

Bloodstain Pattern Analysis

Investigators sometimes find bloodstains in their investigations of crime scenes. The pattern of spilled blood can help investigators reconstruct the crime. This examination is called bloodstain pattern analysis. Specialists divide bloodstains into three general categories: passive, transfer, and projected. A passive bloodstain occurs when blood drips as a result of gravity. An example would be when you dip your finger in water and hold your hand immobile until a drop falls from your finger onto the surface beneath. When a bloody surface contacts a secondary surface that leaves a smudge or smear, this is called a transfer bloodstain. Projected bloodstains occur when a force greater than gravity impacts the blood source. Again, imagine dipping your finger in water, but this time someone knocks your hand, thus releasing a droplet of water.

Activity Blood behaves in much the same manner as water. In this activity, you will be using colored water, tomato juice, or another liquid to examine and differentiate between bloodstain pattern types.

Materials

Water with food coloring or other colored liquid

Food coloring

Eye dropper (or use your finger)

Paper

Task List Place a sheet of white paper on the table. Dip your finger, the end of a pencil, or an eyedropper in the liquid to begin the exercise. For a passive bloodstain, simply allow the water to drip onto the paper surface. For a transfer bloodstain, smear the drop across the paper. For a projected bloodstain, have someone knock your hand, thereby flinging the drop on the paper. Discuss the telltale differences between each type.