A spider's body

A spider has eight legs. They are hairy and jointed, and end in curved claws. The claws have teeth like a comb on the inside. The claws help to hold food. Spiders also use their claws as combs for cleaning themselves. A spider has no antennae like an insect. Instead it has *palps* which are joined to the mouth parts. They are like arms and hands to a spider. Spiders use their palps for feeling and touching.



Copy and fill the gaps:

Palps to a spider are like _____ to an insect.

Palps to a spider are like _____ to a human.

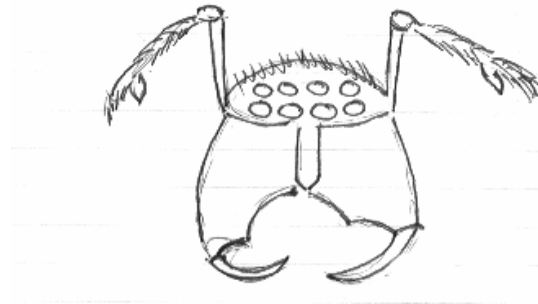
A spider usually has eight eyes. They are simple eyes that shine like jewels. People think that some spiders can see colours! A spider has to keep watch for prey. With so many eyes it can see in many directions. A spider also needs to watch out for enemies. A spider is always *alert*. Christians need to be alert too.

1. Read 1 Peter 5:8 and find out why Christians need to be alert.
2. Why do you think a spider needs so many eyes?
3. Think of some enemies that spider has.
4. Describe the way a spider might move if a fly flew past its web?

Spiders 9

A spider's head

1. Here is a drawing of a spider's head. The palps are the furry arms used for felling and touching. There are poison fangs and eyes. Draw the head and label the palps, the eyes and the fangs



2. A sense of smell is important to a spider:
for catching prey
for male spiders when trying to find a lady spider

3. A good sense of hearing is also important to a spider. A spider feels vibrations in the air through the hairs in its body. There are stories of spiders letting themselves down from ceilings to listen to music. They may think it is the buzzing of an insect.

Why is hearing important to a spider?

4. All spiders have fangs for injecting poison into their prey, but very few spiders are dangerous to humans. When a spider catches its prey, it sticks its fangs into the prey, and instantly kills it with poison. A spider doesn't really eat its prey. It sucks out the juices from the body of the insect, and leaves just an empty skin. Name something that is prey to a spider.

Spiders 10

Amazing builders

All that God has made is wonderful, and reflects His character. Just as a painting tells us something about the person who painted it, so nature can be studied to see what it tells us about God. The world which God has made has patterns and designs in it. All these things did not come about simply by chance. God is a God of order and He made things this way.

Some animals are amazing builders. Shellfish, ants, bees and termites build complex homes. Birds build nests. Both small and large animals make burrows.

God has provided all these animals with the ability to make these things. The spider is able to spin complex webs. Spiders are different from insects because they have eight legs, not six, and no spiders have wings. Baby spiders look like adults and don't go through the larva stage. Spiders have eight tiny eyes. Baby spiders spin webs and are not taught by their parents. God has given spiders some program, which we might call *instinct*, (which means we don't know how or why it works).

1. How do spiders know how to spin webs?
2. Make a table to show the difference between spiders and insects.

Spiders	Insects

Spiders 11

How baby spiders are born

Male spiders are usually smaller than female spiders. This means that they face the risk of being mistaken for prey and eaten! When it comes time for mating, the male spiders use many kinds of tricks. Some male spiders vibrate the female's web with a special rhythm to tell her that they are not to be mistaken for food. Other types of male spiders give the female a present to distract her attention. The present is an insect wrapped up in silk. Some clever male spiders suck up the food from the insect first, then spin the insect shell into a pretty silk cocoon for the female. When she finally gets it open she is in for a surprise because there is nothing to eat! Then the female spider gets angry and might kill the male spider!

As a result of mating, the female spider lays a group of eggs. She hides these under leaves of bark. Sometimes she makes a silk box for them. Baby spiders can make thread soon after they are born. Some can use their thread like a kite to carry them away on the air from the nest.

Do you think that our Father who has provided so many things for the spider to enable it to live, has done an even better job providing for us?

Are you not much more valuable than them to God? (Matthew 6:26)

1. What does a male spider do to attract a female spider?
2. How does the female spider hide her eggs?
3. What special thing can baby spiders do as soon as they are born?

Spiders 12

How a spider catches prey

The spider can keep very still and sit in the centre of the web, or in a hide-out made of leaves woven together on the side.

The spider moves on the dry parts of the web, not the sticky part, so that it doesn't get caught. Also, the spider moves on the underside of the web, and by hanging upside down, keeps free from the sticky thread.

The spider knows if it has caught something because the web's spokes are tight and vibrate if something is caught. It is similar to us holding a fishing line. When a fish is caught we feel the line move. A big fish moves the line a lot more than a little one, so we know its size. A spider, in a similar way, knows the size of what has been caught in the web.

If the insect caught is big, the spider runs over and spins a lot of threads around it. Many spiders can inject poison to kill the insect. The spider eats the soft part on the insect and throws the shell away.

1. Why does the spider sit very still in the centre of the web?
2. How does a spider know if it has caught something?
3. What happens to the web if a big insect is caught?
4. What does the spider do after it catches an insect in the web?

