

STEM

Activity Guide Can you taste colors?

Background:

Have you ever tried adding green food coloring to your milk? Or blue coloring to the butter you spread on your bread? You may not have tried this, but for years, scientists have studied the effect of color and food appearance on how food tastes. Believe it or not, our eyes are an important part of how we taste and perceive food! In this activity, you will learn about how you can trick your taste buds—with just a little food coloring!

Materials Needed:

Apple juice
Red, green, and blue food coloring
Drinking glasses (at least 5)
Water
Volunteers

Rules/Pre-Start Guidelines:

Note: It is important that your volunteers do not know that there is apple juice in each cup! The idea is that your volunteer should expect something different in each cup. Therefore, do not let them see you prepare the drinks ahead of time! Pour a small amount of apple juice into each of four drinking glasses. Put a drop of red food coloring into one glass, a drop of blue food coloring into the second glass, and a drop of green food coloring into the third glass.

Swirl the glasses to mix the food coloring in. Add another drop of food coloring if the colors are not dark enough.

Leave the fourth glass with no food coloring.

Fill the fifth glass with water.

If you have more drinking glasses, prepare them the same way in sets of five (five for each volunteer). Otherwise, you will need to wash, rinse, and dry them in between volunteers

Instructions:

1. Set out all five glasses for your first volunteer.
2. Ask them to start by drinking some water to cleanse their palate.
3. Tell your volunteer to sample the colored drink in each glass one at a time, drinking water in between each one.
4. Ask your volunteer which drink was their favorite.
5. Now ask your volunteer to close their eyes. Hand them the cups one at a time to taste again, in a random order.
6. Did they pick the same cup as the first time?
7. Now, reveal your secret! Tell the volunteer that each cup contains apple juice. Ask them to sample each cup one more time, with their eyes open.
8. Do they still have a favorite, or do they all taste the same?