The cost of skin cancer

Suggested level
Years 10 and 11

Prepare yourself (teacher)
Carry out some background research using the SunSmart website (sunsmart.com.au) to find out about the monetary cost and human cost of skin cancer.

Class resources
• A3 paper
• textas
• Blu Tack
• copies of the Venn diagram (optional)

The facts
• More than 2000 Australians die from skin cancer each year.
• Melanoma is one of the most common cancers for Australians aged 15 to 29.
• Melanoma incidence in Australia and New Zealand is between two and five times higher than Canada, the United States and the United Kingdom.
• Skin cancer costs the Australian health system more than $500 million each year - the highest cost of all cancers.

The activity
Discuss the meaning of direct, indirect and intangible costs to health.

• **Direct**: Costs clearly and directly associated with an illness, e.g. financial cost of treatment and medication.
• **Indirect**: The value of lost output, lost production, absenteeism, increased insurance premiums, etc.
• **Intangible**: Consequences of ill health where a monetary cost cannot be attributed including pain, suffering and decreased quality of life.

Students work in groups to develop three mind maps showing the direct, indirect and intangible consequences of skin cancer.

Once the mind maps are developed, ask students to share their information with the rest of the class.
Each student then completes the Venn diagram below, outlining the impact of skin cancer on the individual and the community.

**Think about!**

Doctors’ visits, cost of not working while receiving treatment, emotional toll on family members, colleagues needing to cover your workload, time off work for regular medical appointments and the stress of waiting for test results, etc.

**Extension activity**

1. Explain why there might be a difference between melanoma deaths in men and women.

2. Outline the reasons why the most common sites for melanoma are the lower legs for women and the trunk for men and how this could affect health costs.
Design your own sunscreen

Suggested level
Years 7 and 8

Prepare yourself (teacher)
Locate the sunscreen information on the SunSmart website www.sunsmart.com.au/uv-sun-protection/slop-on-sunscreen. The focus of this activity is to raise student awareness of the appropriate type and amount of sunscreen required, applying sunscreen 20 minutes before going outside and reapplying every two hours.

Class resources
• bottles of sunscreen as examples
• outline of sunscreen bottle (front and back) on A3 paper (black line provided)
• coloured pencils/textas
The activity

Look at the sample bottles of sunscreen provided by your teacher.

You are a graphic designer for a sunscreen manufacturer. Use your creative skills to design the front and back sunscreen labels on the outline provided. You can use written text, diagrams or step-by-step instructions to communicate why sunscreen is recommended, how to apply and the amount you need.

Think about it!

When designing your labels, think about the following:

- A sunscreen brand name.
- A front label which will attract young buyers. Include a SunSmart tagline or catch phrase that will appeal to younger buyers.
- SPF (Sun Protection Factor) rating.
- The category of sunscreen, e.g. water sports, snow, outdoor workers, kids’ formula, etc.
- Make sure the back label meets SunSmart requirements and includes instructions on when to reapply, use by date and storage details.

Extension activity

1. Visit the sunscreen section of the SunSmart website to research the amount of sunscreen required to protect skin from UV damage. Calculate how many applications are in one 110mL tube of sunscreen.

2. How many 110mL tubes of sunscreen would a family of four need for a three day weekend at the beach, assuming they spend five hours per day outdoors?
Suggested level
Years 9 and 10

Prepare yourself (teacher)

Carry out some background research into sunscreen terminology. Make sure you have an understanding of:

- SPF
- UVA
- UVB
- broad-spectrum
- water-resistant
- chemical blockers
- physical blockers

Class resources

- Use the following pictures of sunscreen bottles:
Think about it!

As a class, discuss what the terms below mean and how they help consumers with decision-making.

- **SPF** – Sun Protection Factor provides a guide to a sunscreen’s protection properties.
- **UVA** – Ultraviolet A radiation from the sun, responsible for sunburn, DNA (cell) damage in the skin and skin cancer.
- **UVB** – Ultraviolet B radiation causes skin damage and skin cancer. Ozone stops most UVB from reaching the earth’s surface.
- **UVC** – Ultraviolet C radiation is the most dangerous type of UV. Ozone in the atmosphere absorbs all UVC so none reaches the earth’s surface.
- **Broad-spectrum** – filters both UVA and UVB radiation.
- **Water-resistant** – Helps prevent formula from washing off while swimming or sweating.
- **Chemical blockers** – Sunscreens that absorb UV radiation before it damages the skin.
- **Physical blockers** – Sunscreens that act as a physical shield reflecting UV radiation away from the skin.

The activity

Look at the pictures provided to complete the following decision-making activity.

1. If you were to purchase a bottle of sunscreen for your daily activities, which would be the most suitable product for you?
2. Explain the reasons why you made this choice and the information you used to make this decision.
3. Outline why it is sometimes difficult for people to make the correct choice when purchasing sunscreen.
4. For each of the sunscreens listed, describe the type of customer you think the manufacturers are targeting.
5. Rank the sunscreens listed in order of most protective to least protective. In a short paragraph, justify your rankings.
6. What should people look for when purchasing a sunscreen?
7. Would it be OK to just use sunscreen as the only form of sun protection? Why or why not?
Making it official

Suggested level
Years 7 and 8

Prepare yourself (teacher)
Get access to a school sun protection or UV policy and allow students to read through this policy. You can download SunSmart’s sample policy template here: www.sunsmart.com.au/online-brief/secondary-schools.aspx.

Class resources
• Copies of a school sun protection or UV policy to share among students.
Think about it!

Discuss the SunSmart policy and practices that were in place in your primary school. What guidelines did you have to follow before going outside? What about your teachers?

The activity

Using the sample policy provided, develop a sun protection or UV policy for your secondary school. Consider uniform requirements, shade provision, access to sunscreen and classroom lessons.

Make sure your secondary school policy clearly differs from a primary school policy.

Clearly outline the sun-protective behaviours required by staff and students and suggestions for how the policy should be implemented and promoted by the school community.

Your SunSmart policy needs to include:

- An outline of why the policy is necessary.
- Identification of shade spaces at your school and recommendations for possible improvements or additions.
- A list of strategies to promote sun-protective behaviours (Slip, Slop, Slap, Seek and Slide) among staff and students.

Extension activity

Develop a two column table with the headings ‘Challenges’ and ‘Solutions’. Under the heading ‘Challenges’, develop a list of reasons why staff and students might resist the introduction of a sun protection policy. Think about the specific elements of the policy that they might find the most challenging. In the next column, under ‘Solutions’, suggest strategies to address each challenge. What have you discovered?
Assessing the risk

Suggested level
Suitable for any year level

Prepare yourself (teacher)

Class resources
• whiteboard
• markers
• copy of the case study analysis for each student

Think about it!
Student to Think-Pair-Share a list of risk factors which increase a person’s chance of skin damage and skin cancer.

Think as individuals taking notes or jotting down ideas.

Form pairs to discuss thoughts and ideas about the task.

Share in small groups by joining with another pair to discuss the issue.

The activity
Scott
Scott has always had naturally olive skin; he tans easily and spends lots of time out in the sun. During summer, Scott’s daily routine involves waking up and having a shower, brushing his teeth, slopping some SPF 30+ sunscreen on his face, walking to school and then heading to the beach for a surf afterwards. When not in his wetsuit, Scott sits on the beach and talks to his friends.

1. Is Scott at risk of skin cancer? Explain your answer.
2. Outline any activities that put Scott at risk of skin cancer.
3. Reorganise and/or add to Scott's daily routine so that he can better protect himself against the sun’s UV.
4. Comment on the following statement: Scott must change his lifestyle to prevent skin cancer.
5. Scott surfs all year round. Would he still need to wear sunscreen in winter? Why/why not?
Linh

Linh is a Year 12 international student from China. Linh loves her new lifestyle in Australia and enjoys being outside. On weekends, Linh likes to go bushwalking with the school hiking club. In preparation for her hikes, Linh puts on SPF 15+ sunscreen before leaving home.

1. Is Linh at risk of skin cancer? Explain your answer.

2. Outline any activities that put Linh at risk of skin cancer.

3. Reorganise and/or add to Linh’s daily routine so that she can better protect herself against the sun’s UV.

4. Explain why it is important for Linh to also wear sunscreen to school. What type of sunscreen do you suggest she wears? Give reasons for your answer.

5. When Linh goes bushwalking, she wears sunscreen, but she only applies it before leaving home. Why might this result in damage to her skin?

6. Do you think Linh receives enough sun exposure? Discuss your response.
Aaron

Aaron is a Year 9 student who is very involved in the local cricket club. Aaron plays cricket at school during recess and lunch and on weekends for his local club. To play for his local club, he must train three nights a week after school. Aaron’s mum put a baseball cap in his cricket bag, but Aaron has not used it. On cloudy days Aaron gets sunburnt. He thinks it is ‘windburn’ as he does not believe the weather is hot enough to cause sunburn.

1. Is Aaron at risk of skin cancer? Explain your answer.

2. Outline the activities that put Aaron at risk of skin cancer.

3. Reorganise and/or add to Aaron’s daily routine so that he can better protect himself against the sun’s UV.

4. Why is Aaron misinformed about ‘windburn’? Provide Aaron with the correct information about windburn.

5. Provide five suggestions that could reduce Aaron’s risk of skin cancer.
Media mapping

Suggested level
Years 8 and 9

Prepare yourself (teacher)
Advertisers and brands have particular techniques to promote certain messages to young people, particularly regarding tanning and body image. Make sure your awareness and knowledge of current sun protection media initiatives is up to date.

Class resources
- A selection of magazines or a prepared selection of digital advertisements shown between September to the end of April.

Think about it!
Predict the results: How many models/actors/personalities in the advertisements appear to have their own natural skin tone?

The activity
Using a contemporary media source such as a magazine or set of digital advertisements, complete the following analysis:

- Develop a table to record your results.
- Look at five or more print and/or digital advertisements and record ratio of tanned vs natural skin colour of models/actors/personalities that appear.
- List the different environments in which the photos/videos have been taken (e.g. beach, bush, indoors).
- List the season/time of year each advertisement is supposed to be projecting.
- Record the ratio of models/actors/personalities who are using sun protection measures such as sunglasses, wide-brimmed or bucket hats, sun-protective clothing or shade.

Compile your results in a spreadsheet and then use the data collected to produce a series of graphs.

Develop a PowerPoint presentation or compose a letter, to present your findings to a Magazine Editor or Digital/TV Producer. Include a summary of the data you have gathered.

Express a point of view as to whether or not you believe the media represents responsible sun protection and tanning attitudes.
**How did you go?**

Develop a paragraph that discusses how accurate your original prediction was.

**Extension activity**

**Group debate**

Assign two teams by dividing your class in half – one team will form the affirmative team and the other the negative team.

All students prepare their argument to the topic *Regulations should be introduced to reduce the number of ‘tanned’ models appearing in advertisements.*

Within each team structure, assign the following roles:

- Team captain
- Debaters
- Time keeper
- Note takers
- Researchers for the team’s assigned position in the debate
- Researchers to prepare a rebuttal to the opposition’s argument.
Scoping out shade

Suggested level
Years 7 and 8

Prepare yourself (teacher)
Be aware of the different shaded areas at your school. Think about areas where shade could be improved or increased. This activity could be modified to teach the components of mapping for Humanities subjects. When developing their maps, students need to include the BOLTSS (Border, Orientation, Legend, Title, Scale, Source) components.

Class resources
• A3 sheet of paper
• pencil
• ruler for map drawing

<table>
<thead>
<tr>
<th>SURFACE</th>
<th>HOW MUCH UV IT REFLECTS (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Snow, old – new</td>
<td>50 – 88%</td>
</tr>
<tr>
<td>Sea surf, white foam</td>
<td>25 – 30%</td>
</tr>
<tr>
<td>House paint – white</td>
<td>22%</td>
</tr>
<tr>
<td>Beach sand, dry, light</td>
<td>15 – 18.0%</td>
</tr>
<tr>
<td>Beach sand, wet</td>
<td>7.1%</td>
</tr>
<tr>
<td>Concrete footpath</td>
<td>8.2 – 12.0%</td>
</tr>
<tr>
<td>Open ocean</td>
<td>8.0%</td>
</tr>
<tr>
<td>Boat deck, wood – fibreglass</td>
<td>6.6 – 9.1%</td>
</tr>
<tr>
<td>Asphalt/bitumen, new (black)/old (grey)</td>
<td>4.1 – 8.9%</td>
</tr>
<tr>
<td>Soil, clay</td>
<td>4.0 – 6.0%</td>
</tr>
<tr>
<td>Open water</td>
<td>3.3%</td>
</tr>
<tr>
<td>Lawn grass, summer – winter</td>
<td>2.0 – 5.0%</td>
</tr>
<tr>
<td>Grasslands</td>
<td>0.8 – 1.6%</td>
</tr>
</tbody>
</table>

This table shows the percentage of UV that is reflected by different surfaces. The higher number means more UV is reflected by that surface. Outdoor areas should try to use materials that reflect less UV.

Think about it!
Think about your school day, when are you exposed to UV?
Are these periods of high UV (e.g. middle of the day) or low UV (early morning or late afternoon)?
How does your school protect you from UV overexposure?
How do you protect yourself from UV overexposure?
The activity

To be completed some time between September and the end of April when UV levels are high.

1. Choose two different areas of your schoolyard. Draw a map of your two chosen areas.
   a. Include one area that has natural or built shade.
   b. Include one area that offers no natural or built shade.
   c. Mark the type of surfaces for each of the areas e.g. grass, concrete, asphalt.

2. Sit close to these two areas during recess and/or lunch and create a table to record usage of these two areas during break times. Record how many people used the area, how long they used it for, what type of activity they did.

3. Develop a summary of usage that could be presented to your Principal. In your summary explain who uses each area, how long it is used for and what activities are done there.

4. Prepare an action plan including five key points to improve each area. Make sure your recommendations consider enough shade to provide sun protection from September to the end of April. Consider surface areas and UV reflection when developing your key points.

5. How could shaded areas be adapted to also allow for some UV exposure during winter?
Our changing environment

Suggested level
Years 7 and 8

Prepare yourself (teacher)
Knowledge of the ozone layer, global warming and climate change.
Activity to be completed some time between September to the end of April.

Class resources
• pens
• workbooks

Think about it!
Think about how weather has changed in the last 10 years and what extreme weather events you have experienced. How do extreme weather events change your outside activities and the number of hours you spend outdoors?
The activity

Over a one-week period keep a journal of your daily UV exposure.

For each day, keep track of the following information:

- Develop a list of activities you participated in when your skin was exposed to the sun’s UV.
- For each activity, comment on the type of sun protection you used (if any) – Slip, Slop, Slap, Seek and Slide. Use the five SunSmart icons to help you.
- Detail any activities that you participated in which increased your risk of UV exposure. What time of day did you participate in these activities? How long were you exposed to UV? Did the time of day change your risk of sun damage or sunburn?
- For each activity outline the steps you could take to reduce your UV exposure. Use the five icons to help you.
- Given the current trend of ozone depletion and climate change, how will you need to change the outdoor activities you participate in? In your response, think about how your life might be different in 10 years’ time.
- Explain what you could do to help reduce global warming.

Slip
Slop
Slap
Sleek
Slide

Protect yourself five ways from skin cancer
Sun-god slaves

Suggested level
Suitable for all year levels

Prepare yourself (teacher)
Pre-reading of The Sunday Age newspaper article *Sun-god slaves making a nation’s mole problem a mountain*.

Access to Survey Monkey (www.surveymonkey.com) is required. You can find out how to use this free internet tool online.

Class resources
- A copy of *Sun-god slaves making a nation’s mole problem a mountain* (provided). Reprinted with permission from The Sunday Age. Article strictly for educational purposes only.

The activity
Read the article to find out more about the issue of skin cancer for young people.

1. Outline in your own words what skin cancer is.
2. Explain the difference between the three main types of skin cancer.
3. Discuss how skin cancer can affect the life of a patient.
4. Explain how the ‘Bronzed Aussie’ culture impacts upon our sun protection behaviours.
5. Over time, the desire to get a suntan has decreased. If this is the case, why has the incidence of melanoma for Australian men and women increased? In your response, refer to the data provided in the article.
6. What are the trends in terms of death rates as a result of melanoma?
7. Provide reasons why it is uncommon for people with naturally very dark skin to get skin cancer. Do people with this skin type still need to take care in the sun?
8. Almost 90% of Victorian primary schools actively participate in the SunSmart Program. Approximately 10% of secondary schools are registered participants of SunSmart’s secondary school UV Program. What might be some reasons for the difference in participation rates? List six difficulties the SunSmart Program might have in trying to promote the sun protection message to adolescents.
Extension activity

- Using Survey Monkey, create your own online survey to find out how many people in your class regularly:
  a. wear sun-protective clothing
  b. wear wide-brimmed or bucket hats
  c. apply sunscreen
  d. use sunglasses
  e. do not follow any sun protection advice.

- Graph your results – remember to give your graph a title and clearly label both axes.

- From your results, what conclusions can you draw about young people and sun protection behaviours?

- What is currently working?

- What improvements can be made?
Sun-god slaves making a nation’s mole problem a mountain

A spike in Australian skin cancer diagnoses has prompted calls for a tougher, more targeted approach to prevention, writes Jill Stark.

“I’m a slave to the sun god’s rays. I just love it,” says Les Tims, 64, who has spent most of his life by Port Melbourne beach. In summer, he takes his shirt off and walks for two hours in the midday heat. “I feel happiest when I’m in the sun. It’s part of being Australian.” Does he wear sunscreen? Never.

Tims’ worship of the sun may be “part of being Australian”, but we pay for it. Almost 30 years after the now iconic “Slip! Slop! Slap!” campaign began challenging the “bronzed Aussie” culture, Australia remains the skin cancer capital of the world. The disease claims more than 1600 lives a year, up from around 1200 in the early 1990s. Melanoma, the most deadly form, has hit its highest level on record. In Victoria, with a 19 per cent jump in cases from 2004 to 2005, the disease has overtaken lung cancer as the fourth most common cancer.

The culture is stubborn. The number of people baking themselves in the heat is almost as high as it was in the late 1980s. Among teenagers, grilled with SunSmart messages from toddlerhood, progress is slow – one in four suffers sunburn on a typical summer weekend compared to around 14 per cent of adults. Specialists fear that hard-fought behavioural changes are on the verge of reversing.

Men over the age of 60, like Les Tims, a Port Melbourne beach regular who never wears sunscreen, are increasingly being diagnosed with skin cancer because they missed the SunSmart messages in their youth. Photo: Simon O’Dwyer

“The worry is that the campaign’s been going for 20 years. There’s a feeling that people have got the message … but skin cancer rates are still going up and if the programs drop off, people revert back to sitting in the sun and that’s a real risk,” says Peter Foley, an associate professor at the University of Melbourne who is based at the Skin and Cancer Foundation.

There has been progress – people do wear hats more than they did, and sunscreen is more common. In most primary schools, children are banned from the playground without a hat. The number of people who say a tan is desirable has almost halved since the late 1980s. And most of the increase in skin cancer victims are those who never had SunSmart messages as kids – people like Les Tims. But even among those aged about 40, rates are rising, and a large proportion of younger people are still not getting the message.
The stubbornly high rates have prompted calls for a new approach – and much more funding. SunSmart, funded by VicHealth and the Cancer Council, operates in 87 per cent of primary schools, where playgrounds must have adequate shade and students must wear hats outdoors. But only 13 per cent of high schools take part in the program and experts believe the anomaly needs to change, even if hats are “uncool”. There are calls for new buildings to include shade as a matter of course, and for public campaigns to target the most at-risk groups rather than continue with a general “cover up” message.

Rod Sinclair, professor of dermatology at St Vincents, says it is uncommon for people of African or Asian origin to get skin cancer. “The ones who burn the easiest – the fair-skinned people – are the ones at greatest risk, so they’ve got to think carefully about how they expose their skin. It can’t be a one-size-fits-all approach.”

Experts say the spike in skin cancer rates is partly due to greater awareness and better detection as more people seek treatment. Our close proximity to the equator, clear skies and depleted ozone layer give us the highest ultraviolet radiation levels in the world. Professor Foley says rising skin cancer rates are largely due to the time-lag – skin cancer can lie dormant for two or three decades. Older people are increasingly being diagnosed, particularly men over 60.

“Childhood exposure is one of the biggest risk factors for developing melanoma later in life, so although we’re now up to 28 years since the Slip! Slop! Slap! campaign began, it means people over the age of 45 who had that exposure in primary and secondary school – before the message was out there – are developing skin cancers and melanomas.”

But what of younger people, who have never known a time without sunscreen, long-sleeved swimsuits and legionnaire hats? Skin cancer figures among under-25s have dropped, but teenagers are still taking dangerous risks in alarming numbers. Less than a third remember to wear a hat or sunscreen compared to half of adults.

Skin cancer figures take a long time to collect – the most recent data is from 2005. Specialists told The Sunday Age they fear rates could be on the rise as they are starting to see more cases in people in their 20s and 30s. Professor Sinclair says many young people coming to see him have red hair and fair skin. “They have usually had a lot of sun exposure and spent a lot of time down the beach, and we do see more people who are using solariums. But it’s like smoking: everyone knows it’s bad for you but some people will still smoke despite the risk. Amongst the young people I see, ignorance is not the reason they have got skin cancer; they have just chosen not to do anything about sun protection.”

For Richmond teacher Matt Stevic, 29, who contracted melanoma at age 22 after a fortnight “scorching” himself on a beach in Noosa, sun protection was not on his radar. “I was fairly naive. I just didn’t think it could happen that quickly. I was on holiday and wandering around with my shirt off. I just thought it was sort of cool to have a tan so didn’t really bother to put on sunscreen. I was lucky I got it early because it could have killed me. I guess it takes something like that to give you a wake-up call.”

Australians aged 12 to 24 are more likely to contract melanoma than any other cancer. The fashion editors who depict the body bronzed as the most beautiful should shoulder some of the blame, according to John Kelly, head of the Victorian Melanoma Service at The Alfred hospital.
“Teenagers are, by nature, resistant to health prevention messages – they feel immortal and they’re very much subject to peer pressure. If the media continue to promote a tan via advertising with tanned models and promotions for vacation spots that say ‘you’ll get nice and brown’, then there’s a subliminal message that there’s something cool about a tan, and young people are very slavish in what they perceive to be the right look.”

Getting a group of natural risk-takers to protect against a disease that might not affect them for decades is a huge challenge. Melanie Wakefield, director of behavioural research at the Cancer Council Victoria, says adolescents are less likely to wear hats for fashion reasons but often they forget to protect themselves with clothing and sunscreen – so reminders through mass media campaigns are vital.

“Towards the end of the 1990s and into the noughties, we’ve seen a plateauing of those effects (of campaigns) right up until the summer of 2006-07, when there was a national campaign run and we saw some improvement. If we take our foot off the pedal we could risk seeing some reversal of those gains and that would be a tragedy,” Ms Wakefield says.

One problem is money. In a report to be released early next year, the Cancer Council will warn that, without major investment, skin cancer rates will rise more steeply and deaths will mount. Specialist clinics are already struggling with the surge in demand, and there are fears potentially higher temperatures caused by climate change will exacerbate the problem. SunSmart in Victoria, which began in 1988, eight years after “Slip! Slop! Slap!” was launched, has invested $20 million in campaigns.

But despite skin cancer being the most expensive cancer to treat, costing more than $300 million a year, the Federal Government only began funding national prevention campaigns three years ago. The current campaign, which includes a television ad showing a young woman having a melanoma surgically removed, had an immediate positive impact on use of sunscreen and hats, according to Craig Sinclair, chairman of the Cancer Council’s national skin cancer committee.

“We’re now in an unfortunate situation where we have no indication that the investment will continue beyond this summer, despite evidence that it works. Some states rely solely on charity to fund SunSmart programs, so the investment is piecemeal and minimal given how much skin cancer costs our health system.”

The “Slip! Slop! Slap!” message has been praised for its simplicity, but that may no longer be its strength. “Unlike the ‘Quit’ campaign,” says Rod Sinclair, “where you can get the message out that one cigarette is bad for you, with the sun it’s not as clear-cut because it can depend a lot on skin type. Some people actually benefit from getting out in the sun, particularly black-skinned women who may cover up for religious reasons and don’t get enough vitamin D.

“We can’t solve an entire problem with a single strategy.”

Source: Reprinted with kind permission from The Sunday Age. The Sunday Age Dec 14 2008: pg 6
Suggested level
Year 10

Prepare yourself (teacher)
Pre-reading of the Canberra Times newspaper article Sunscreen ban mystifies Foreshore crowd and authorities.
Organise internet access for the class.

Class resources
- copy of Sunscreen ban mystifies Foreshore crowd and authorities. Reprinted with permission from Canberra Times. Article strictly for educational purposes only.
- access to the internet.

The activity

Part 1: Investigation
Use the internet to complete the following task:

- Outline the incidence of non-melanoma skin cancer and melanoma in young Australians.
- Discuss the importance of skin cancer prevention programs and how these promote a sun protection message to Australians.
- Find out about the UV Index. A UV level of 14 was recorded on the day of the festival. What does this mean for a person who is not regularly applying sunscreen or using other forms of sun protection?
- Explain the importance of regularly applying sunscreen whenever UV levels are 3 and above. Is sunscreen enough to protect your skin from sun damage?

Part 2: Writing task
Use the information that you collected to prepare a letter to the Foreshore Festival organisers explaining the possible consequences associated with their sunscreen ban. What are some alternative strategies they could employ to promote sun protection behaviours at their event?
Sunscreen ban mystifies Foreshore crowd and authorities

Security guards surprised music fans and earned the ire of Cancer Council ACT by confiscating sunscreen at the popular Foreshore festival.

The confiscations came on the final day of National Skin Cancer Action Week, and as the Bureau of Meteorology was reporting extreme UV levels for Canberra.

Foreshore attendee Emma Wilson, of Farrer, said she was astonished when security personnel refused to let people take sunscreen into the venue on Saturday.

“They were taking it off people, claiming sunscreen was available inside.”

Once inside, Ms Wilson reported patrons found sunscreen very difficult to obtain.

Elinore Gerritsen, of Lyneham, said she was shocked by the behaviour of security guards.

“I don’t understand why they did it. There was nothing available inside except for the Red Cross and they were very difficult to find ... Why would they take sunscreen? It’s not like anyone is going to drink the stuff.”

Cancer Council ACT spokesman David Wild expressed concern at the reported confiscations.

“Without knowing exactly why they were confiscating sunscreen, I have to say it sounds like a very unfortunate thing to do,” he said.

“We do a lot to get the right messages out there and it would be disappointing if that message worked, only to be thwarted by event organisers.”

The Red Cross regularly operates its Save-A-Mate campaign at dance festivals and parties. Staffed by volunteers, Save-A-Mate supports festival-goers with healthy messages and on-the-spot care, such as providing water and sunscreen.

Red Cross Save-A-Mate organiser and coordinator Belinda Stedman attended Foreshore and reported the crowd was well behaved.

“It was a good day overall a great vibe,” she said. “I don’t know if we handed out any more sunscreen than usual, but it certainly was in high demand.”

A police spokesman expressed surprise that sunscreen had been confiscated. “That is unusual - maybe an over-zealous use of a no-liquids policy,” he said. “It’s certainly not something we would approve of.”

Foreshore organisers Kicks and security firm I-SEC could not be reached for comment.

Source: Reprinted with kind permission from Canberra Times. Canberra Times Jan 29 2010: pg 3
Sid the Seagull

Suggested level
Years 7 and 8

Prepare yourself (teacher)

Class resources
• A3 poster paper
• coloured pencils
• access to a computer design program (if possible).

The activity
SunSmart’s iconic Sid Seagull recently turned 30 and is in need of a makeover. Bring Sid Seagull into the modern age. You are the advertising agency responsible for designing an advertisement for young people aged 13–24 years using Sid. Design a song which includes SunSmart’s key messages and present this, along with a story board of your video idea, to the class.

Think about!
How will you communicate to the public that it’s UV, not temperature, that causes skin damage and skin cancer?
UV or temperature?

Suggested level
Years 7, 8, 9 and 10

Prepare yourself (teacher)
Everyone is exposed to ultraviolet (UV) radiation from the sun. The sun sends out different types of radiation – visible light that we see as sunlight, infrared radiation felt as heat and UV radiation that we can’t see or feel. People often confuse infrared and UV radiation. When the temperature is cool it means less infrared radiation, but not necessarily less UV radiation.

Exposure to UV radiation from the sun is the major cause of skin cancer. UV radiation from the sun is also one of the best natural sources of vitamin D. Vitamin D is necessary for healthy bones, muscles and overall health.

Levels of UV radiation from the sun change throughout the day, months, seasons and location. The total amount of UV radiation present at a given location is affected by:
- closeness to the equator
- time of day
- time of year
- cloud cover
- altitude
- scattering
- reflection.

Class resources

UV index range

12
Extreme

6
Very high

39
Very high

68
High

10
High

12
Moderate

246
Moderate

p
Low

m
Low

UV index range
The activity

Read through the SunSmart webpage www.sunsmart.com.au/uv-sun-protection/uv

1. Complete the following table by identifying which of the following conditions are caused by UV and which are caused by infrared radiation (heat).

<table>
<thead>
<tr>
<th>UV radiation</th>
<th>Infrared radiation (heat)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Goose bumps on the skin</td>
<td></td>
</tr>
<tr>
<td>Skin flushing and reddening</td>
<td></td>
</tr>
<tr>
<td>Freckles</td>
<td></td>
</tr>
<tr>
<td>Sweating</td>
<td></td>
</tr>
<tr>
<td>Wrinkles</td>
<td></td>
</tr>
<tr>
<td>Sunburn</td>
<td></td>
</tr>
<tr>
<td>Shivering</td>
<td></td>
</tr>
<tr>
<td>Sagging of the skin</td>
<td></td>
</tr>
<tr>
<td>Cataracts</td>
<td></td>
</tr>
<tr>
<td>Sunspots</td>
<td></td>
</tr>
</tbody>
</table>

2. Using the results from the table above, explain the difference between UV radiation and infrared radiation (heat).

3. Why does SunSmart suggest that people check the UV level each day to determine if sun protection is required?

4. At what UV level is it advised that you should Slip, Slop, Slap, Seek and Slide?

5. At what UV level is it advised that sun protection is not recommended? What is the reason for this?

6. Are there any exceptions to this?

7. Describe a situation/environment where temperature could be low, but UV extreme.

8. Some parts of Australia can reach extreme UV levels on a daily basis. What are some strategies you could use to communicate this important message to overseas visitors?
Extension activity

Imagine you are looking in a magic mirror that can see into the future. Draw a full body picture of what you would look like in the future if you didn’t protect yourself from UV? Clearly label the parts of your body most affected.