

Sitka Sprouts

Activity Packet

Theme: Natural Dyes



Recommended Books:

- Let's Paint! – Gabriel Alborozo (children's book)
- Botanical Inks – Babs Behan (instructional book)
- The Wild Dyer – Abigail Booth (instructional book)
- Natural Dyeing – Jackie Crook (instructional book)
- Planting a Rainbow – Lois Ehlert (children's book)
- Anywhere Artist – Nikki Slade Robinson (children's book)

Making Natural Dyes

Intro:

Natural dyes can be made from food or food scraps and common kitchen ingredients - it can be a great way to get creative in the kitchen and use food that would otherwise be wasted! Natural dyes can be used to dye fabrics such as clothing and pillowcases OR they can be used to make colored paper, dye eggs, or make homemade paints! They can also replace synthetic chemical colorings in things like frostings, icings and batters (not explained here, but there are a ton of resources online for doing this!).

****Tips****

For natural dyes to stick to certain materials and create long-lasting colors, they need a fixative. In the ingredients lists below, salt and vinegar serve as the fixative, which is why you will find one or both of them in the materials list for each dye. You can certainly make your dyes without a fixative, however the color won't be quite as vibrant and won't last as long.



****I recommend wearing rubber gloves if you have them, otherwise you might have stained hands! But I suppose if you're a frequent sprouter, dyed hands are not an unusual occurrence... totally up to you!****

Pink

Materials:

- 2 cups of red beets chopped (or you can use leftover beet skins)
- 2 tablespoons vinegar
- 1 teaspoon salt
- 4 cups of water

Instructions:

- Combine beets, vinegar, salt, and water in a pot
- Bring the mixture to a boil
- Simmer uncovered for 30 minutes
- Strain the beets
- The liquid remaining is your dye – use as desired! (ideas for dyeing found below)



Yellow

Materials:

- 4 tablespoons ground tumeric
- 2 tablespoons vinegar
- 1 teaspoon salt
- 4 cups of water

Instructions:

- Combine tumeric, vinegar, salt, and water in a pot
- Bring the mixture to a boil
- Simmer uncovered for 30 mins
- Remove from heat and let mixture cool
- The liquid is your dye – use as desired! (ideas for dyeing found below)



Green

Materials:

- 6 cups spinach, roughly chopped
- 1 tablespoon ground turmeric
- 2 tablespoons vinegar
- 1 teaspoon salt
- 4 cups water

Instructions:

- Combine spinach, tumeric, vinegar, salt, and water in a pot
- Bring to a boil
- Simmer uncovered for 30 minutes
- Strain out spinach
- The liquid remaining is your dye – use as desired!
(ideas for dyeing found below)



Blue/Purple

Materials:

- 2-4 cups purple cabbage leaves
- 2 tablespoons vinegar
- 1 teaspoon salt
- 4 cups water

Intructions:

- Combine cabbage, vinegar, salt, and water in a pot
- Bring mixture to a boil
- Simmer uncovered for 30 minutes
- Strain the cabbage
- The liquid remaining is your dye – use as desired!
(ideas for dyeing found below)



Orange

Materials:

- 1 – 2 cups onion skins
- 2 tablespoons vinegar
- 1 teaspoon salt
- 2-4 cups water

Instructions:

- Combine onion skins, vinegar, salt, and water in a pot
- Bring mixture to a boil
- Simmer uncovered for 30 minutes
- Strain the onion skins
- The liquid remaining is your dye – use as desired! (ideas for dyeing found below)



Light Orange

Materials:

- 1 – 2 cups orange peel
- 1 teaspoon salt
- 2-4 cups water

Instructions:

- Combine orange peels, salt, and water in a pot
- Bring mixture to a boil
- Simmer uncovered for 30 minutes
- Strain the orange peels
- The liquid remaining is your dye – use as desired! (ideas for dyeing found below)



Peach/Light Pink

Materials:

- Avocado skin and pit
- 1 teaspoon salt
- 2 cups water

Instructions:

- Combine avocado skin, pit, salt, and water in a pot
- Bring mixture to a boil
- Simmer uncovered for 30 minutes
- Strain the avocado skin and pit
- The liquid remaining is your dye – use as desired! (ideas for dyeing found below)



**What can you do with your dyes? Here are some ideas!
(instructions found below)**

Dyeing Paper

Dyeing Fabrics (clothing, pillowcases, yarn, etc.)

Dyeing Eggs

Dyeing Paint

Dyeing Paper

Materials:

- Cabbage juice (instructions for making found above)
- White paper
- Baking dish

Instructions

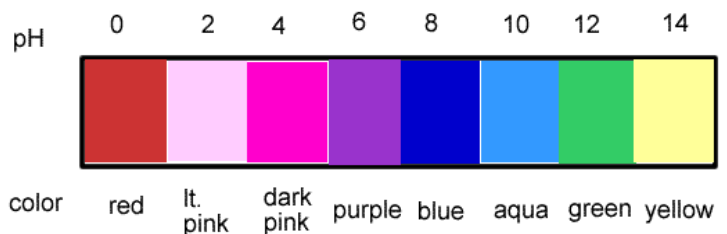
1. Pour your cabbage juice into a baking dish or tray.
2. Place a piece of white paper in the cabbage juice, fully submerging.
3. Let the paper soak for about one minute.
4. Remove the paper and let dry.
5. Test each liquid on a strip of cabbage paper and observe the color change.
6. Use the liquids to paint a picture on a larger piece of cabbage paper.

Liquids to use (you can of course use others too):

- Lemon juice
- Vinegar
- Baking soda and water
- Soda water
- Milk
- Dish soap



Red Cabbage Color changes with pH



Dyeing Fabrics

Materials:

- White fabric or t-shirt
- Rubber bands
- Natural dye liquids (any of the above)
- Pipettes, droppers, or spoon

Instructions:

1. Wrap a piece of fabric or t-shirt with rubber bands.
2. Dip the fabric in water and ring out excess water in the sink.
3. Place the fabric on a tray.
4. Use pipettes, droppers, or a spoon to drop natural dye on the fabric.
5. Once you're done dyeing, let your fabric sit for a couple of hours or overnight to get more vibrant colors.
6. After you've let it sit, rinse thoroughly until water runs clear.
7. Remove rubber bands and see your masterpiece!



Dyeing Eggs

Materials:

- Hard-boiled eggs
- Natural dye liquids (any of the above)
- Spoons
- Bowls
- White crayon (optional)

Instructions:

1. Begin with hard-boiled eggs.
 - a. To add a design to your egg, use a white crayon to draw on your egg.
2. Pour the dyes you will be using into jars or bowls deep enough for your egg to be fully submerged.
3. Place your egg in the dye and let it sit for a couple of minutes (I found the more times a took it out, dried it, and re-submerged it, the darker the color).
4. Once you're happy with your color, remove the egg from the dye using a spoon and let it dry completely.



Dyeing Paint

Recipe #1:

Materials:

- Natural dyes (any of the above)
- Egg yolk
- Cups
- Spoon or mixing utensil

Instructions:

1. Separate egg yolk from egg white and drop one yolk into each of your bowls.
2. Add a few drops of your natural dyes to each bowl and mix.
3. Tada! Your paint is ready to be used.



Recipe #2:

Materials:

- Natural dyes (any of the above)
- 1 cup corn starch OR flour
- 1 tablespoon salt
- 3 cups water
- 1 tablespoon liquid dish soap or glycerin (optional)

Instructions:

1. Combine the dry ingredients in a saucepan.
2. Add 2 cups water and stir until completely dissolved.
3. Heat mixture over medium heat, stirring constantly. After a few minutes it will start to thicken (it might get lumpy but just keep stirring until smooth).
4. Remove from heat and stir in $\frac{1}{2}$ cup cold water and dish soap or glycerin.
5. Divide mixture into small bowls and add your natural dyes.
6. Tada! Your paint is ready to be used.

Related Links:

- <http://www.classic-play.com/the-science-issue/experiment-red-cabbage-ph-indicator/>
- <https://www.popsugar.com/smart-living/Homemade-Natural-Dyes-31861660>
- <https://www.diynatural.com/natural-fabric-dyes/>
- <https://www.greenchildmagazine.com/natural-easter-egg-dyes/>
- <http://bigsislilsis.com/2010/04/02/natural-dye-colored-easter-eggs/> (this is a super cool way to use natural materials (flowers, leaves, etc.) to create patterns on your eggs)
- <https://draxe.com/beauty/homemade-finger-paint/>