HEADWATERS SCIENCE CENTER

Name of Demonstration: StarLab®

Description of Demonstration: This is a portable planetarium where up to 20 star-gazers can observe the night sky at any time of the day! Learn about stars, constellations, and planets and how they appear in the night sky on any day and hour of the year. See the STARLAB® home page for detailed information. Ages 8 and up.

MN SCIENCE Grad Stand/Strand/Sub-strand: Number####:
     3E 2.1.1.1, 3E 2.2.1.1, 3E 4.2.2.1
     5E 2.2.1.2, 5E 4.1.1.1,
     6E 1.1.1.1, 6E 2.1.1.1, 6E 3.1.1.1, 6E 4.2.2.1

Grade Level(s): 3rd through 6th Grades

Content Area(s): Earth and Space Science

Learning Target(s):
1. I can make observations of the sun, moon, and stars and predict continuing/future patterns.
2. I can explain how to electronically present collected data that identifies and describes patterns in the amount of daylight in the different times of the year.
3. I can describe patterns in the daily changes in length and direction of shadows, day and night, and the seasonal appearances of some stars in the night sky.
4. I can ask informed questions from observations of objects in the night sky.
5. I can collect and organize data from observations demonstrating the effects of sunlight on the Earth's surface.
6. I can use scale models of solar system objects to describe the size of objects, the location of objects, and the motion of objects in the solar system.

Essential Question(s):
1. What is the effect of sunlight on the Earth's surface?
2. How can recorded observations of the sun, moon and stars predict future patterns?
3. What future patterns of the sun, moon, and stars can be made based on recorded patterns?
3. What are the different amounts of daylight during the year? What effect does this have?
4. What are the daily changes in the length and direction of shadows, day and night, and seasonal appearances?
5. What is in the night sky?
6. What is the relative size, location, and movement of objects in the solar system?
   What role does gravity and inertia play in controlling motion in the solar system?

Key Vocabulary: Astronomy, Atmosphere, Cardinal directions, Constellations, Cycle, Galaxy, Horizon, Lunar, Model, Moons, Night sky, Orbit, Phases, Planet, Revolution, Rotation, Solar, Solar System, Stratosphere

Prerequisite Terms: Collect, Data, Demonstrate, Describe, Gravity, Inertia, Informed Question, Observation, Organize, Patterns, Predict, Present, Scale Model, Seasonal, Star