Examine your results:

What colors do you see on your chromatogram? Are the two chromatograms similar? Where do you see differences? Look at the ingredient list on the packaging and see if some of the same dyes are listed. If the dyes overlap, what do you think might be the reason for different chromatograms?
**WHAT HAPPENED:**
The water travels up the paper strip by capillary action. Capillary action occurs because the water is attracted to the surface of the paper, and as the first water molecules stick to the paper, they pull others along with them. (Capillary action is one way water moves up through the roots of plants.) As the candy coating dissolves in the water, it is pulled up the paper too.

You probably found that the candy coating is actually a mixture of several pigments. Certain pigments dissolve in water more easily and are pulled with the water farther up the paper. Others are more attracted to the paper and move more slowly. Usually smaller molecules move farther than larger ones.

For further study, repeat the experiment with colored markers, flavored gelatin, powdered drink mix, or food coloring. Try to predict your results.

**CHROMATOGRAPHY CONCEPTS:**
The word chromatography comes from the two Greek words for color and writing, and this project will teach you why. Chromatography is a simple technique for separating a mixture’s individual components.

In chemistry, a mixture is a combination of substances that can be separated because they are not chemically bonded. Conversely, a compound cannot be separated since its elements are chemically bonded.

In this paper chromatography project, a mixture is dissolved and pulled across a piece of paper. The mixture separates and its components travel across the paper at different rates. The result is what’s known as a chromatogram, or the pattern of separated substances revealed through chromatography.

**NOTES:**