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# TEACHER NOTES

## Introduction

Welcome to the Kidskin educational resource for upper primary school students. This curriculum based resource promotes the SunSmart message and provides teachers with information and a range of classroom and take home activities on skin cancer prevention and sun protection. Many of these materials were developed in Western Australia by Curtin University's Centre for Health Promotion Research and the Department of Public Health at The University of WA, in association with the Cancer Council WA and the Department of Education WA. Due to the overwhelming success of the Kidskin resources in Western Australia they have now been revised by the Cancer Council Australia's National Schools Working Group, for use by teachers and schools throughout the country.

## History of Kidskin

Between 1995 and 1999, more than 1,600 primary school students and 101 teachers from 33 schools in Western Australia took part in Kidskin, a study designed by researchers at the University of WA's Department of Public Health and Curtin University's Centre for Health Promotion Research.

The schools were divided into three groups; a control group, a moderate intervention group and a high intervention group. The control group followed the WA Education Department K10 Health Education Syllabus. The high and moderate groups, however, received a multi-component intervention including a specially designed curriculum – the Kidskin curriculum materials. Students from both the moderate and high intervention groups had take-home activities to complete similar to those in this resource.

After two years of the Kidskin study it was found that children in the intervention groups - especially the 'high' group - were reported to have had less sun exposure. This involved covering the back more often, spending more time in the shade when outdoors and wearing a style of swimsuit that covered the trunk. There was also evidence that children in the intervention groups spent less time outdoors in the middle of the day (Milne E et al. *Australian and New Zealand Journal of Public Health*. 24(5): 481-7 2000: Improved sun protection behaviour in children after two years of the Kidskin intervention).

## Use of Kidskin

The activities in this resource are arranged in five cross-curricular topics. Extension activities have been included for several topics. WA, QLD and ACT specific curriculum tables are located at the back of the book linking activities with the current curriculum in those locations.

A home activity has been included in some topics to actively involve families and to reinforce the sun protection message. Results from the Kidskin study show that students in the high and moderate intervention groups who completed take-home activities showed a much higher level of sun protection awareness than those in the control group. To get the most out of this resource it is recommended that teachers strongly encourage students and families to complete the take home activities. A sample letter to families has been included in this resource. This letter seeks family support in role modelling and participating with their children during the take home activities.

It is also recommended that teachers use this resource throughout the year so that the message can be reinforced at different times and sun protection is kept on the agenda, particularly during peak UV periods.

# BACKGROUND INFORMATION

## Skin cancer in Australia

Australia has one of the highest rates of skin cancer in the world. Every year, over 430,000 people are diagnosed with non-melanoma skin cancer and over 10,000 people with melanoma.<sup>1,2</sup> Annually, over 1,700 Australians lose their lives to skin cancer, the majority of these from melanoma.<sup>3</sup>

Skin cancer is a disease that develops when the skin has been damaged by ultraviolet (UV) radiation from the sun. Children have delicate skin which places them at particular risk of sunburn and skin damage. In fact, sun exposure in the first 10 years of life determines to a substantial degree the lifetime potential for skin cancer, whilst sun exposure in later life determines the extent to which this potential is realised.<sup>4</sup> At least two in three Australians will develop some form of skin cancer before the age of 70.<sup>5</sup>

There are three main types of skin cancer. They are named after the type of cell they develop in and each type has different features. Basal cell carcinoma (BCC) and squamous cell carcinoma (SCC) are known as non-melanoma skin cancers and are the most common types of skin cancer. Melanoma is the least common of the three but the most dangerous form of skin cancer and accounts for about 80% of skin cancer-related deaths.

The good news is that most skin cancers can be prevented. No matter what the skin type or colour, it is important to protect skin from overexposure to the sun's potentially harmful UV radiation.

## UV radiation

Ultraviolet (UV) radiation in sunlight damages our skin. We can see sunlight and feel infrared radiation (heat), but we cannot see or feel UV radiation. It can damage skin on cool, cloudy days and hot, sunny days.

Most UV radiation comes from the sun. It can be scattered by particles in the air and reflected from surfaces such as buildings, concrete, sand, snow and water. It can also pass through light cloud.

The Global Solar UV Index is a rating system that indicates the amount of solar UV radiation that reaches the earth's surface. The higher the index number becomes, the greater the potential for skin damage.

The UV Index has five categories:

- Low 0-2
- Moderate 3-5
- High 6-7
- Very high 8-10
- Extreme 11 and above

## Reference

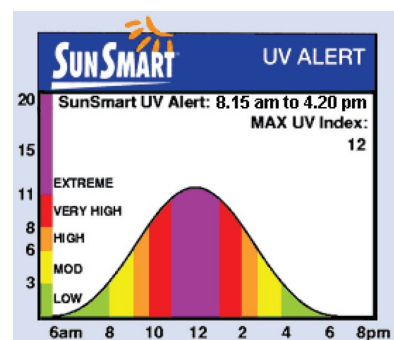
1. Australian Institute of Health and Welfare (AIHW). *Non-melanoma skin cancer: general practice consultations, hospitalisations and mortality*. Canberra: AIHW2008.
2. Australian Institute of Health and Welfare (AIHW) & Australasian Association of Cancer Registries (AACR). *Australian cancer incidence and mortality workbooks (ACIM)*. AIHW, 2008.
3. Australian Bureau of statistics (ABS). *Causes of death 2006*. Canberra: Commonwealth of Australia, March 14 2008.
4. Armstrong BK. How sun exposure causes skin cancer: an epidemiological perspective. In: Hill D, Elwood JM, English DR, eds. *Prevention of Skin Cancer*. Dordrecht, the Netherlands: Kluwer Academic Publishers, 2004 pp 89-116.
5. Staples M, Elwood M, Burton R, Williams J, Marks R, Giles G. Non-melanoma skin cancer in Australia: the 2002 national survey and trends since 1985. *Medical Journal of Australia* 2006; 184 91): 6-10.

Whenever UV Index levels reach 3 (moderate) and above, sun protection is recommended because skin damage can occur and may lead to skin cancer. UV Index levels reach their peak in the middle of the day so extra care should be taken between 10 am and 3 pm to reduce exposure. People with fair skin need to take particular care at all times. Sun protection should always be used in alpine regions, or near highly reflective surfaces like snow, sand or water.

## The SunSmart UV Alert

The SunSmart UV Alert is a quick and easy tool that helps people know when UV Index levels will be high enough to damage the skin and therefore, when sun protection is needed.

UV radiation levels vary throughout the year and throughout the country. The SunSmart UV Alert, issued by the Bureau of Meteorology (BOM), shows the daily forecast UV radiation index levels in over 200 cities across Australia. It is reported in most daily newspapers and is available on the Bureau of Meteorology website. Go to [www.bom.gov.au/weather/uv/](http://www.bom.gov.au/weather/uv/)



**When the UV Index reaches 3 and above, use these 5 steps to be SunSmart:**

Particular care should be taken between 10 am and 3 pm when UV Index levels reach their peak.



### 1. Slip on sun protective clothing

Wear loose fitting, close weave clothing that covers as much skin as possible during outside activities. School uniform or dress codes should include tops with at least elbow length sleeves, collars and knee length or longer style shorts and skirts.



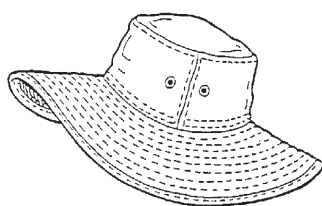
### 2. Slop on SPF30+ sunscreen

Apply SPF 30+ broad-spectrum, water-resistant sunscreen 20 minutes before going outside to ensure maximum effectiveness. Reapply every two hours or more often if involved in physical or water activities. Sunscreen should never be the only method of sun protection.

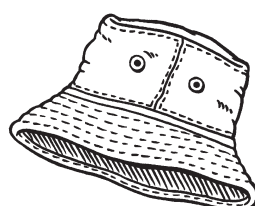


### 3. Slap on a hat

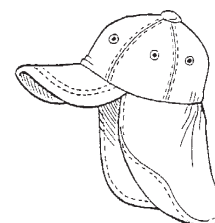
To protect the neck, ears, temples, face and nose, wear a broad-brimmed, legionnaire or bucket hat.



*Broad Brimmed Hat*



*Bucket Hat*



*Legionnaire Hat*

- Broad brimmed hats should have a brim width of at least 6cm for children and 7.5 cm for adults. The brim width for children under 10 years of age should be proportional to the size of the child's head and ensure that their face is well shaded.
- A legionnaire hat should have the front peak and the long, back flap meet at the sides to protect the side of the face, neck and ears.
- Bucket hats should have a deep crown and a brim width of at least 6 cm (5cm for young children).
- Baseball caps and visors offer little protection to the sides of the face, ears and neck and are not recommended for sun protection.



#### 4. Seek shade

Try to use shade whenever possible. UV radiation can reflect from surfaces such as water, sand and concrete. So it is important to wear a hat, appropriate clothing and sunscreen even while in the shade.



#### 5. Slide on some sunglasses

Eyes can be damaged by over exposure to UV radiation. Wear practical, close fitting, wrap around style sunglasses that cover as much of the eye area as possible. Sunglasses should meet Australian Standard 1067 (lens category 2, 3 or 4) and preferably be marked EPF (eye protection factor) 9 or 10. There are also swimming goggles available with EPF 10.

Remember to always use a combination of sun protection strategies for maximum protection – don't ever just rely on one and extra care should be taken during the peak period of the day between 10 am and 3 pm.

## UV and Vitamin D

Exposure to the sun provides most of the body's vitamin D, so we need some sun to keep us healthy. A balance is required to achieve enough sun exposure to maintain adequate vitamin D levels while minimising the risk of skin cancer.

Most people achieve sufficient vitamin D levels from the incidental sun exposure they receive during typical day-to-day outdoor activities, without needing to seek additional sun exposure.

Some people such as those with naturally very dark skin, those who cover their skin for religious or cultural reasons, the elderly, babies of vitamin D deficient mothers and people who are housebound or in institutional care are at increased risk of vitamin D deficiency. Concerns about vitamin D should be discussed with your doctor.

For more information, refer to Cancer Council Australia's 'Risk and Benefits of Sun Exposure' position statement, available at [www.cancer.org.au/](http://www.cancer.org.au/)



## Role models

Children often copy those around them and learn by imitation. If you adopt sun protection behaviours, the children in your care are more likely to do the same. It's important to use a combination of the 5 sun protection measures at school and home.

## Occupational UV radiation exposure - an OH&S hazard.

Occupational UV radiation exposure is a serious occupational health & safety issue. Schools and staff should be aware of their OH&S responsibilities and duties of care. Occupational health and safety legislation, specific to each state and territory, has the clear objective of preventing illness and injury at work and saving lives.

## Family information

The link between children's sun protection education and their family can be significant. Parents' behaviour influences their children's behaviour, and their interest and willingness to participate in sun safety activities may motivate their children. Parents can teach and reinforce sun protection knowledge and behaviours in an everyday context. For example, they can model appropriate behaviours such as hat and sunscreen use when going outside, encourage their children to play in the shade and remind them to wear sun protective clothing. Parents can also act as advocates for sun safety within the school.

It is important that families understand the school's sun protection policy and are aware of how they can assist by supporting the school's uniform / dress code, providing appropriate hats, and possibly sunglasses and sunscreen, and being good role models themselves. Newsletters, assemblies and notice boards are an ideal way of keeping the school community informed.

Increased sun protection against UV radiation exposure will help prevent skin cancer at whatever age it is applied.



## For further information

State and territory Cancer Councils have various resources to help promote sun protection behaviour in your school community. These resources include posters, brochures, information sheets, lesson activities and teaching resources. Information about joining the National SunSmart Schools Program and further developing your school's sun protection policy is also available.

Visit [www.cancer.org.au/sunsmart](http://www.cancer.org.au/sunsmart). Follow the links to your state / territory's Cancer Council to access resources and information. For more advice on sun protection or skin cancer see your doctor or call the Cancer Council Helpline on 13 11 20.

## Useful web links

Australian Radiation Protection and Nuclear Safety Agency (ARPANSA)  
[www.arpansa.gov.au](http://www.arpansa.gov.au)

Bureau of Meteorology  
[www.bom.gov.au](http://www.bom.gov.au)



# PARENT / CARER LETTER

Dear Parent / Carer

Most people enjoy being outdoors in the warmer weather and in most parts of Australia, the warm climate means there are plenty of opportunities to enjoy an outdoor lifestyle.

Your child's class is starting a series of lessons on sun safety, but school can only provide part of the program. Your child may bring home some short activities and we would like to invite you to help with these. This will not only help with motivation and class discussions, but also emphasise the importance of sun protection for everyone.

Most people living in Australia are at risk of developing skin cancer because Australia has high ultraviolet radiation levels throughout most of the year.

You are more likely to develop skin cancer if you:

- Have fair skin that burns easily and does not tan
- Have blue or green eyes and/or fair or red hair
- Have sunspots
- Have suffered sunburn in the past, particularly as a child
- Spent your childhood in Australia
- Have large number of moles or freckles
- Have a family or personal history of skin cancer
- Use a solarium (also called a sunbed or sunlamp)
- Spend a lot of leisure time in the sun
- Work outdoors
- Don't protect your skin in the sun

Please help your child to stay well protected from the sun by encouraging your entire family to use a combination of these five SunSmart steps:



## 1. Slip on sun protective clothing.

Loose fitting, close weave clothing that covers as much skin as possible (eg sleeves, collars and longer shorts and skirts) is the best choice. Avoid singlet tops and thin fabrics that do not block out sunlight.



## 2. Slop on some sunscreen.

Apply SPF 30+ broad-spectrum, water-resistant sunscreen 15 to 20 minutes before going outside. It needs to be reapplied every 2 hours. Remember, sunscreen is only *one* of the 5 ways of protecting your child's skin from the sun's UV radiation.



## 3. Slap on a sun protective hat.

Encourage your child to wear a broad brimmed, legionnaire or bucket style hat whenever they go outside. Baseball caps are not recommended as they do not provide enough protection from the sun.



## 4. Seek shade.

Try to use shade whenever possible. UV radiation can reflect from surfaces such as water, sand and concrete. So it is important to wear a hat, appropriate clothing and sunscreen even while in the shade.



## 5. Slide on some sunglasses.

Where practical, choose close fitting, wrap around sunglasses for your child that cover as much of the eye area as possible. The sunglasses should meet Australian Standard 1067 and preferably be marked EPF (eye protection factor) 9 or 10. Sunglasses that are sold as toys do not meet Australian Standards and are not recommended.

Thank you for your continued help and support

Yours sincerely



# TOPICS / LESSONS



## Topic 1 Let's look at this

### Purpose

- Discuss the sunlight in Australia – it is harsh and bright
- Looking at our skin in detail. What skin type am I?
- Children assess their personal vulnerability when in the sun



## Lesson 1.1

# Noticing the light

### Aim

Students will discuss the natural light in Australia using terms such as strong, harsh, bright.

Students will be able to name at least one reason for the light in Australia being brighter than it is in many other parts of the world.

### Resources

- Internet connection and large screen for class to view.

### Discussion

Some of the first European settlers who arrived in Australia from 1788 onwards, were artists. Many of them painted landscapes of their new surroundings. We still have many of their paintings today. Famous artists of this period included John Glover and Joseph Lycett, however there were many others.

An interesting aspect of the paintings from this early period is the way they depicted light. Most painters of early Australian landscapes gave the light a very soft quality. It often seems to have a sort of misty feel to it that gives the landscapes quite a mild appearance. It's almost as though the artists painted all their pictures on grey overcast days. Of course, we know that the Australian bush is not usually like this.

Art historians generally agree that these early landscape painters had trouble capturing the harsh bright light that exists in Australia. After all, they had learned to paint in England and Europe where the skies are cloudy and the weather is often cooler and wetter than it is in Australia. It took time for them to adjust their techniques.

It is not until 1880 or so, that we find paintings that show the Australian light more correctly. A group of painters who belonged to what has become known as the Heidelberg School, are regarded by many as being the first to capture our harsh light correctly. This style of painting was also influenced by a new technique known as *en plein air*, a French expression which means "in the open air".

Sunlight in Australia is much brighter and stronger than it is in many other places around the world. This means that the damaging UV radiation is also stronger. We have clear skies and long dry summers. We are relatively close to the equator. These things mean that we must take extra care of our skin when we are outside. We need to be like the Heidelberg painters and "notice the light".

### Instructions

View the images of the following paintings on the internet at [www.generationSunSmart.com](http://www.generationSunSmart.com).

#### Pre Heidelberg School

- Kissing Point NSW by Joseph Lycett (1824)
- Australian landscape with cattle, Patterdale by John Glover, circa 1835
- HMS Beagle at Tierra del Fuego by Conrad Martens (1831)
- Sydney Cove by John William Lewin (c 1808)

#### Heidelberg School

- Golden Summer, Eaglemont by Arthur Streeton (1889)
- Down on his luck, by Frederick McCubbin (1889)
- A holiday at Mentone, by Charles Conder (1888)
- Mount St Quentin, by Arthur Streeton (1905)

Display the pre Heidelberg paintings to the students followed by the Heidelberg school paintings and ask them to spot the main differences between the two groups of pictures.

Compare the light in the two groups of paintings and list some adjectives to describe it for each group.

Ask the students to guess the reasons for the light in Australia being brighter than it is in other places. Clearer skies, less pollution, low latitude - close to equator, dry climate means fewer clouds

Ask the students to pick their favourite adjective and draw a calligram for it. See description and example below.

A calligram is a poem, phrase, or word in which the font itself helps to represent the meaning of the text. A calligram of the word "Fire" might be depicted in a font that has the letters burning. The word "Frozen" could be written in letters made of ice.

**The light in Australia is FIERCE**

#### **Extension**

Have the students paint their own landscapes that show bright light in local settings. Hint: use strong colours and high contrast, dark shadows and bright surfaces.

Compare the Heidelberg School paintings with colour photographs of the astronauts on the moon. Are there similarities in the light?

Research the term "En plein air".

#### **Useful websites**

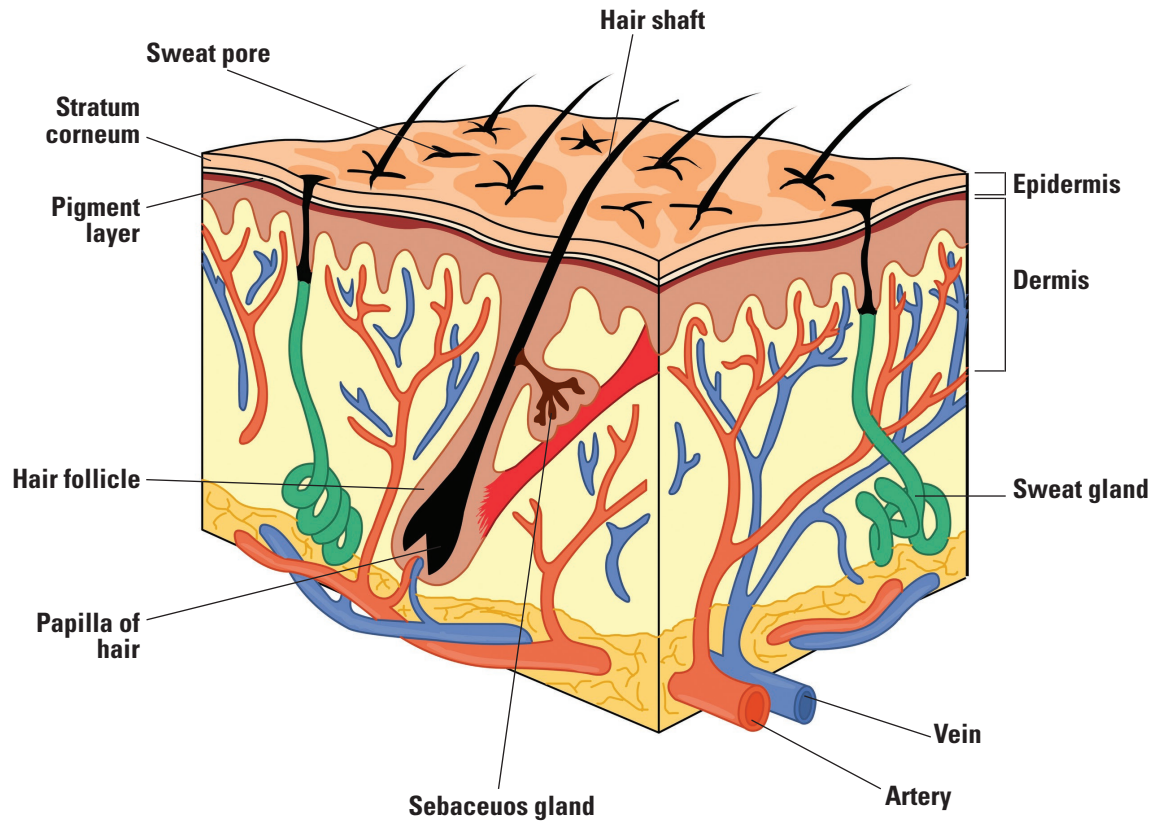
<http://www.artistsfootsteps.com/>

## Lesson 1.2

# The skin

### Aim

Students will learn that the skin is made of many parts that function together.



### Resources

- Labelled diagram of the skin.
- Fact sheet about skin
- Skin labelling Activity Sheet 1.2a

### Instructions

Discuss the questions below.

Look at the diagram of the skin and discuss.

Ask students to complete skin labelling activity in groups.

At the end of the activity, come together to check answers.

### Questions

1. What is skin?
2. Why do we need skin?
3. What are the different parts of skin?
4. What does each part do?
5. How should we look after our skin?

### **Facts about the skin.**

Skin is the largest organ of the body.

Skin provides a tough waterproof barrier that protects our delicate internal organs.

New skin cells are always being made.

When skin is exposed to UV radiation it can make vitamin D.

Vitamin D helps keep the bones, muscles and teeth healthy and strong.

A small amount of UV radiation is good for us.

DNA in our cells tells them what to look like and what job they are supposed to do.

Too much UV can damage the DNA in our skin cells and can lead to skin cancer.

The pigment layer contains special cells called melanocytes. These create melanin which causes our skin to darken when exposed to UV radiation.

The nerve endings in your dermis let you know how things feel when you touch them or get close to them.

Perspiration not only helps cool the body but also helps clean it.

Your dermis is also full of tiny blood vessels. These keep your skin cells healthy by bringing them the oxygen and nutrients they need.

The only skin which doesn't have hair is on our lips, the palms of our hands and the soles of our feet.

Hair helps trap warm air near the skin.

The skin reacts to heat and cold to help keep your core body temperature even.

Keeping the skin well protected and clean is important for skin health.

### **Activities**

Memory test – Show students the labeled picture of the skin cross section. It has 12 items displayed.

Then hide the picture and ask the students to write as many as they can remember on the blank picture on Activity Sheet 1.2a

Go over the "Facts about the skin with the students in a class discussion. Then ask them to fill in the missing words in the paragraph on Activity Sheet 1.2a

### **Extension Activities**

Find out what DNA stands for.

Ask students to develop questions about the skin for other students to answer. Run a "skin quiz" in groups or as a whole class.

### **Activity Sheet 1.2a**

#### **Missing words – Answer key.**

Skin is the largest organ of our body. Skin is waterproof. Our bodies are always producing new skin cells to replace the ones that wear out each day.

When skin is exposed to UV radiation it can make vitamin D. Vitamin D helps keep our bones, muscles and teeth healthy and strong. A small amount of UV radiation is good for us.

The DNA in our skin cells tells each one what to look like and what job it should do.

Too much UV radiation can damage the DNA and this can lead to skin cancer.

Our skin is full of nerves which tell us if something is touching us and if things are hot or cold. Nerves also help us to know what things feel like when we touch them. The dermis is the layer of skin that contains our



nerves. Our dermis is also full of tiny blood vessels. These keep our skin cells healthy by bringing them the oxygen and nutrients they need.

Perspiration not only helps cool the body but also helps clean it. Another name for perspiration is sweat.

The only skin which doesn't have hair is on our lips, the palms of our hands and the soles of our feet. Hair helps trap warm air near the skin.

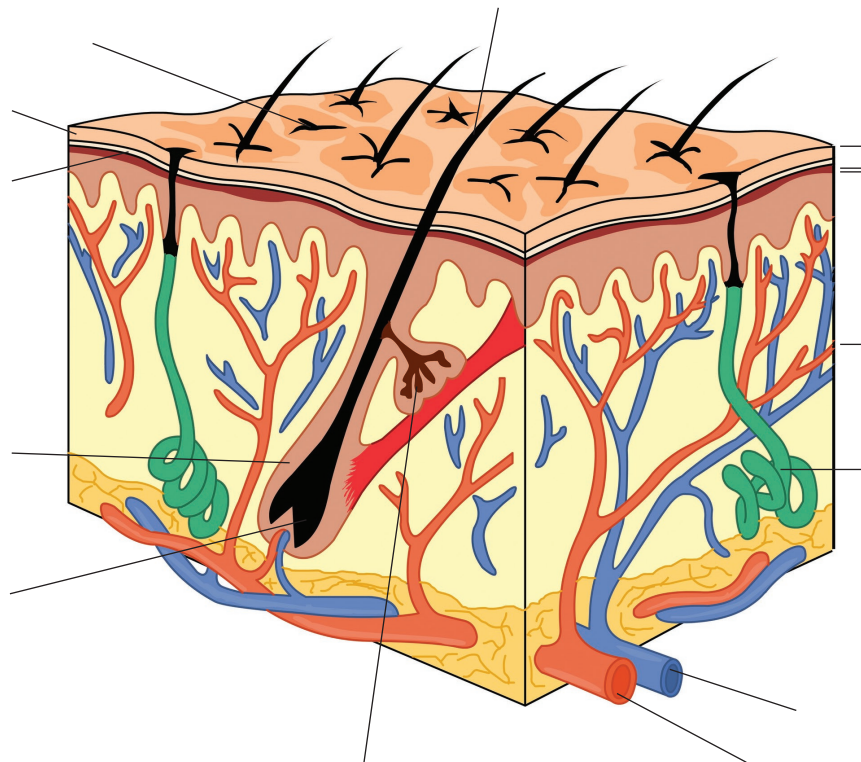
Keeping the skin well protected and clean is important for skin health.

## Activity Sheet 1.2a

# The skin

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

Hair shaft  
 Pigment layer  
 Sweat pore  
 Sweat gland  
 Nerve fibre  
 Vein  
 Artery  
 Epidermis  
 Dermis  
 Sebaceous gland  
 Hair Follicle



Skin is the largest \_\_\_\_\_ of our body. Skin is \_\_\_\_\_ proof. Our bodies are always producing new skin \_\_\_\_\_ to replace the ones that wear out each day.

When skin is exposed to \_\_\_\_\_ it can make vitamin D. Vitamin D helps keep our \_\_\_\_\_, muscles and teeth healthy and strong. A small amount of UV radiation is good for us.

The DNA in our skin \_\_\_\_\_ tells each one what to look like and what job it should do.

Too much \_\_\_\_\_ can damage the DNA and this can lead to skin cancer.

Our skin is full of \_\_\_\_\_ which tell us if something is touching us and if things are hot or cold. \_\_\_\_\_ also help us to know what things feel like when we touch them. The \_\_\_\_\_ is the layer of skin that contains our nerves. Our dermis is also full of tiny blood vessels. These keep our skin cells healthy by bringing them the \_\_\_\_\_ and nutrients they need.

\_\_\_\_\_ not only helps cool the body but also helps clean it. Another name for perspiration is sweat.

The only skin which doesn't have hair is on our lips, the \_\_\_\_\_ of our hands and the \_\_\_\_\_ of our feet. Hair helps trap warm air near the skin.

Keeping the skin well \_\_\_\_\_ and clean is important for skin health.

## Lesson 1.3

# Skin types

### Aim

Students will understand that there are 6 types of skin.

Students will understand that each type of skin behaves differently when exposed to the sun.

### Resources

- Diagram of skin from previous activity.
- Activity Sheet 1.3

### Instructions

Review what students discovered about the skin in the previous lesson.

Look at diagram of the skin – various layers.

Look at all colours of skin – lots of different shades.

In small groups ask children to lay their hands on the table and compare skin tones? Look at the inside of the arm and compare. Who has the fairest skin tone? Who has the darkest skin tone?

Discuss melanin / melanocytes and their role in helping to provide some sun protection.

Discuss the 6 main skin types (see Fitzpatrick scale - Activity Sheet 1.3 also available at [www.generationsunsmart.com](http://www.generationsunsmart.com)) and look at photo images depicting skin types. What are the differences?

The sun's UV radiation can affect all skin types but some people have more natural protection than others. All skin types still need to take care.

Students decide which skin type they have using Activity Sheet 1.3.

Teacher to tally, then students graph this on Activity Sheet 1.3b.

Students decide on a personal sun protection plan.

## Questions to discuss

What are freckles? (Freckles are clusters of concentrated melanin which are most visible on people with a fair complexion).

Do people with fair skin or dark skin tend to have more freckles?

Which skin type are most at risk of skin damage, sunburn and skin cancer? (Type 1 and 2)

Which skin type would have more natural protection from the sun? Why? (Type 5 and 6)

*People who have naturally very dark skin (skin type 5 and 6) have less chance developing of skin cancer than most other skin types. Because of the high level of melanin in the skin, this skin type rarely or never burns. People with very fair skin don't have as much melanin and need to use alternate methods to protect their skin?*

Would fair skin or dark skin be quicker at getting the UV it needs to make vitamin D?

*Fair skin – a few minutes exposure of the face, arms and hands in the morning or afternoon should be enough for people with this skin type. People with skin type 5 or 6 need longer time in the sun.*

The body can only make a certain amount of vitamin D at a time so extra sun exposure doesn't mean a person makes extra vitamin D.

Which part of the skin causes the skin's colour? - Melanocytes.

## Extension Activities

How does your class compare to the others in the school?

Is the most common skin type in your class also the most common at your school?

Calculate the mean, mode and median skin types in the class / school.



## Activity Sheet 1.3

# Skin types

Fitzpatrick Skin Types. ARPANSA. Copyright Commonwealth of Australia reproduced with permission.



Australian Government  
Australian Radiation Protection  
and Nuclear Safety Agency

# Fitzpatrick Skin Type

The most commonly used scheme to classify a person's skin type by their response to sun exposure in terms of the degree of burning and tanning was developed by Thomas B. Fitzpatrick\*, MD, PhD. Examples are given below.

\* Fitzpatrick, T.B. (1988) The validity and practicality of sun reactive skin types I through VI. Arch Dermatol 124; 869-871.

<p><b>Eye colour</b></p> <ol style="list-style-type: none"> <li>0. Light colours</li> <li>1. Blue, gray or green</li> <li>2. Dark</li> <li>3. Brown</li> <li>4. Black</li> </ol>	<p><b>Do you turn brown?</b></p> <ol style="list-style-type: none"> <li>0. Never</li> <li>1. Seldom</li> <li>2. Sometimes</li> <li>3. Often</li> <li>4. Always</li> </ol>	<table border="1" style="width: 100%; border-collapse: collapse; text-align: center;"> <thead> <tr> <th colspan="2" style="background-color: #4CAF50; color: white; padding: 5px;">Score</th> </tr> </thead> <tbody> <tr> <td style="background-color: #4CAF50; color: white; padding: 5px;">0-6</td> <td style="background-color: #4CAF50; color: white; padding: 5px;">Skin Type I</td> </tr> <tr> <td colspan="2" style="padding: 5px;">Always burns, never tans (pale white skin)</td> </tr> <tr> <td style="background-color: #4CAF50; color: white; padding: 5px;">7-13</td> <td style="background-color: #4CAF50; color: white; padding: 5px;">Skin Type II</td> </tr> <tr> <td colspan="2" style="padding: 5px;">Always burns easily, tans minimally (white skin)</td> </tr> <tr> <td style="background-color: #4CAF50; color: white; padding: 5px;">14-20</td> <td style="background-color: #4CAF50; color: white; padding: 5px;">Skin Type III</td> </tr> <tr> <td colspan="2" style="padding: 5px;">Burns moderately, tans uniformly (light brown skin)</td> </tr> <tr> <td style="background-color: #4CAF50; color: white; padding: 5px;">21-27</td> <td style="background-color: #4CAF50; color: white; padding: 5px;">Skin Type IV</td> </tr> <tr> <td colspan="2" style="padding: 5px;">Burns minimally, always tans well (moderate brown skin)</td> </tr> <tr> <td style="background-color: #4CAF50; color: white; padding: 5px;">28-34</td> <td style="background-color: #4CAF50; color: white; padding: 5px;">Skin Type V</td> </tr> <tr> <td colspan="2" style="padding: 5px;">Rarely burns, tans profusely (dark brown skin)</td> </tr> <tr> <td style="background-color: #4CAF50; color: white; padding: 5px;">35+</td> <td style="background-color: #4CAF50; color: white; padding: 5px;">Skin Type VI</td> </tr> <tr> <td colspan="2" style="padding: 5px;">Never burns (deeply pigmented dark brown to black skin)</td> </tr> </tbody> </table>	Score		0-6	Skin Type I	Always burns, never tans (pale white skin)		7-13	Skin Type II	Always burns easily, tans minimally (white skin)		14-20	Skin Type III	Burns moderately, tans uniformly (light brown skin)		21-27	Skin Type IV	Burns minimally, always tans well (moderate brown skin)		28-34	Skin Type V	Rarely burns, tans profusely (dark brown skin)		35+	Skin Type VI	Never burns (deeply pigmented dark brown to black skin)	
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<p><b>Natural hair colour</b></p> <ol style="list-style-type: none"> <li>0. Sandy red</li> <li>1. Blond</li> <li>2. Chestnut or dark blond</li> <li>3. Brown</li> <li>4. Black</li> </ol>	<p><b>How brown do you get?</b></p> <ol style="list-style-type: none"> <li>0. Never</li> <li>1. Light tan</li> <li>2. Medium tan</li> <li>3. Dark tan</li> <li>4. Deep dark</li> </ol>																											
<p><b>Your skin colour (unexposed areas)</b></p> <ol style="list-style-type: none"> <li>0. Reddish</li> <li>1. Pale</li> <li>2. Beige or olive</li> <li>3. Brown</li> <li>4. Dark brown</li> </ol>	<p><b>Is your face sensitive to the sun?</b></p> <ol style="list-style-type: none"> <li>0. Very sensitive</li> <li>1. Sensitive</li> <li>2. Sometimes</li> <li>3. Resistant</li> <li>4. Never have a problem</li> </ol>																											
<p><b>Freckles (unexposed areas)</b></p> <ol style="list-style-type: none"> <li>0. Many</li> <li>1. Several</li> <li>2. Few</li> <li>3. Rare</li> <li>4. None</li> </ol>	<p><b>How often do you tan?</b></p> <ol style="list-style-type: none"> <li>0. Never</li> <li>1. Seldom</li> <li>2. Sometimes</li> <li>3. Often</li> <li>4. Always</li> </ol>																											
<p><b>If you stay in the sun too long?</b></p> <ol style="list-style-type: none"> <li>0. Painful blisters, peeling</li> <li>1. Mild blisters, peeling</li> <li>2. Burn, mild peeling</li> <li>3. Rare</li> <li>4. No burning</li> </ol>	<p><b>When was your last tan?</b></p> <ol style="list-style-type: none"> <li>0. +3 months ago</li> <li>1. 2-3 months ago</li> <li>2. 1-2 months ago</li> <li>3. Weeks ago</li> <li>4. Days</li> </ol>																											

\* The information published here is not intended to take the place of medical advice. Please seek advice from a qualified health care professional.

# Activity Sheet 1.3b

## Skin type graph

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

My skin type is \_\_\_\_\_

My personal sun protection plan is \_\_\_\_\_

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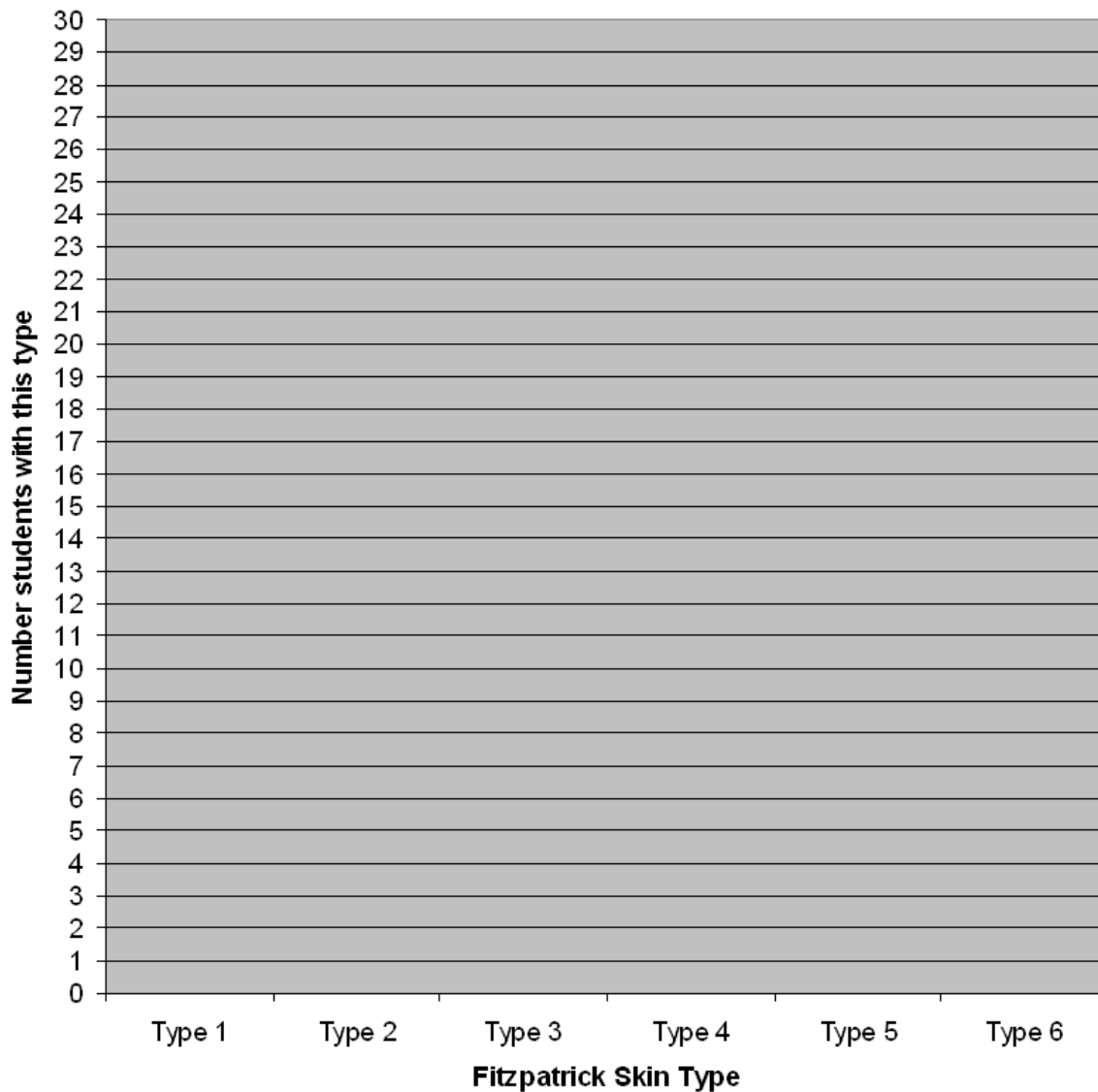


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**Class Skin Types**



This means when we are outside in the sun we need to:



**PROTECT YOURSELF IN FIVE WAYS FROM SKIN CANCER**

## Lesson 1.4

# Sun safety needs assessment

### Aim

Students will understand that not all parts of their body have an equal risk of sunburn.

### Resources

- Butchers paper, thick pens and blue-tac.

### Instructions

1. To introduce the issue of sun safety, place sheets of butcher's paper around the classroom. Discuss different parts of the body that are most at risk of being sunburnt. Write the name of a part of the body that is commonly sunburned on the top of each sheet. For example, one sheet will have 'nose' written on the top, the next 'legs'.
2. Ask students to move around the room and write their name on the sheet of butcher's paper if that part of their body has ever been sunburnt.
3. When all students have had a chance to write their name on the butcher's paper, tally and graph the results to determine which body parts are the most vulnerable. Discuss which body parts seem to be most at risk of sun damage. For example, why does your nose have more chance of getting sunburnt than your stomach? Clothing and exposure are important factors. Ask students to consider what other factors increase their vulnerability to sunburn such as spending time at places where there is no shade, not wearing effective sun protection, spending time outdoors in the middle of the day.
4. Students prioritise actions they can take to better protect these parts of their body.
5. This activity could also be done by students tracing a silhouette of each other's body and marking on the silhouette the parts that are likely to get sunburned. They then add the things they can do to protect these body parts.







## Topic 2

# Understanding solar radiation

### Purpose

- Understand the motion of the Earth and Sun in space
- Experiment with some basic light concepts
- Develop an understanding of UV radiation and its effects on the skin
- Discuss issues associated with UV radiation
- Monitor personal sun exposure



## Lesson 2.1

# SunSmart sundial

### Aim

To highlight the fraction of the day that students need to be SunSmart

### Resources

- Sunny area with a level, flat surface.
- Stick 750 – 1000mm in length. A cricket stump or broom handle size is ideal.
- Large flower pot. Only used to support stick if it cannot be supported any other way.
- Clock or watch with second hand.
- Chalk, paint or markers (eg milk bottle tops) as appropriate.
- Measuring tape, ruler or blackboard ruler.
- Hats, sunscreen for everyone outside.

### Time required

Day 1

10 mins to set up initially.

1 min every hour between 9 am and 4 pm.

Day 2

15 mins on day two to mark out and consider the SunSmart zone.

### Instructions

Day one.

Locate a suitable area with all day sun exposure and a hard, level, flat surface.

If required, fill the flower pot with soil and place it in the centre of your area.

Push the stick (called a gnomon) into the soil in the flower pot and ensure that it is as vertical as possible.

Alternatively, just push your gnomon into the ground.

The gnomon should now be casting a shadow.

Using the clock to monitor the time, come back and mark the end of the gnomon's shadow precisely on the hour, every hour.

Place markers every hour between 9 am and 3 pm.

Day two.

Using an appropriate marker such as the blackboard ruler and chalk, or string lines, have some students draw lines connecting the hour marks and the base of the gnomon. Then, using a different colour of chalk, shade in the area of the sundial that represents the "peak" SunSmart hours (10 am to 3 pm). Discuss the result with the students.

Reflection / Discussion / Activity ideas:

- How much of the school day falls inside the peak SunSmart hours? Students could calculate the area of the whole sundial and compare this to the area of the SunSmart hours to find the percentage of the day they need to be SunSmart. The chalk lines will show a group of 6 or 7 triangles sitting next to each other. To find the area of a triangle, multiply the base by the height, and then divide by 2. Remember that the base and height measurements must be perpendicular to each other. Work out each triangle's area and add them all together.

- Why are the shadows cast by the gnomon each hour different lengths?

*As the earth turns under the sun, the angle of the sun's rays changes. This causes a change in the length of the shadow.*

- If you do this activity in the summer time and then again in the winter time, your sundial hour markers will be in a different place. Why is this?

*Because the Earth is tilted on its axis at 23.5 degrees, the sun appears higher in the sky in summer time than it does in winter. This changes the sun's angle to the gnomon and causes the shadows to change.*

- Why do we need to be SunSmart in some hours and not in others?

*Between 10 am and 3 pm, the sun is highest in the sky and is shining almost straight down. Therefore the sunlight (including the UV radiation) passes through less atmosphere and is more intense because of this. Remember though you can still receive skin damage outside of these times if the UV Index is 3 or higher.*

- We need to take extra care to be SunSmart in the middle of the day, even when it does not feel hot. Why is this?

*The ultraviolet radiation that causes sun burn does not carry heat energy. Therefore, we cannot see or feel UV radiation. Because of this our skin can be damaged and burn without ever feeling hot.*

- Visit the sundial several times on day two and use it to estimate the time.

#### **Extension activities**

The school could work with the local council to construct a permanent SunSmart sundial in the local community.

The students could prepare a powerpoint presentation about their SunSmart sundial and deliver it to other classes, community groups such as senior citizens or other schools.

Students could conduct this activity at home with parents and grandparents.

Students could visit the Cancer Council website [www.generationsunsmart.com](http://www.generationsunsmart.com) with their parents and complete the student activities together.



## Lesson 2.2

# What are “polarized” sunglasses?

### Aim

Students will investigate the wave concept of light.

Students will experiment with light filters and examine ways of changing light.

### Resources

- Polarized sunglasses.
- A variety of transparent plastic objects. CD cases and clear plastic rulers are ideal.
- Flat computer screen (LCD).
- Clear sticky tape (not cloudy magic tape).

### About this lesson

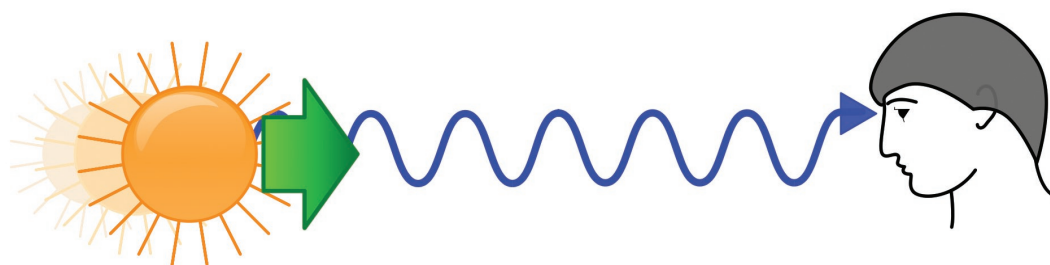
Some sunglasses are described as having polarized lenses. What does this mean and are they better than ordinary sunglasses? Non-polarized sunglasses block light. Polarized sunglasses are also designed to block light, but they block glare as well. How?

Children work in groups of three or four for this activity. It is ideal to have two pairs of polarized sunglasses for every group.

### Background information

Light sometimes behaves as a wave and sometimes as particles. In this lesson we will think of it as a wave.

When light travels as a wave, it looks like this.



Notice that as this wave travels from left to right, its wave pattern is up and down (vertical). Scientists call this wave pattern the direction of vibration. Now, in normal light, not all the light rays vibrate vertically. Some vibrate horizontally. In fact, light rays can vibrate on any angle as they travel.

If you are having trouble understanding this, it might help to imagine a light ray coming straight at you. A light wave that is vibrating vertically will be like a car travelling on a straight but hilly road. It will move vertically up and down over the hills and valleys as it moves towards you.

A light wave that is travelling towards you in a horizontal vibration would be like a snake, slithering towards you by swishing its body left and right as it moves along.

### What to do...

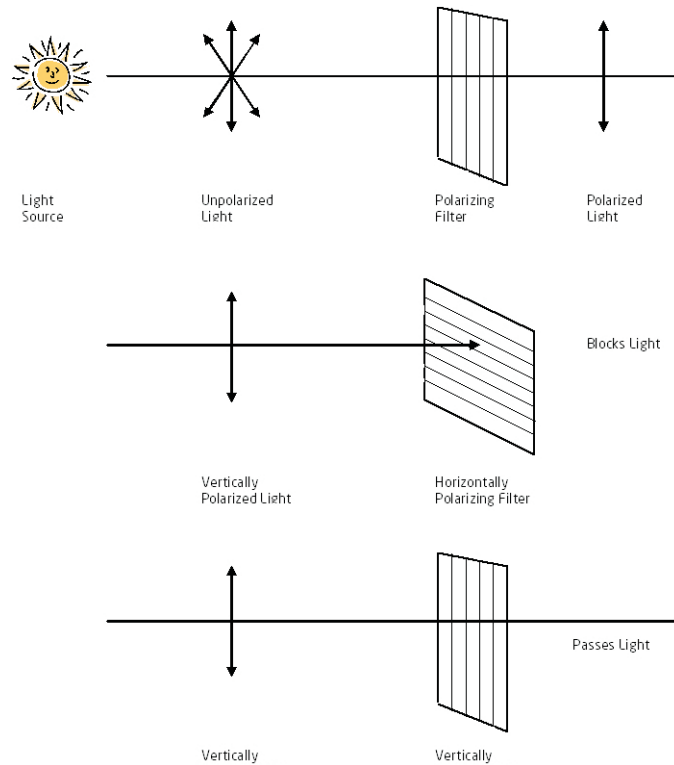
1. Ask students to put on a pair of sunglasses and then look through a second pair of sunglasses. They will be able to see through both sunglasses. Then ask the students to tilt their head to the right. They will find that the lenses of the other sunglasses go completely black. Ask them to experiment with different angles of head tilt. What happens?
2. Next, ask the students to sit in front of the computer screen wearing their sunglasses. Have them hold one of the plastic objects up in front of the screen and look at it. They should notice that the plastic is now filled with a rainbow of colours. Ask them to rotate the object and describe what they see. This works best when the screen is white, eg use a blank Word document on the screen.
3. Finally, give the children a strip of sticky tape about 30 cm long. Ask them to hold this in front of the screen while they wear the sunglasses. Have them hold the tape still and tilt their heads. Then ask them to keep their heads still and rotate the tape. What do they see?

## What is going on?

Although you can't see it, the lenses in the sunglasses are made up of many closely spaced bars. These bars block out all the light rays, except the ones that are vibrating in the same plane as the bars. Scientists say the lenses in the sunglasses are acting as "polarizing filters". That means that the light passing through the sunglasses is all vibrating in the same direction or plane. You could think of the lenses as gates. Only the light that lines up with the gaps in the bars can squeeze through.

Only the light rays vibrating vertically can pass through the vertical gaps in the gate (filter).

When there are two gates (filters) that are not aligned, all light is blocked. The polarized light coming through the first filter is blocked by the second filter because it is set in the horizontal direction which stops vertically polarized light.



This explains why the lenses of the sunglasses go dark as the children look through two pairs and tilt their heads.

The light that comes out of the computer monitor (LCD) is polarized. When you hold a clear plastic object in front of it and look at it with sunglasses on, you see a pattern of rainbow colours in the plastic. The colours are caused by the polarizing filters blocking some frequencies of light and letting others pass to your eyes.

The sticky tape has the amazing ability to "refract" polarized light 90 degrees. It is not a polarizing filter itself, it just twists the light that passes through it. That explains why the light coming through the sticky tape behaves in reverse to the light from the rest of the screen.

### That's all great but what is glare and how do polarized lenses stop it?

Normal light rays vibrate in all directions, but once light has been reflected by a surface this can change. In reflected light, many of the light rays vibrate in the same plane as the reflecting surface. This concentration of light rays in one plane is often called glare.

Much of the glare people are exposed to comes from horizontal surfaces (for example, a lake, snow or a highway). If you wear sunglasses with polarized lenses set to the vertical plane or to 45 degrees, most of the horizontally polarized light (glare) is blocked for you.

### Testing Sunglasses for polarization.

How can you tell if a pair of sunglasses is polarized or not? You know that they are polarized when you buy them, because there is a sticker on them labeling them as such. The only other way to know is to put one lens of a pair of sunglasses over another and rotate them. If they darken and then lighten, the lenses are both polarized. If there is no change in the lenses, one pair is definitely not polarized; the other pair may or may not be.

### **Extension Activities**

The word *polarize*, means to break into opposing factions. For example,

- The voters at the election were polarized by their party allegiances.
- The decision to build the new highway polarized the community.

How are polarized sunglasses like the fans at a football game or the people in that community? (*Polarized sunglasses filter light waves to produce waves that are all vibrating in the same plane -- vertically or horizontally.*)

What is the difference between 'light', 'glare' and 'UV radiation'?

Compare polarized light with laser light.

## Lesson 2.3

# SunSmart sausages

### Aim

To investigate the effectiveness of different types of sun protection.

### Resources

- 6 thick sausages
- Zinc cream
- Sunscreen SPF 30+
- T-shirt fabric
- Olive oil
- Cardboard, glue, pop sticks, general craft supplies
- String or masking tape
- Hats and sunscreen for everyone outside

### Instructions

Try this experiment on a warm, sunny day between 10 am and 3 pm (remind students to be SunSmart when they are outside).

1. Place the string or masking tape across the classroom as a continuum. Label one end of the continuum 'not serious' and the other end 'very serious'. Ask students to position themselves along the continuum to show how serious they think sunburn is. Write the students name on the tape at that position.
2. Assemble sausages (either as a class or one per group) and apply an agent from the list below. Students can design and produce a shade structure for sausages using the craft supplies outlined.

- Sausage 1:    apply zinc  
Sausage 2:    apply olive oil  
Sausage 3:    apply SPF 30+ sunscreen  
Sausage 4:    cover with shade structure  
Sausage 5:    apply t-shirt fabric  
Sausage 6:    nothing applied  
Sausage 7:    control – not in the sun



3. Place the sausages in full sun for one hour. Remove the sausages and have students compare all sausages to the control sausage (Sausage 7). Note any changes that have occurred on Activity Sheet 2.3a. Have students write an experiment report and draw their observations using the report format below. Encourage them to make links between the sausage skin and their own skin and the effects of different coverings.

### **EXPERIMENT REPORT**

*Aim: What question are you trying to answer? Why are you doing this?*

*Equipment: List materials used.*

*Method: Describe what you did.*

*Results: Describe what happened.*

*Hypothesis: Why do you think this result occurred?*

*Conclusion: What does this result mean for you and for other people?*

Draw a labeled diagram of your investigation.

4. Discuss the possible short and long term effects that exposure to UV radiation may have (eg. freckles, tan, sunburn, peeling, eye damage, skin cancer).

Have students recall a time when they were sunburnt.

- How did it happen?
  - How did their skin react?
  - How did their skin feel?
  - Did they peel?
  - Discuss why it is important to be SunSmart?
  - Ask students to identify as many SunSmart behaviours as possible.
5. Ask students to stand along the continuum again to show how serious they think sunburn is. Have any students changed their position? Invite them to tell the class why they moved. Students can discuss what they can do to reduce their exposure to UV radiation when at school or playing different sports or on the weekend.



## Activity Sheet 2.3a

# SunSmart sausages

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

SUNSMART SAUSAGES							
	Zinc Cream	Olive Oil	SPF 30+	Shade	Tee Shirt	No protection	Not in sun (Control)
Sausage 1							
Sausage 2							
Sausage 3							
Sausage 4							
Sausage 5							
Sausage 6							
Sausage 7							

Marking Key: NC = No change compared to control sausage  
 VS = Very Small change  
 M = Moderate change  
 L = Large change

## Lesson 2.4

# Ultraviolet radiation

### Aim

Students will learn 3 facts about ultraviolet radiation.

Students will present information to the class.

### Resources

- Access to computers
- Activity Sheet 2.4a - Research

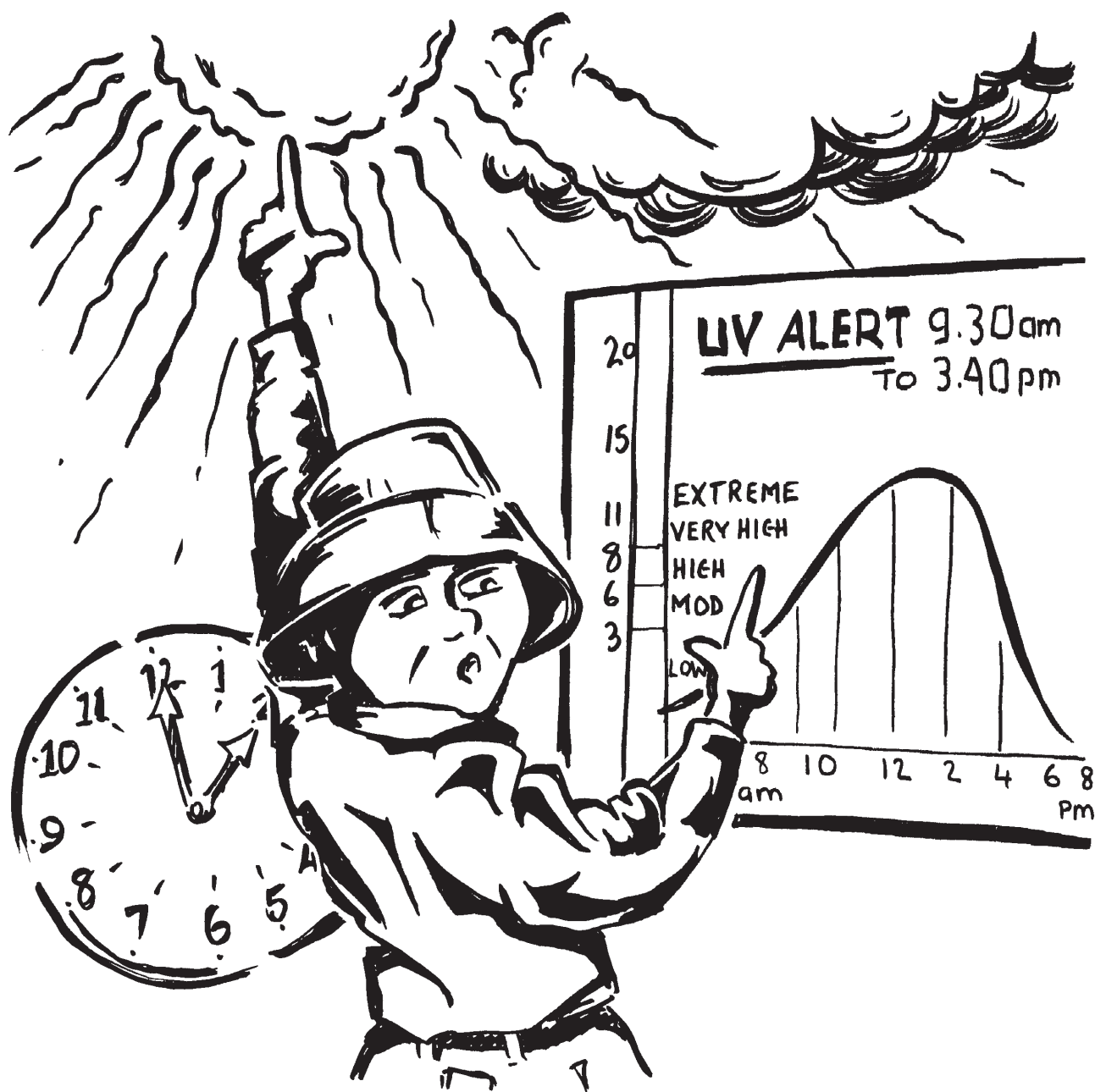
### Instructions

Have students review what UV radiation is.

In groups of two, students log onto a computer and answer the questions listed on Activity Sheet 2.4a.

Once all students have answered the questions, have a member from each group answer one of the questions for the class. Then as a class, discuss the answer to ensure all students have the correct answer.

You may like to invite a meteorologist to visit the class and explain what a meteorologist does and how the ozone layer affects UV radiation.



## Activity Sheet 2.4a

# Research activity

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

### These web sites may help you in your research:

[www.arpana.gov.au](http://www.arpana.gov.au)

[www.epa.gov/sunwise](http://www.epa.gov/sunwise)

[www.bom.gov.au/](http://www.bom.gov.au/)

[www.nasa.gov/audience/forstudents/5-8/index.html](http://www.nasa.gov/audience/forstudents/5-8/index.html)

In pairs, answer the following questions:

- Between what times of the day is UV radiation most intense? \_\_\_\_\_
- During what times of the year is the average UV radiation level above 3 in your state? \_\_\_\_\_
- Can you find the SunSmart UV Alert for your capital city or nearest town? What times do you need to use sun protection today? \_\_\_\_\_
- What can we do to reduce our exposure to UV radiation but still spend time outdoors? \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_
- What is the UPF rating scale?  
\_\_\_\_\_  
\_\_\_\_\_
- What is the SPF rating scale?  
\_\_\_\_\_  
\_\_\_\_\_
- Some products such as umbrellas, shirts and shade cloth have UPF ratings. Sunglasses have EPF ratings. How are these ratings useful? \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_
- How is UV radiation different to other types of radiation? \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_
- How is UV radiation similar to other types of radiation? \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_
- How many types of UV radiation are there? \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

- Which type of UV radiation reaches the earth's surface?

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- Why doesn't UVC reach us?

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- In what ways does the ozone layer protect us from UV radiation?

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- In what ways can we protect the ozone layer?

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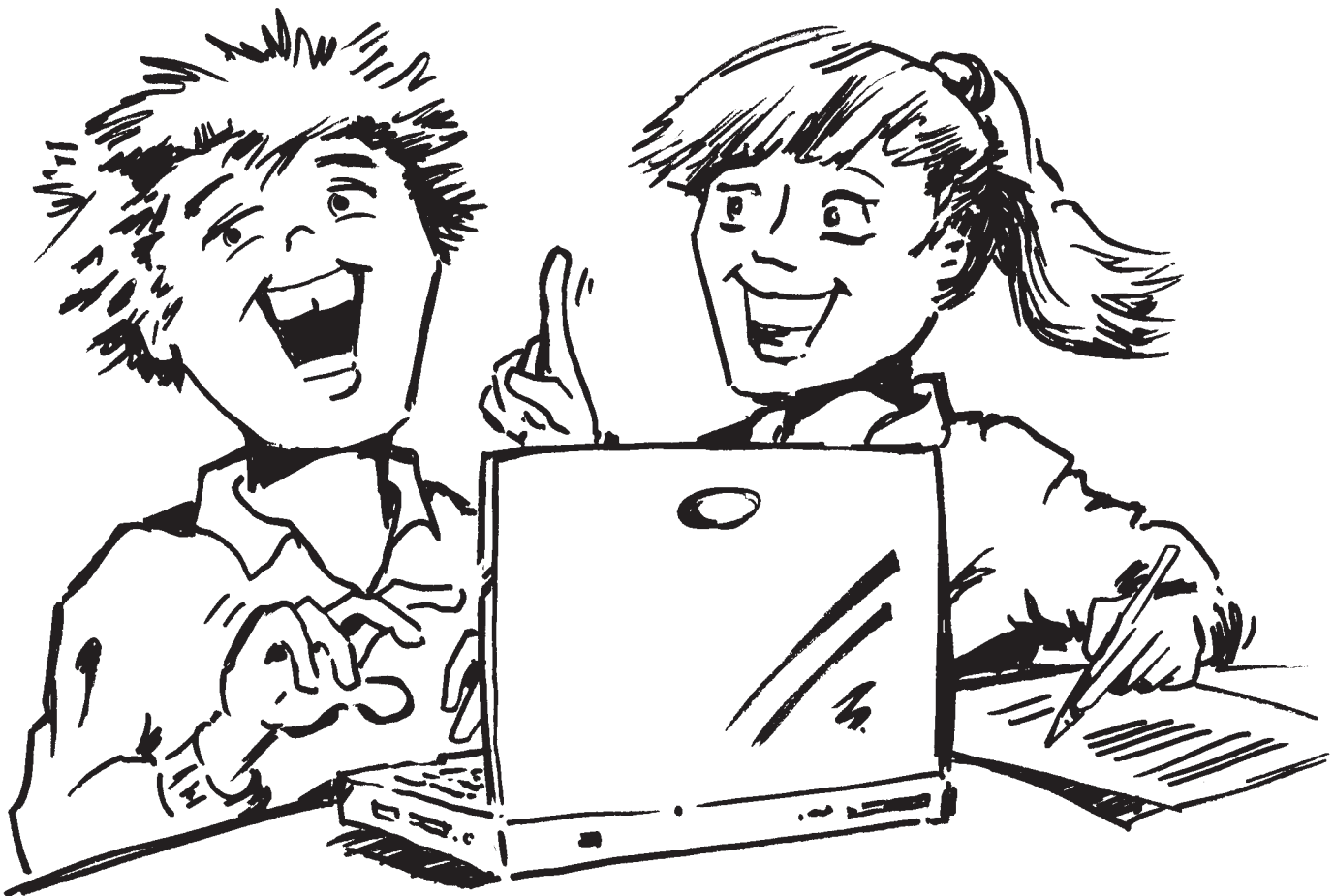
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- Why is it so important to take action to help maintain the ozone layer?

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## Lesson 2.5

# SunSmart UV Alert advertising campaign

### Aim

Students will investigate the role of the media in communicating a message.

Students will consider the importance of motivation and persuasion in advertising.

### Review:

1. What is the SunSmart UV Alert?
2. What is it used for?
3. Where can you find it?
4. How can it help people?

Ask the class to break into groups. Most groups work at advertising agencies, but one group works for the Cancer Council on the SunSmart program.

The SunSmart team needs to prepare a design brief presentation for the advertising teams.

This presentation should explain:

- What message you are trying to share
- Why this is an important message for a school community
- What you would like students and their families to know about the SunSmart UV Alert
- What you would like students and their families to do when they see the SunSmart UV Alert

The advertising agency workers will need to take notes during this presentation so they can be sure they know exactly what their client wants.

It is now up to the advertising agency teams to try and develop an appropriate strategy or campaign that will be suitable for their clients.

Things to consider:

- Who is the target audience?
- What are the key messages?
- What is the best way to communicate with the target audience?
- How can you make sure they will know about the SunSmart UV Alert?
- How can you make sure they will understand the SunSmart UV Alert?
- How can you motivate them to use the SunSmart UV Alert?
- How can you persuade them to be SunSmart when they need to be?

During the campaign development, the advertising agency teams can consult with the SunSmart team for feedback and to make sure they are on the right track. The SunSmart team can also help with the campaign process.

The advertising agencies then present their campaign strategy to their client.

Try to develop a strategy you can really use at your school. You might like to send examples of advertisements or posters or ideas to your the Cancer Council.

### Resources

- Examples of the SunSmart UV Alert from the newspaper or print out from the BOM website.
- Activity Sheet 2.1a – SunSmart UV Alert
- Access to the Bureau of Meteorology website [www.bom.gov.au/weather/uv](http://www.bom.gov.au/weather/uv).
- Atlas of Australia
- SunSmart UV Alert poster. Copies are available from your state/territory Cancer Council.

## Lesson 2.6

# Reducing sun harm

### Aim

Students monitor their own exposure to the sun.

### Resources

- Activity Sheet 2.6a - SunSmart Diary

### Instructions

UV radiation can't be seen or felt and isn't related to air temperature, therefore when discussing sun protection, use terms such as 'middle of the day', 'around lunchtime', or 'when your shadow is shorter than your body' rather than the 'hottest time of the day'.

The hottest time of the day is usually from 2 pm to 3 pm whereas the UV radiation is strongest between 10 am and 3 pm.

1. Begin by discussing some facts about the harmful short and long term effects of sun exposure. This could include some of the following information taken from the skin cancer background information from the front of this book.
  - Australia and New Zealand have the highest rates of skin cancer in the world.
  - Overexposure to UV radiation can lead to skin cancer, premature skin ageing, diseases of the eye and a less efficient immune system.
  - Children are most at risk because their skin is thinner and more easily damaged.
  - Sun exposure, especially sunburn, during childhood appears to increase the risk of melanoma.
  - Receiving one or more blistering sunburns before the age of 18 may double a person's risk for developing melanoma later in life.
2. Students monitor the time they spend outdoors by completing a diary for a week (or at least several days). A chart to record their findings can be found in Activity Sheet 2.6 or students can design their own diary.
3. Students review their personal diary by answering the following questions.
  - Which day and at what time do you spend the most time outdoors?
  - Where do you spend most of your time when you are outside?
  - How long do you spend outside each day being SunSmart?
  - How long do you spend outside each day NOT being SunSmart?
  - How much time did you spend in total outside during the peak UV radiation times?
  - What sun protection behaviour did you use most frequently?
  - What sun protection behaviour could you use more often?
4. Students should decide which of their sun protection behaviours they could improve and set some short-term goals to achieve this.
5. Students could also compile everyone's findings and graph the results and make some recommendations in accordance with what they find out about their class' sun safety behaviour.



## Activity Sheet 2.6a

# SunSmart Diary

Name \_\_\_\_\_

	Time of day	Length of stay	Place	Activity	UV radiation protection used	UV radiation protection I could have used
Examples	7 am - 10 am	45 min	Beach	Surf carnival	Sunscreen & rashie	Beach umbrella
	10 am - 3 pm	3 hrs	Skate park	Skateboarding	Sunscreen & sunsmart clothes	Gone a bit later in day
	3 pm - 6 pm	2 ½ hrs	Cinema	Watch film	None – Inside	None - inside
Monday	7 am - 10 am					
	10 am - 3 pm					
	3 pm - 6 pm					
Tuesday	7 am - 10 am					
	10 am - 3 pm					
	3 pm - 6 pm					
Wednesday	7 am - 10 am					
	10 am - 3 pm					
	3 pm - 6 pm					
Thursday	7 am - 10 am					
	10 am - 3 pm					
	3 pm - 6 pm					
Friday	7 am - 10 am					
	10 am - 3 pm					
	3 pm - 6 pm					
Saturday	7 am - 10 am					
	10 am - 3 pm					
	3 pm - 6 pm					
Sunday	7 am - 10 am					
	10 am - 3 pm					
	3 pm - 6 pm					

## Lesson 2.7

# Sun burn excuses

### Aim

Students will consider the reasons sun protection can be overlooked. Students will suggest ways to ensure sun protection is used when required.

### Resources

- Activity Sheet 2.7a Sunburn excuses

### Instructions

1. Brainstorm on the board the different excuses people typically provide when they get sunburnt.
2. Students select four of the excuses from the list that they believe are the most common excuses they or other people give for getting sunburnt.
3. Using Activity Sheet 2.7a 'Sunburn excuses' decide what strategies (to counter each excuse) individuals can take to reduce their likelihood of being sunburnt.

Strategies could include:

- Limit time in the sun from 10 am to 3 pm.
- Slip on a shirt and wear clothing that covers as much skin as possible.
- Slap on some sunscreen. Make sure it is SPF 30+ broad spectrum water resistant sunscreen.
- Slap on a hat. Make sure it has a wide brim.
- Seek shade.
- Slide on some wrap-around sunglasses.

4. Have students reflect and write answers down to the following questions:

- Why is it important to consider sun protection actions other than using sunscreen?
- Why do some people not take some action to avoid sunburn?

NB. If students would benefit from further information about sun safety provided in other support materials, check the Resource List at the back of the book or visit the Cancer Council WA website. [www.cancerwa.asn.au](http://www.cancerwa.asn.au)





## Activity Sheet 2.7a

### Sunburn excuses

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

From the class discussion, write four excuses in the space below, that you have used or that you think are most commonly used by people who get sunburnt. For each of these excuses suggest something that could be said (a counter response) to help a person with this excuse to avoid sunburn next time.

	Excuses	Suggestions (counter responses)
Eg.	I didn't have time to get my hat and sunscreen	Put on sunscreen straight after your shower or when you get dressed in the morning. Keep your hat and sunscreen in your bag so you don't have to remember to bring them each time you go out.
1		
2		
3		
4		

## Home Activity

# SunSmart Behaviour

### Resources

- Activity Sheet 2.6a – SunSmart Diary

### Instructions

1. Have students take home their SunSmart diary and with the help of their families record each family member's sun safety behaviour for a particular day.
2. Encourage students to talk with their families about how they can all improve their sun safety behaviours such as making hats and sunscreen more accessible. This can include them recognising via the diary how susceptible they are to skin damage from the sun.
3. Students and families could work together to develop a 'sun safe' contract. For example, the contract may include agreements like 'everyone in the family will wear a hat when going outside' (eg. gardening, hanging out the washing, playing sport).
4. Have students return their SunSmart diary and explain what new measures their families are going to take to become more SunSmart e.g. make a SunSmart door hanger reminder.



## Topic 3

# Tanning risks

### Purpose

- Assess and clarify personal attitudes towards sun tanning / changing your skin tone
- Develop an understanding of the effective use of sunscreen
- Discuss the elements that determine a successful sunscreen
- Students assess their own risk factors for skin cancer
- Develop and then support a personal point of view on a sun protection issue
- Examine a topic from another person's point of view



## Lesson 3.1

# To tan or not to tan?

### Aim

Students clarify their personal attitudes towards sun tanning / changing their skin tone.

Students assess their own risk factors for skin cancer.

### Resources

- Activity Sheet 3.1a - To tan or not to tan?

### Instructions

1. Have students complete Activity Sheet 3.1a 'To tan or not to tan?' to assess their current attitudes to sun tanning.
2. Once students have finished Activity Sheet 3.1a discuss their opinions on tanning. Remind students that everyone is at risk of developing skin cancer.
3. Ask the students to record their "yes or no" answers to the following questions on a piece of paper. Tally the YES answer out of 12. Students can share their scores or keep them private.

Please answer yes or no to the following questions. Do you:

- Have fair skin
  - Have fair or reddish hair
  - Have freckles or many moles
  - Remember being sun burnt badly enough for it to hurt and/or peel
  - Have someone in the family who has had skin cancer
  - Spend a lot of leisure time in the sun
  - Refuse to wear hats
  - Refuse to use sunscreen
  - Like to sun tan
  - Wear a baseball cap during the day (caps do not provide good sun protection)
  - Notice that your skin change colour after spending time in the sun
  - Use sun beds or solariums or artificial tanning devices (people under 18 and anyone with fair skin are now prohibited from using these by law)
4. Have students consider how many of YES answers they gave, and what this means in terms of potential risk of skin damage.
  5. Explain that Australia has the highest rate of skin cancer in the world and around 2 in 3 people will develop some form of skin cancer before the age of 70.
  6. **Emphasise that if your skin changes colour after being outside, it is an indication that your skin has been affected by UV radiation and some damage has been done.** Tanning is a sign of skin damage. It is not possible to tan safely. This is an important issue as many students in upper primary (and older) develop the belief that it is possible to tan safely (as long as you don't feel like you have been burnt).
  7. Ask students to consider if there are any differences in the behaviours of sun tanning or sun baking or if they are synonyms. Suggest, given the previous discussion about there being no safe levels of tanning, that the words mean the same. Discuss the connotations associated with the terms sun tanning and sun baking.



## Activity Sheet 3.1a

# To tan or not to tan?

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

Decide whether you agree or disagree with each of the following statements and circle the appropriate letters, where Strongly Agree = SA, Agree = A, Disagree = D, Strongly Disagree = SD.

In the space provided indicate why you agree or disagree with the statement.

Everybody wants to change their natural skin colour in some way. SA A D SD

Why do you agree / disagree?

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Having fair skin is not fashionable. SA A D SD

Why do you agree / disagree?

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People with a tan are more popular. SA A D SD

Why do you agree / disagree?

---

---

---

People with fair skin are less healthy than people with tanned skin. SA A D SD

Why do you agree / disagree?

---

---

---

Clothes look better on people with fair skin. SA A D SD

Why do you agree / disagree?

---

---

---

Movie stars usually have pale rather than tanned skin. SA A D SD

Why do you agree / disagree?

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## Lesson 3.2

# Pros, Cons, Other

### Aim

Students will be exposed to a variety of attitudes towards tanning.

### Resources

- Activity Sheet 3.2a – Pros, Cons, Other
- Butchers paper
- Thick pens

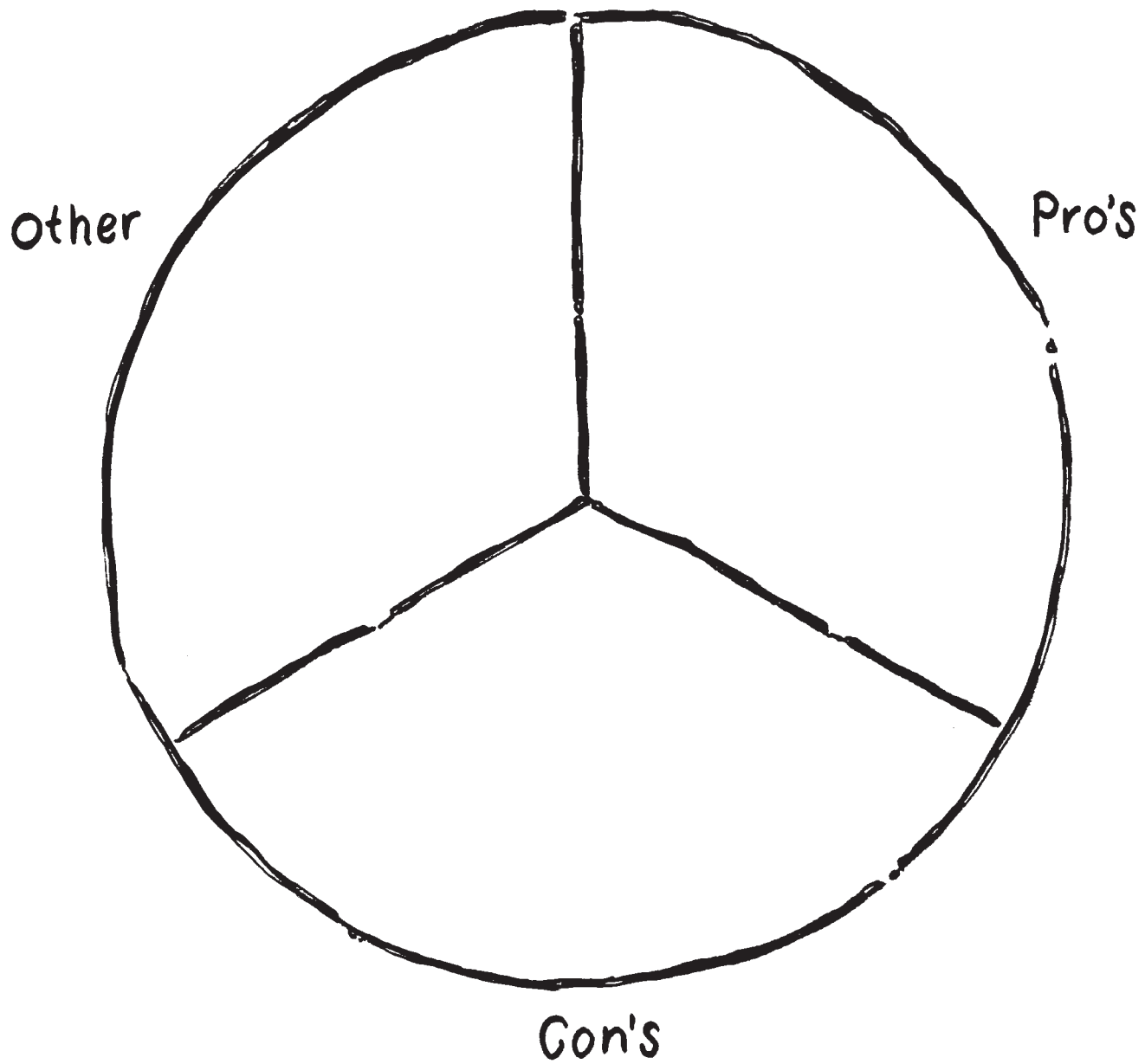
### Instructions

1. Students individually brainstorm the pros, cons and “other” (PCO) points about sun tanning / sun baking / changing ones skin tone on Activity Sheet 3.2a.
2. After they have completed their individual PCO lists, divide the class into five groups. Assign one person in each group to write on the butchers paper and another one to be group spokesperson.
3. Groups record their collective pro, con and other points on the butchers paper.
4. When their butchers paper is full, have the spokesperson share the group findings with the whole class.
5. Using the compiled class information, ask students to consider how they feel about their own behaviour in the sun.
6. Have students discuss or write how their feelings about their own behaviour in the sun may have changed as a result of listening to other student’s opinions / expectations. Have students indicate which ‘pros’ and ‘cons’ they hadn’t considered prior to this activity and any that surprised them.

Activity Sheet 3.2a  
Pros, Cons, Other

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

List the pros, cons and other points about sun tanning / sun baking





## Lesson 3.3

# Be the expert

### Aim

Students will develop and then support a personal point of view on a sun protection issue.

### Resources

- Activity Sheet 3.3a – Questions

### Instructions

Ask students to answer questions from Activity Sheet 3.3a individually (you may like to show these questions on a large screen). Once students have answered the questions, discuss their answers as a class.

Emphasise that if your skin changes colour after being outside, it is an indication that UV radiation has affected your skin and some damage has been done. Hence it is not possible to tan safely. This is an important issue as many upper primary students develop the belief that it is possible to tan safely as long as you don't "feel" like you have been burnt.

Ask students to choose any two of the bulleted points below, brainstorm some ideas about how the two points might be linked and then write an essay discussing this. They are going to "Be the Expert"

- My skin
- The sun
- My doctor
- Sunscreen
- UV radiation
- Skin cancer
- Baseball cap
- SunSmart hat

As an example, students might choose the baseball cap and the skin. Brainstorming the links between caps and the skin might produce the following statements:

- When wearing a baseball cap, more skin on the head is exposed to the sun,
- People who wear baseball caps are more likely to develop skin cancer,
- Baseball caps are really about fashion and not about skin protection,
- If you are serious about keeping your skin safe, you wouldn't choose a baseball cap for summer.

Students then choose their favourite statement and use it as the topic for an essay.

#### THE ESSAY/ EXPOSITION FRAMEWORK

##### Thesis –

- What position will I take?
- What background information should I give the reader?
- What is my general line of argument?

##### Assertions/Arguments –

- What points are important to support thesis.
- What evidence can I find to convince the reader that my thesis is correct?

##### Conclusion-

- How can I restate my thesis and arguments in a concise and convincing form?

Once they have finished, ask for volunteers to read their work out to the class.

## Activity Sheet 3.3a

### Be the expert

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

Answer the following questions in your book:

What most influences young people to have a sun tan?

How can young people be encouraged to appreciate the skin tone they already have?

What role has the fashion industry played in encouraging people to be sun tanned?

Why do you think some people find tanned skin more attractive than fair skin?

Name some famous actors who keep their natural skin tone?

Why are many adults less tanned today than they were when they were younger?

Why can tanning salons be harmful?



## Lesson 3.4

# Wear a parent's 'hat'

### Aim

Students will examine a topic from another person's point of view.

### Resources

- Students bring in dress up clothes for the play (optional)
- Activity Sheet 3.4a – Role play

### Instructions

1. Discuss with students what makes a good role play. Participation, good script, good costumes, engaging acting, dialogue and expression.
2. Ask students to get into groups of 3 or 4. Explain that they will be writing a role play which assumes they are parents of 12-year-olds.
3. Students write the script for a role play conversation on Activity Sheet 3.4a. Ask them to write what they would say to their child if he / she wanted to participate in an outdoor activity which may have them exposed to UV radiation for an extended time. Also write the child's part of the conversation.
4. Once students have written their plays, have them checked by the teacher. Once they are checked, have students practise their plays then present them to the class.

## Activity Sheet 3.4a

# Wear a parent's 'hat'

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

Imagine you are parents of a 12 year old. Your son / daughter wants to go to a long duration outside activity (you choose which activity).

What are your concerns? How can you make sure they are sun safe when they do this activity?

Characters played by:

Parent 1: \_\_\_\_\_ Parent 2: \_\_\_\_\_

12 year old: \_\_\_\_\_

### Script


Teacher checked:

## Lesson 3.5

# Famous people

### Aim

Students will name five ways of reducing exposure to UV radiation when outside.

Students will consider situations in which other people have neglected their own sun protection and why.

### Resources

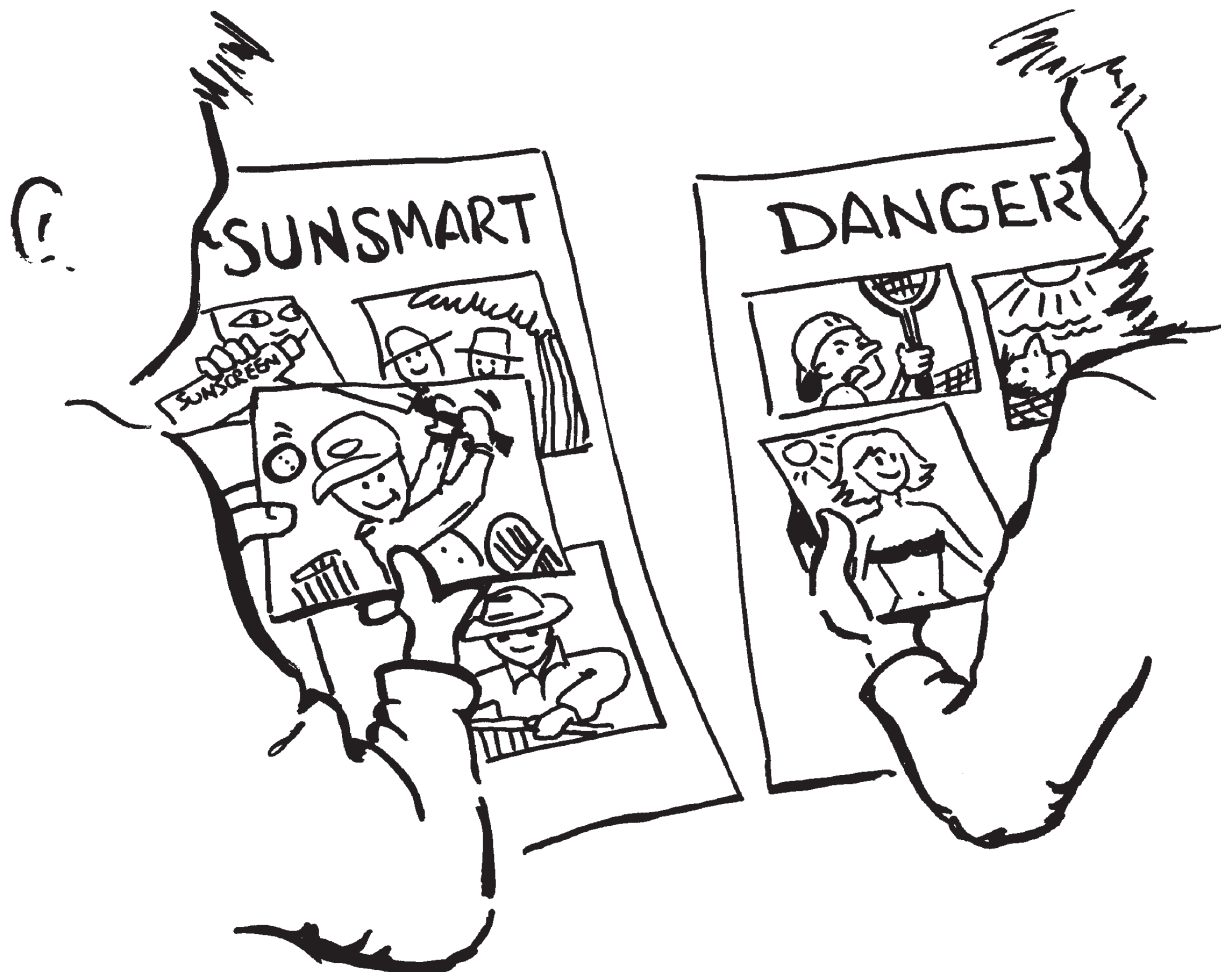
- A3 sheets of paper
- Glue and Scissors
- Magazines

### Instructions

1. Discuss with students what the five SunSmart steps are



2. Students work in pairs. One will collect pictures from magazines and newspapers of people practicing SunSmart behaviours (eg. cricketers wearing hats, children playing in the shade etc) and the other will collect pictures of people who are not practicing SunSmart behaviour (eg. tennis players wearing their hats back to front and models wearing skimpy bathers on the beach).
3. Have each student glue their pictures down in a collage so that there is a SunSmart collage and a Danger collage.
4. You may like to collate all SunSmart collages to create a whole class collage to promote sun safety.
5. Discuss what are some of the things the people could do in the danger collage to reduce their UV radiation exposure.



## Home Activity 3.6

# Interview

### Resources

Home Activity Sheet 3.6a – How do you feel?

### Instructions

Have students interview their parents / caregivers to find out if they were interested in changing their natural skin tone in some way?

- Why did they feel like this?
- If they did try to change their skin tone, what did they do?
- Did this affect their health? How?
- Have their attitudes / ideas changed?
- What do they think now?
- What advice would their adult self give to their younger self today?

Students can use the Home Activity Sheet 3.6a to discuss how attitudes to sun tanning are slowly changing and why this has happened.

Students return their sheets to class for a class discussion. Discuss the following points:

- Is there any general patterns among all the responses?
- Do the attitudes to tanning of these older people differ from those of the class?
- If so, what could the reasons for this difference be?
- What is the average age of the people interviewed by the class?



## Home Activity Sheet 3.6a

# How do you feel?

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

Interview your grandparents, parents or caregivers to find out how they feel about the following questions and discuss your findings in class.

**Name of person interviewed:**

\_\_\_\_\_

**Age of person interviewed:**

\_\_\_\_\_

When you were younger, did you ever want to tan or change your natural skin tone in some way? Yes / No

If yes please answer all questions. If No, please go to question 8.

1. What did you do?

\_\_\_\_\_

2. Why did you want to do this?

\_\_\_\_\_

3. Did this affect your health? How?

\_\_\_\_\_

4. Have your attitudes / ideas changed?

\_\_\_\_\_

5. What do you think now?

\_\_\_\_\_

6. What advice would your adult self give to your younger self?

\_\_\_\_\_

7. What would you do differently (if anything) to protect your skin, if you were a teenager again?

\_\_\_\_\_

\_\_\_\_\_

8. Given that any change in skin colour after being outdoors means that some damage has been done to the skin, what do you think teenagers (and others) today should do to protect their skin?

\_\_\_\_\_

\_\_\_\_\_

9. Do you think attitudes towards sun tanning are changing? YES/NO

\_\_\_\_\_

10. Why?

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_





## Topic 4

# Good or bad advice

### Purpose

- Assess external influences in school, at home and in the community
- Demonstrate assertive response skills
- Students will act as peer tutors and role models of sun protective behaviour



## Lesson 4.1

# Brainstorm

### Aim

Students will examine the way external influences affect their sun protection choices.

### Resources

- Six pieces of butchers' paper, thick pens and blu-tac.
- Activity Sheet 4.1a What makes me tick.

### Instructions

1. Divide students into six groups and give each group a piece of butchers' paper and a thick pen.
2. Assign two groups the task of brainstorming things in their school, home and community environment that influence them to protect their skin from the sun (eg. availability of shade, access to the beach, weather conditions, availability of places to play outside). Ask students to list factors that influence them NOT to be SunSmart as well as those that influence them TO be SunSmart (eg. I live very close to the beach so I can go every day. I never wear a hat or sunscreen because I just run home after a quick swim).
3. Ask another two groups to brainstorm how people they know (eg. friends and family) and don't know (eg. older / other students at school, models and movie stars, sports stars) positively and negatively influence them to protect their skin from the sun.
4. Have the final two groups brainstorm how the media and fashion may influence them positively and negatively to protect their skin.
5. Display all groups' findings around the room. Using Activity Sheet 4.1a, What Makes Me Tick, students move around the room and read what's written. Students write down those influences (positive and negative) that most affect them personally. Encourage students to consider those that have the greatest influence on them. Discuss what students identified as the greatest influences. In the second column of the table have students consider what they can do to cope with or counter each of these influences.

## Activity Sheet 4.1a

# What makes me tick

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

Write in the table below those influences that affect you personally to be SunSmart or not. Place positive influences in the first column and negative influences in the second column. Highlight the things that have the greatest influence on you. In the third column of the table describe what you could do to cope with or respond to each of the negative influences.

Positive influences on my sun exposure	Negative influences on my sun exposure	Ways I can respond to negative influences

My greatest positive influence to be SunSmart is \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

My most negative influence is \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

I plan to \_\_\_\_\_

\_\_\_\_\_ next time this happens.

## Lesson 4.2

# Making decisions

### Aim

Students will examine the way external influences affect their sun protection choices.

### Resources

- Activity Sheet 4.2a – Decisions, Decisions

### Instructions

Discuss with students that sometimes they may be in a situation where they feel pressured to do something they:

- don't want to do
- would like to do, but feel might be harmful or risky.

What are some situations that might be harmful?

Lead students to discuss sun protection / being SunSmart

1. Have students brainstorm (either as a class, individually or in groups) situations where they may feel pressured into not being SunSmart.
2. Have students complete Activity Sheet 4.2a.
3. Ask students to consider both positive and negative thoughts the characters in the stories may be having about being SunSmart. The activity can be completed individually, in pairs or as a role play.
4. After completing the activity, have students consider why it is sometimes hard to be SunSmart when you feel pressured, or feel the behaviour is not 'cool'.



## Activity Sheet 4.2a

# Decisions, decisions

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

Choose one of these situations below (or make up your own). List the negative and positive thoughts for the character in the situation you select and answer the final questions in your work book.

### Situation one

Rachel is going to the pool with her friends Chloe, Holly, Laura and Chloe's mum. Rachel has packed her rash shirt and board shorts. When they get to the pool the girls go into the change rooms to get changed. The others are all wearing two piece bathers. They laugh at Rachel's bathers and suggest she wear a spare bikini that Holly has brought. Rachel is concerned about getting burnt, but she also wants her friends to think she is cool.

List Rachel's positive and negative thoughts about wearing sun safe clothing:

Positives	Negatives
_____	_____
_____	_____
_____	_____

OR

### Situation two

Luke has been selected in the school cricket team. He is pretty excited about his first game. When the team arrives at the ground Luke begins to apply sunscreen and to put on his broad brimmed hat. The other boys laugh at him and say his hat looks stupid. None of the others appear to be making any attempt to be SunSmart. Luke wants to use his sunscreen and broad brimmed hat (which looks like those worn by the Australian cricket team) as he knows he will get burnt badly if he doesn't.

List Luke's positive and negative thoughts about wearing his sunscreen and hat:

Positives	Negatives
_____	_____
_____	_____
_____	_____

OR

### Make up your own scenario or experience

List the positive and negative thoughts your characters have about being SunSmart.

Positives	Negatives
_____	_____
_____	_____
_____	_____

### Final Questions

1. What decision do you think this character would make based on his/her thoughts?
2. Which thoughts would be the most influential?
3. What are some of the possible consequences of his/her decision?

## Lesson 4.3

# Being assertive

### Aim

Students will examine a variety of assertive responses to difficult situations

### Resources

- Activity Sheet 4.3a Zig Bank
- Activity Sheet 4.3b Being Assertive
- Activity Sheet 4.3c Zag Bank

1. Explain to students that one way to deal with a pressure situation is to be assertive. Discuss with students that assertive behaviour can be verbal or non-verbal. Think of some examples. Have students brainstorm different assertive responses to the situations discussed on the activity sheet from previous activity.

2. Explain the following tips for being assertive:

You can be both polite and assertive at all times.

The less 'drama' the better – in many situations you don't need to actually do anything.

Politely and firmly say what you want to do.

3. Explain to students that sometimes situations don't end with a single response. Sometimes people can 'push' you a little further, you think you need to say more, or a situation changes. These are called 'push-backs'.

Write the words 'zig' and 'zag' on the board. Under the word zig write 'assertive response' and under the word zag write 'push back'.

Provide students with copies of Activity Sheet 4.3a 'Zig Bank' and have them brainstorm (individually or in pairs) other assertive responses ('zigs').

Arrange students into groups of five.

Cut out zag cards from Activity Sheet 4.3c 'Zag Bank' and distribute one set of zag cards to each group. Students may want to use the 'zigs' from Activity Sheet 4.3a to help with their responses.

4. Ask students to conduct a zig-zag activity from the scenarios on Activity Sheet 4.3b 'Being assertive'. A group member should read out the scenario. Each group member in turn demonstrates how to respond assertively. After each response one student reads a zag card ('push back'). The next student responds assertively in response to that zag. All students should have an opportunity to respond assertively.

(Activity adapted from: WA Centre for Health Promotion Research (WACHPR). 2001, The Helmet Files: Year 6 Teachers Manual, School Bicycle Safety Project: WACHPR, Perth).

## Activity Sheet 4.3a

# Zig bank

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

**If you can't think of any zigs (assertive responses) try some of these.**

**Write some of your own zigs at the bottom of the list.**

Thanks, but I prefer...

Thanks, but I would like to...

I don't want to get sunburnt

I want to protect my skin

Wearing my hat won't affect you

We can still be friends if I wear this hat

I like these bathers

This shirt is my favourite

I don't see the point of not wearing my hat

My hat doesn't bother me

Wearing sunscreen doesn't bother me

I prefer to sit in the shade

It is cooler to sit in the shade

No words – just put it on

No words – just walk away

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## Activity Sheet 4.3b

# Being assertive

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

### Walking home

You and your friends walk home from school together every day. You all wear your hats. Recently a group of older boys from the high school have begun to call out to you as you walk past. They always tease you and your friends about your hats. This makes you feel uncomfortable.

What would you say or do?

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### Swimming

You are at your friend's place and he/she suggests you go for a swim in their pool. It is the middle of the day and you would love a swim but you haven't brought your bathers. Your friend offers you a pair of theirs. You put them on then put on your t-shirt for extra protection. Your friend says to take the t-shirt off and get a bit of a tan.

What would you say or do?

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### Tennis

You have just started playing tennis at the local club. You are really enjoying it and there are quite a few kids from your school who also play. You like to wear your legionnaire style hat when playing as it stays on your head when you run and it also provides good protection from the sun. Some of the other kids in your team have been laughing at you and saying you look stupid. They all wear their caps reversed. You really want to be part of the team and make friends but also don't want to get burnt.

What would you say or do?

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### In the Shade

You are having lunch with your friends at school. It is a warm day and you suggest you all sit under the big tree in the shade. Your friends say they want to get a tan and would like to sit on the lawn in the sun. You don't have any sunscreen or a hat. You really want to have lunch with your friends but don't want to sit in the sun.

What would you say or do?

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## Activity Sheet 4.3c

### Zag bank

#### Zig - Zag 1

##### Walking Home

Zag 1: there is no other way to walk home, you have to walk past them.

Zag 1: they block your path.

Zag 1: "take off your hats, you look stupid".

Zag 1: one of the boys is the brother of a girl/boy at your school who you really like.

Zag 1: one of the boys lives next door to you.

Zag 1: one of the boys plays at the same basketball club as you.

#### Zig - Zag 3

##### Tennis

Zag 3: "here, you can borrow my cap".

Zag 3: "those hats are for little kids".

Zag 3: "all the professional tennis players wear their hats like this".

Zag 3: "you will make our team look stupid".

Zag 3: "I don't want to play tennis with someone who wears a hat like that".

Zag 3: "you have got sunscreen on so it doesn't really matter about your hat".

#### Zig - Zag 2

##### Swimming

Zag 2: "you look stupid in that t-shirt".

Zag 2: "we will be in the water so we won't get burnt".

Zag 2: "it is not that hot outside".

Zag 2: "don't you like my bathers?".

Zag 2: "it will be good to get a bit of a tan while we swim".

#### Zig - Zag 4

##### In the Shade

Zag 4: "it is not that hot – we won't get burnt".

Zag 4: "it will be good to get a little bit of a tan while we eat our lunch".

Zag 4: "we won't be in the sun for long".

Zag 4: "only the little kids sit under the tree".

Zag 4: a boy/girl you really like is sitting with his/her friends near where your friends want to sit.

## Lesson 4.4

# Assertive response

### Aim

Students will demonstrate a variety of assertive responses to difficult situations

### Resources

- Completed Activity Sheet 4.1a
- Black A4 sheets of paper

### Instructions

1. Have students select a negative influence from their previously completed Activity Sheet 4.1a and describe a situation where this might happen. Students write the scenario on a single sheet of paper under the following headings:  
who is doing the influencing? (eg. their best friend),  
what are they doing to influence? (eg. teasing them for wearing a hat),  
where are they doing this? (eg. at the local pool).
2. Students fold the paper that describes their completed scenario and place it in the class container.
3. In groups of two or three students, randomly select a scenario from the container and decide as a group how they would deal with this situation without 'losing face' but still protecting their skin from the sun.
4. After completing their discussion, students describe their scenario to the class and role-play or demonstrate their assertive response(s). After each demonstration ask the class to suggest other assertive ways to deal with the situation. Repeat this process with groups selecting other scenarios from the container.



## Lesson 4.5

# Role models

### Aim

Students will act as peer tutors and role models of sun protective behaviour

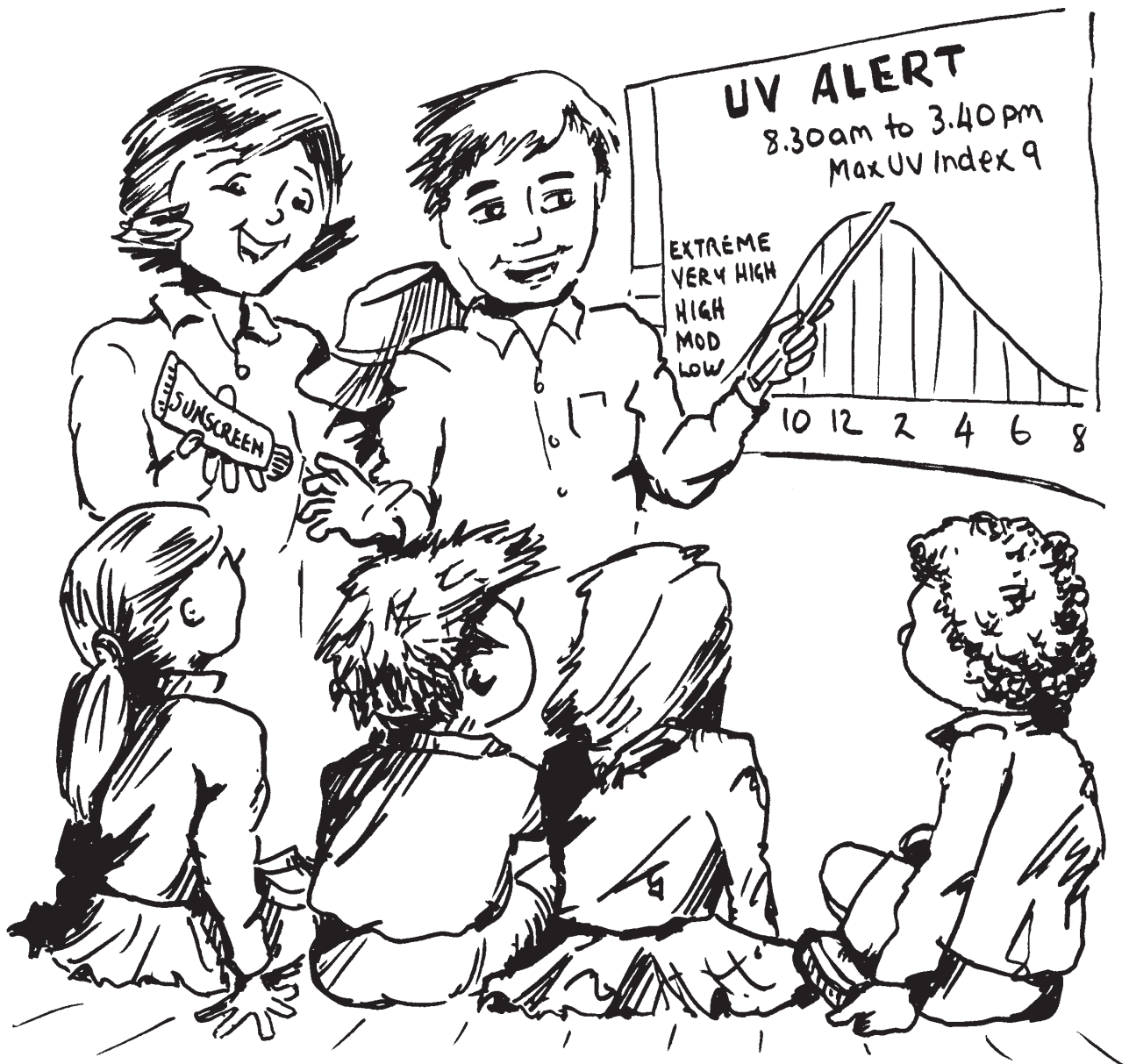
### Resources

- Activity Sheet 4.5a – Lesson Plan

Note: You will need to arrange with a year one or two class to have access to the students for approximately 20 - 30 minutes.

### Instructions

1. Remind students that they are often seen as role models by the younger students in the school. Discuss what makes a good role model and why their behaviour in front of younger students is so important.
2. Explain to students that they will be running a 15 minute presentation or an activity with small groups of younger students. The presentation or activity they choose needs to encourage the younger students to protect themselves from the sun. Some examples of activities could be a SunSmart hat relay, applying sunscreen correctly, the five SunSmart steps to take before going out into the sun.
3. Have students fill out Activity Sheet 4.5a and have their lesson approved by the teacher.
4. Once students have run their 15 minute activity with the younger students, discuss with them how their lessons went.



# Activity Sheet 4.5a

## Role models lesson plan

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

Teacher approval: \_\_\_\_\_

### Lesson Plan

Year level I will be teaching: \_\_\_\_\_

Number of students in my group: \_\_\_\_\_

What do I want the children to learn /understand from my lesson: \_\_\_\_\_

\_\_\_\_\_

How can I best share this information with the children? \_\_\_\_\_

When you have decided on what you will do, think about these questions.

Is my lesson interesting enough for young children? \_\_\_\_\_

What will I do to make sure the children want to participate? \_\_\_\_\_

What do I need for my activity:

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

### How I am going to run my activity?

Step 1: \_\_\_\_\_

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Step 2: \_\_\_\_\_

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Step 3: \_\_\_\_\_

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Step 4: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Step 5: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

This is to be completed after you have run your lesson with the younger students.

**Evaluation:**

How did my lesson go? \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

What were the good parts of my lesson? \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

What should I change before doing this again? \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Did the younger students understand my SunSmart message? \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

What did the children learn from my lesson? \_\_\_\_\_

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How do you think your lesson might have changed their sun behaviours?

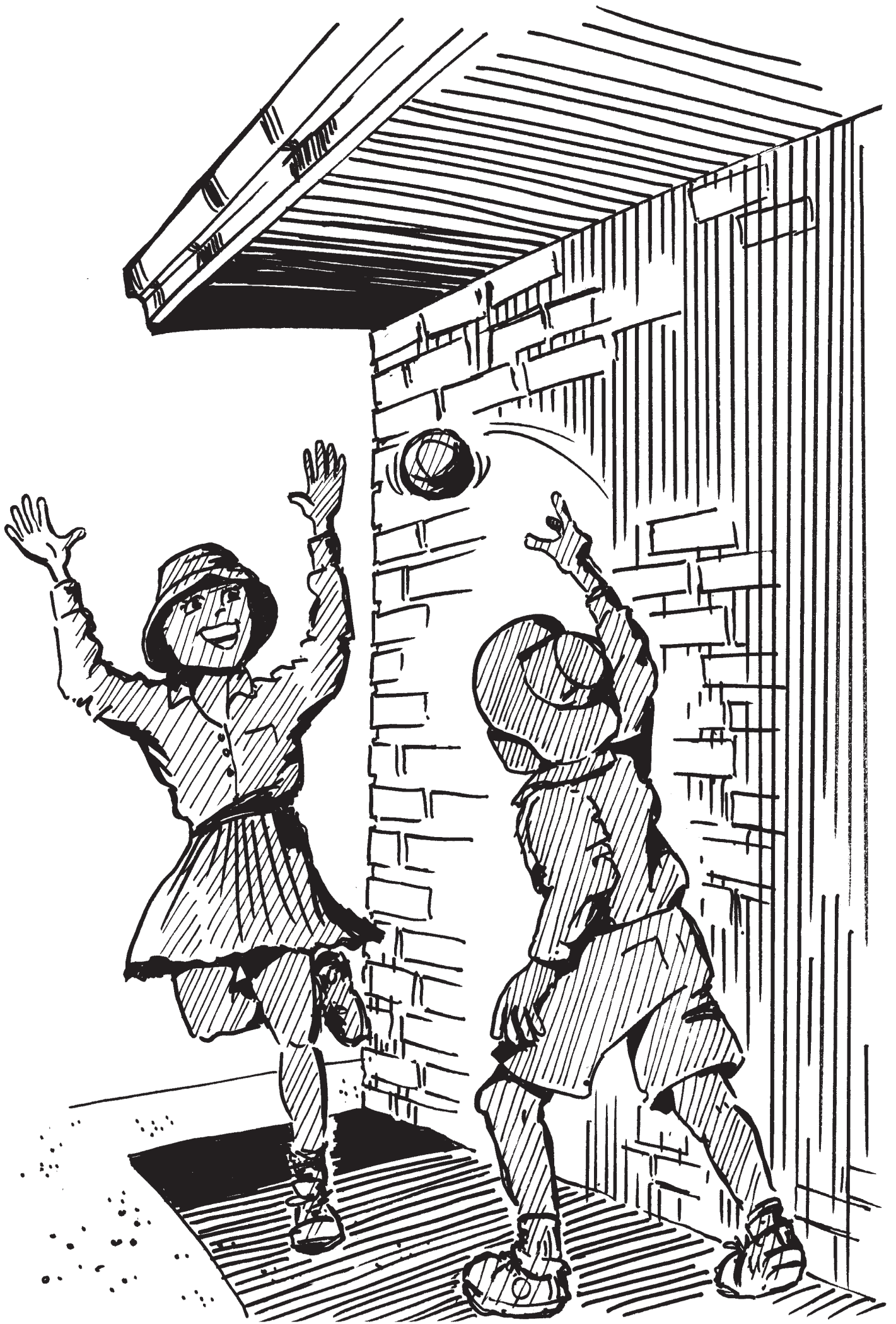
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## Topic 5 Shade

### Purpose

- Develop an understanding of effective shade and suitable environments
- Evaluate shade within schools and communities
- Suggest improvements to external bodies to increase shade
- Survey people's sun protection practices
- Students test their own sun safety knowledge and that of their peers



## Lesson 5.1

# Shadow

### Aim

Students examine the effectiveness of shade in a given area.

### Resources

- Map of the school grounds, enlarge it to A3, photocopy it onto graph paper and cut it (like a jigsaw) into approximately 10 sections (enough for groups of 2-3 to have a different section each)
- Blu-tac
- Activity Sheet 5.1a Surveying the Shade

Note - Students should be SunSmart whilst carrying out this activity.

### Instructions

1. Review the period of the day that has the strongest and most harmful levels of ultraviolet (UV) radiation and the reasons for this. Remind students that if their shadow is shorter than their body they should be under shade as this is when UV radiation is at its strongest (usually between 10 am and 3 pm). Also, remind students that the hottest part of the day is not necessarily the time of the day with the most intense UV radiation. Sun protection is recommended when UV levels reach 3 and above.
2. Discuss where animals tend to be during peak UV times (in the shade).
3. Photocopy an A3 enlarged map of the school grounds onto two pieces of A4 or an A3 piece of graph paper.
4. Use the scale on the map to calculate the area of each graph square. Cut the map of the school grounds into sections like a jigsaw and give a section to each group of 2-3 students (try to assemble groups such that each group has a student who is reasonably good at maths).
5. Students survey and colour in the squares on their graph paper that represent the area in their section covered by shade. Have students also assess the quality of the shade provided in their section of the schoolyard.
6. Students should assess this at different times of the school day eg. before school, at recess and during lunchtime. Students calculate the total area of shade in their section by counting the number of squares coloured and the area that this represents according to the scale on the map. Students record their findings on Activity Sheet 5.1a and indicate the total area on their section of the jigsaw.
7. Students can also record the number of people using the shady areas at each of these times and the types of activities they were doing.
8. Using blu-tac, have a representative from each group reassemble the jigsaw so that the full map is visible. Students use the information provided on each section to calculate the total proportion of the grounds protected by shade at each of these times of the day.
9. Have students determine how many children attend their school and calculate how much shade is available per student at each time of the day, alternatively, students can just colour on a map of the school grounds the areas covered by shade at the three different times of the day.

Activity Sheet 5.1a  
Surveying the shade



After completing the shade survey using a map of the school, transfer each groups' information into the table below to provide a detailed summary for the whole school.

Area of School	Type of shade F = Full P = Partial N = None	Number of 'squares' covered by the shade			Total area of shade (m <sup>2</sup> )		
		Before school	Recess	Lunch	Before school	Recess	Lunch
<b>TOTAL AREA OF SHADE IN SCHOOL:</b> _____							
<b>Before school</b> _____							
<b>During recess</b> _____							
<b>During lunchtime</b> _____							

Answer the following questions using the information gathered during the shade search.

1. What is the total number of students in the school \_\_\_\_\_
2. What is the total area of shade in the school \_\_\_\_\_ square metres
3. Using the equation below calculate the amount of shade available per student at the school.

$$\frac{\text{Total area of usable shade in the school(m}^2\text{)}}{\text{Total number of students in the school}} = \text{_____ m}^2 \text{ shade per student}$$

Calculate other ways of dividing the shade between different groups at school. For example calculate the amount of shade available per classroom, for each faction and for the students in your class. Consider the different areas of the school and the year groups that are allowed to play there. Calculate how much shade each of these students has access to during the day if they are only allowed in certain areas.

Compile a report for the school council or principal based on these findings, remember to make practical suggestions for improving the amount of shade.

## Lesson 5.2

# Round table discussion

### Aim

Students will generate ideas for improving the shade at school and suggest these to the school administration.

### Resources

- Shade map of school grounds from previous activity
- Butchers paper and large pens
- Activity Sheet 5.2a – Round Table
- Over head projector or similar

### Instructions

1. Explain to students the guidelines for a 'round table discussion'.
2. Establish the specific focus of the group (prescribed by teacher).
3. Always have a list of questions to follow to keep discussion flowing.
4. Always encourage equally active participation from all group members.
5. Be sure to discuss topics one at a time.
6. Always recap what was covered at the end of the round table.
7. Divide students into groups of four or more and give each group a piece of butchers paper and a pen.
8. The group is to assign a scribe to take down the views of the group for each question.
9. Display the questions for all groups to see.
10. Act as the facilitator to ensure all groups are on task.
11. When all groups have finished, assign each group a question to answer in front of the class, then as a class other groups contribute their ideas to the question.
12. Decide on a method of summarising the groups findings and a method for presentation to the school council.

## Activity Sheet 5.2a

### Round table

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

- What actions can be taken to encourage schools to provide more shade for students? Which places need the shade (ie. where students spend large amounts of time at recess and lunch)?
- What are some appropriate types of shade for your school (eg. planting more trees, putting up shade cloth, umbrellas). How could the school raise the money for the extra shade?
- How can students in senior classes be encouraged to spend more time in the shade at schools during lunch and recess?
- How could schools modify the school timetable to reduce the amount of time students spend in the sun during the middle of the day?
- During what school activities are students exposed to the sun during the middle of the day? How could these activities be modified to reduce the amount of sun exposure? (eg. the school swimming carnival could be held during late afternoon, 3 pm - 6 pm, or in the evening rather than during the middle of the day, or it could be held at an undercover pool).
- Discuss how other hot countries, such as Spain and Mexico, cope with the heat (eg. staying out of the sun during the heat of the day, style of clothing etc). Also discuss how Australian Aborigines traditionally coped with the heat and intensity of the sun.

## Lesson 5.3

# Shady trees

### Aim

Students will actively contribute to increasing the amount of shade at the school.

### Instruction

1. Recap with students some of the discussion points regarding shade from previous activity 5.2 Round Table. Decide with students who needs to be approached for permission to plant trees in the school grounds to increase shade (Principal and Gardener).
2. Arrange a tree planting day or focus the activities of Arbor Day or National Tree Day on planting trees that provide good quality shade.
3. As part of a library study, students identify the trees that provide the best and greatest area of shade and that are also safe to have on school grounds. (See the Cancer Council publication "The Shade Handbook" for a comprehensive list of suitable trees.)
4. Invite the school gardener to speak to the class and provide advice regarding the best shade trees to plant (that suit the area) and how and where to plant these trees.
5. The class can then plan where to plant the trees, which trees are the best to purchase and how they are going to raise the money for the trees.

Students may like to write a letter to the school parent committee to request funding to provide a shade shelter (natural or built shade) in an area identified by students.

6. Explore water tanks & water collection points so new plants can be watered easily.



## Lesson 5.4

# Examining the local community

### Aim

Students will examine and map a local facility.

Students will generate ideas for improving the shade at the facility and suggest these to the facility administration.

### Resources

- Activity Sheet 5.4a - Surveying

### Instructions

1. Discuss with the class...

Why is it necessary to make each of the following safer to reduce harm from the sun?

- The physical environment
- A person's behaviour
- Sun protection equipment.

How can features of the environment be made more sun safe – particularly for children (and adults) who may not wear adequate protection?

The quality of shade material and the design are both important issues in sun safety.

What types of trees provide the best quality shade?

The reflection of UV radiation can be a problem even if people are protected by shade. How can this reflection be reduced at venues within your community?

2. Students identify an area in their community where they spend a lot of time outdoors eg. sporting venues such as tennis courts, local pools or parks.
3. Have students visit this venue and draw a map of all the major structures and trees in the area. From this map, students determine the sun risk and sun safety features provided by the venue.
4. Students draw another map to show how they would enhance and include more sun safety features.
5. Encourage students to be creative but realistic. Have students present their proposal to the class and discuss what action could be taken to encourage the local council or owners of the venue to make them aware of and perhaps make some of these changes.
6. Encourage students to consider alternatives to shade provision that would also increase sun protection for the users such as changing the organisation of events eg. changing the times of the matches. This part of the activity could be completed with parents / care givers at home.
7. Have students prepare a letter to the local council or venue owners outlining their suggestions and rationale for the changes. Students could also consider writing a letter to the editor of the local newspaper about the limited amount of shade provided in certain neighbourhoods. Encourage students to be community advocates for shade and sun protection.
8. Consider asking an architect (perhaps a parent or architecture student) to speak to the class about designing shade.



## Activity Sheet 5.4a

# Surveying

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

Draw a map of the local community venue you have chosen for this activity (preferably a venue you use such as the local oval, swimming pool, beach or park) on the back of this worksheet. As you are surveying and drawing the outdoor area of this venue, record in the chart below any features that are harmful or helpful in relation to sun protection.

Name of venue: \_\_\_\_\_

This venue is mainly used for: \_\_\_\_\_

Current SunSmart features	Ideas for increasing the use of SunSmart features	Strategies to achieve these changes
Current sun risk features	Ideas for improving sun protection at this venue	Strategies to achieve these changes

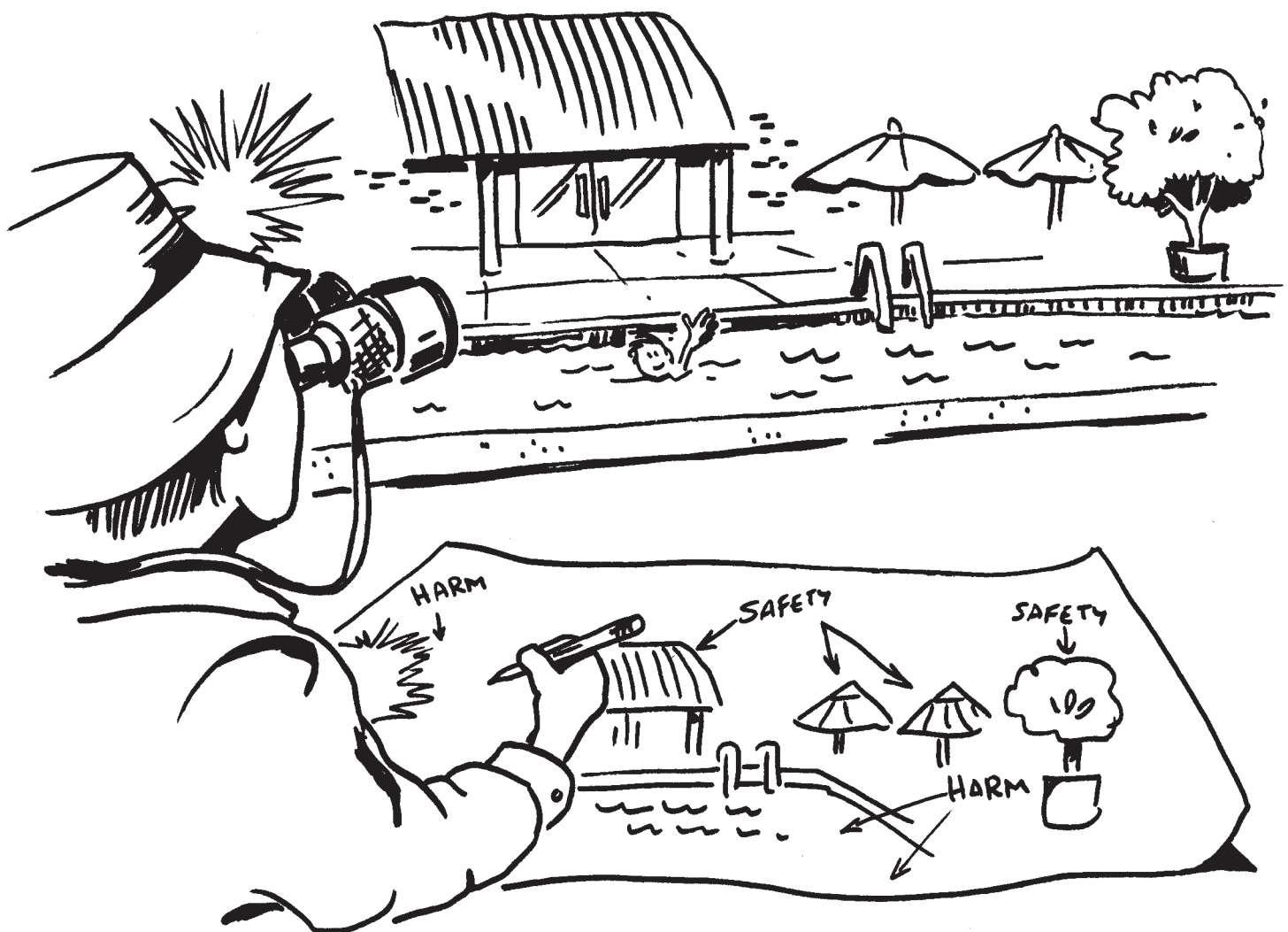
## Home Activity Shady times

### Resources

- Activity Sheet 5.5a

### Instructions

1. Students use the questions on Home Activity Sheet 5.5a to interview their parents / caregivers and, if possible their grandparents (or an older relative / friend), regarding how much has changed during their life regarding sun protection.
2. Encourage students to bring the sheets back to class for discussion.
3. Alternatively, organize a visit to an elderly citizens home / club so students can interview people there.



## Home Activity Sheet 5.5a

# Shady Times

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

Use the following questions to interview your parents, caregivers, older friends or relatives if possible. Write down any additional questions you would like to ask on the back of this page.

'Hello my name is \_\_\_\_\_. I will be interviewing you today about sun protection practices when you were a child. Thank you for joining me today. Lets get started.'

1. Has hat wearing changed in your lifetime? If so, how? \_\_\_\_\_

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2. What types of hats did people wear? \_\_\_\_\_

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3. How has the provision of shade in public places changed?

(Think about children's playgrounds, public swimming pools and other local facilities) \_\_\_\_\_

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4. Why do you think some people's sun protection behaviour has changed? \_\_\_\_\_

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5. How has the clothing people wear when they plan to spend time outside changed?

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6. Why have schools become more involved in sun safety issues for students? For example, many schools have a 'no hat – play in the shade' policy, as well as shade provision projects.

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7. Has the wearing of sunglasses changed? \_\_\_\_\_

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8. How have employers' responsibilities to outdoor workers changed? \_\_\_\_\_

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9. How has people's use of sunscreen and the types of sunscreen available changed?

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10. How have the products that provide shade to your home changed? \_\_\_\_\_

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## Lesson 5.6

# Testing sun safety knowledge

### Aim

Students test their own sun safety knowledge and that of their peers.

### Resources

- Activity Sheet 5.6a

### Instructions

Divide students into teams of three to four. Have each group sit together and choose a SunSmart team name. Students could answer the questions on Activity Sheet 5.6a in their group in one of the following ways:

- Have a quiz competition. Students answer the questions in their groups competing with the other groups for the highest score, as the teacher reads them aloud.
- Each group is given a round (theme) of questions and spends time in the library researching answers to these.
- Groups use a round of questions as a basis to research and develop their own questions to add to the quiz or to create their own quiz.
- Cut the quiz into individual questions and place these into a box for selection 'lucky dip' style.
- Use the questions to monitor student 'knowledge and understanding' progress in the Health and Physical Education Learning area.

## Activity Sheet 5.6a

### SunSmart Quiz

#### Round 1: Risks associated with sun exposure

(True/False)

Over-exposure to UV radiation during childhood and adolescence increases the risk of developing skin cancer later in life.

Answer: True.

Skin cancers only occur in older people.

Answer: False. Younger people can also develop skin cancer. Melanoma is the most common form of cancer diagnosed in young people aged 12-24.

Australia and NZ has one of the highest rates of skin cancer in the world.

Answer: True.

You can't get sunburnt on cool or cloudy days.

Answer: False. UV radiation can penetrate clouds especially on overcast days. Even if the sky is clear on a cooler day, UV radiation levels can still be high enough to cause skin damage and sunburn.

A person is at highest risk of skin damage if they are outside in the middle of the day when the sun is highest, as the sun's rays have less distance to travel through the atmosphere.

Answer: True.

You can not see or feel the UV radiation which gives you sunburn.

Answer: True.

#### Round 2: Sun protection

Question: What type of hat provides the best protection from UV radiation?

Answer: Broad brimmed, legionnaire and bucket style hats provide the best protection. Baseball caps & visors are not appropriate for sun protection as they do not cover the ears, cheeks, back of neck or nose adequately.

Question: What sort of sunglasses provide the best protection for the eyes?

Answer: Sunglasses that meet the Australian Standard AS 1067, are close fitting and have a wrap around design. Wearing a broad brimmed hat and Australian Standard sunglasses can reduce UV radiation exposure to the eyes by 98%.

Question: At what time of the day should you take extra care with your sun protection or minimize time outdoors?

Answer: Between 10 am and 3 pm, as this is the time when UV radiation is strongest. Exposure to UV radiation can be reduced significantly if activity is undercover during this time.

Question: What can you do to make sure you don't get too much UV from the sun?

Answer: Stay out of the sun during peak UV radiation times, wear a hat and sunnies, stay in the shade or inside, cover up with clothing and use sunscreen on skin that cannot be easily covered with clothes.

Question: When should you apply sunscreen?

Answer: Sunscreen should be applied 15 to 20 minutes before going outside to clean, dry skin. It should always be used in combination with the other sun protection measures.

## Round 3: Sunscreen

Question: Does sunscreen need to be reapplied?

Answer: Yes. It needs to be reapplied at least every two hours or straight away after being in the water

Question: How long will sunscreen last in the bottle?

Answer: About two years, if it has been stored correctly, in a cool dry place. The glove box of the car is not a good place to keep sunscreen. Check the expiry date on the pack.

Question: What does SPF mean?

Answer: Sun Protection Factor. SPF is the sun protection rating used for sunscreen.

Question: What do the SPF numbers mean?

Answer: The SPF number is a guide to the amount of UV radiation the sunscreen will block. The higher the number, the more UV radiation is blocked.

Question: What factors may reduce the effectiveness of sunscreen?

Answer: How well the sunscreen was applied (eg. even thickness), the activity the person is doing outside (eg. swimming and perspiring can reduce sunscreen effectiveness), how long ago it was applied (eg. reapply every 2 hours), the time of day, time of the year, the amount of reflected light, cloud cover and the person's skin type.

Question: What are the two basic types of sunscreen?

Answer: UV Blockers and UV Absorbers.

## Round 4: UV radiation and the environment

(True/False)

UV radiation is weakest at the equator, where the sun is more directly overhead.

Answer: False. It is strongest at the equator.

The ozone layer is 15 to 30 km above the surface of the earth.

Answer: True.

The ozone layer cannot absorb ultraviolet radiation (UV radiation).

Answer: False. Ultraviolet radiation is divided into three groups known as UVA, UVB and UVC. Solar UVC rays are absorbed by the ozone layer, and are therefore not harmful. UVA and UVB rays do reach the earth and are potentially dangerous.

UV radiation can not be reflected by surfaces around us.

Answer: False. UV radiation can be reflected by light coloured and shiny surfaces such as water, snow, sand glass and metal.

There is less atmosphere to absorb UV radiation when at higher altitudes.

Answer: True.

Sitting under a beach umbrella protects you completely from the sun.

Answer: False. UV radiation can be reflected from surfaces such as sand, water and concrete near the umbrella.

## EXTENSION ACTIVITIES

Develop an appropriate SunSmart web page for the school website.

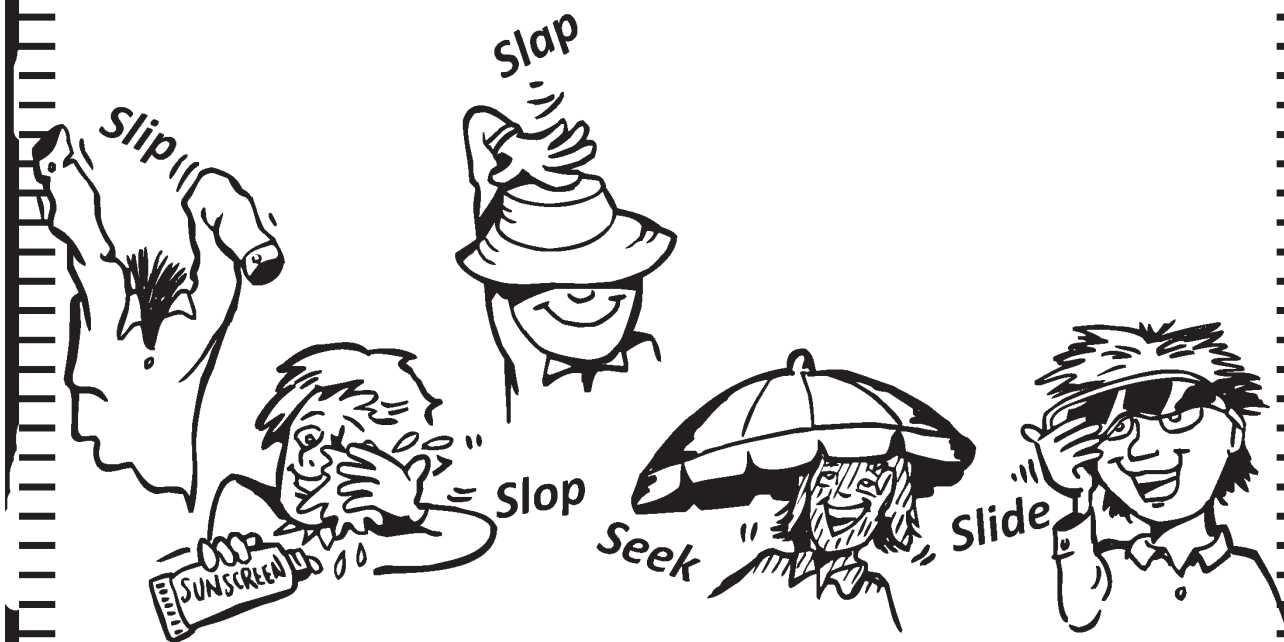
Create a list of great shady parks in the area. List these on the school website with images so families have ideas about where they can go for sun safe outdoor play.

Introduce a 'SunSmart Champion Spotters' team. Older students could hand out raffle tickets to younger students they see that are consistently being SunSmart. The winner of the raffle could win some free time or a small prize.

# KIDSKIN CERTIFICATE

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Name



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Teacher

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Date



# RESOURCE LIST

## Internet Resources

Australian Bureau of Meteorology - [www.bom.gov.au](http://www.bom.gov.au)

Australian Government Health Information Portal - [www.healthinsite.gov.au](http://www.healthinsite.gov.au) – search on skin cancer for a wide variety of information.

Cancer Council [www.sunsmart.com.au](http://www.sunsmart.com.au) – Follow the links to your state for local skin cancer information.

## Print resources

### Books for use with children

These books are useful to prompt discussion, but not all illustrations represent SunSmart behaviour.

Adults can encourage children to think about who is SunSmart and what those who are not could do to protect themselves.

### Skin and touch

Kroll, J. 1994. Sunny Faces. Mammoth, Australia. ISBN 1863303685 # Pluckrose, H. 1989. Look at Skin, Shell and Scale. Franklin Watts, London. ISBN 0863138330

Whitaker, A. 1995. My Skin. MacMillan Education, Australia.

Stockley, C. 2006. The Usebn Illustrated Dictionary of Biology. Usebn Publishing Ltd, London. ISBN 0 7 460 77459

Parker, S. 2008. Discoverology Human Body. Allen and Unwin, Crows Nest, NSW. ISBN 978-1-74175-469-8

### The seasons

Anholt, C. and Anholt, L. 1995. Sun, Snow, Stars and Sky. William Heinemann Ltd, London. ISBN 0670861960

Thomas, A. 1997. Summer in Australia (also Autumn, Spring and Winter). MacMillan, South Melbourne. ISBN 0732929024

### Society and environment

Malcolm, P. 1994. Animals in Hot and Cold Places. Wayland, Hove, England ISBN 0750208090

Crisp, S. 1994. Clothes in Hot and Cold Places. Wayland, Hove, England. ISBN 0750207175

### Hats and shade

Corbett, S. 1995. Hats Off to Hats. Children's Press, Chicago. ISBN 0516081764

### Around the world

Jackson, M. 1994. Our Clothes. Evans Brothers Ltd, London.

Taylor, B. 1994. People at Work. A and C Black Publishing, London. ISBN 071363765X

Walpole, B. 1996. I Wonder Why the Sun Rises and Other Questions About Seasons. Kingfisher, London.

McClish, B. 1994. Hot Desert Lands. McMillan, London. ISBN 0732929326

McInnes, P. and Bowring, J. 1997. An Australian Story. Puffin Books, Victoria. Environment

Costa-Pau, R. 1994. Protecting our Forests. Chelsea House Publishing, New York. ISBN 0791021041

Edmunds, A. 1996. The Greenhouse Effect. Franklin Watts, London. ISBN 0749624485

Edmunds, A. 1996. The Ozone Layer. Aladdin Books Ltd, London.

Ellyard, D. 1996. Weather. Allen and Unwin, St Leonards.

Juniper, T. Threatened Planet. Ladybird Discovery, London.

**Clothing through the ages**

Hewitt, S. and Rowe, J. 1997. *The Clothes We Wear*. Evans Brothers. England ISBN 0237516497

**Earth, sun and solar system**

Levy, D. H. 1996. *Stars and Planets*. Allen and Unwin, St Leonards.

L'Hommedieu, A. J. 1994. *Children of the Sun*. Children's Play International Ltd, Sydney. (complex)

Riley, P. 1996. *Our Solar System*. Wishing Well Books, Noble Park.

Wellington, J. 1995. *Space*. Wayland, Hove, England. ISBN 0750212748

No Author, 2008. *Our Environment Climate Change and Global Warming*. Robert Frederick Ltd, UK. ISBN 0 7554 7967 X

**Solar power**

Harlow, R. and Morgan, S. 1995. *Energy and Power*. Kingfisher, London.

Hawkes, N. 1995. *Focus on Heat and Energy*. Glouster Press, London. ISBN 0749619589

Howes, J. 1994. *The Sun's Energy*. MacMillan, South Melbourne. ISBN 0732937000

**Light**

Wick, W. 1998. *Walter Wick's Optical Tricks*. Scholastic Cartwheel Books, New York. ISBN-10: 0-439-85520-9

Rogers, K. et al. 2001. *The Useborn Internet Linked Library of Science: Light, Sound and Electricity*. Useborn publishing, London.

**General**

Rogers, K. et al. 2000. *The Useborn Internet Linked Encyclopedia*. Useborn publishing, London. ISBN 0 7460 3888 X

**Managing Peer Pressure**

Alexander, J. 2007. *The 7 Day Self Esteem Super-Booster*. Hodder Childrens Books, London. ISBN13: 978 0 340 930670

**Drama**

Swasbrook, E. 1995. *Health and Safety Through Drama*. Prim-Ed Publishing, Nuneaton, Warwickshire. ISBN 1864002042

## For further information

For more information about cancer call the Cancer Council Helpline on 13 11 20.

For more information about being SunSmart, contact your state/territory Cancer Council.

### **Cancer Council Australian Capital Territory**

ph: 02 6257 9999  
email [reception@actcancer.org](mailto:reception@actcancer.org)  
[www.actcancer.org](http://www.actcancer.org)

### **Cancer Council Northern Territory**

ph: 08 8927 4888  
email: [admin@cancernt.org.au](mailto:admin@cancernt.org.au)  
[www.cancercouncilnt.com.au](http://www.cancercouncilnt.com.au)

### **Cancer Council New South Wales**

ph: 02 9334 1900  
email: [info.metro@nswcc.org.au](mailto:info.metro@nswcc.org.au)  
[www.cancercouncil.com.au/sunsmart](http://www.cancercouncil.com.au/sunsmart)

### **Cancer Council Queensland**

ph: 07 3258 2200  
email: [info@cancerqld.org.au](mailto:info@cancerqld.org.au)  
[www.cancerqld.org.au](http://www.cancerqld.org.au)

### **Cancer Council South Australia**

ph: 08 8291 4111  
email: [tcc@cancersa.org.au](mailto:tcc@cancersa.org.au)  
[www.cancersa.org.au](http://www.cancersa.org.au)

### **Cancer Council Tasmania**

ph: 03 6233 2030  
email: [infotas@cancertas.org.au](mailto:infotas@cancertas.org.au)  
[www.cancertas.org.au](http://www.cancertas.org.au)

### **Cancer Council Victoria**

ph: 03 9635 5148  
email: [sunsmart@cancervic.org.au](mailto:sunsmart@cancervic.org.au)  
[www.sunsmart.com.au](http://www.sunsmart.com.au)

### **Cancer Council Western Australia**

ph: 08 9388 4333  
email: [education@cancerwa.asn.au](mailto:education@cancerwa.asn.au)  
[www.cancerwa.asn.au](http://www.cancerwa.asn.au)

