Shapes in Nature

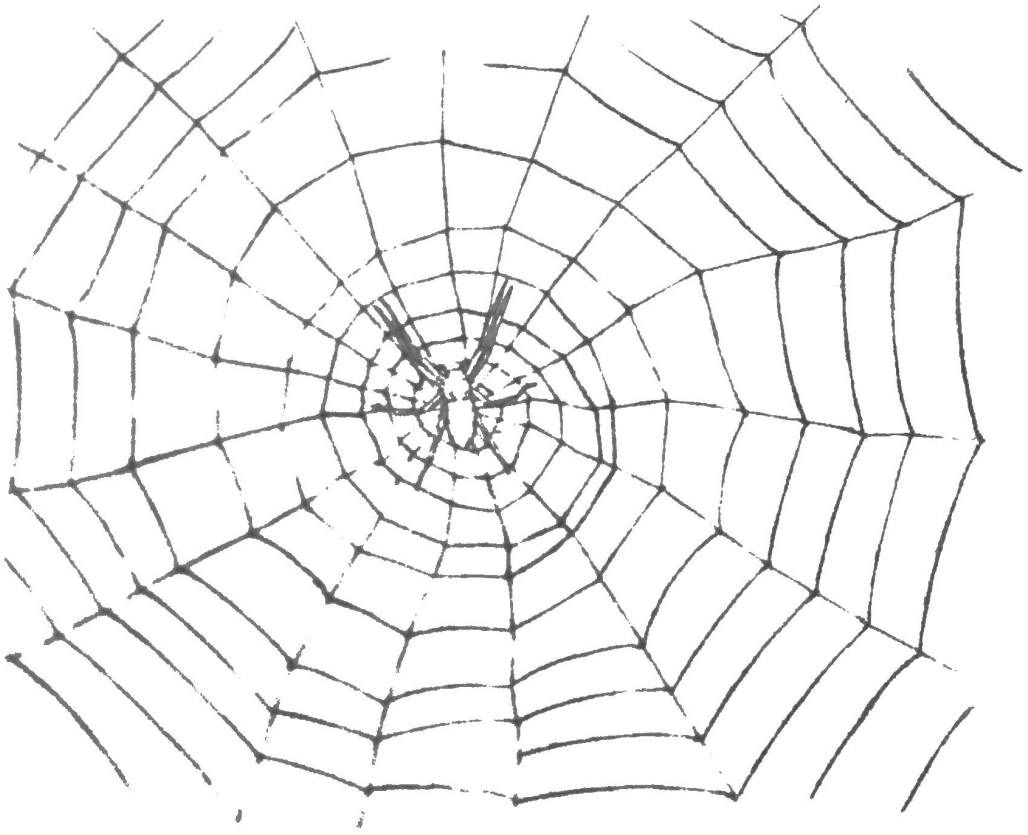
by Susan Hughes

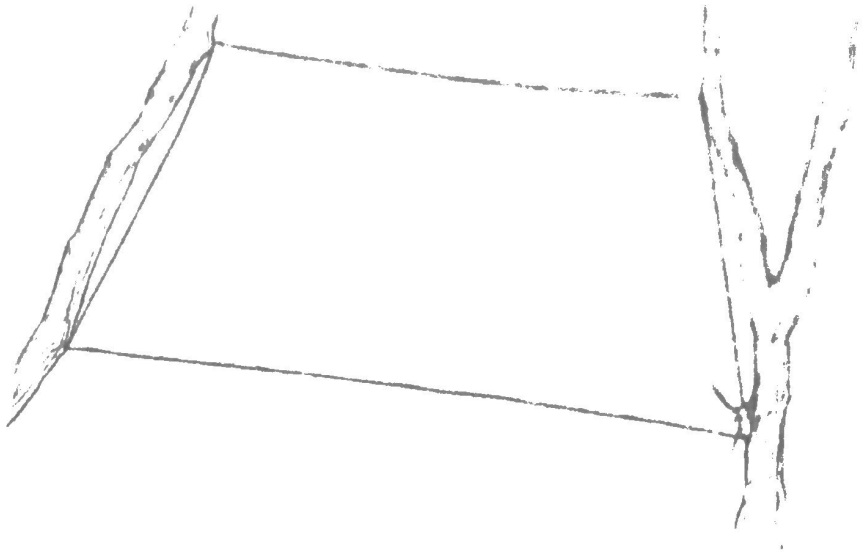
Look around at the world of nature. What shapes do you see?

Spiderweb

There are many different sizes and shapes of spider webs. Here is a spider's web that looks a little like the shape of a bicycle wheel. It is called an orb-web and it is made by a garden spider.

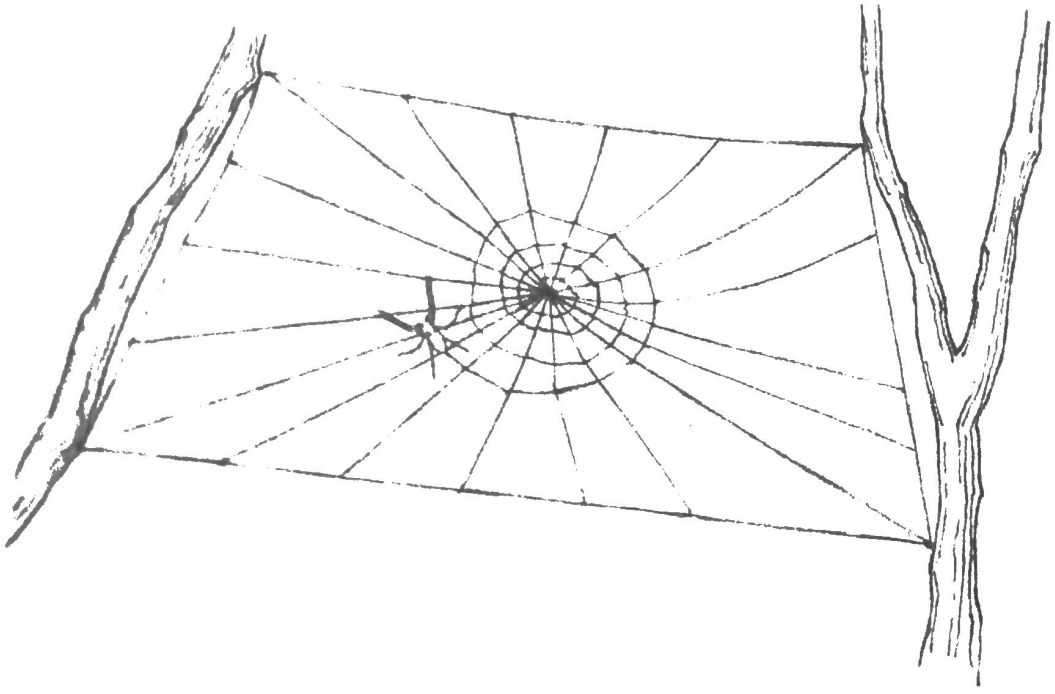
First, the spider makes a bridge by attaching silk from one twig to





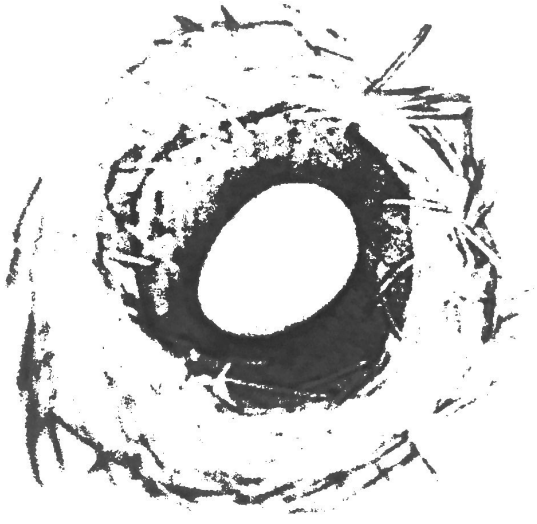
another. Then she attaches more corner threads to more twigs.

Next, she makes the spokes of the web. They run from the centre of the web to the edges. Then she begins a spiral in the centre of the web. The spiral curls out, wider and wider. The spiral makes the web strong. Now the spider makes another spiral, which also starts in the middle and goes outward. Insects will stick to this sticky spiral!



Egg nests

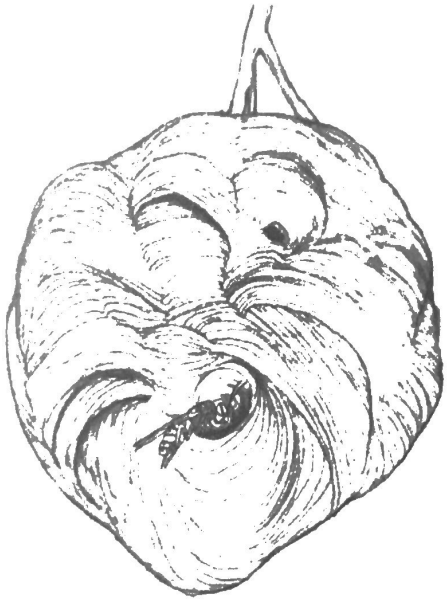
Look at this tree. It is full of blossoms! Why don't high winds and rain rip apart the blossoms on this tree? The blossoms are curved. A curve is a strong shape. When you push on a curve, it won't snap or tear. The curve spreads out the pressure and shares it around. Nature has made these blossoms in this strong shape to protect them. Look closer and you can see an egg in a bird's nest.



The eggshell is thin, but the shape of the egg makes it strong. An egg is made of curves. The curves in the egg protect the new life growing inside. The bird's nest is built in the shape of a dish. A dish is also a very strong shape. You can push on it from the inside or the outside, and its shape won't change either.

Wasp nest

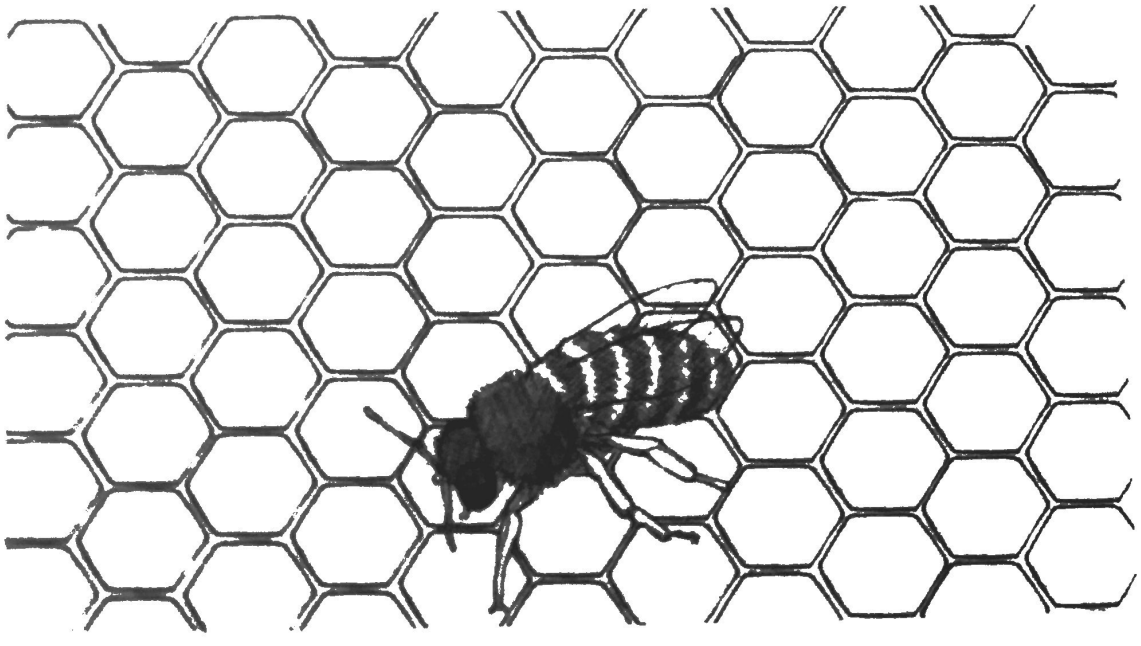
Have you ever seen a wasp nest? Wasps build their nest in almost the shape of a ball or a sphere.



The sphere is the strongest shape because it curves everywhere. A sphere has no weak spots. A wasp's nest will be able to survive even the heaviest downpour of rain!

Honeycomb

A bee's nest is called a honeycomb. Bees store honey and eggs there. They make wax and use it to build the honeycomb cells. Each cell has six sides of equal length and six equal angles. A shape with six equal sides and angles is called a hexagon. The honeycomb cells are linked together without leaving any spaces in between. This tight packing makes the honeycomb nest strong.



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1. List the five steps a spider takes when making an orb-web.

   1.

   2.

   3.

   4.

   5.

2. In this article, the author tells us about several items in nature that are very strong. List four items, and tell what makes each one strong.

Item	What Makes it Strong
1.	
2.	
3.	
4.	

3. What do you think is the main idea of the article? Use information from the text to support your answer.

4. Use information from the text and your own ideas to explain why curved shapes are important in nature.

5. Choose an illustration from the article and tell how it helps the reader.