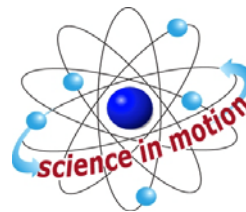


REFLECTION, DIFFRACTION, REFRACTION

SECTION 9: COLORED FILTERS WILL CHANGE THE PERCEIVED COLOR OF AN OBJECT



Westminster College

PROCEDURE:

1. Take three different colored sheets of construction paper and fold them in half. (Preferred: one each red, blue, green)
2. Take three sheets of white paper, fold them in half, and place next to the colored sheets to form a 3-sided figure. (see illustration in activity 8)
3. Shine the flashlight directly on the colored paper. Observe the shade of the white paper.
4. Place a colored filter over the flashlight. If possible, match the color of the filter to the color of the construction paper. Record your results. What color is the white paper now?
5. Mix and match colored filters and the background color of the construction paper. Observe the changes of color in both the white paper and the construction paper.
6. Working together with other groups, have one flashlight with each of the three filter colors. Try shining all three flashlights on a sheet of white paper. What color do you see reflected off the white paper?
7. Now try combining two of the beams of filtered light, is the light reflected different? Is it white?

ADDITIONAL ACTIVITIES

- Using your three filtered flashlights shine all three together at each of the colored construction paper screens you made earlier, is the color reflected the same or different than what you observed when you used only the single filtered flashlight in each case?
- Arrange a visit to a local theatre and have someone demonstrate the stage lighting to you. What happens on stage when different light colors are mixed?