



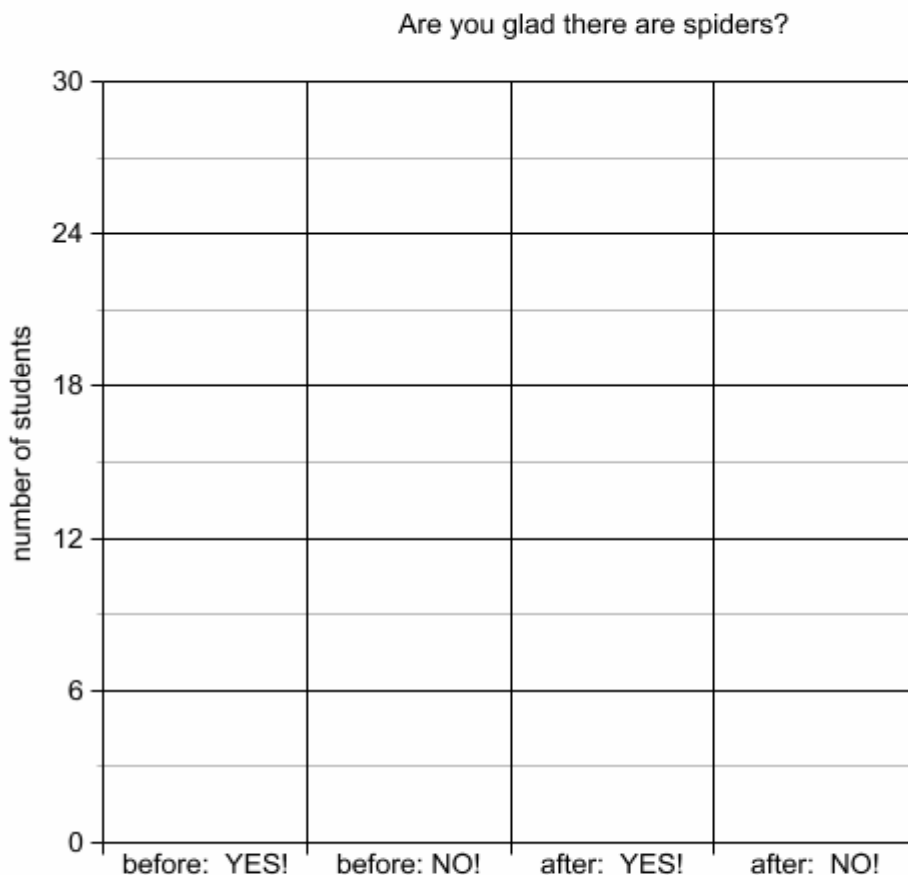
# Spiders

## Pre-Visit Activities

The activities in your pre-visit packet have been designed to help you and your students prepare for your upcoming Spiders program here at the St. Joseph County Parks. The information and activities included in this packet have been designed to introduce your students to the characteristics of spiders, their lifestyles, and some basic vocabulary.

### Make a bar graph!

Before you start your spider unit, ask the students “How many of you are glad there are spiders?” Have your students complete the first two columns of the bar graph below, documenting the students’ opinion of spiders. After completing the unit and field trip to St. Joseph County Parks, repeat the exercise, and have them complete the second two columns in a different color. Compare the two: Did learning about spiders change the students’ opinions of spiders? How? Do they like them more or less than before? Why?



## READ-ALoud PAGE

### The Spider and the Fly by Mary Howitt

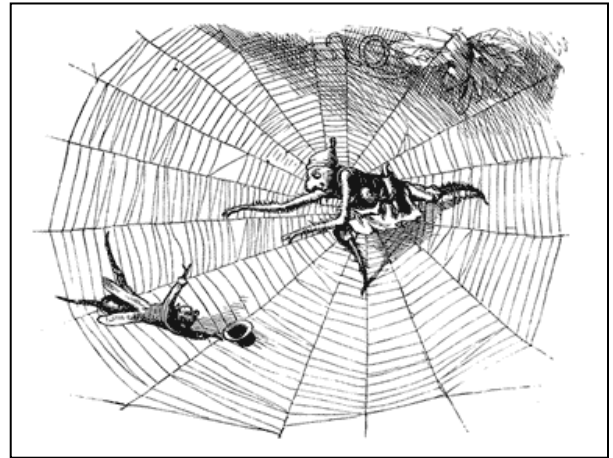
Will you walk into my parlour?" said the Spider to the Fly,  
'Tis the prettiest little parlour that ever you did spy;  
The way into my parlour is up a winding stair,  
And I've a many curious things to show when you are there."  
Oh no, no," said the little Fly, "to ask me is in vain,  
For who goes up your winding stair can ne'er come down again."

"I'm sure you must be weary, dear, with soaring up so high;  
Will you rest upon my little bed?" said the Spider to the Fly.  
"There are pretty curtains drawn around; the sheets are fine and thin,  
And if you like to rest awhile, I'll snugly tuck you in!"  
Oh no, no," said the little Fly, "for I've often heard it said,  
They never, never wake again, who sleep upon your bed!"

Said the cunning Spider to the Fly, "Dear friend what can I do,  
To prove the warm affection I've always felt for you?  
I have within my pantry, good store of all that's nice;  
I'm sure you're very welcome -- will you please to take a slice?"  
"Oh no, no," said the little Fly, "kind Sir, that cannot be,  
I've heard what's in your pantry, and I do not wish to see!"

"Sweet creature!" said the Spider, "you're witty and you're wise,  
How handsome are your gauzy wings, how brilliant are your eyes!  
I've a little looking-glass upon my parlour shelf,  
If you'll step in one moment, dear, you shall behold yourself."  
"I thank you, gentle sir," she said, "for what you're pleased to say,  
And bidding you good morning now, I'll call another day."

The Spider turned him round about, and went into his den,  
For well he knew the silly Fly would soon come back again:  
So he wove a subtle web, in a little corner sly,  
And set his table ready, to dine upon the Fly.  
Then he came out to his door again, and merrily did sing,  
"Come hither, hither, pretty Fly, with the pearl and silver wing;  
Your robes are green and purple -- there's a crest upon your head;  
Your eyes are like the diamond bright, but mine are dull as lead!"



Alas, alas! how very soon this silly little Fly,  
Hearing his wily, flattering words, came slowly flitting by;  
With buzzing wings she hung aloft, then near and nearer drew,  
Thinking only of her brilliant eyes, and green and purple hue --  
Thinking only of her crested head -- poor foolish thing!  
At last,  
Up jumped the cunning Spider, and fiercely held her fast.  
He dragged her up his winding stair, into his dismal den,  
Within his little parlour -- but she ne'er came out again!

And now dear little children, who may this story read,  
To idle, silly flattering words, I pray you ne'er give heed:  
Unto an evil counsellor, close heart and ear and eye,  
And take a lesson from this tale, of the Spider and the Fly.

## Read About SPIDERS

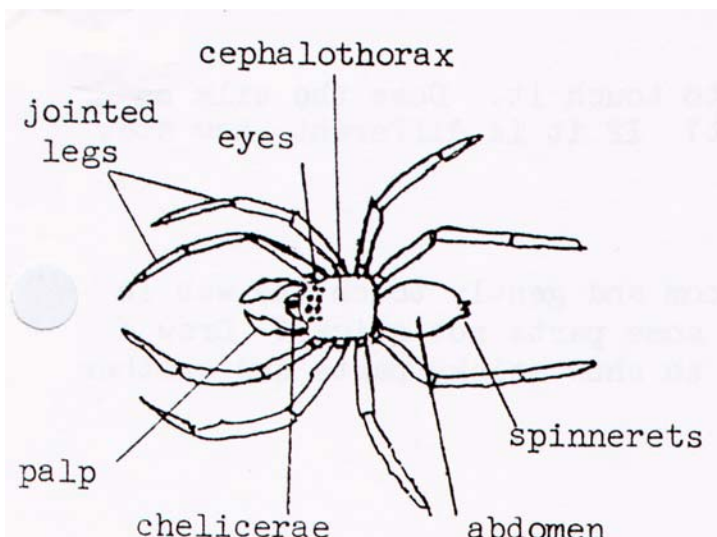
**Spiders** are not insects as many people believe. They belong to a class of animals called arachnids. **Spiders** have eight eyes, four pairs of segmented legs, and can grow a new leg if they lose one. They do not have antennae or wings. A spider's body is divided into two sections. The sections are the abdomen and the cephalothorax. The legs, eyes, and mouthparts are in the cephalothorax section. Most **spiders** have poison glands and fangs in their jaws, which they use to inject poison into insects. This poison is called venom. Venom can paralyze an insect, allowing the spider to eat the insect as food.

**Spiders** can live almost anywhere in the world. Some like very humid or hot temperatures and some like places that are very dry. Some **spiders** prefer to live underground and others live in trees. We have all seen **spiders** that prefer to live in our houses.

These amazing animals usually have six fingerlike silk glands called spinnerets located beneath their abdomen. The silk comes from inside the spider's body as a liquid that is thicker than water. A spider uses this silk to make a web by squeezing the silk out of two small holes at the back of its body. At the time the silk hits the air, the silk dries into a line that looks like a long string of hair. **Spiders** use this silk to build webs. Some spiders also use silk as draglines to hang onto as the wind blows the spider through the air. This is called "ballooning." The spider can crawl up or down on this dragline if the wind takes it somewhere it doesn't want to be. Young **spiders** and adult male **spiders** like ballooning and can release long silken threads that make them float or ride in the wind to new areas.

There are about 30,000 different types of **spiders** known to scientists. Most of them are

very tiny animals that help us by eating insects. The next time you see a spider, inside or outside, take a few minutes to watch this most interesting animal.



# Tell About Spiders

1. Where are the poison glands located on the spider's body?

- a. cephalothorax
- b. eyes
- c. jaws
- d. none of these

2. **Spiders** prefer to live in \_\_\_\_\_.

- a. hot temperatures
- b. dry places
- c. trees
- d. all of these

3. Which of the following is true?

- a. Spinnerets are used by the spider to see things.
- b. **Spiders** belong to a class of animals called arachnids.
- c. The silk **spiders** make is thinner than water.
- d. **Spiders** have antennae and wings.

4. How is venom used by the spider?

- a. to paralyze insects
- b. for ballooning
- c. as a dragline
- d. none of these

5. Which of the following is NOT true?

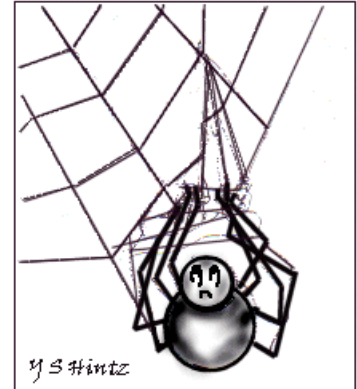
- a. The legs, eyes, and mouthparts of the spider are located in the abdomen section.
- b. **Spiders** have eight eyes and four pairs of segmented legs.
- c. **Spiders** can live almost anywhere in the world.
- d. Most **spiders** have fangs and poison glands located in their jaws.

6. How do **spiders** help us?

- a. by making webs and draglines
- b. by growing new legs
- c. by eating insects
- d. none of these

7. WRITE TWO SENTENCES ABOUT THE SPIDER.

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Why spiders shouldn't play cat's cradle with their own webs

# Tell About Spiders - Answer Sheet

1. Where are the poison glands located on the spider's body?

- a. cephalothorax
- b. eyes
- c. **jaws**
- d. none of these

2. **Spiders** prefer to live in \_\_\_\_\_.

- a. hot temperatures
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3. Which of the following is true?

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4. How is venom used by the spider?

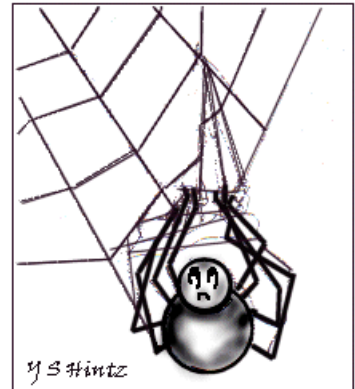
- a. **to paralyze insects**
- b. for ballooning
- c. as a dragline
- d. none of these

5. Which of the following is NOT true?

- a. **The legs, eyes, and mouthparts of the spider are located in the abdomen section.**
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6. How do **spiders** help us?

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- b. by growing new legs
- c. **by eating insects**
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Why spiders shouldn't play cat's cradle with their own webs

## ORB WEAVERS!



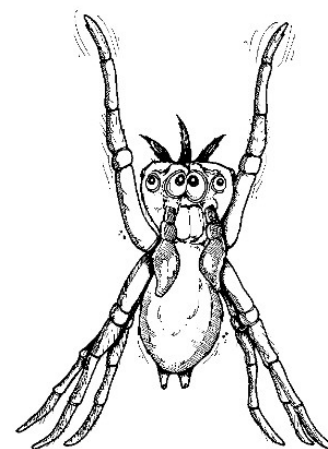
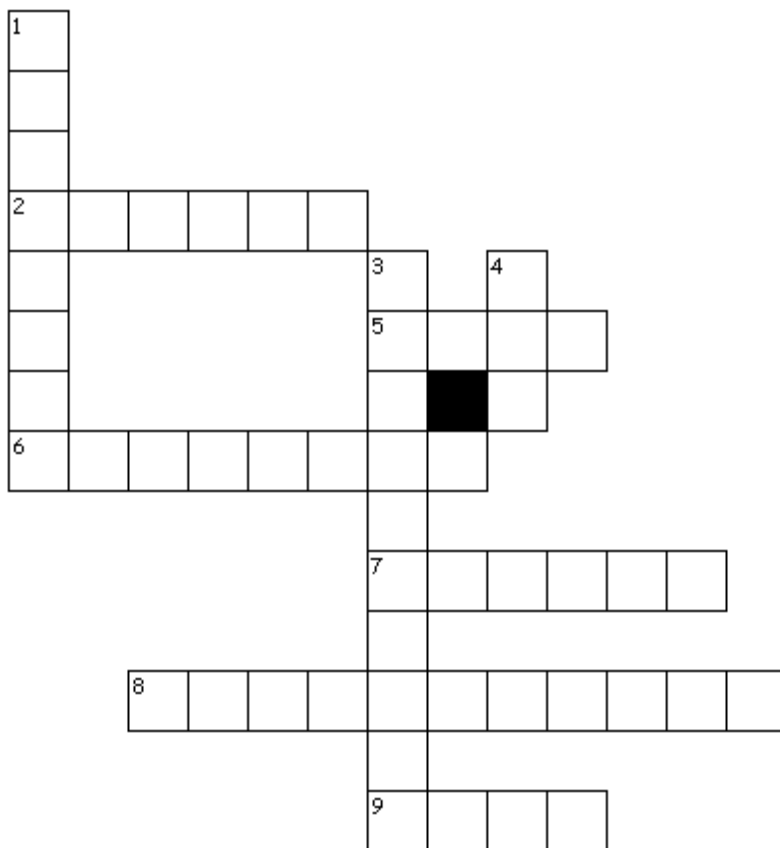
Have you ever watched an orb weaver build a web? To weave a web, a spider “squirts” a liquid thicker than water out of the **spinnerets** on its **abdomen**. As soon as the liquid touches the air it dries into a silk line!

FIRST, to build an orb web, the spider makes a frame, like then one you see below. Can you see how it has spokes coming from the center, kind of like a bicycle wheel? Once the frame is finished, the spider weaves its round web onto the frame.

HELP THIS SPIDER finish its web! Start where the spider is, and draw the line shape you see on the left. Don't draw circles! You will need to make one continuous line, going round and round, until you get to the center.



# Spider Words!



## Across

2. old tangled spider web that has collected dust and dirt
5. an animal hunted for food
6. long silk threads that trail behind the spider
7. sac made of silk that holds the spider eggs
8. baby spiders
9. a fine threadlike material spun by a spider

## Down

1. the class of animal that includes spiders
3. part of spider that makes silk
4. pieces of silk put together by a spider

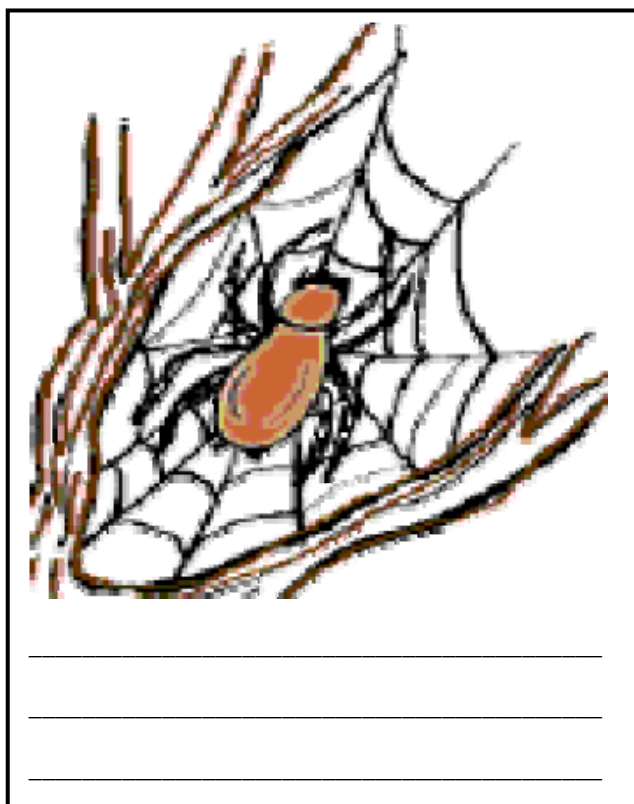
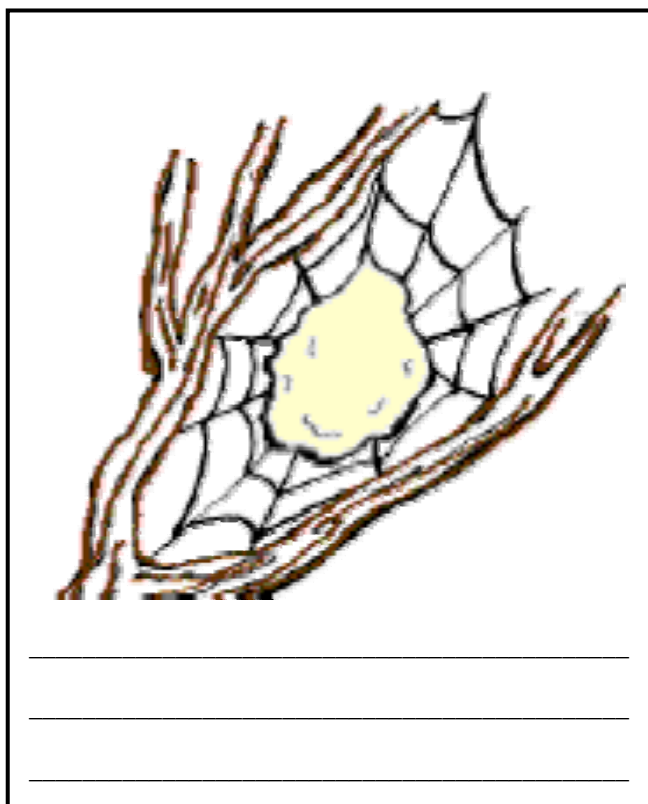
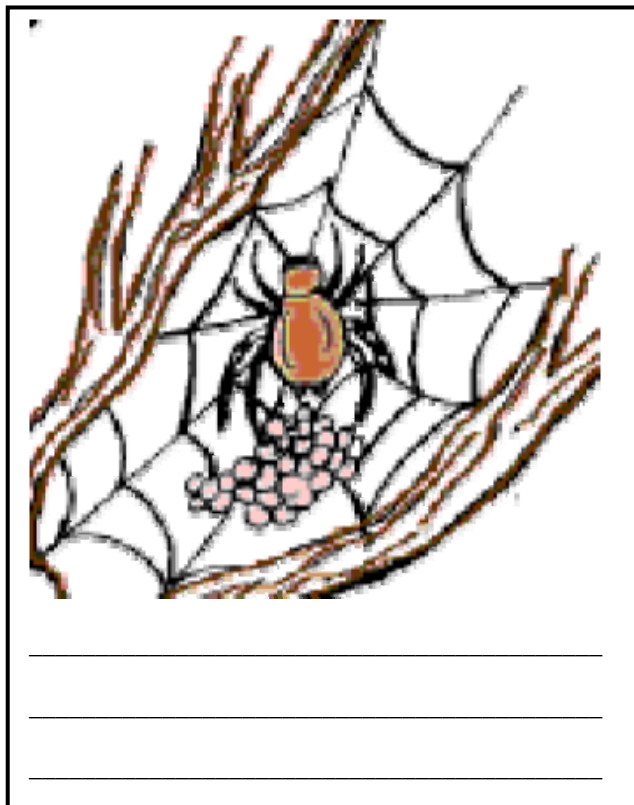
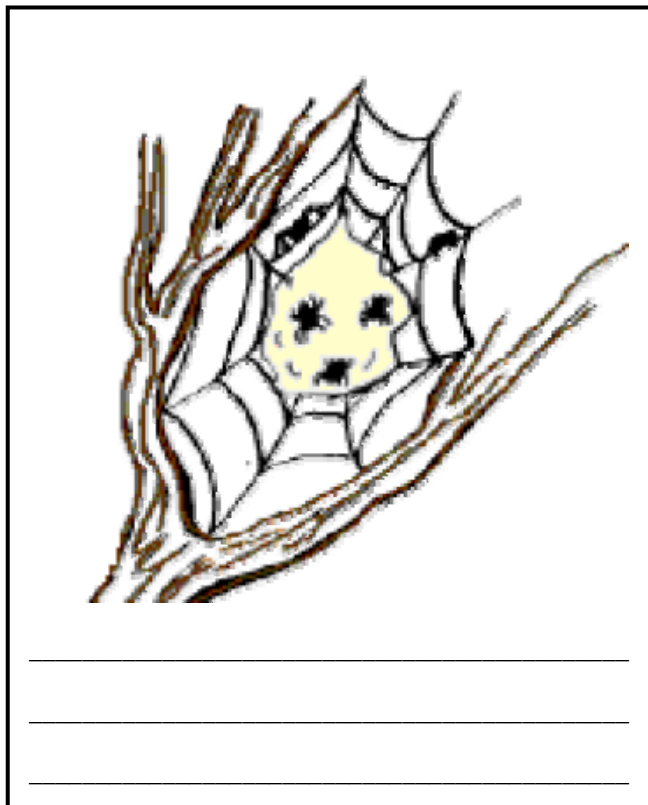
## Choose from these words!

- Web
- Spiderlings
- Cobweb
- Dragline
- Prey
- Spinnerets
- Egg sac
- Arachnid
- Silk



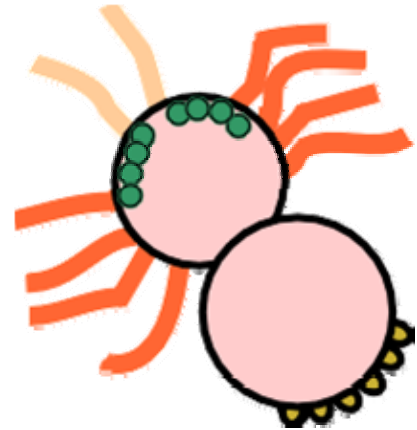
## Here come the Spiderlings!

Which picture goes first? Second? Third? Fourth? Write what is shown in each picture and add color. Then cut out each square, and staple it into a book or a timeline.



## Make Spider Cookies!

To start, give each child a plastic sandwich bag filled with the following spider parts: a napkin, 2 chocolate sandwich cookies, 4 pieces of thin red licorice, 2 Chinese noodles, 8 round “confetti” decoration candies, and 6 shelled sunflower seeds. Then read these directions aloud:



1. Place the two cookies side by side on your napkin. A spider has 2 body parts. The front part is called the cephalothorax. The back is called the abdomen. The cephalothorax is like the head and chest of the spider. It contains its brain and stomach.
2. Carefully open the cephalothorax and lay each piece of licorice across the middle of the cookie. Put the top back on the cookie. A spider's legs grow out from the front part of its body. Your spider should have 4 licorice legs on each side. How many legs do spiders have in all? Spider legs are covered with tiny hairs. It can smell and feel vibrations with these hairs. Spiders also have two tiny claws on the end of each leg which help it cling to its web. If a leg is lost, a spider grows a new one!
3. Many spiders have 8 eyes. Lay your tiny candies on the cephalothorax in two rows with 4 in each row. Even with all those eyes, most spiders do not have good eyesight. How can a spider know when an insect is caught in her web? (It feels the vibrations with its legs).
4. In the front of a spider's body are its jaws and fangs. Stick 2 noodles into the filling of the cookie so they stick out under its eyes. Its jaws are very strong and its fangs sharp and poisonous. When a spider catches an insect, it uses its fangs in two ways. First, it injects its prey with poison to paralyze it. Then, because spiders can digest only liquids, it injects the insect with digestive fluids that turn its insides into bug soup. The spider then sucks up the meal. It leaves the crunchy outside of the insect for another animal to enjoy.
5. Open your spider's abdomen. This part contains the heart and lungs. In the back of the abdomen are 6 tiny spinnerets--tubes that release thin threads of silk to make a web or an egg sack. Place 6 sunflower seeds inside the back part of the spider's body to remind you of the spinnerets.

**IF YOU EVER WANTED TO EAT A SPIDER, NOW IS YOUR CHANCE!**

