

Grade Level: 2

Title: Time in the Sun

Purpose:

Students will explain how energy from the sun serves as a source of light that warms the land, air and water.

Subject Area(s) Addressed:

Science and Math

Common Core/Essential Standards:

Science:

2.E.1.1 Summarize how energy from the sun serves as a source of light that warms the land, air and water.

Math:

2.MD.7 Tell and write time from analog and digital clocks to the nearest five minutes, using a.m. and p.m.

Vocabulary:

hour
interval
location
minute
position
shadow
sun's rays

Materials Needed:

graph paper
planter
raised bed
pots
science journal
chart paper

Teaching Strategy:

Problem:

Where does the sun shine the strongest throughout the day around the school? Where are the best spots in the classroom for your strawberry plants to receive sunlight? Will all plants get the same amount of sun? How can you prove this? Where should the garden (or pots) be placed to get the most sun?

Activity:

Have students observe the position of the sun and the shadows that it cast in various places across the school yard or the classroom. As you discuss strawberry farming, note that farmers have open fields where the sun shines on their plants all day, but have to consider this same question when parts of their fields are near the woods. What is the best place for our strawberries to be planted?

As students observe the position of the sun, have them chart the location and time of day. Have students use a watch and tell time to the minute. Have students chart the time and location where the sun is casting a shadow. Then have students compare the time and the position of the sun. Students will need to find the location that receives the most sun for the longest period of time. Use this opportunity to teach intervals of time. This should be easily seen on their charts as they record their data. Have them write their observations in their science journals and chart the data. Students can take their information from their charts and create a line graph to determine the best location for the plants.

The sun is lower in the sky during the winter, and shadows of buildings, trees, etc. will be more of a factor. Discuss this factor as you look at different possible sites. Also discuss N, E, S and W on a compass as you look at different possible sites.

Extension Activity:

Talk about other needs that plants/a garden have: good soil, access to water, safe place to work, protection from 2-footed and 4-footed marauders, etc. Does the place with the best light also have these? Which place is best?

If the classroom has a window, graph the height of a shadow on the wall at the same time of day every day throughout the school year (set an alarm as a reminder). Discuss what the graph indicates about the length of the day and the position of the sun and the earth.

Assessment:

Information recorded in science journal and charts.

North Carolina Strawberry Association – www.ncstrawberry.com

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