



## AMAZING ANIMAL ARCHITECTURE: SPIDER WEBS

Determine some of the kinds of webs that different spider species create.

### Materials

Floss, yarn or string  
Cotton balls  
Sticks  
Scissors  
Glue

### Procedure

- Gather 16 sticks of about the same thickness and break the ends so that they are about 6 in. in length. Make a frame by laying two sticks side by side, about 5 in. apart, and placing a stick across each end to make a square. Glue the overlapping ends together. Repeat this until you have four frames. Set your frames aside to dry.
- Grab one frame and tie your string in a cross over the frame. Then, tie an "X" across the same frame. These are your support strings for your web. Next, take a very long piece of string and knot one end to a support string near the center of your frame. Making sure to wrap your string around each support string you pass, create a spiral spreading out from the center of your frame. Tie off the end and you have now made an orb weaver web.
- On another frame, tie your string to create a triangle in the center of your frame. Then, tie a string that goes vertically through the middle of your triangle. Tie the end of a long piece of string to one of your support strings near the point of your triangle. Wrap your string around your support strings as you go from left to right, then right to left across your triangle. It should look like you have ladders running up your web. Tie off the end and you have now made a triangle web.
- Using another frame, start your web by wrapping your string around the outside of one of the corners of your frame. Cover the corner with string until you're about 1-2 inches down the frame, then tie your string to the edge of your frame. Take another string, and starting by your wrapped corner, wrap your string over and under the top branch and a side branch in a figure-eight pattern. When your frame is mostly covered, tie off the end of your string to complete your funnel web.
- For your last web, take 1-2 cotton balls and gently pull them apart until they are very thin and wispy. Spread this over your last and frame and use a little glue to secure it. You've now completed your cobweb.

### Results

Spider webs come in many shapes and sizes.



### Why?

Different spider species use different methods to hunt their prey. Orb weaver spiders create the most recognizable web with its wheel shape and spiral design. These webs are very sticky and are mostly found outdoors. Triangle spiders weave webs that look like pizza slices and are built horizontally instead of vertically like orb weaver webs. The spiders building these webs don't create any venom, so they make their webs fuzzy to smother trapped prey. Funnel web spiders use their webs as a trap and a hideout. Their web is large and flat, with a funnel at one end. Cobweb spiders spin super-sticky, messy webs in corners inside houses. The outside version of these spiders are called mesh web spiders. They make their cobwebs outside under leaves and rocks. Not all spiders use webs to catch prey; brown recluse spiders, wolf spiders, and jumping spiders are just a few that prefer to "hunt."

To learn more about life science, check out the Pink Palace Museum's *Natural History* Exhibits.