



## Concept:

A diffraction grating is used to clearly disperse white light into its spectral components.

## Equipment:

- Slide Projector
- Slotted Slide
- Pasco Diffraction Grating – 610 lines/mm
- (2) Small Ring Stands
- (2) Small clamps
- White Screen

## Procedure:

1. Verify that the slotted slide is in the slide projector and the diffraction grating is facing the slide projector lens.
2. Turn on the slide projector and move the white screen so that the color spectrum is spread along its length.
3. Turn of the lights and view the complete visible electromagnetic spectrum.
4. Turn on the lights and turn the slide projector to its “Fan” setting, letting it run until the bulb cools down.

## Notes and Extras:

- To best focus the spectrum on the white screen:
  1. After step 2 above, without moving the grating, rotate the slide projector so that it is directly aimed at the white screen.
  2. Adjust the slide projector focus so that the slit is well focused on the white screen.
  3. Rotate the slide projector back so that it points again through the diffraction grating.