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1. INTRODUCTION

The SunWise School Program is a free environmental and health education program that aims to teach children (grades K-8) and their caregivers how to protect themselves from overexposure to the sun. SunWise Partner Schools sponsor classroom, school, and community activities that raise children's awareness of stratospheric ozone depletion, ultraviolet (UV) radiation, and simple sun safety practices that ultimately lead to sustained sun-safe behaviors.

2. BACKGROUND

Although the sun is necessary for life, too much sun exposure can lead to adverse health effects. The sun's UV radiation causes sunburn, contributes to premature aging of the skin and cataracts, and has been linked to skin cancer and immune system suppression.

During the past several decades, the amount of UV radiation reaching the Earth's surface has likely increased due to ozone depletion. (WMO, 1999) The heightened UV levels may cause the incidence and severity of UV-related health effects to rise, particularly given current sun-protection practices. Since the condition of the ozone layer is not expected to improve significantly until the middle of the 21st century, sun behaviors should be modified now to protect future health.

Currently, one in five Americans develop skin cancer during their lifetime. Every hour one person dies from this disease. The incidence of melanoma, the most serious type of skin cancer, is increasing faster than all but one form of cancer. (American Cancer Society, 2001)

Children are of particular concern since most of the average person's lifetime sun exposure occurs before the age of 18. (Stern et al., 1986) Childhood exposure to ultraviolet (UV) light increases risk for skin cancer as an adult, thus early prevention may be key to developing positive

sun protection habits. (American Academy of Pediatrics, 1999) By educating children about UV-related health effects and the steps for sun protection, a healthy future for the next generation can be ensured.

3. THE SUNWISE PROGRAM

Through the use of classroom-based, school-based, and community-based components, SunWise seeks to develop sustained sun-safe behaviors in schoolchildren, grades K-8.

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, students and teachers increase their awareness of simple steps they can take to protect themselves from overexposure to the sun. Students demonstrate the ability to practice health-enhancing behaviors and reduce health risks. Children also acquire scientific knowledge and develop an understanding of the environmental concepts related to sun protection and ozone depletion.

3.1 Program Content

SunWise Partner Schools receive, at no cost, a SunWise Tool Kit with standards based, cross-curricular activities for grades K-8; a UV sensitive frisbee for hands-on experiments and fun; hand-held UV meter (on loan, when requested); policy guidance, and more. The SunWise website has an online interactive database where students report actual UV measurements taken daily with hand-held UV meters, and compare them with UV Index forecast data for their zipcode. The site has mapping, charting and plotting features for visualizing the data they report.

Additional resources for participating schools include new and revised print brochures and booklets on UV radiation, ozone depletion, health effects and sun safety. SunWise publishes a biannual newsletter, *The SunWise Monitor*, to update participating schools and communities about the progress of the Program and important sun protection issues. EPA maintains a Sun Protection Listserv with news and information

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about UV radiation, sun protection and human health.

Registered schools are encouraged 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, with elements that 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.

3.2 Program Evaluation

SunWise 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. The EPA is using interim measurements, including student, parent, teacher and administrator surveys to evaluate program effectiveness.

Evaluation findings from Boston University for the pilot phase of the program show the estimated one-hour of SunWise teaching resulted in marked improvements in children's knowledge, with certain attitudinal changes fostered and intentions to play in the shade promoted. SunWise was awarded the 1999 Excellence in Education Award by the American Academy of Dermatology.

3.3 Current Status and Registration Information

To date, SunWise has registered over 1700 schools in all 50 states. Schools/educators can register for this free program online by visiting: <http://www.epa.gov/sunwise>
Or, they can contact Kristin Kenausis at 202-564-2289 to obtain a hard copy of the registration form.

4. THE FUTURE OF SUNWISE

The Program's objective is to have 17,000 participating K-8 schools by 2005. It also hopes to collaborate with the *National Council on Skin*

Cancer Prevention and engage Broadcast Meteorologists in support of the program. The program will become available for Spanish speaking audiences (Summer 2002) and a training/marketing video is planned. Additional evaluations will be conducted to assess the effectiveness and value of the SunWise School Program.

5. REFERENCES

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