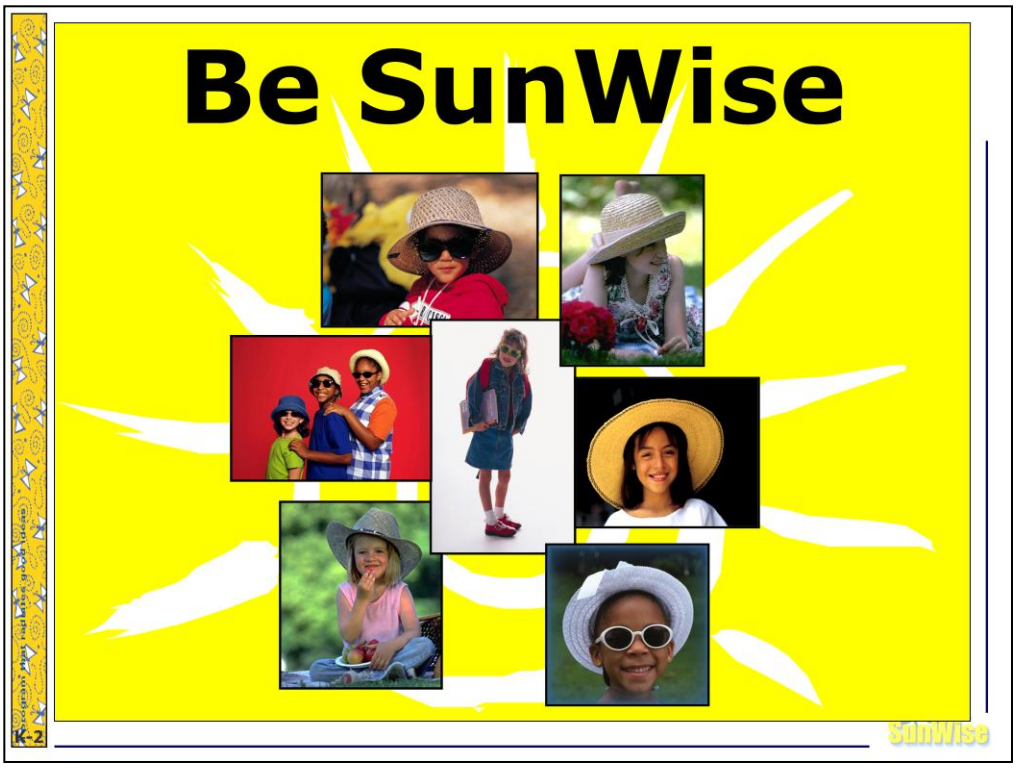
# SunWise

a program that **radiates** good ideas

www.epa.gov/sunwise

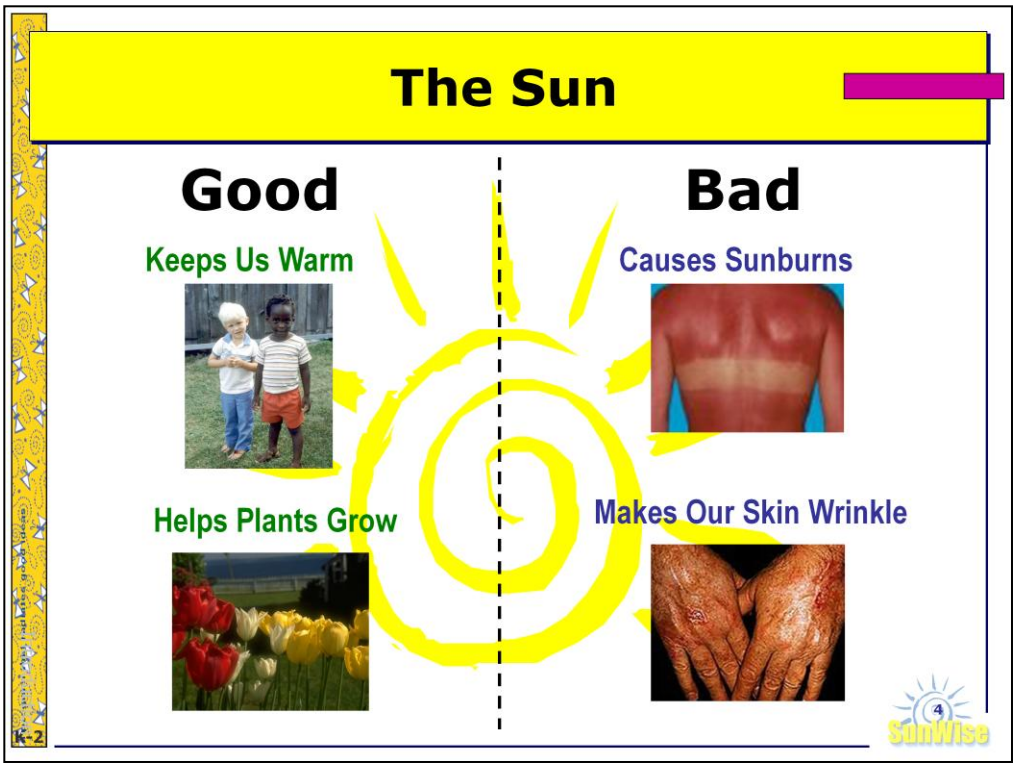
*U.S. Environmental Protection Agency*

K-2




Ask students to look at the pictures and come up with a definition for the word "SunWise." You may chart the responses and keep them posted for later reference. Tell students that they are going to receive more information about SunWise and that you will revisit the definitions later.


Ask the question and give students time to think about an answer. You might have them talk to a neighbor to generate ideas. After sufficient wait time move to the next slide. Ask students to share their ideas about the sun.

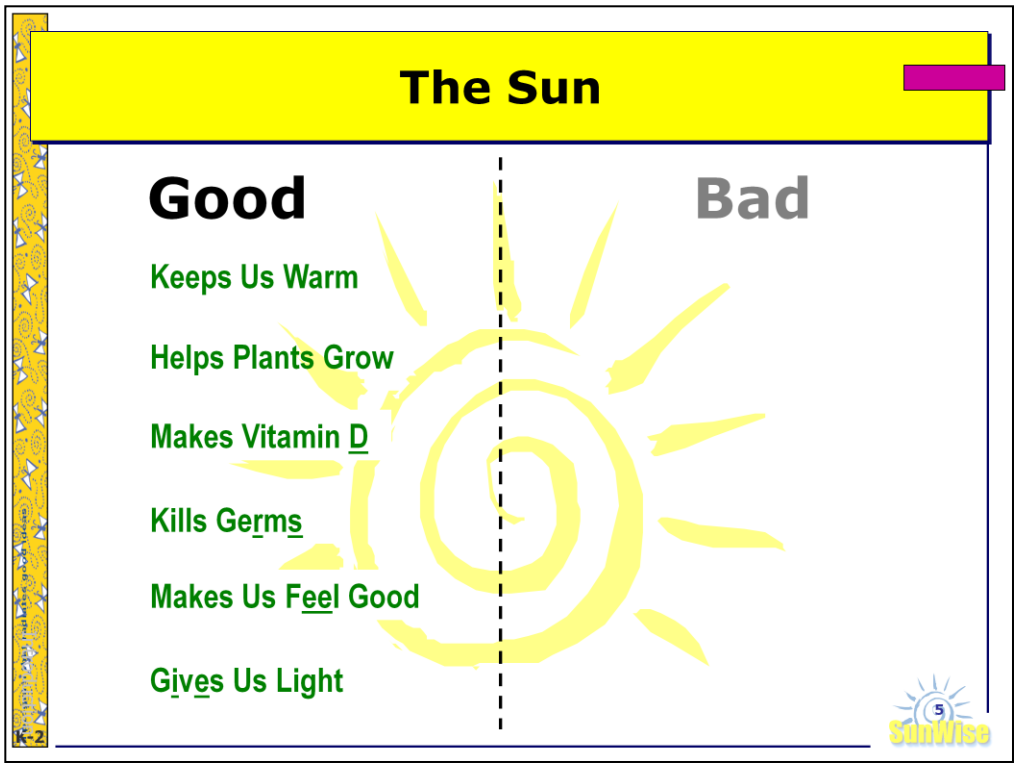


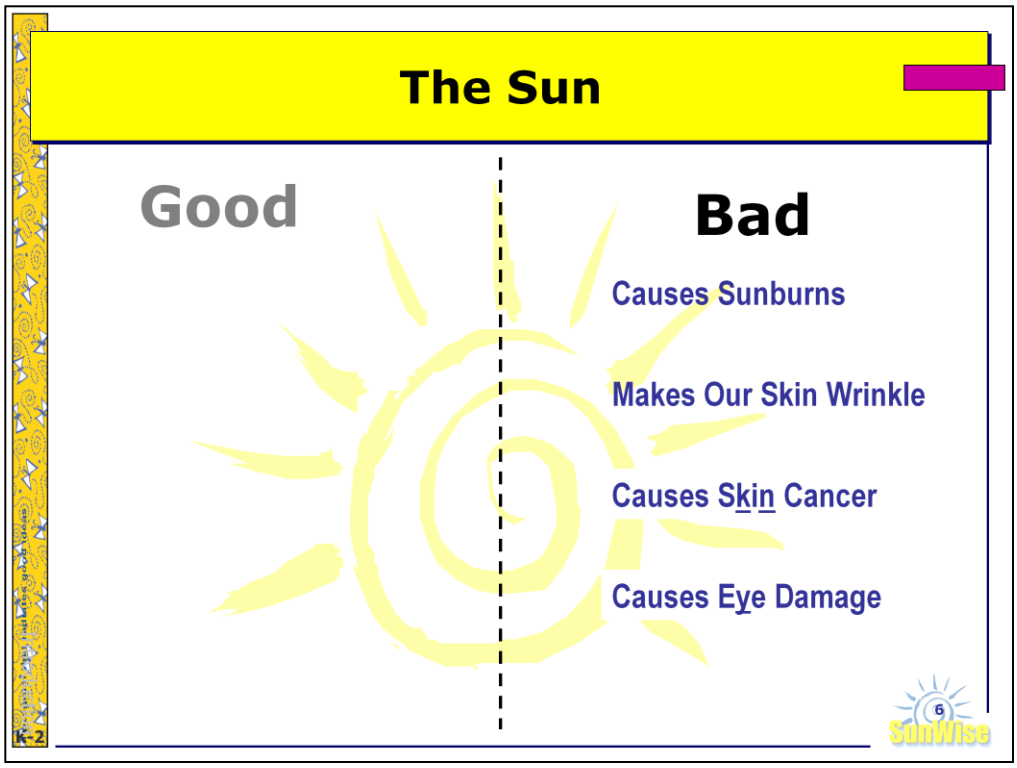

Give students ample time to generate ideas.

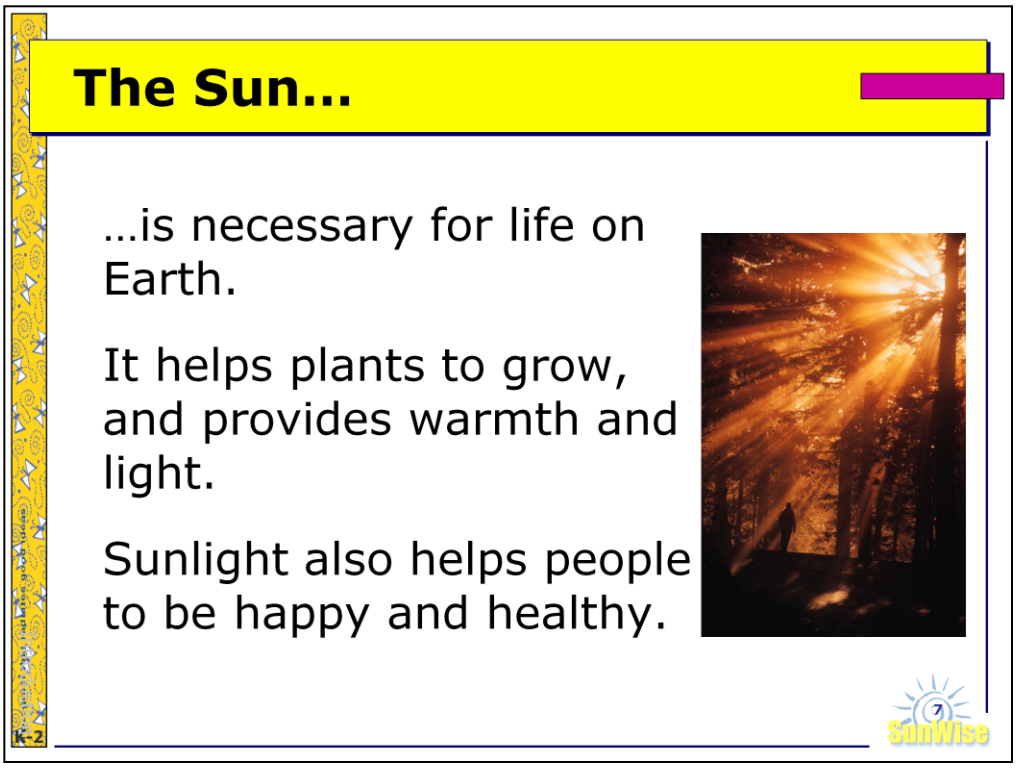
Listen to all student responses and then let the students know that you have pictures of a few things that show what we know about what our sun can do. Continue to mouse click until all four examples are on the screen. Ask students to look at the four pictures that you have selected and to put them into two categories. After students have shared their ideas for categories, mouse click again to show the text "Good" and "Bad" on the slide and ask students why you have selected these categories. Fill in any background information for students to help them understand why sunburns and wrinkles are not good for our skin (for background information go to the SunWise Web site: http://www2.epa.gov/sunwise/health-effects-uv-radiation) .

Use the next two slides to expand on the list in each category. Have students participate by filling in the blanks to finish the words.

Hopefully some of the responses were already generated by the students.

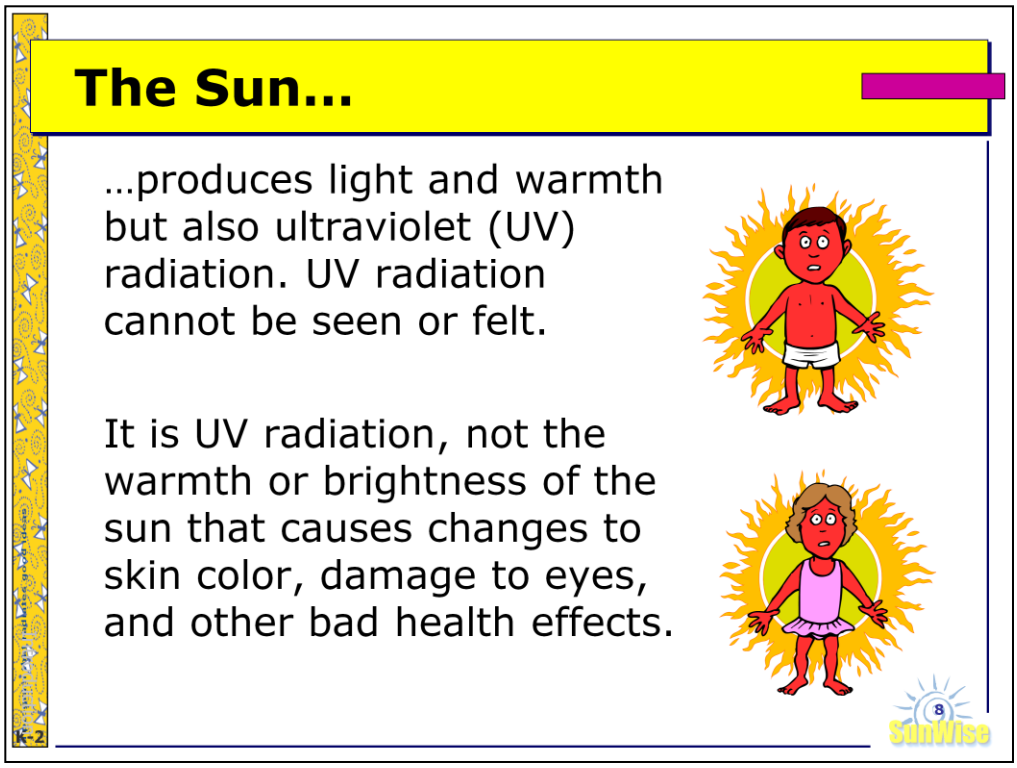

The Sun
Good
Bad
Keeps Us Warm
Helps Plants Grow
Makes Vitamin D
Kills Germs
Makes Us Feel Good
Gives Us Light
K-2
SunWise


The Sun
Good
Bad
Causes Sunburns
Makes Our Skin Wrinkle
Causes Skin Cancer
Causes Eye Damage
K-2
SunWise

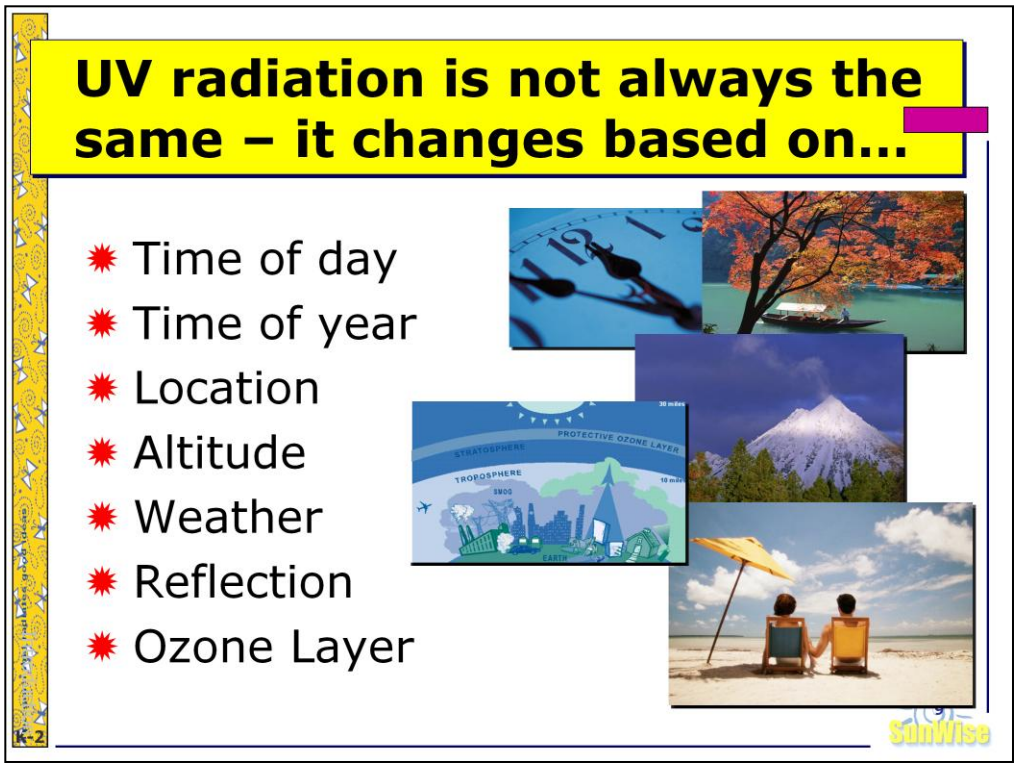



Summarize information about the sun…

For additional information go to the SunWise Web site (www.epa.gov/sunwise) or the SunWise kid pages (www.epa.gov/sunwise/kids.html)




Point out that the sun also produces ultraviolet (UV) radiation that can be potentially harmful to us. Stress (as much as possible for this age group) that it is UV radiation, not the light or warmth that causes the harmful effects.




(General UV information: http://www2.epa.gov/sunwise/uv-index)

Give students example of each variable that fits with their experiences such as:

Time of day: early morning vs. late at night (Note: Remember the shadow rule: Watch Your Shadow. No Shadow, Seek Shade!)

Time of year: summer vs. winter

Location: black top vs. under the shade of a tree

Altitude: in the mountains

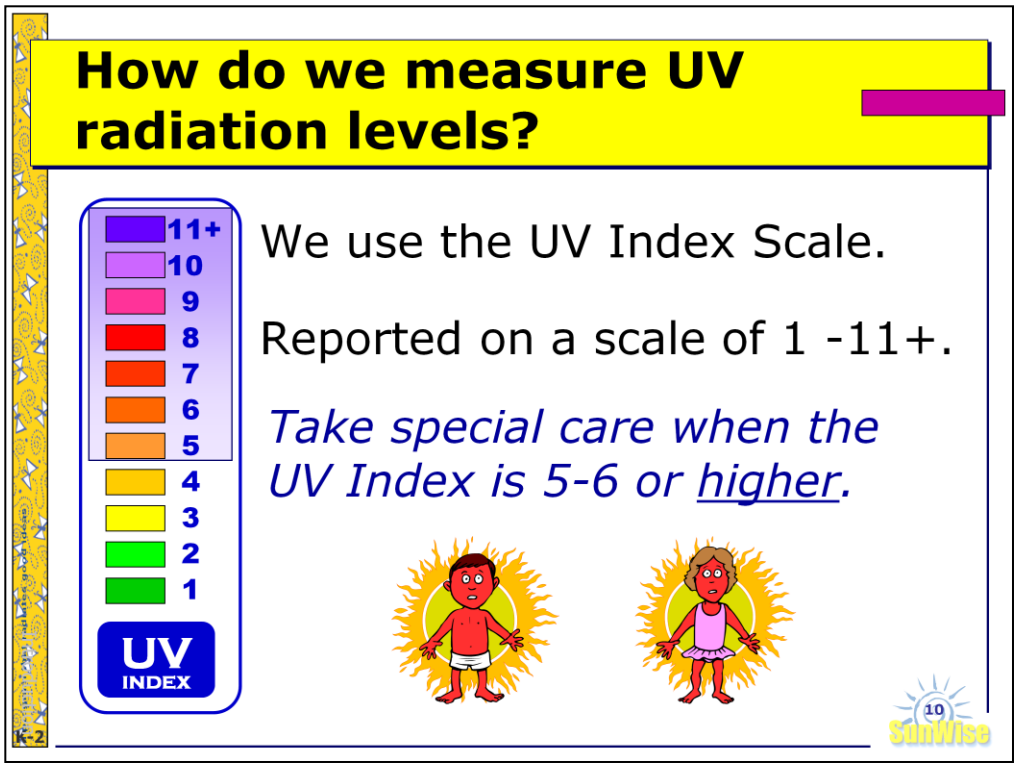
Weather: cloudy vs. clear

Reflections: snow and water

Ozone layer: is thinning and offering less protection against harmful UV rays

(Until recently, chlorofluorocarbons (CFCs) were used widely in industry and elsewhere as refrigerants, insulating foams, and solvents. When CFCs break down in the stratosphere, they release chlorine, which attacks ozone. http://www2.epa.gov/sunwise/ozone-layer-depletion)

Information on the UV Index and why it varies: http://www.cpc.ncep.noaa.gov/products/stratosphere/uv_index/uv_information.shtml




The UV Index is a prediction (based on a mathematical equation available at http://www2.epa.gov/sunwise/calculating-uv-index) of the UV level at noon. It can be used as a tool (much like a thermometer is a tool for temperature) for reminding people how to protect themselves from overexposure to UV radiation. The higher the UV Index level, the greater the possibility of damage to the skin and eyes in less time. Ask students to think back to the pictures of people being SunWise that you used when asking them to form a definition. What were some of the ways that people were taking special care to protect themselves from the UV radiation levels? Students should remember the use of sunglasses, wide-brimmed hats and clothing.


Again ask students to think about the definition of SunWise that they formed at the start of the lesson. Tell them that you will now go over some specific ways to become SunWise.

http://www2.epa.gov/sunwise/action-steps-sun-safety


As you read and review each Action Step with the students ask them to think of the action steps that are part of their routine.

## Sun Safety Action Steps

# Limit Time in the Midday Sun

The sun's rays are strongest between 10 a.m. and 4 p.m.

Limit exposure to the sun during these hours.

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## Sun Safety Action Steps

# Seek Shade

Staying under cover is one of the best ways to protect yourself from the sun.

But remember, shade structures do not offer complete sun protection.

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## Sun Safety Action Steps


# Cover Up

Wearing long sleeves and long pants is a good way to protect your skin from the sun's UV rays.

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## Sun Safety Action Steps

# Use Sunscreen

Use sunscreen of SPF 15+ generously and reapply every 2 hours, or after working, swimming, playing, or exercising outdoors.

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## Sun Safety Action Steps


# Wear a Hat

A hat with a wide brim offers good sun protection for your eyes, ears, face, and the back of your neck.

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## Sun Safety Action Steps


# Wear Sunglasses

Sunglasses that provide 99 to 100 percent UV protection will greatly reduce sun exposure that can lead to eye damage.

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## Sun Safety Action Steps

# Avoid Tanning Parlors

The light source from sunbeds and sunlamps damages the skin and unprotected eyes. It is a good idea to avoid artificial sources of UV light.

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## Sun Safety Action Steps

# Watch for the UV Index

The UV Index provides important information to help you plan your outdoor activities in ways that prevent overexposure to the sun. The UV Index is issued daily across the United States.

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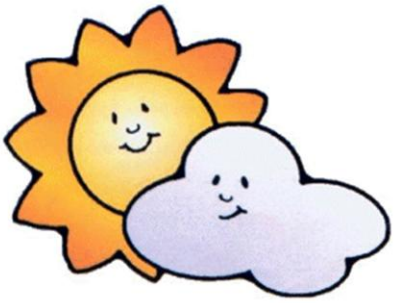
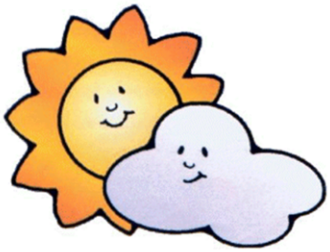
Ask students if they feel that they are SunWise and, if not, what more could they do to become SunWise. Have students brainstorm on how this might happen. Use the next four true/false questions as a formative evaluation tool to check for understanding.

# True or False?



**You can get sunburned on a cloudy day.**

# True or False?



You can get sunburned on a cloudy day.

**TRUE**

Even on a cloudy day, many of the sun's rays can still reach the Earth's surface.

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# True or False?

**You only need to wear sunscreen when you are at the beach.**

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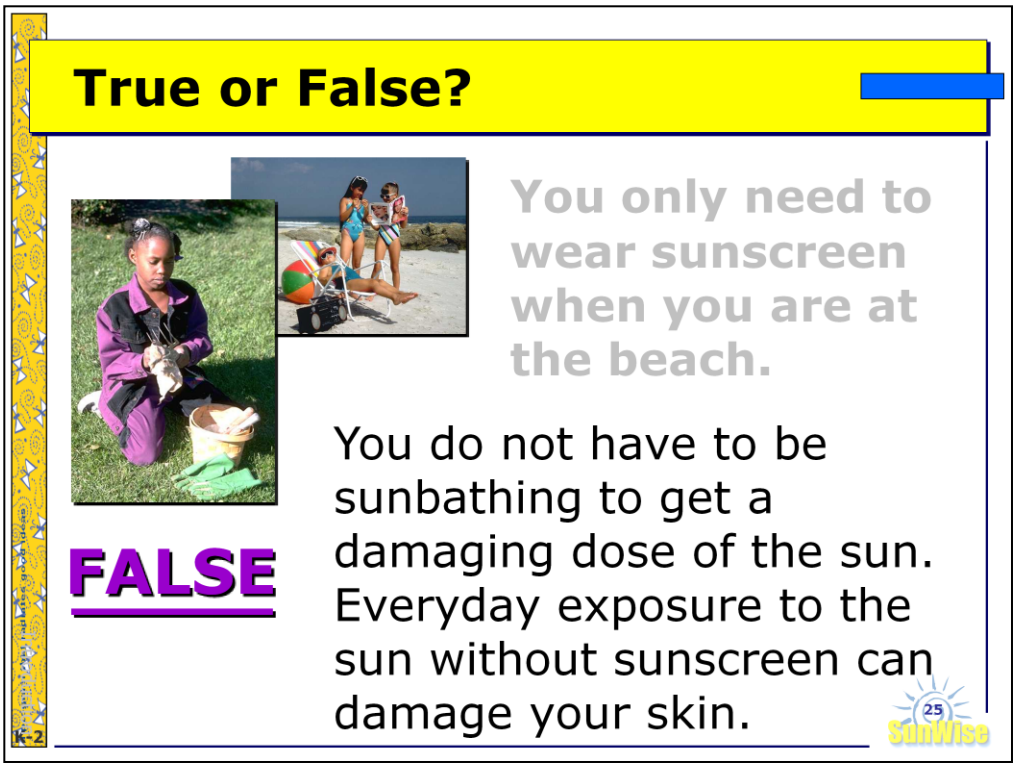
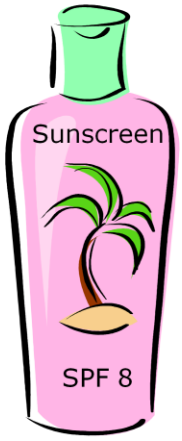
24 SunWise




Check for understanding by asking students what other action steps they could do along with applying sunscreen.

# True or False?




**Sunscreen with an SPF of LESS than 15 is enough to protect my skin.**

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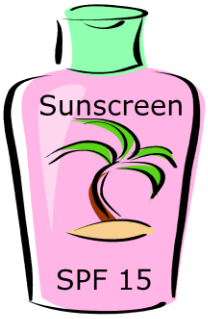
# True or False?




**Sunscreen with an SPF of LESS than 15 is enough to protect my skin.**

**FALSE**

Use sunscreen with **SPF 15 or Higher**. Remember to put on enough sunscreen to protect your skin.

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# True or False?

**My skin doesn't get sunburned, so I don't need to worry about protecting myself from overexposure to the sun.**

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# True or False?

**My skin doesn't get sunburned, so I don't need to worry about protecting myself from overexposure to the sun.**

**FALSE**

Skin cancer and other bad effects from the sun can affect any person, regardless of skin color.

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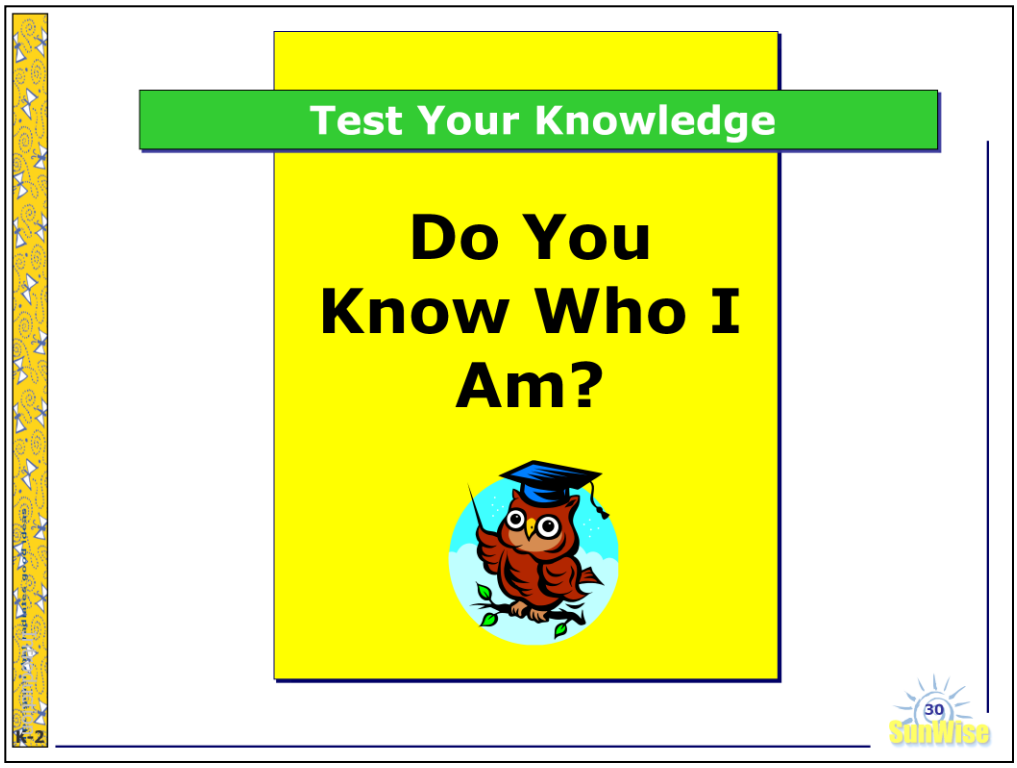


Use the next six slides as a fun extension activity with students.

# SunWise Clue

From morning 'til evening, I avoid the sun's rays. Eucalyptus trees shade me and keep me cool through the days!

**Who Am I?**

Courtesy of Sunwise Stampede – San Diego Zoo.

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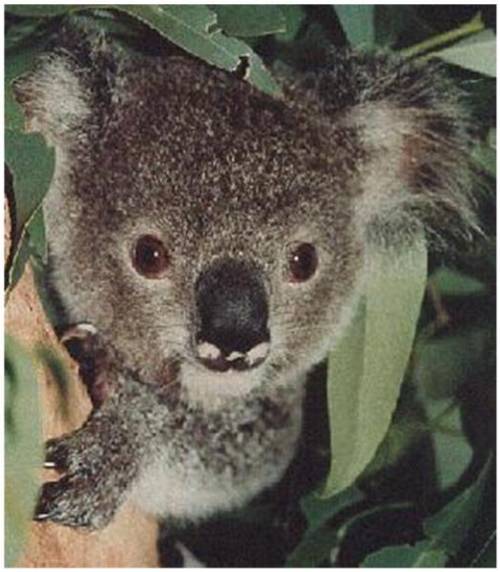
SunWise

# I’m a Koala Bear.



# SunWise Clue

I put dirt and sand on my back to block out the sun, and drink trunks full of water, being thirsty is no fun!

**Who Am I?**

Courtesy of Sunwise Stampede – San Diego Zoo.

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# I'm an Elephant.

# SunWise Clue

In water and mud I love to stay. My body makes an oily pink sunscreen to protect my skin so I can play!

**Who Am I?**

Courtesy of Sunwise Stampede – San Diego Zoo.

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# I’m a Hippopotamus

## SunWise Clue

My black eye ring "sunglasses" protect my eyes from the sun's glare. I'm the coolest "kat" around with a social flare.

**Who Am I?**

Courtesy of Sunwise Stampede – San Diego Zoo.

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SunWise

You might want to use Timon (Pumba's buddy) from The Lion King as a hint. Timon is the hyperactive meerkat with a motor mouth.

# I’m a Meerkat.

# SunWise Clue

I'm low on the ground and I move real slow. My clothing protects me from the sun wherever I go.

**Who Am I?**

Courtesy of Sunwise Stampede – San Diego Zoo.

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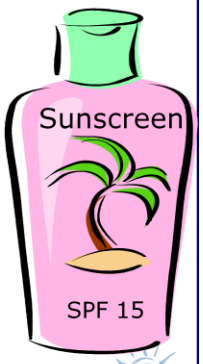
# I'm a Turtle.

## SunWise Riddle

**Knock, Knock,** *Who's there?*

**Anita.** *Anita who?*

**I "nita" another bottle of SPF 15 sunscreen!**

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SunWise

As a follow up activity ask students to construct their own riddles and share with the class.

## Whatever You Do… Be SunWise!


SunWise
a program that radiates good ideas
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