

a natural state

Make and Use Natural Dyes	
Before you begin, determine:	
<ul style="list-style-type: none"> • What would you like to color? • What do you have in your backyard that can be used as dye? 	
Tips:	
<ul style="list-style-type: none"> • Animal fibers, such as wool and silk, take dyes differently than do the vegetable fibers: cotton, linen, jute and sisal. In every instance, natural, unbleached fibers give the best results. If you are going to be dyeing cotton fabric, such as a t-shirt, make sure that the shirt has not been worn. If the cotton contains any traces of body oil, the fabric will not take color evenly. Also, avoid fabrics containing polyester because they do not take dye well. • Dyeing is best done in an open, well-ventilated area. Do not use pots or utensils that you plan to use again for cooking. Some dyeing materials are poisonous and you should never put your hands near your mouth, or eat foods while you are in the process of mordanting, and dyeing fabric. • Because dyeing can be so variable, take notes about what you did and what you used throughout every step of the process. 	
Keywords:	
<ul style="list-style-type: none"> • Mordant – a color fixative used in soaking fabric before the dye bath process, which helps to set the color so that it cannot be easily washed out. Some dyes, such as indigo, do not require a mordant to remain color fast, but others do. 	

List of Materials:		
	<ul style="list-style-type: none"> • large dye pot • hot plate (if you are doing the dyeing out of doors) • tongs • rubber gloves • two or three dowels for stirring • towels for blotting • clothesline to hang cloth to dry • notebook for keeping track of records • blender or mortar and pestle for grinding • measuring spoons 	
Directions		
Part 1: Preparing the Mordant		
<p>Most dyers mordant the cloth first, and then apply the dye in a separate step. Dyers will keep the steps separate if they want to produce several batches of color with differences in shading. To obtain many shades of color, the dyers will use a different mordant for each dye process. The choice of mordant will depend upon the result you are trying to achieve.</p> <p>If your fabric needs to have a pre-wash with a mordant, do that step of the process either before or while preparing the dye bath. Remember that even the type of pot that you use for the dyeing process will have an effect upon the color of your dyelot.</p>		
Some commonly used mordants are listed below:		
	<ul style="list-style-type: none"> • alum • lemon juice or vinegar • copper (pennies) • iron (rusty nails) • cream of tartar • baking soda 	



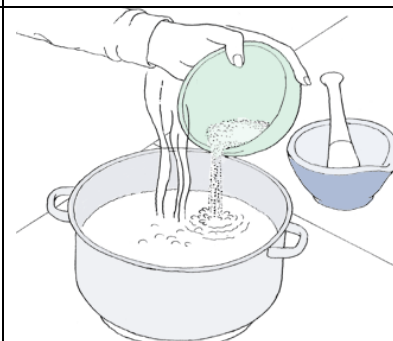
Because changes in the alkalinity (baking soda) and acidity (vinegar and lemon juice), also will alter the final color, some mordants are used in combination with others.


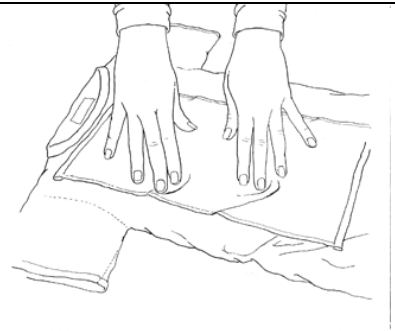
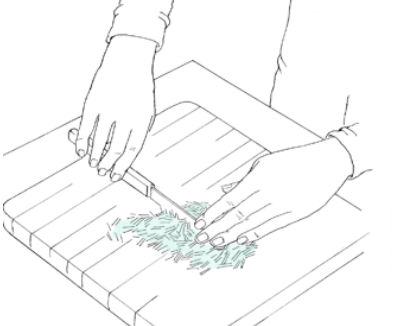

Alum is used when making pickles and can be found at the grocery store. The table below shows a listing of dye materials and mordants used, along with corresponding colors produced.




Dye Material	Color	Mordant Used
• Virginia Creeper	peach	alum
• strawberries	red	vinegar
• inner bark of red maple tree	purple	rusty nails
• Marigold flowers	yellow	alum
• black Walnut hulls	dark brown, black	no mordant
• Goldenrod flowers	pale yellows	alum
• Coreopsis	yellow	alum
• Rhododendron	green	alum
• terra cotta clay	tans and red browns	alum



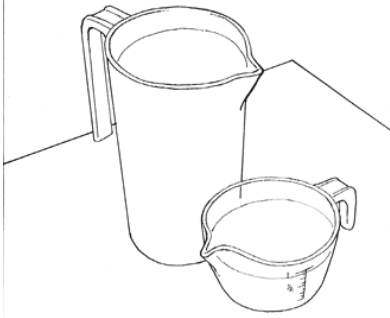
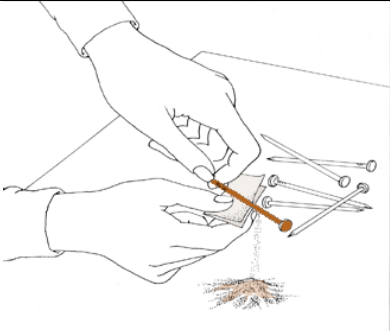
To make the mordant solution:



- 1) With the assistance of an adult, dissolve a small quantity of the mordant in a quart of warm water in a large stainless steel pot.



2)	Using tongs or gloves, add your cloth or fabric by gently pushing it into the bath. Heat the solution to boiling, then lower heat and let it simmer for an hour.	
3)	Let the solution cool and carefully remove your fabric. Blot the excess moisture with paper towels, but do not wring the fabric.	
Part 2: Dyeing Your Fabric		
To make the dye solution:		
1)	Chop plant material into small pieces, and place the pieces in a large pot.	
2)	Double the amount of water to plant material.	

3)	With the assistance of an adult, bring the water to a boil, let it simmer for about an hour, and then strain the plant parts from the mixture. Do this over a container or in an area that you are not worried about staining.	
To dye the fabric:		
1)	Wearing rubber gloves so as not to stain your hands, add your fabric to the pot to be dyed. For a stronger color, allow material to soak in the dye overnight.	
2)	When you are satisfied with your color, release any loose dye from the fabric by rinsing in cool water until the water runs clear. Again, do this over a container or in an area that you are not worried about staining.	
Part 3: A Project for Dyeing Cotton Dark Brown		
For the dye:		

1)	Find 15 to 20 large, ripe acorns, or use the nut and hulls of 40 smaller acorns. Pound or grind the acorns and hulls into a powder, either using a mortar and pestle or a blender.	
2)	With the help of an adult, put the powder into a pot with a cup or two of water, bring the water to a boil, and then reduce the heat and allow the water to simmer for an hour. Afterwards, let it cool.	
For the mordant:		
1)	Use 1 cup of vinegar mixed into a quart of water.	
2)	Find some rusty nails, and then scrape or sand off the rusted sections. Use a hammer to pound the rust into powder. You will need 2 tablespoons of rust.	
Working with the fabric:		

1)	Soak the fabric in the mordant of vinegar and powdered rust. Allow your material to soak overnight. The next morning, drain the fabric.	
2)	Wearing rubber gloves, put the fabric into the dye bath, letting it soak overnight in the dye. Depending upon the color, you may want to have it soak longer in the dye bath.	
3)	When you are happy with the color, rinse the fabric with cool water until the water runs clear and allow the fabric to dry.	