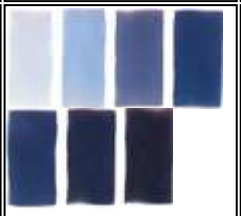
This is only an overview to creating natural dyes.

Herb	Image	Colors	Description
Madder			Madder's leafy tops sprawl untidily over the ground and their clusters of tiny yellow-green flowers are insignificant. Yet, to the dyer, madder is a miracle of color because its roots contain alizarin, one of the most valuable red dye pigments ever known.
Haritaki			Haritaki is so named because it grows in the abode of Hara (the Himilayas); it is green (harita) in the natural colour and it cures (harayet) all diseases.
Cutch, Cutechu			The dyestuff known as cutch or catechu is an extract usually made from the heartwood of Acacia catechu, a small thorny tree. It yields orange-brown dyes that are rich in tannin, and was used in India calico printing before its introduction to the West. It is used mainly to dye cotton and silk.
Indigo			Indigo's ability to produce an extensive range of beautiful blue shades has made it the most successful dye plant ever known. The commercially available indigo powder is made from the leaves of Indigofera tinctoria, which requires hot, sunny and humid growing conditions to flourish.
Turmeric			Turmeric belongs to the same family as ginger. Sometimes known as "Indian saffron", it is the source of the familiar yellow color of many Asian curry dishes. Both the culinary spice and the dye are obtained from its root. Turmeric was and still is used for textile painting and printing in India.
Onion			The outer skin of this common vegetable is one of the most useful and readily available dyestuffs. It is ideal for the novice dyer's first experiments since it reliably produced rich, vibrant shades of orange, yellow, rust and brown on all fibers, and does not impart any odor to the dyed material.
Pomegranate			The edible pomegranate fruit yields a ocher-yellow dye and the skins are rich in tannin, which improves colorfastness. The pomegranate dye lacks brilliance so it is often mixed with turmeric root to make the color brighter. In India and Southeast Asia it is used as a mordant and a dye.

Flag Assignment

Instructions: create a flag to be flown in your area. Your flag will be used to represent or symbolize something important in your city. Flags can be used to incite patriotism, respect for those who died, or boost morale, or simply act as a city identifier.

Flag requirements:

1. Your flag needs to be hoisted on a flagpole and flown so that everyone can be reminded of the values of your city, in addition to acting as a city identifier.

2. Each person in your group will create a design for your flag with a one page typed description of the symbols, colors and design to turn in to Mr. Martinez/Ms. Yoshida. Each member of the group will vote for the best flag representation without voting on their own. The best representation will be the city flag.

3. Since a natural disaster has occurred in your area finding materials to construct a flag will be difficult. It is your group's task to construct your flag out of natural dyes and materials. Use the following summary to create your own dyes and design your flag. Attached is a small list of herbs used to create various dye tones. Discover other possibilities. Websites have been noted below to aid you in your research.

Step 1: Soak the fabric in mordant

Soak fabric (no smaller than 8.5x11) for about 12 hours in a solution of warm water and mordant (research required; times & products vary). Hot waster from the tap is fine. Use 25% alum by weight of fabric. Alum and cream of tartar is in the baking section of the supermarket. Always

wear rubber gloves to avoid skin contact and absorption into your skin during this process. Keep out of reach of children and pets. Make sure they do not accidentally drink the solution.

Step 2: Dry the fabric

Thoroughly dry the fabric so the dye won't run when you apply it. A wax resist (research required-techniques & products vary) can be used to keep clean lines.

Step 3: Mix dyes for different colors

Check chart. Create new solutions for creating dye colors. Store dyes in airtight jars.

Step 4: Dye

Shake or stir the bottle of dye before using. Brush the dye directly on your fabric, as with any watercolor paint. **Consider techniques such as stenciling or tie-dyeing**.

Step 5: Dry

Dry your dyed fabric in the shade.

Step 6: Rinse

If you plan to make a garment to wear you should wash the excess dye out of the fabric first. If you are making an art piece, no rinsing is necessary.

Step 7: Remove wax

If you used a wax resist it must be removed. You will need an ironing board, iron on low to medium setting, and paper bags. First, place a paper bag on the ironing board, fabric on top of the bag and another bag on top of the fabric. Place heated iron on top of the bag for a few seconds; lift the iron and the bag. Check for wax stains on bag. Move bags to clean area and repeat the process until all wax has been removed.

http://www.tenfoldorganic.com/files/dye-materials.html

hhttp:www.aurorasilk.com/tutotials_articles_faqs/natural_dyes/faq_mordants_and_dyes.html