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 and other sources, such as solariums, is the major cause of skin cancer. UV radiation from the sun is also one of the best natural sources of vitamin D so a balance is important. Vitamin D helps to develop and maintain healthy bones, muscles and general 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

- access to SunSmart website page: FAQs about UV radiation www.sunsmart.com.au/uv-sun-protection/uv

The activity

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

1. Identify which of the following conditions are caused by UV and which are caused by temperature by completing the following table.

	UV radiation	Temperature
Goose bumps on the skin		
Skin reddening		
Freckles		
Eyes swelling		
Sweating		
Wrinkles		
Sunburn		
Shivering		
Flushed cheeks		
Sagging of the skin		
Cataracts		
Sunspots		

2. Using the results from the table above, explain the difference between UV radiation and infrared radiation.
3. Why does SunSmart suggest that people check the UV Index 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 required? 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. Places across 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 you in your current bathers. What would you look like in the future if you didn't protect yourself from UV? Clearly label the parts of your body most affected.