

# Changes to Dye Colour..

Dye colours are commonly affected by a change in Alkali and acidity of the solution they appear in. Alkalis and acids react with the substance in different ways, either exciting or dulling the electrons present, the effects of this cause the substance to release or hold on to different waves of light, resulting in a change of colour.

Red colours are usually made more visible in the presence of acid as the wavelength for red light is rebounded/emitted whereas in the presence of an alkali a colour can turn from blue to green and finally on to yellow.

## Test...

1. *Chop the red cabbage into large pieces.*
2. *Place the cabbage in a 3-quart pot and add 2-3 cups water. Bring to a boil, and then simmer until the cabbage is almost white.*
3. *Strain the cooking water ("cabbage juice") into the glass jar. Let cool.*
4. *Use the Sharpie to number each of 10 clear plastic cups.*
5. *Place the plastic cups in numerical order on a counter or table. Pour 4 oz. of water into cups 1 through 9.*
6. *Place a different liquid soap or small piece of solid soap into each cups numbered 2 through 5. Stir to dissolve the soaps.*
7. *Add 1 tablespoon of fruit juice to cup 6. Add 1 tablespoon of a different fruit juice to cup 7, another to cup 8, and another to cup 9.*
8. *Add 1 tablespoon of baking soda to cup 1, and stir until it is dissolved.*
9. *Pour 4 oz. of white vinegar into cup 10.*
10. *Your line up of cups should have baking soda at one end with the soaps, and the vine-*

