

Plant Stems—Structure and Function

Session I—Activity 36

1. Use a piece of tape to label the cup with your team’s name. Bring the cup to the distribution station and fill it half way with water. Add about 15 drops of red food coloring.
2. Return to your team’s work station. Trim off the bottom of the celery stalk. Describe the appearance of the cut end.

What looks like dark green circles in the cut end of the celery?

3. Gently stir the food coloring into the water with the cut end of the celery stalk. Leave the celery in the cup overnight. What do you predict will happen?

Session II—Activity 37

4. Describe the appearance of the stalk one day later.

5. Remove the stalk from the water and cut it into several segments. Describe the appearance of the cut ends.

What do you conclude from your observations?

Based on your observations, what do you infer is the function of the xylem cells in the stem?

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Session II—Activity 37

6. Draw what you see in microslide images 4 and 5. Then label your drawings.

What differences can you see between the structure of the woody stem and the structure of the nonwoody stem?

What are two functions of xylem in a stem?

What is the function of phloem in a stem?
