

# **Operational Learning Goals for Sun and Shadows Unit**

2005 revisions, based on work by Rebekah Rice and Paul Zachos, ACASE, Saratoga Springs, New York with Jennifer Burgin, Diamond Middle School, Lexington, Massachusetts.

**Coordinates direction of sun with direction of shadow**

**Coordinates sun altitude and shadow length**

**Models pattern of change in length of day over the course of the year**

**Models path of sun over the course of the day**

**Models changes in path of sun over the course of the year**

**Models pattern of change in length of shadows over the course of the day**

**Models pattern change in length of shadows at noon over the course of the year**

**Creates accurate graphic communication (drawing to scale)**

**Solves problems of proportionality geometrically**

**Solves problems of proportionality mathematically**