

# BROCCOLI-BRUSHED AUTUMN ART

Autumn has officially arrived, and leaves are starting to lose their green hue, revealing the splendor of fall colors! This fun and educational activity is a great opportunity to teach children about photosynthesis and deciduous trees while engaging in a festive, tactile experience.



## MATERIALS

**Broccoli Florets**  
**Sturdy White Paper**  
**Paint Plate**  
**Paint- Red, Yellow,  
Orange, Brown**  
**Paint Brush (optional)**

## METHOD

- 1) Lay out paper.
- 2) Squirt dollops of paint onto plate.
- 3) Begin forming your tree by painting the outline of the trunk and branches. This can be done with a paintbrush for straight outlined edges, or a small piece of broccoli for a more textured outline look.
- 4) Proceed to color in the trunk and branches with a piece of broccoli by dipping into the brown paint, and drag it inside the outlines. For a more textured bark look, dab the brown paint instead of using strokes.
- 5) Now comes the really fun part! Gently dip a piece of broccoli into the different colors of paint, and dab it onto the paper among the branches. Repeat this step, using different colors or even several colors on one piece of broccoli, until the desired look is created. Experiment with different levels of pressure- Light pressure creates speckles of leaves while more pressure creates solid clusters of leaves. Consider dabbing paint onto the bottom of the paper to create a forest floor of leaves, or in the space alongside the trunk to create the look of falling leaves.

## WHY LEAVES “CHANGE” COLORS – OR DO THEY?

Leaves get their green color from chlorophyll, which is what makes photosynthesis possible. During photosynthesis, leaves take energy from the sun, water from the ground, and carbon dioxide from the air and make glucose (sugar) to “eat.” So long as the leaves can soak up enough energy from the sun to make food, they stay green. But- When the seasons begin to change, daylight grows shorter, and the weather cools, access to sunlight becomes limited. When this happens, it is harder for the chlorophyll in the leaves to make the food needed to stay green. So instead of making more food, the leaves start using all the food they have stored away for this time of year. As the leaves use up the glucose they have been storing, the green color of that food begins to wane, revealing the beautiful red, yellow, and orange colors of fall leaves. The leaves have not “changed” color so much as they have revealed the colors underneath the green glucose. The fall colors are hiding in the trees all year long- The just can’t be seen most of the year because of all the chlorophyll in the leaves!



## OPPORTUNITIES FOR EXPANDED LEARNING

- To add an extra “layer” to this project, stamp the paper with the clean broccoli before adding the paint, pushing the green pigment from the floret onto the branches to look like green leaves. During this process, introduce the concepts of photosynthesis and chlorophyll. Explore the way the green in the broccoli is a liquid, and discuss what that does for the broccoli plant, and by extension, for humans when we eat it! When you add the fall leaves to your painting, allow the green pigment from the broccoli to poke through too, creating a painting of a deciduous tree in transition from a summer to autumn.
- A deciduous tree is a tree that loses its leaves every fall and grows new leaves each spring. Each year deciduous trees go through a process in which their green leaves become bright yellow, gold, orange and red for a few weeks before turning brown and falling to the ground.
- Get outside! Go for a walk and look for signs of photosynthesis, and signs of chlorophyll leaving plants. Look for trees that are deciduous versus trees that seem to look the same. What other changes do you see in the plants around you? While some are losing their leaves, are others growing new things?

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