
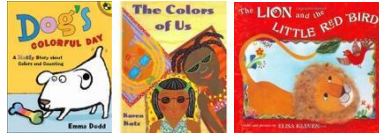


<p>Unit 4</p>  <p>Week 1</p>	<p>Outdoor Learning Opportunities:</p> <p>Colors of Nature – Natural Dyes</p>	<p>Standards: CA.VA.PS.1 PHD.FM.PS.5</p>
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<p>Materials:</p> <ul style="list-style-type: none"> ● Abundance of onion skins (red and yellow) ● Large stainless steel cooking pot ● Sieve ● Water (access to boiling water, electric kettle or stove) ● Natural unbleached and undyed fabric or yarn or eggs ● Alum (optional mordant) ● Cloth cut in 8" squares (for egg dying) ● Slotted spoon (for egg dying) ● Rubber bands (for egg dying) 	<p>Vocabulary:</p> <ul style="list-style-type: none"> ● Natural dyes ● Boil ● Mordant ● Onion skins
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Introduce natural dyes by having the children identify colors in nature. They can do this while on a color hike or look through magazines for pictures of natural areas or flowers. Some natural items that make good dyes are blueberries, black walnuts, yellow and red onion skins and red cabbage. Making dye from onion skins is an easy way to start. Collect as many yellow and red onion skins as possible (by asking parents to save them, or asking local grocer for loose skin found on the bottom of onion bins). Skins should be free of dirt and black mold. Store onion skins in a paper bag to dry out.

Prepare the dye by filling the stainless steel pot with the onion skins and cover with water. Boil for 30 minutes. The skins become translucent and the water becomes colored. Strain off the liquid and return to the pot without the onion skins. If using alum as a mordant, add it at this time. Add wet fabric or yarn to the dye and then slowly bring back to a boil for 30 minutes, stirring occasionally. The water will clear as the fabric or yarn absorbs the color. Let the water cool to room temperature before removing fabric or yarn. Rinse the dyed material.



Extension: Use onion skins to dye eggs by wrapping the eggs with the skins and placing in cloth square, then tie with a rubber band. Place wrapped eggs in a pot of boiling water and boil for 30 minutes. Remove each egg from pot with slotted spoon and allow to cool, then unwrap the egg to see design. Allow egg to dry.



Have the children do as much of the preparation and dyeing as you deem safe for their age and ability (putting the onion skins in the pot, adding the fabric or yarn after the water has cooled, wrapping the eggs, etc.).

Guiding Questions:

- What are the colors from nature that can stain or dye fabric?
- How can we transfer the colors from nature to fabric or eggs?
- Can you predict the color the fabric or eggs will turn when dyed with onion skins?