Color (Monochromatic Light)

Dispersion - Refractive Index depends on $\lambda$

Single Slit Diffraction

$$D \sin \theta = m\lambda \quad \text{where} \quad m = 1, 2, 3, \cdots$$

(note: $m \neq 0$)
Diffraction Grating

Multiple equally spaced slits

\[ \sin \theta = \frac{m \lambda}{d} \quad \text{where } m = 0, 1, 2, \ldots \]

Spectroscope will prove to be an important instrument!