A Close Look at Color

Colors from a feather
Look at a distant candle flame through the end of a feather. You should see two or three candle flames on each side of the actual flame and a flattened X with four colored arms.
If the feather is good you will see two blue and red bands in each of the four arms.

How colors change.
Paste some colored illustrations from a magazine on a piece of cardboard. Pour three tablespoonfuls of salt in a saucer and add several tablespoonfuls of alcohol. Mix and light. This produces a very brilliant light that gives out only yellow. View the picture in this light in a darkened room and observe how all colors but the yellow change.

Colors in a soap film
Make a strong soap solution such as would be used for blowing soap bubbles. Fill a flat dish with the solution and dip an egg cup or a tea cup into the solution until a film forms across the cup. Hold this in a strong light and observe the colors you can see. Thin films often have colors.

Colors in an oil film
Fill a shallow dish with water. Color the water with black ink until it is very dark. Put the dish in a window where light from the sky is very bright, but not in direct sunlight. Look into the water so that light from the sky is reflected to your eye. While looking at the water place a drop of oil or gasoline on the surface at the edge of the dish nearest to you. You should see a brilliant rainbow of colors flash away from you toward the opposite edge. By blowing on the surface you will observe a change in the colors.