

16: burns & scalds

suggested answers

1) Using the clues provided, someone like Woosha could:

1. get sunburnt eyes because sunglasses are broken (or not used or even brought on the trip)
2. get sunburnt shoulders from not properly covering up
3. burn themselves (or someone else) toasting marshmallows over a campfire
4. get hot wax over themselves (or someone else) if they have a lit candle inside their tent – a good principle to follow is **no naked flames & nothing alight inside tents**
5. burn their hands handling hot metal that doesn't look hot (e.g. a can of baked beans). (Students may not be aware that cans will explode if they are not punctured before heating, as will certain porous rocks if they are thrown into a fire.)
6. spill boiling hot billy tea over themselves (or someone else)

2) Firstly, **never** light a fire on a day of total fire ban or in any hot, windy or otherwise dangerous conditions.

Secondly, never rely on fires for cooking, warmth, etc.

If you have a campfire:

1. keep it small
2. contain it in a fireplace or trench
3. ensure that the area within a 3 metre radius of the fire is clear of flammable material
4. ensure that an adult is present at all times
5. ensure that there is sufficient water within easy reach in case of emergency
6. ensure that the fire is completely extinguished with *water* before you leave it. (This point raises the supplementary question of how you know that the fire is well & truly out. Our view is that when every square inch of fire bed is doused with water, there is no sizzle or steam.)

3) STOP DROP ROLL

4) The **D** – removing them from danger or removing the danger

5) The water must be cool to minimise damage to the burnt area. It must be clean (ideally, sterile) to minimise the risk of infection. Cool clean water will also help pain management. Any delay will increase the extent of damage & prolong pain & suffering. (Never use the old-fashioned remedy of applying butter or the like as these sorts of oils just retain the heat.)

6) Unopened spring water is sterile. Irrigating with confectionary drinks is probably better than doing nothing.

7) According to the **St John Ambulance Australian First Aid** manual, the general principles for managing burns are:

1. follow DR ABC
2. cool the burnt area
3. cover the burnt area with a non-adherent/burns dressing (or aluminium foil, cling wrap or wet clean dressing)

footprints answers

4. prevent infection
5. minimise shock

8) True or false?

a. Sun cream has a use-by date.	TRUE
b. Snow-blindness from not wearing sunglasses at the snow is painful & permanent.	It is painful but not permanent.
c. Sun cream should be applied half an hour before you go into the sun.	TRUE , though some of the literature says 15-20 minutes.
d. Applying — & regularly reapplying — sun cream that is not out-of-date will definitely prevent sunburn.	FALSE . Sunscreen just slows down the rate of sun damage. As an example, someone who would burn in 12 minutes using no sunscreen would burn in 120 minutes using SPF10 sunscreen (i.e. SPF10 slows down the rate of burning by a factor of 10).
e. Getting sunburned is not harmful if I) you go red then go brown, or II) you have dark skin.	FALSE . Any sunburn indicates skin damage with possible long-term serious consequences. Suntans offer slight protection against burning (due to the layers of dead skin cells). Dark-skinned people have more melanin in their skin cells which means that they are better protected, but they will still burn.
f. You can get sunburnt under the water.	TRUE – according to http://www.weather.gov.hk/education/edu06nature/ele_spf_e.htm “At half a metre under water, the uv is still 40% as intense as at the surface.”

additional activities

Ask students to research topics such as:

1. the nature of burns, ranging from superficial to full thickness
2. the flammability of various types of material (e.g. wool cw polyester)
3. specific rules relating to fire ban days
4. sunscreens & their most effective application. (A research question, for example, could be the advantages of broad spectrum sunscreen.)
5. different kinds of skin cancers (e.g. how to recognise them, how they are treated, etc.)

further notes

See also **Footprints** worksheet #47: “How not to fry yourself with a Trangia stove.”