This demonstration uses an overhead projector and a holographic diffraction grating to produce a large continuous spectrum on the projection screen.

Place the two pieces of manila cardboard on the projector stage so as to project a vertical slit on the screen. Suspend the grating in front of the projector head by clipping it to the fixture provided. First order spectra will be formed on both sides of the slit image. Turn the projector so as to center one of the spectra on the screen. Adjust the separation of the cardboard pieces to produce a good balance of brightness and hue – about one centimeter works well.

To demonstrate reflection of colors, first hold the white flower in the spectrum and show that white reflects all wavelengths equally. Then hold the blue flower in the blue part of the spectrum. It still appears blue. Move it to the red part of the spectrum. It now appears black, showing that it absorbs rather than reflects red light. The red flower will likewise appear red in red light, but black in other parts of the spectrum. (Note: the red flower contains some violet, so this works best if it is moved between the red and green parts of the spectrum only.)

Red, blue, and yellow filters are provided. Place each in turn on the stage over part of the slit. The red transmits red light, the blue, blue light, and the yellow filter transmits all but the blue light. The filters can be stacked in various combinations as well.