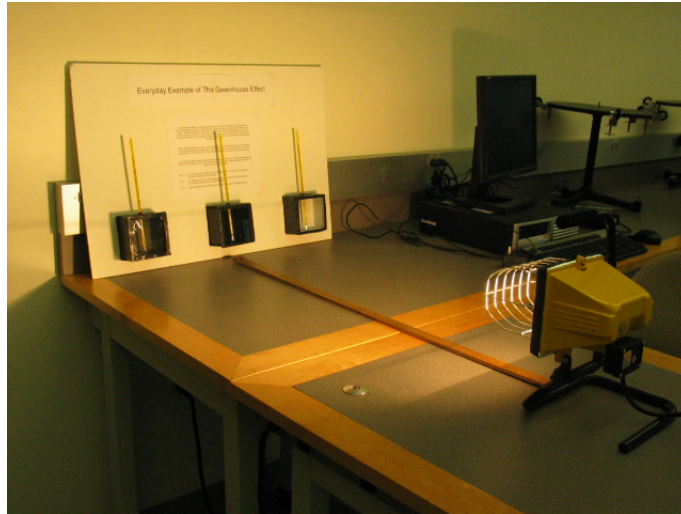


## Greenhouse Effect



**Purpose:** To demonstrate the greenhouse effect

**Location:** room 136, beneath white board on floor (work light on shelf P2)

NOTE: Although temperature differences are observable in as little as 10 minutes, allow an hour or more to see best results. Position work light about 1 m away with each box equally illuminated. Record the initial and final temperatures for each box. The 3 boxes have the same volume of enclosed air, but 2 have black interiors and one has a white interior. Box #1 has a thin film cover which provides negligible trapping of infrared radiation from the interior. Boxes 2 and 3 have glass covers which block most of the infrared radiation from the interiors of the boxes from escaping, resulting in more heat buildup inside. The middle box gets hottest, as it is black and covered with glass. Although box 3 is white and doesn't absorb as much radiation as box 1, it gets warmer because its glass cover more effectively blocks radiant heat from escaping.