Physics 100 Lab #11 – Reflection and Refraction

Name_____ **Date**_____

Lab Partner(s)_____ **Section**_____

OBJECTIVE:
The purpose of this experiment is to study the basic optics of mirror reflection and refraction through materials.

APPARATUS:
Flat mirror, straight pins, Styrofoam block, paper, ruler, protractor, plastic block,

THEORY:
The angle of reflection equals the angle of incidence (page 534). For a material the index of refraction n =c/v where c = speed of light in vacuum and v = speed of light in the material (page 538). For refraction through a material (page 542):

$n_1 \sin\theta_1 = n_2 \sin\theta_2$ (see Figure below and on page 3).