

**GOD IS  
CREATOR**

**Creators & Builders**

**PART 1: Inventions**

**Year 6**

**Term 2**

Thinking Skills

**Creativity 1**

List 10 ways in which people can show creativity.



**Creativity 2**

Explain the meaning of this poster:



**Creativity 3**

Give 5 good points about being creative.

**Creativity 4**

Make up two sentences about creativity using some of these words.



**Creativity 5**

Explain how this picture can tell us about creativity.



**Creativity 6**

Imagine a world with no creativity.

Give 5 bad points.

<p style="text-align: center;"><b>Creativity 7</b></p> <p>Think of 3 creative ways to use a coat hanger. (Not what it's normally used for.)</p>	<p style="text-align: center;"><b>Creativity 8</b></p> <p>Design something original. Choose one of the following:</p> <ul style="list-style-type: none"> <li>• A song</li> <li>• A dance</li> <li>• A game</li> <li>• A recipe</li> <li>• An invention</li> </ul>
<p style="text-align: center;"><b>Creativity 9</b></p> <p>Think of a way to solve one of these problems:</p> <ul style="list-style-type: none"> <li>• Too much rubbish</li> <li>• Too much traffic</li> </ul>	<p style="text-align: center;"><b>Creativity 10</b></p> <p>Imagine that you and your friend have been shipwrecked on a tropical island. List 5 things you will do to survive. Think about food, water, shelter and how to signal for help.</p>
<p style="text-align: center;"><b>Creativity 11</b></p> <p>Imagine that you are the Prime Minister. What will you do to improve your country?</p>	<p style="text-align: center;"><b>Creativity 12</b></p> <p>List 3 animals that use creativity. Explain why these animals are creative.</p>

# Jacob Vouza

## Biography



Everyone in the village was talking about the new-comers, Jacob Vouza and his wife:

“A new policeman has arrived here on Guadalcanal. You should see him. He’s very tall, maybe 6 feet, and he has great broad shoulders.”

“He looks really powerful.”

“He has a lovely wife.

“And they’re both Christians. They’ve started having worship services on Sundays. The policeman teaches from the Bible.”

“I think I’ll go along, it sounds good.”

Jacob Vouza and his wife soon settled in to life in the village near Honiara in the Solomon Islands. Their Sunday meetings grew in number and the village folk greatly respected their new policeman and his wife.

“They live their lives like true Christians, just like he teaches us,” they said.

The village community lived together peaceably, learning to follow the Christian way. Then one day their peace was shattered.

“What’s that noise?” asked one man.

“Sounds like a plane, coming this way,” said another.

Jacob Vouza looked up to the distant skyline then called urgently to everyone, “You’d better run and hide in the bush. Those are enemy planes. Get your families together and run!”

In the following few days, Japanese planes had landed on the airstrip at Honiara, ships had landed Japanese soldiers at the wharf and they now occupied the township of Honiara and the surrounding villages. Vouza recalled the past few years.

“I always thought it was suspicious the way those Japanese men came spying their way into our islands,” he commented to a friend. “I remember when I was working at Tulagi there was a Japanese who worked as a carpenter. He openly boasted about how his people would come one day and occupy our islands.”

For the first few months after the enemy landed on Guadalcanal, Jacob and all the villagers were hiding in the jungle, and no one knew where he was or what he did. But then the day came when a ship appeared from the east. “It’s an American ship!” someone cried, “They’ve come to help us claim our islands back!”

The villagers watched from the shelter of the jungle as the American troops landed on the wharf at Honiara, relieved and excited that help had come for them. They found ways of contacting the Americans to pass on information about the whereabouts of the enemy. Jacob Vouza came to the American officers. “I know all the tracks through the jungle, lots of secret ways to spy on the enemy.” he said, “I can get the information to you about what they are doing and where they are going.”

The Americans were pleased to have such a strong, reliable man helping them and Jacob Vouza served their forces well.

But the day came when Jacob was captured by the Japanese. He had some important information about the movement of enemy troops which he was anxious to pass on to the American officers. He was following a jungle track to their base when he was taken.

Roughly the soldiers pushed him up against a tree and threatened him. “You tell us where the Americans are!” they ordered, but Jacob remained silent. They tied him to a tree with lengths of bush rope. “We’ll give you tins of food. Tell us what you know!”

Jacob said nothing.

The man who had been a carpenter at Tulagi was amongst the Japanese party that had captured Jacob. He recognised him and bigger bribes were offered. “You’re a big man in the police force. You’re important. We’ll give you lots of food.” “Tell us about the Americans.”

But nothing would make Jacob talk.

They left him for a time and Jacob thought they had finished with him, but later they returned.

“One last chance,” they said. “Tell us where your friends are. If you don’t we’ll kill you!”

Still not a word from Jacob.

They thrust bayonets through his arms, neck and finally his body. Believing he was dead they left him there, tied to the tree. But Jacob did not die.

“I must get to the American base and give them the information I learned today,” he thought to himself. “I’ve got to get out of these ropes.”

Somehow he managed to chew through the bush ropes and set himself free. He was bleeding a lot from the bayonet wounds, and his strength was fading. But he determined to reach the American base. “I must get there tonight,” he said to himself, “This information is too important to wait.”

It was twenty miles to the American lines, but staggering, crawling, bleeding, sometimes forced to rest, he struggled through the jungle during the long hours of the night.

Suddenly, “Halt! Who’s there?”

It was an American sentry on duty who had heard a noise in the nearby jungle and called out his challenge. Then out of the dark jungle crawled Jacob, his strength almost gone.

“We must get you to a doctor immediately,” said the sentry.

But Jacob objected. “No, the doctor can wait. Take me to an army officer. I have important information for him. I must see him first.”

They helped him walk the rest of the way to see the officer, who listened to his amazing story of courage and determination. “You’re a very brave man, Jacob Vouza. You’ve done well to get this information to us. Thank you for your courage and loyalty. Now you’ve done your duty we need to get you to the doctor.”

During the months that followed Jacob recovered under the care of the Americans. In the following two years there was bitter fighting on Guadalcanal between Japanese and Allied forces, but finally the Japanese were driven out and eventually the Solomon Islanders were free to return to their lands.

Jacob Vouza was awarded the George medal, a British award for bravery and also the American Silver Star. Those who knew his story knew that both awards had been well and truly earned for this brave man who gave a new and deeper meaning to the word “loyalty.”

Adapted from: *Safety Last* by Rita Snowden, Epworth Press, London  
*Not in Vain* periodical of the South Evangelical Mission, Sydney, N.S.W.

## Inventions 1

### Questions about technology

<b>Student activities</b>
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1. What do you think are the 3 greatest inventions of all time?
2. How has technology changed the workplace?
3. Has technology ever *let you down*? (Have you ever been disappointed because something did not work properly?)  
What happened?
4. How has technology improved our daily lives? Give examples and explain the advantages of technological advances.
5. What could never be replaced by technology?  
Explain why not.
6. What things should never have been invented?
7. Do computers save time or do they just make us waste more time? Explain.
8. What would you like to see invented in the future?  
Explain why.
9. Which modern invention could you not live without?  
Explain your choice.
10. How has technology changed medical care?
11. How has technology revolutionized transport?

## Inventions 2

### The Invention of Umbrellas

It seems natural to open an umbrella when it rains. But actually the umbrella was not invented for protection against rain. It was first used as a shade against the sun.

Nobody knows who first invented it, but the umbrella was used in very ancient times.

The first people to use it were probably the Chinese in the eleventh century B.C. The umbrella spread to ancient Egypt and Babylon. At that time it was a symbol of honor and authority. The umbrella was only for royalty or by those in high offices.

It is believed that the first people to use the umbrella as protection against rain were the ancient Romans.

The umbrella became popular in Europe in the eighteenth century and then started to become popular worldwide. Umbrellas have not changed much in style during all this time; however, it wasn't until the *twentieth century* that umbrellas began to be made in a **variety** of colors.

1. *Who first invented the umbrella?*
2. *When did the first people start to use the umbrella?*
3. *Who were the first people to use the umbrella for protection from the rain?*
4. *When did umbrellas began being made into different colors?*



### **Inventions 3**

#### **For good or for bad**

Just a few hundred years ago, life was far different than it is today. When people wanted to travel or communicate, they had to go on foot or horseback.

Whatever people owned—from clothing to tools—had to be made by hand.

Diseases were difficult to treat without modern medicines.

Quality of life has improved over the years through the efforts of the men and women who had the brilliance, diligence, and creativity to come up with new and better ways of doing things.

Alexander Graham Bell discovered how to send sound down a wire from the speaker to the listener, and so invented the telephone, which ultimately led to the cell phone, and our modem, and a communication system that now links the entire globe.

The electric light illuminated the darkness so people could work at night. Braille made it possible for blind people to read.

These inventions, like many others, have clearly improved life by keeping people healthier, helping them to communicate and work more efficiently, and allowing them to travel farther.

Other inventions were controversial because of their potential for destruction. Some people think that the world would be better off without the invention of the hydrogen bomb.

**List 5 good inventions. Explain how they have changed people's lives.**

## **Inventions 4**

### **Telephone and Computers**

#### **The Telephone**

The telephone is an instrument that converts voice and sound signals into electrical impulses for transmission by wire to a different location, where another telephone receives the electrical impulses and turns them back into recognizable sounds. In 1875, Alexander Graham Bell built the first telephone that transmitted electrically the human voice.

#### **Computers**

There are many major milestones in the history of computers, starting with 1936, when Konrad Zuse built the first freely programmable computer. In the 1960s computers were used by NASA to place a man on the moon. The computers then were very large.

1. What are the advantages and disadvantages of having a mobile phone?
2. Explain in 3 sentences or more how have computers changed since 1936.

## **Inventions 5**

### **The car and the camera**

#### **The Car**

In 1769, the very first self-propelled road vehicle was invented by French mechanic, Nicolas Joseph Cugnot, (French). It was a steam-powered model. In 1885, Karl Benz, (German) designed and built the world's first practical car to be powered by an internal-combustion engine. In 1885, Gottlieb Daimler (German), took the internal combustion engine a step further and developed a gas engine. He later built the world's first four-wheeled motor vehicle.

1. Apart from walking, how did people travel before the invention of the car?
2. How is the modern car different to the first car invented?

#### **The Camera**

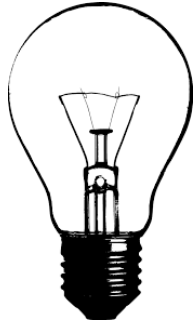
In 1814, Joseph Nicéphore Niépce (French), created the first photographic image with a camera he invented. The image required eight hours of light exposure and later faded. In 1837 Louis-Jacques-Mandé Daguerre (French), invented of the first practical process of photography.

3. How did people produce images before the camera?
4. What can we do with cameras today?

## Inventions 6

### The light bulb

In 1809, Humphry Davy, an English chemist, invented the first electric light. Fifty years later Thomas Edison (American), improved upon this idea. In 1878, Sir Joseph Wilson Swan, an English scientist, was the first person to invent a practical and longer-lasting electric lightbulb that burned for 13 hours. In 1879, Thomas Edison invented a carbon filament that burned for forty hours. The filament is made of tungsten wire. Tungsten is a hard metal with the highest melting point of any metal.



1. How did people light their homes before the invention of the electric light?
2. Why was Thomas Edison's invention in 1879, better than any previous attempts at making a light bulb?
3. Why is tungsten a suitable metal for using in a light bulb?
4. Draw the light bulb and label the tungsten wire filament.

## Inventions 7

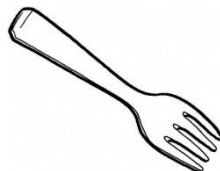
### Household objects

Choose five of the following objects.

Name and draw each object.

Explain how life would have been without this object, or how the job would have been done before it was invented.

1. Hammer
2. Fork
3. Spade
4. Mop
5. Broom
6. Screwdriver
7. Grater
8. Peeler
9. Scissors
10. Saucepan
11. Clothes peg



## Inventions 8

### Household objects

Choose five of the following objects.

Name and draw each object.

Explain how life would have been without this object, or how the job would have been done before it was invented.

1. Mirror
2. Pen
3. Washing machine
4. Clock
5. Sewing machine
6. Can opener
7. Ironing board
8. Lawn mower
9. Saw
10. Drill
11. toothbrush



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**PART 2: Spiders**

**Year 6**

**Term 3**

## Spiders 1

### A good place to build a web

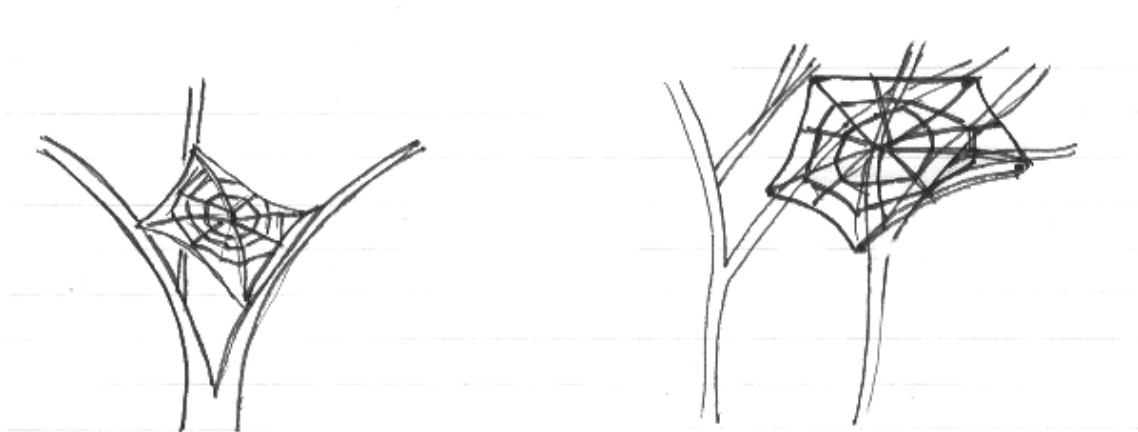
Student activity

A spider is a creator and a builder. 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".

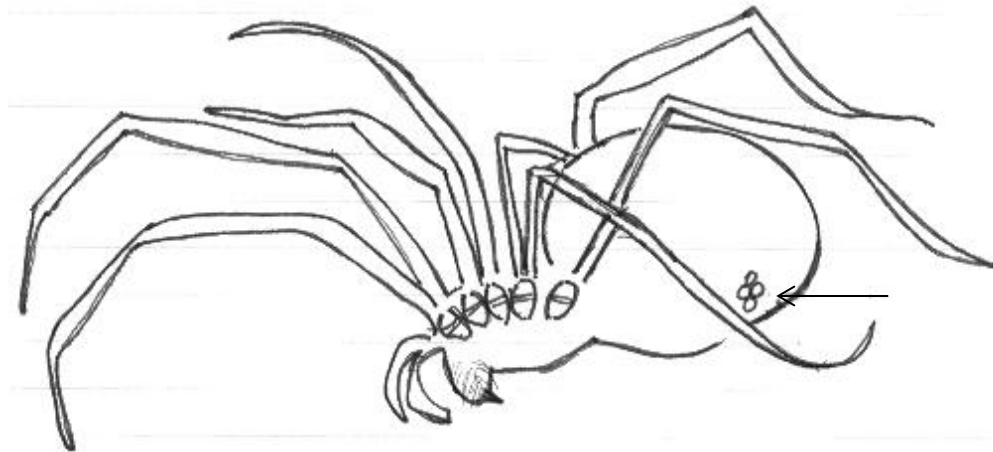


## Spiders 2

### 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.

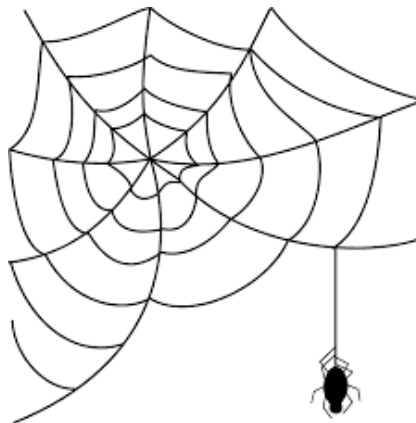
It is important to keep trying, even when you think you have failed.

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.



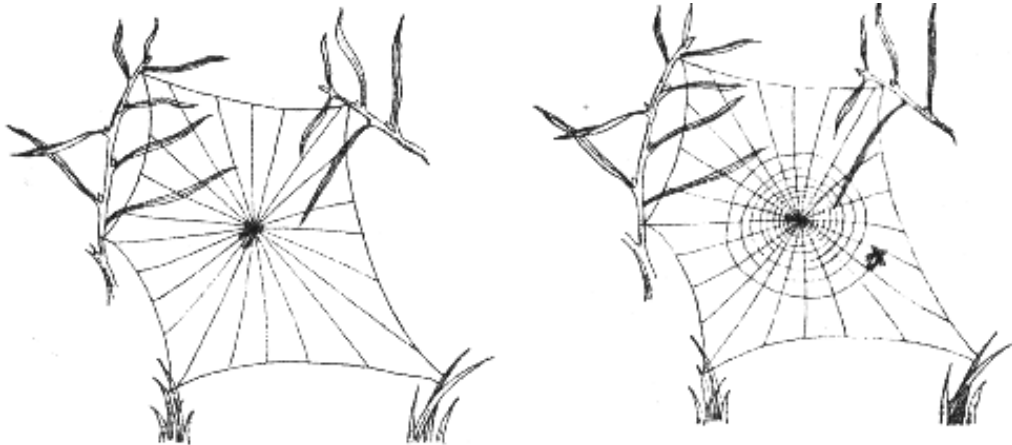


## Spiders 4

### 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

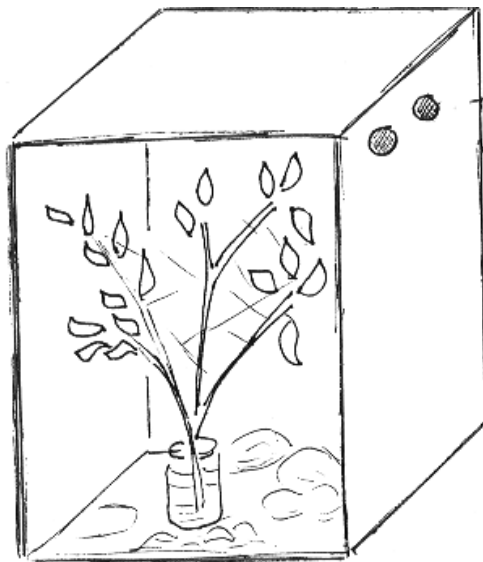
You can easily keep a house spider for a short time in a big glass container with air holes in the lid. Give it some water, somewhere to shelter and some insects for food.

#### 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**

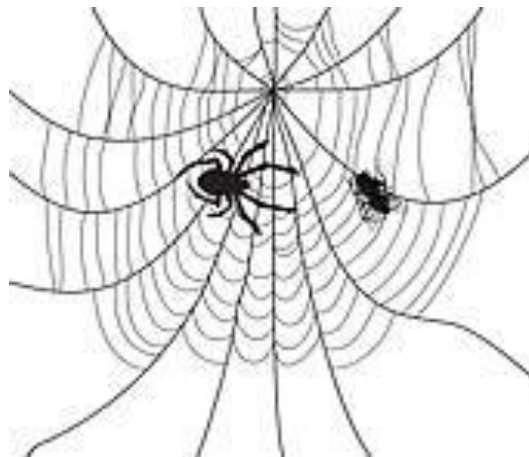
### **Spiders help us.**

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.

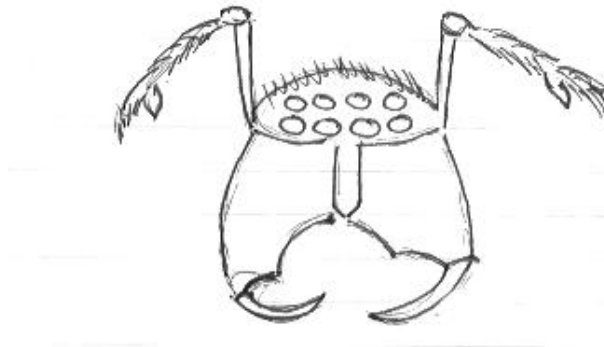
A spider usually has eight eyes. They are simple eyes that shine like jewels. People think that some spiders can see colours! A spider has to keep watch for prey. With so many eyes it can see in many directions. A spider also needs to watch out for enemies. A spider is always *alert*. Christians need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

