



# The SunWise School Program Guide

A School Program That Radiates Good Ideas



Printed on paper that contains at least 30 percent postconsumer fiber.

# Acknowledgments

**T**he SunWise School Program would like to thank the many teachers, parents, communities, health professionals, educators, meteorologists, nonprofit organizations, environmental groups, scientists, and others who have helped make the SunWise vision a reality. Your commitment, energy, and dedication are truly remarkable, and the SunWise School Program sincerely appreciates your valuable efforts.

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# Introduction

Children spend lots of time outdoors during recess, physical education classes, after-school activities, and sports programs. While some exposure to sunlight can be enjoyable and healthy, too much can be dangerous. Children need to be physically active, but must learn to protect themselves from overexposure to ultraviolet (UV) radiation. This overexposure can cause serious health effects, including skin cancer and other skin disorders, eye damage and cataracts, and immune system suppression. Skin cancer is the most common type of cancer in the United States.<sup>1</sup> Currently, one in five Americans develops skin cancer during their lifetime. Every hour one person dies from this disease. Since 1973, new cases of the most serious form of skin cancer—melanoma—have increased approximately 150 percent.

You can make a difference! Children need sun protection education since unprotected exposure to the sun during youth puts them at increased lifetime risk for skin cancer. One or two blistering sunburns in childhood may double the lifetime risk of developing melanoma. By educating ourselves and children about UV-related health effects and the steps for sun protection, we can promote a healthy future for the next generation.

In the atmosphere, the ozone layer forms a protective shield that protects the Earth from the sun's powerful UV radiation. Scientists have discovered, however, that the ozone layer is thinning and allowing more UV rays to reach the Earth's surface.

The federal government has classified UV radiation as a human carcinogen, along with other cancer-causing agents such as asbestos, radon, and tobacco smoke.

These heightened levels may cause the incidence and severity of UV-related health effects to rise, particularly given current sun-protection practices in the United States. Since the condition of the ozone layer is not expected to improve significantly until the middle of the 21st century, we need to change our sun protection behaviors now to protect our future health.

<sup>1</sup> American Cancer Society, "Cancer Facts and Figures 2003."

Many believe that only lighter-skinned people need to be concerned about the effects of overexposure to the sun. Though it is true that darker skin has more natural pigment, which acts as a protectant, the skin is still susceptible to many of the damaging effects of UV radiation. Any change to the skin's natural color is a sign of damage to the skin. The incidence of skin cancer is lower in dark-skinned people, but it still occurs and is often not detected until later stages when it is more dangerous. The risk of other UV-related health effects, such as cataracts, premature aging of the skin, and immune suppression, is not dependent upon skin type.

The good news is that UV-related health effects are largely preventable by instituting sun-protection practices early and consistently. Schools and teachers can play a major role in protecting children by teaching sun safety behaviors.

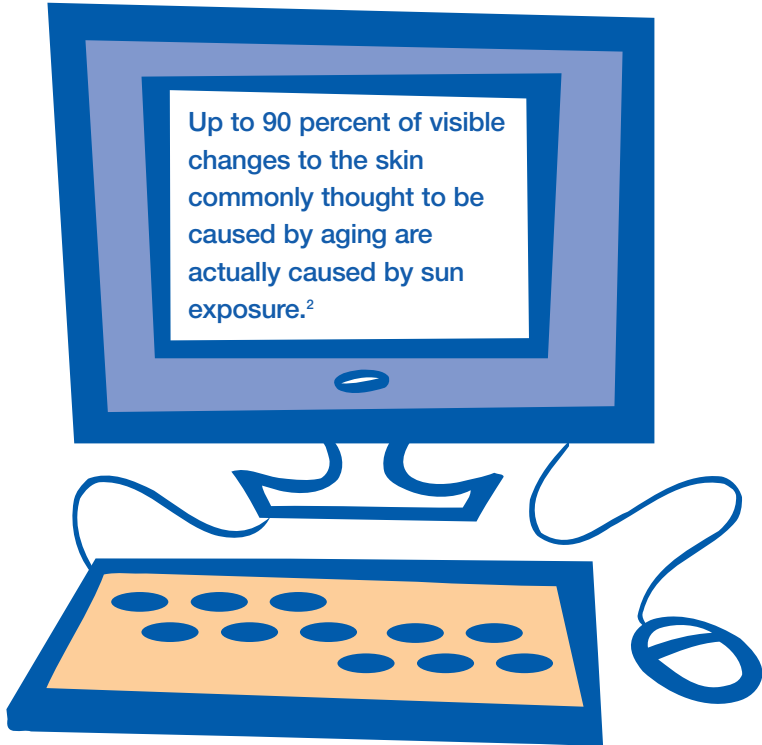
To help educators raise sun safety awareness, the U.S. Environmental Protection Agency (EPA) has developed the SunWise School Program, a national education program for children in grades K through 8. SunWise Partner Schools sponsor classroom and schoolwide activities that raise children's awareness of stratospheric ozone depletion, UV radiation, and simple sun safety practices. SunWise is a collaborative effort of schools, communities, teachers, parents, health professionals, environmental groups, meteorologists, educational organizations, and others. With everyone's help, sun protection can grow beyond classrooms to the entire community. *The SunWise School Program Guide* is designed to provide school administrators, teachers, nurses, and other childhood caregivers with a general overview of SunWise and the components of the program. Additional brochures and fact sheets are available by calling the National Service



Skin cancer and other sun-related health effects are largely preventable.

Center for Environmental Publications at (800) 490-9198 or by visiting the publications section of the SunWise Web site at <[www.epa.gov/sunwise](http://www.epa.gov/sunwise)>.

SunWise is intended to actively engage children in the learning process. Its dual focus on health and the environment will help children develop the skills necessary for sustained SunWise behavior and an appreciation for the environment around them.



<sup>2</sup>"Guidelines for School Programs to Prevent Skin Cancer." *Morbidity and Mortality Weekly Report* 51, No. RR-4 (April 26, 2002). Available: [www.cdc.gov/nccdphp/dash/guidelines/skin\\_cancer.htm](http://www.cdc.gov/nccdphp/dash/guidelines/skin_cancer.htm)

# The SunWise School Program

**T**he SunWise School Program is an environmental and health education program that aims to teach

children and their caregivers how to protect themselves from overexposure to the sun. Through the use of classroom-based, school-based, and community-based components, SunWise seeks to develop sustained sun-safe behaviors.



The program's learning components build on a solid combination of traditional and innovative education practices already in use in many U.S. elementary and middle schools. Through the program, educators, students, and their families will increase their awareness of simple steps they can take to protect themselves from overexposure to the sun. Students will demonstrate the ability to practice health-enhancing behaviors and reduce health risks. Children also will acquire scientific knowledge and develop an understanding of the environmental concepts related to sun protection.

The program encourages schools to provide a sun-safe infrastructure, including shade structures (e.g., canopies, trees) and policies (e.g., using hats, sunscreen, sunglasses) that promote sun protection in a school setting. Though based in schools, SunWise also supports community partnerships, such as inviting guest speakers to school assemblies, to enhance sun safety efforts.



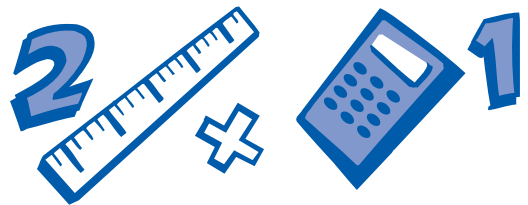
Recognizing the many issues schools are asked to address daily, SunWise has been developed with the needs of schools and educators in mind. The program is designed to provide maximum flexibility—elements can be used as stand-alone teaching tools or to complement existing school curricula. The time commitment necessary to implement SunWise is minimal, while the potential payoff in lower skin cancer rates—and other health benefits in the future—is high.

SunWise was pilot tested in 130 schools in 38 states during the 1999-2000 school year. National implementation began in the 2000-2001 school year. The components outlined below are available to Partner Schools free of charge.

## SunWise School Program Components

Classroom	School	Community
<ul style="list-style-type: none"> <li>✓ Cross-Curricular Classroom Lessons</li> <li>✓ Internet Learning, Including UV Measurement and Reporting</li> <li>✓ SunWise Student Survey</li> <li>✓ SunWise Teacher Survey</li> </ul>	<ul style="list-style-type: none"> <li>✓ Suggestions for Infrastructure Enhancements (e.g., sun-safe policies and structures)</li> <li>✓ Ideas for School-Based Sun Safety Activities (e.g., school assemblies)</li> <li>✓ Evaluation of SunWise School Program</li> </ul>	<ul style="list-style-type: none"> <li>✓ Suggestions for Community Partnerships (e.g., guest speakers and business partnerships)</li> <li>✓ Service Learning Components for Students</li> </ul>

*SunWise lessons meet national standards for science, math, health, and language arts.*







## How Does a School Become a SunWise Partner?

Becoming a SunWise Partner School is easy! Any elementary or middle school in the United States may participate in the SunWise School Program. A single classroom, multiple classrooms, a school, or an entire school district may join. To become a SunWise Partner School, you must:

- 1. Register as a SunWise Partner School.** Educators are asked to complete the registration form located on the SunWise Web site at [www.epa.gov/sunwise](http://www.epa.gov/sunwise). This is the fastest way to join the program. Printed copies also can be downloaded from the Web site. A hard copy can be found in the middle of this guide as well.
- 2. Participate in student evaluation.** A random sample of participants will be asked to complete the SunWise Student Survey before and after implementation of SunWise Activities. This simple, 10-minute questionnaire, developed by Boston University's Skin Cancer Prevention Team, elicits basic information on attitudes and practices of children relating to sun exposure. This survey will provide information for evaluation purposes only. All personal information will remain confidential.
- 3. Complete the teacher evaluation form.** Teacher feedback about the usefulness of classroom and school materials is vital to the refinement of SunWise education materials.
- 4. Adopt at least one of the following SunWise activities:**
  - ✓ Cross-curricular classroom lessons.
  - ✓ UV measurement and reporting on the Internet.
  - ✓ School infrastructure enhancements (school policy changes and/or sun-protection structures).
  - ✓ Community outreach (inviting guest speakers and forming business partnerships).
  - ✓ Schoolwide sun safety activities.






## What Tools Are Available to SunWise Partner Schools?

Based on the activities you choose, you will receive, free of charge, materials and tools to help you implement SunWise in your classroom or school.

### ✓ SunWise Tool Kit

A Tool Kit containing cross-curricular, standards-based lessons and background information is **free** to registered schools. The Tool Kit consists of a variety of **fun, developmentally appropriate activities** that combine education about sun protection and the environment with other aspects of learning.

The Kit includes activities focusing on:

-  The science behind UV radiation and stratospheric ozone;
-  The health risks from overexposure to UV radiation; and
-  The steps you can take to protect yourself.






The Kit contains classroom activities for K-2, 3-5, and 6-8 grade levels. In keeping with the intent of making these lessons hands-on and fun, the Kit also includes tools, such as a UV-sensitive frisbee and the *On the Trail of the Missing Ozone* comic book, which reinforce the sun safety lessons. Finally, to reward your students for their participation in the SunWise program, we have created the easily photocopied Certificate of SunWisdom.

The Tool Kit contains an additional section targeting school policy, which gives guidance on how to institute sun safety changes outside the classroom. The Tool Kit is also available in Spanish.

## ✓ SunWise Internet Learning Site and UV Database



In order to make the best use of innovative educational and information-sharing technologies, EPA developed an Internet Learning Site as part of its main SunWise Program Web site. Students and teachers can use the site to:

-  Report and interpret daily measurements of UV radiation, weather conditions, and information regarding sun-protection practices.
-  Search for the UV Index in their community using a ZIP-code searchable UV Index database.
-  Chart, graph, and map UV measurements.
-  Participate in online, interactive educational activities.
-  Locate additional resources on sun protection, health, and the environment.

Once schools register, teachers will receive secure IDs for entering daily UV data on the Internet Learning Site.

## ✓ Publications

EPA has published a number of documents to help your school be SunWise. These can be used as warm-up reading exercises, copied and placed in school newsletters, used as part of field trip permission forms, etc. All of the documents are available on the SunWise Web site at [www.epa.gov/sunwise/publications.html](http://www.epa.gov/sunwise/publications.html) and in paper form. For free printed copies, please contact the National Service Center for Environmental Publications at (800) 490-9198.

## How Will SunWise Be Evaluated?

The SunWise School Program recognizes a particular challenge in measuring the effectiveness of its effort to create sustained SunWise behavior, especially given the latency period associated with the onset of UV-related health effects. Therefore, the careful and consistent evaluation of program effectiveness through a variety of interim measurements—including student survey and teacher evaluation data—is integral to SunWise’s success. As of 2002, data from over 6,000 student pretests and posttests has been analyzed and the results are promising, with four major findings. Children ages 5-12 receiving SunWise education have:

- a) **Marked improvement for all knowledge variables.** Identifying that wearing a hat and shirt outside were ways to keep the skin safe from the sun improved overall from 60 percent to 75 percent. Student knowledge of the need for SPF 15 improved from 50 percent at pretest to 78 percent at posttest. Awareness of the UV Index reading that best correlated with the most optimal sun protection also improved overall from 28 percent to 57 percent.
- b) **Improved attitudes and beliefs about tanning.** In particular, from pretest to posttest, youngest children (ages 5 to 9) experienced a 10 percent decrease in the attitude that a tan is healthy. These findings in students receiving education are in stark contrast to more than 1,000 students in control schools (receiving no education) who had no changes in knowledge or attitudes during this comparable period.
- c) **Fewer sunburns.** School nurses at 11 schools in six states surveyed the same children during the 2000-01 and 2001-02 school years. Among the 477 children completing three surveys, gains in knowledge and attitudes were maintained and sunburning rates were lower in the most recent summer (55 percent in summer 2001 compared with 66 percent for summer 2000).
- d) **Stronger intentions to avoid adverse sun exposure.** Overall, intentions to play in the shade increased significantly from 70 percent to 76 percent from pretest to posttest with more substantial differences noted in younger children.

## Why Should Schools Participate in SunWise?

Being a part of SunWise is a fun, easy, and effective way to protect the health of the children in your school. The program focuses on the whole spectrum of health effects, including skin cancer, eye damage, and other illnesses, and is appropriate for diverse school populations nationwide. Though based in schools, SunWise also encourages a sustained connection between schools and their communities. By participating in SunWise, children will enhance their creativity, critical thinking, data collection, reading, problem solving, decision-making, and communication skills.

EPA has developed a recognition/incentive program to acknowledge outstanding SunWise schools. The awards recognize innovative and exemplary efforts in the area of sun-protection education. By meeting certain criteria, schools and community organizations are recognized at either the “Shining Star” or “Helios Leadership” award levels. Awards may include an engraved plaque, T-shirts, frisbees, being featured on EPA’s Web site, or being highlighted through local media. Check the SunWise Web site at [www.epa.gov/sunwise](http://www.epa.gov/sunwise) for details.



# Be SunWise: Action Steps for Sun Protection



The SunWise School Program has developed a set of action steps for sun protection that can be used in the classroom, on the playground, or elsewhere to help reduce students' and adults' risk from UV radiation. With these steps, preventing overex-

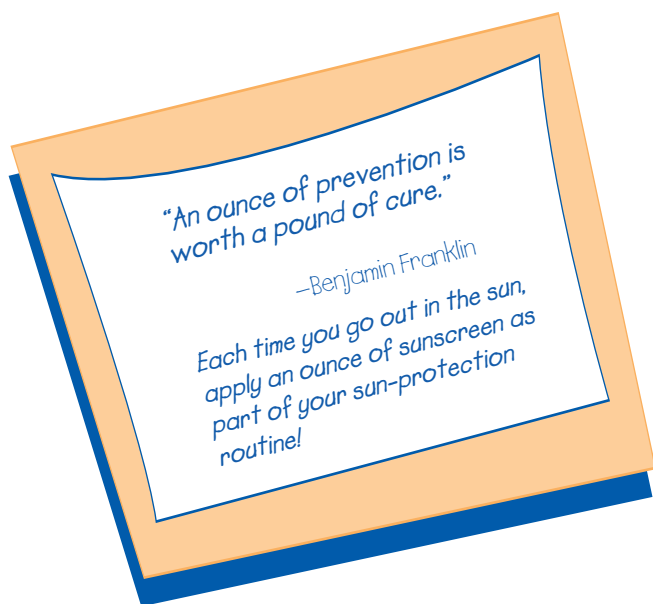
posure to the sun is simple. You and your students should always take the following precautions:

- ✓ **Limit time in the midday sun.** The sun's UV rays are the strongest between 10 a.m. and 4 p.m. To the extent possible, limit exposure to the sun during these hours.
- ✓ **Check the UV Index.** This important resource helps you plan your outdoor activities in ways that prevent overexposure to the sun's rays. Developed by the National Weather Service and EPA, the UV Index is available on the SunWise Web site ([www.epa.gov/sunwise/uvindex.html](http://www.epa.gov/sunwise/uvindex.html)) in a ZIP code-searchable format. The UV Index uses numbers to represent the likely level of UV exposure (Minimal: 0-2; Low: 3-4; Moderate: 5-6; High: 7-9; Very High: 10+). While you should always take precautions against overexposure, take special care to adopt sun safety practices when the UV Index predicts exposure levels of moderate or above. Watch for possible changes to the UV Index in 2004.
- ✓ **Use shade wisely.** Seek shade when UV rays are the most intense, but keep in mind that shade structures (e.g., trees, umbrellas, canopies) do not offer complete sun protection.
- ✓ **Wear protective clothing.** A hat with a wide brim offers good sun protection for your eyes, ears, face, and the back of your neck. Sunglasses that provide 99 to 100 percent UV-A and UV-B protection will greatly reduce eye damage from sun exposure.

Wrap-around sunglasses provide the most protection. Tightly woven, loose fitting clothes will provide additional protection from the sun.

- ✓ **Use sunscreen.** Apply a broad-spectrum sunscreen of SPF 15+ liberally 20 minutes before going outside and reapply every 2 hours, or after working, swimming, playing, or exercising outdoors.
- ✓ **Avoid sunlamps and tanning booths.** The light source from sunbeds and sun lamps damages the skin and unprotected eyes and is best avoided entirely.

Remember, everyday exposure counts! You don't have to be actively sunbathing to get a damaging dose of the sun—take care even when having lunch outside, going on school field trips, taking part in after-school activities, or participating in sports programs. Inform your friends and family about these simple sun safety steps. You could save a life!



# Additional Sun-Protection Resources

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lease contact the following organizations or visit the links on the SunWise Web site for additional information on sun protection:

## **American Academy of Dermatology**

930 North Meacham Road  
P.O. Box 4014  
Schaumburg, IL 60173-4965  
888 462-DERM (462-3376)  
[www.aad.org](http://www.aad.org)

## **American Cancer Society**

1599 Clifton Road, NE  
Atlanta, GA 30329-4251  
800 ACS-2345 (227-2345)  
[www.cancer.org](http://www.cancer.org)

## **Boston University Medical Center**

Skin Oncology, Cancer Prevention  
& Control Center  
720 Harrison Avenue, DOB-801A  
Boston, MA 02118  
617 638-7131

## **Centers for Disease Control and Prevention**

Division of Cancer Prevention and Control  
4770 Buford Highway  
Chamblee, GA 30341  
770 488-4751  
[www.cdc.gov/cancer](http://www.cdc.gov/cancer)

## **National Council on Skin Cancer Prevention**

[www.skincancerprevention.org](http://www.skincancerprevention.org)

## **SHADE Foundation**

Curt and Shonda Schilling  
Melanoma Foundation of America  
10645 N. Tatum Boulevard  
Suite 200, #467  
Phoenix, AZ 85028  
602 595-4858

## **The Skin Cancer Foundation**

245 Fifth Avenue  
Suite 1403  
New York, NY 10016  
212 725-5176  
[www.skincancer.org](http://www.skincancer.org)







United States  
Environmental Protection Agency  
(6205J)  
Washington, DC 20460

Official Business  
Penalty for Private Use \$300

# Registration Form



SunWise School Program  
U.S. Environmental Protection Agency  
1200 Pennsylvania Avenue, NW (6205J)  
Washington, DC 20460

**Registering for the SunWise School Program is easy!** The fastest way to register and receive SunWise materials is via the online registration form at <[www.epa.gov/sunwise](http://www.epa.gov/sunwise)>. If you do not have Internet access, please review the program requirements and the activities described in this guide and then fill out this form completely. Use the self-addressed cover to mail it back to EPA. We'll send you everything you need within six weeks of receipt of your registration form. If you do not receive a Tool Kit within that timeframe, please contact us.

## Participant Requirements

1. Register online or complete and return this self-addressed form.
2. Adopt at least one of the SunWise activities listed on page 6.
3. Complete the teacher evaluation form (required) and the student survey (if selected).

Fold Here

## Mailing Instructions

Carefully remove the entire form from the booklet and fold it as indicated above, with the address visible. To ensure the form remains folded during shipment, secure it with a piece of tape. Please affix first class postage.

At this time, we can only accept registrations from educators who are currently working in elementary or middle schools in the United States with a classroom size of at least 10 students. Those who do not fall into this category (e.g., student teachers, universities, camp counselors, preschool/high school teachers, educators from other countries, etc.), please do not register. Contact us via e-mail at <[www.epa.gov/sunwise/contacts.html](http://www.epa.gov/sunwise/contacts.html)> and we will gladly provide you with appropriate SunWise materials.

## To Participate in SunWise, Please Tell Us...

Your Name: \_\_\_\_\_

How Did You Learn About SunWise? \_\_\_\_\_

## About Your School

School Name: \_\_\_\_\_

Street Address: \_\_\_\_\_

City: \_\_\_\_\_ State: \_\_\_\_\_ ZIP Code: \_\_\_\_\_

Number of Students in School (Estimate): \_\_\_\_\_ Phone: \_\_\_\_\_

Principal's Name: \_\_\_\_\_

School District Name: \_\_\_\_\_

## About Yourself

E-mail: \_\_\_\_\_ Phone: \_\_\_\_\_

Grades You Teach:  K  1  2  3  4  5  6  7  8

Subjects You Teach:  Science  Math  School Nurse  ESL  
 Social Studies  Physical Education  English  
 Other: \_\_\_\_\_

Would You Prefer Materials in  English or  Spanish?

To Approximately How Many Students Do You Plan To Teach SunWise? \_\_\_\_\_

## SunWise Activities

Please indicate below which SunWise activities you would like to implement in your classroom, school, or community. Please choose at least one activity, but feel free to implement as many as you like. Remember, all materials and tools will be provided to you **free of charge**.

**Implement SunWise Tool Kit Activities**

The Tool Kit contains standards-based, cross-curricular activities that focus on the science behind UV radiation and stratospheric ozone; health effects from overexposure to UV radiation; and action steps for sun protection. The kit also contains tools such as a UV-sensitive frisbee; grade-level appropriate story, activity, and comic books; and a Certificate of SunWisdom. A policy section gives guidance on how to institute sun safety changes outside the classroom.



**Report Daily UV Intensity and Forecast Data**

Teachers and students can use the site to report and interpret daily UV data and weather conditions.

**SunWise Video**

You may also register to receive the video, "SunWise: A Sun Safety Program for Grades K-8," designed for teachers, school nurses, parents, and school administrators who would like to learn more about the program.

## SunWise School Program Identification

Please list the classes to which you will be teaching SunWise (each class receives a unique ID number that is used to enter UV data).

Class 1 \_\_\_\_\_ (Identification name, e.g., Science 1)

Class 2 \_\_\_\_\_

Class 3 \_\_\_\_\_

Class 4 \_\_\_\_\_

**Incomplete forms cannot be processed.**