**Stoppers**

**Purpose**
To simulate the formation of blood clots.

**Materials**
- Scissors
- Ruler
- Cotton ball
- Stiff paper (A file folder will work well)
- Clear plastic drinking glass
- One-hole paper punch
- Sheet of red construction paper

**Procedure**
1. Cut out a square piece of stiff paper large enough to rest on top of the glass.
2. Fold the piece of stiff paper in half, and cut a notch in the center of the folded edge. The notch should be about 1 inch (2.5 cm) wide and 1/2 inch (1.25 cm) long.
3. Unfold the paper and place it across the top of the glass.
4. Use the paper punch to cut 20 or more circles from the red paper.
5. Hold the red circles about 2 inches (5 cm) above the hole in the paper and drop them.
6. Remove the red circles from the glass. Replace the paper cover across the glass. Then pull a small piece from the cotton ball and stretch it across the hole in the paper so that a thin layer of cotton fibers covers the hole.
7. Hold the remaining paper pieces about 2 inches (5 cm) above the covered hole in the paper, and then release them.
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Results
Without the cotton fibers covering the hole, the paper pieces fall through the hole. With the fibers, the paper pieces stack together on the fibers and do not fall through.

Why? Your circulatory system is a group of body parts that carry materials to and from cells. The parts of the circulatory system represented in this experiment are the blood (a liquid that circulates in blood vessels, transporting oxygen to cells and removing waste) and the blood vessels (pathways in the body through which blood flows). The hole in the paper represents a cut in your skin. A break in the skin usually breaks the wall of one or more blood vessels. The blood flows out the opening, and the body begins an emergency procedure to form a blood clot. A blood clot is a solid mass made of fibrin (a threadlike fiber) and blood that plugs the hole in the skin. Like the fibers of cotton in this experiment, fibrin covers and plugs the hole, preventing the blood, represented by the red circles, from passing through. Trapped blood in fibrin dries, forming what is called a scab.