

The U.S. EPA's SunWise Program



A free skin cancer prevention and ozone layer education program for K–8 learners.

A Roadmap

In this document, you'll find...

- The SunWise Story
- A Study in Sun Safety Awareness
- Information on How SunWise Saves Lives and Money
- Lessons in Program Effectiveness
- Skin Cancer Facts
- How Schools and Community Organizations Can Become SunWise
- Publications and References



a program that **radiates** good ideas

A Partnership Program of the U.S. Environmental Protection Agency
www.epa.gov/sunwise



The SunWise Story

- ☀ Launched nationwide during the 2000–2001 school year, this award-winning program is available to schools and informal education organizations, to promote sustained sun-safe behaviors in children.
- ☀ As of 2008, more than 18,000 schools and one million students are SunWise.
- ☀ Schools and partners receive a free SunWise Tool Kit with over 50 standards-based, cross-curricular activities, a UV-sensitive Frisbee® for experiments, story and activity books, posters and more.
- ☀ The program is flexible and activities fit into what an educator is already doing. The time commitment can be as little as one to two hours during the entire school year.

A Study in Sun Safety Awareness

Starting with a “pilot group” in 1999, the SunWise Program has undergone routine evaluations to determine its effectiveness on student sun safety knowledge, attitudes, practices, and intended practices using student responses to surveys.

- ☀ Teachers leading SunWise lessons have also completed program evaluations, in which three out of four have noted improvements in their own sun protection behaviors.
- ☀ The most recent study, conducted in 2006–2007, took the evaluation of changes in students’ sun safety behaviors one step further by analyzing the human health benefits of SunWise (e.g., fewer skin cancer cases and mortalities), then comparing these benefits to the program’s costs.¹
- ☀ The study found that **using SunWise to teach children about sun safety saves lives and money.**¹
- ☀ The study is unique because few studies to date have analyzed the benefits of school-based health programs in economic terms. This is the first study to review the cost-benefit of a school-based sun safety program.
- ☀ The study results were published in the May 2008 issue of *Pediatrics*, the official journal of the American Academy of Pediatrics and one of the leading publications for pediatric research. The full article, entitled “Economic Evaluation of the U.S. Environmental Protection Agency’s SunWise Program: Sun Protection Education for Young Children,” is available online at www.pediatrics.org/cgi/content/full/121/5/e1074.

SunWise Saves Lives and Money

The newest evaluation of SunWise assessed student survey responses from 1999–2005 to determine program effectiveness, benefit-to-cost ratio, and cost-effectiveness.

- ☀ Teachers can bring about modest changes in students’ sun protection behavior, such as wearing sunscreen or a hat more frequently, by taking 1–2 hours each year to use activities in the free, standards-based and cross-curricular SunWise Tool Kit. These modest changes can lead to significant health benefits in the future.¹
 - ☀ As a result of teaching SunWise to children between the years 1999–2015, EPA estimates that **more than 50 premature deaths and 11,000 cases of skin cancer will be prevented.**¹
 - ☀ By increasing federal spending by just a few pennies per person more over the next seven years, the SunWise Program could **save 20 more lives and prevent more than 4,000 more cases of skin cancer.**¹
 - ☀ Every federal dollar invested in SunWise **saves \$2–\$4 in public health costs**, such as medical care costs and productivity losses associated with skin cancer.¹
 - ☀ The larger the investment in SunWise, the greater the number of reduced skin cancer cases and mortalities, and the more cost-effective the program becomes.¹
- ☀ **\$1 spent on SunWise saves \$2–\$4 in public health costs.**

Lessons in Effectiveness

Surveys of children and teachers have taken place since the inception of the program in 1999. From 1999–2002, two special efforts evaluated the effectiveness of the SunWise classroom lessons on student knowledge, attitudes, practices, and intended practices using student responses to identical pre-test and post-test surveys.

- ☀ As part of the first survey effort, students completed pre-test surveys between autumn and early spring and post-tests immediately after being taught the SunWise lessons (spring to early summer).²
- ☀ A large school district also served as a control group for this study (the students at these schools *did not* receive SunWise education between the pre- and post-tests).²
 - ☀ Among the more than 1,800 students aged 5–12 that received a SunWise education, **the percentage of students who knew the right number SPF of sunscreen to wear increased by 25%.**²
 - ☀ Results also showed a **4% decrease in students who thought people look healthier with a suntan.**²
 - ☀ Modest changes were observed in student practices from pre-test to post-test, and **intentions to both play in the shade and use sunscreen increased by 4% to 5%.**²
 - ☀ This compared very favorably with control schools where no improvements in attitudes or practices were noted.²
- ☀ As part of the second survey effort, a separate group of students received the pre-test and two post-tests from their school nurses: one post-test immediately after being taught SunWise and another the following fall to determine if students retained the SunWise lessons and maintained their SunWise behaviors.^{3,4}
 - ☀ 477 children completed the second set of post-tests, which indicated that **students maintained their gains in knowledge and attitudes.**^{3,4}
 - ☀ In addition, an **11% decrease in sunburning rates, particularly in frequent burns,** was noted from summer 2000–summer 2001.^{3,4}

☀ **11% decrease
in sunburning
rates, particularly
frequent burns.**



Skin Cancer Facts

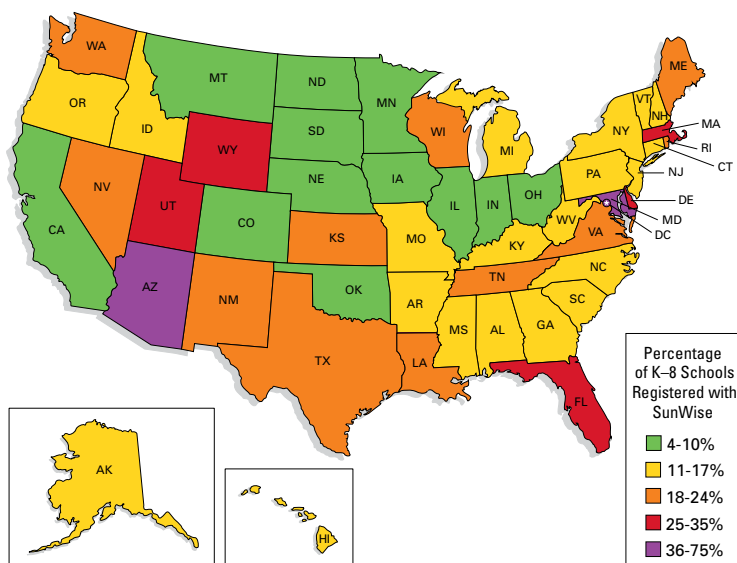
SunWise aims to prevent skin cancer by changing the sun protection behaviors of children and their caregivers.

- ✿ In 2008, an estimated 8,400+ people will die of melanoma.⁵
- ✿ Approximately half of all cancers in the U.S. are skin cancers. **One in five Americans will develop skin cancer during their lifetime.**⁶
- ✿ This year alone, more than **one million new cases** of skin cancer will be found in the United States.⁶
- ✿ The number of people diagnosed with melanoma, which is responsible for approximately 75% of all skin cancer deaths, is rising at an alarming rate. It is projected that for persons born in 2008, **one in 58 will be diagnosed with melanoma**⁷—that's about 20 times higher than it was for persons born in 1930.⁸
- ✿ Exposure to ultraviolet (UV) light is the **number-one preventable risk factor** for skin cancer. Taking simple steps now to prevent overexposure lowers one's risk.
- ✿ In a majority of studies, researchers have found a **positive relationship between childhood sunburns and the subsequent risk of melanoma.**⁹

How Schools and Community Organizations Can Become SunWise

- ✿ Schools may register to receive a free Tool Kit online at: www.epa.gov/sunwise/becoming.html.
- ✿ SunWise also partners with science centers, museums, parks, camps, and other informal education facilities to expand and reinforce the SunWise message. By working with multiple organizations within a community, SunWise Communities takes the program from the classroom into the community at large. Partners may register to receive a free Tool Kit at: www.epa.gov/sunwise/becoming_partner.html.
- ✿ For more information, schools and partners may visit the SunWise Web site at: www.epa.gov/sunwise.

SunWise is in all 50 states!



SunWise Evaluation Publications and Other References Cited

1. Kyle, J.W., et al. 2008. Economic Evaluation of the U.S. Environmental Protection Agency's SunWise Program: Sun Protection Education for Young Children. *Pediatrics* 121(5), e1074-e1084.
2. Geller, A.C., et al. 2002. The Environmental Protection Agency's National SunWise School Program: Sun protection education in U.S. schools (1999-2000). *Journal of the American Academy of Dermatology*. 46(5), 683-689.
3. Geller, A., et al. 2003. Evaluation of the SunWise School Program. *The Journal of School Nursing*. 19(2), 93-99.
4. Geller, A.C., et al. 2003. Can an hour or two of sun protection education keep the sunburn away? Evaluation of the Environmental Protection Agency's SunWise School Program. *Environmental Health: A Global Access Science Source* 2003, 2(13). Available online at: www.ehjournal.net/content/2/1/13.
5. American Cancer Society. Cancer Facts and Figures 2008. Available at www.cancer.org/downloads/STT/2008CAFFfinalsecured.pdf. Accessed April 11, 2008.
6. American Cancer Society (ACS). 2008. Available at www.cancer.org/docroot/PED/content/ped_7_1_What_You_Need_To_Know_About_Skin_Cancer.asp?sitearea=&level=>. Accessed April 10, 2008.
7. American Academy of Dermatology. 2008 Skin Cancer Fact Sheet. Available at www.aad.org/media/background/factsheets/fact_skincancer.html. Accessed April 16, 2008.
8. Rigel, D.R.J. Friedman, A.W. Kopf, 1996. The Incidence of Malignant Melanoma in the United States: Issues as We Approach the 21st Century. *Journal of the American Academy of Dermatology*. 34(5), 839-847. May 1996.
9. Oliveria, S.A., et al. 2006. Sun Exposure and Risk of Melanoma. *Arc Dis Child*. 91:131-138. doi: 10.1136/adc.2005.086918.