



Observe the Sun!

Background:

This lesson will help students understand how the position of the sun in the sky will affect the length of shadows. It will help to have the students point out what else can be seen in the sky (the moon and the stars).

Materials:

- Dow rod
- Sunglasses
- String

Procedure:

1. Ask the students what they know about patterns of the sun. Ask them to record what they know.
2. Introduce them to shadows and ask what they know.
3. Have the students go outside and find an area in the grass with little to no shade. Place the dow rod vertically into the ground.
4. Have students put on sunglasses and find where the sun is. They will measure how many handspans above the horizon (where the sky meets the ground) the sun is. For handspans, have the students straighten one arm out and lock their elbow. Make a fist, and make sure the thumb is at the top. Measure by putting the fists one on top of the other until you get to the sun. Have students record this number.
5. Next, have students measure how long the shadow from the dow rod is using string. Record this data as well.
6. Repeat steps 4 and 5 three more times throughout the day.
7. Have students draw conclusions about how the position of the sun affects length of shadows.

Next Generation Science Standards Used:

1-ESS1-1: Use observations of the sun, moon, and stars to describe patterns that can be predicted.

