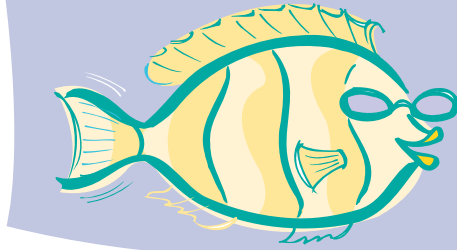


grades 6-8



SunWise[®] 

a program that **radiates** good ideas

A Partnership Program of the U.S. Environmental Protection Agency

www.epa.gov/sunwise



SunWise Surveyor

Directions

You are a surveyor. You measure and map land areas and have been assigned to determine the current availability of shade on your school's property. This will help school administrators decide if the grounds are sun safe.

Take a survey of the grounds during a period when students are using them. Don't forget to be SunWise as you walk around the school!

Begin by drawing a map of the school grounds. Observe and mark on the map the most popular places where students congregate and play. These Play Areas can include sports fields, jungle gyms, blacktops, eating areas, and any other places where kids hang out.

Survey and mark the parts of the Play Areas that are covered in shade.

Measure the dimensions of the Play Areas, and write down your results. Then, measure the shade-covered portions of these areas. For circular-shaped areas, such as under a tree, measure the diameter of the shady spot. Record your results.

Questions

- 1 What is the total area of the Play Areas on your school's grounds?
- 2 What is the total area of the portions of those Play Areas covered by shade?
- 3 What percentage of the Play Area on your school's grounds is sun safe?



SunWise Surveyor

Estimated Time

One to two class periods

Supplies

Clipboards (optional)

Measuring tapes, yardsticks, or metersticks

Learning Objective

This activity will raise student awareness of daytime exposure to the sun. Students will focus on the amount of shade provided for their outdoor hours at school, and the importance of providing sun-safe areas on the property. Assess student comprehension by asking students to design a more SunWise playground (see the “You Are the Architect” activity).

Directions

Tell your students that they are surveyors who have been assigned to determine the current availability of shade on your school’s property in order to help school administrators decide if the grounds are sun safe.

Have the class take a survey of the grounds during a period of time when students are present, such as recess or lunchtime.

Have the students begin by drawing a scaled map of the school grounds, observing and marking on the map the most popular places where students congregate and play. These Play Areas can include sports fields, jungle gyms, blacktops, eating areas, and any other places where kids hang out.

Now have students survey and mark the parts of the Play Areas that are covered in shade.

Have the students measure the dimensions of the Play Areas, record their results, and measure the shade-covered portions of these areas. For circular-shaped areas, such as under a tree, students will measure the diameters and calculate the areas of the shady spot, and write down these results as well.

Questions and Answers

- 1 What is the total area of the Play Areas on your school’s grounds? *Answers will vary. Students will determine this figure using algebraic formulas to calculate the area of each Play Area, then adding the sums together. $A = l \cdot w$*
- 2 What is the total area of the portions of those Play Areas covered by shade? *Answers will vary. Students will determine this figure using algebraic formulas to calculate the area of each shade-covered area, then add the sums together.*
- 3 What percentage of the Play Area on your school’s grounds is sun safe? *This answer will be determined by dividing the total area of shady spots by the total area of the Play Areas.*

This activity was adapted from *California Department of Health Services, School Shade Protocol*, Cancer Prevention and Nutrition Section.

Additional Resources

CDC’s Shade Planning for America’s Schools

www.epa.gov/sunwise/doc/cdc_shade_planning.pdf