

Chapter 4 Bushfires

Adrienne English

Fire has been part of the Australian environment for millions of years. They have helped shape our landscape and continue to be a part of our lives each summer. Bushfires can be responsible for the loss of homes, land and lives. So what is a bushfire? There are four types:

- *surface fires* burn above the ground in grass, leaf litter and shrubs;
- *crown fires* burn in the same places as surface fires, but also in trees;
- *ground fires* burn underground in tree roots, soil or rubbish tips; and
- *spot fires* occur when the wind blows debris ahead of the fire front.

What fires need

Most bushfires are caused either intentionally or unintentionally by people. They can start in a number of ways, such as by out of control burning off, sparks from machinery, short circuits in overhead electrical lines, or even lightning. Fire needs three essential elements to continue burning:

- *fuel*,
- *heat* and
- *oxygen*.

To control a fire, one or more of these elements must be removed. (See Figure 4.2)



Figure 4.1 Bushfires are a major hazard in many regions of Australia

This is why it is important for people in fire risk areas to remove combustible material from near their homes. It is ironic that an abundance of rain can lead to bushfire hazard. Plentiful rain in the wet season, for example winter in southern Australia, causes grasses and bushes to flourish and provide lots of bushfire **fuel** for the dry season that follows. Reducing the fuel in the area around one's home is essential. It is wise to keep the gutters free from leaves and twigs as a small fire there can quickly move under the roof and destroy a house. Fire-fighters often deprive bushfires of fuel by burning fire breaks or removing vegetation with a road grader, or bull-dozer, ahead of the fire's path.

Three things fire must have (and how these help us stop fire)

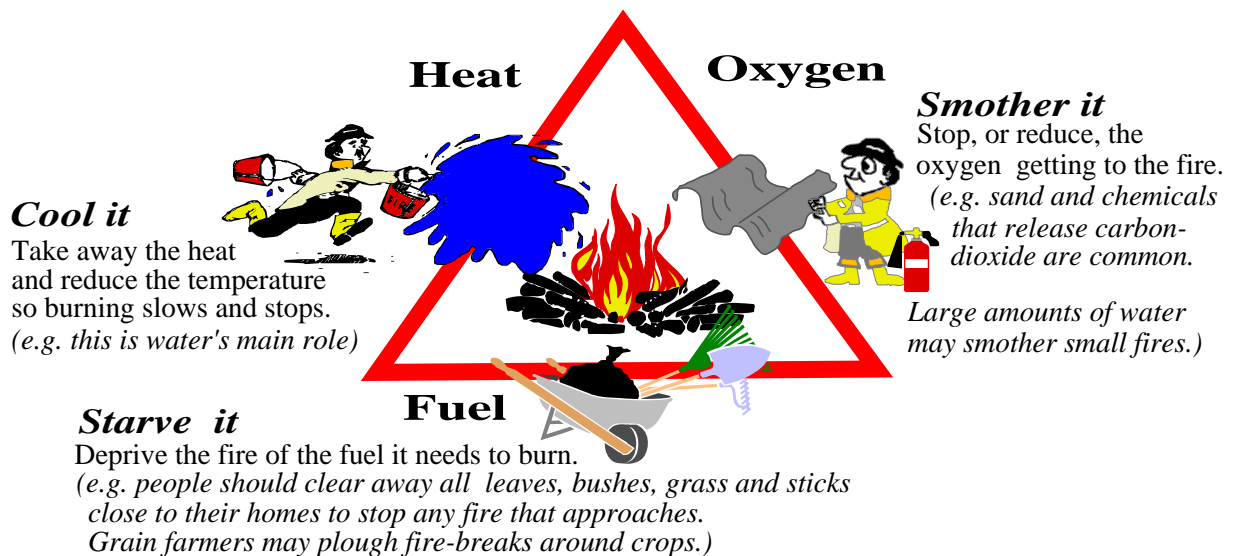


Figure 4.2 The three essentials for a fire.

Fuel + Heat + Oxygen → Fire

Activity 4.4 - Being prepared at home

a In groups of 3 or 4, decide which of the following statements are true and which are false:

- (1) Keep old, dry papers and magazines in your garage.
- (2) Remove dry leaves, paper and rubbish from around the house and in gutters.
- (3) If a fire is approaching, open all the doors and windows.
- (4) In the case of a fire, move furniture away from windows to prevent sparks entering and setting it alight.
- (5) Plant trees and shrubs close to your home for protection.
- (6) Wet towels and blankets around window and door frames will prevent smoke and embers from entering the house.
- (7) Store wood piles away from your home.

Answers can be found at the back of this booklet. (page 38)

b Rewrite the false statements to make them true.

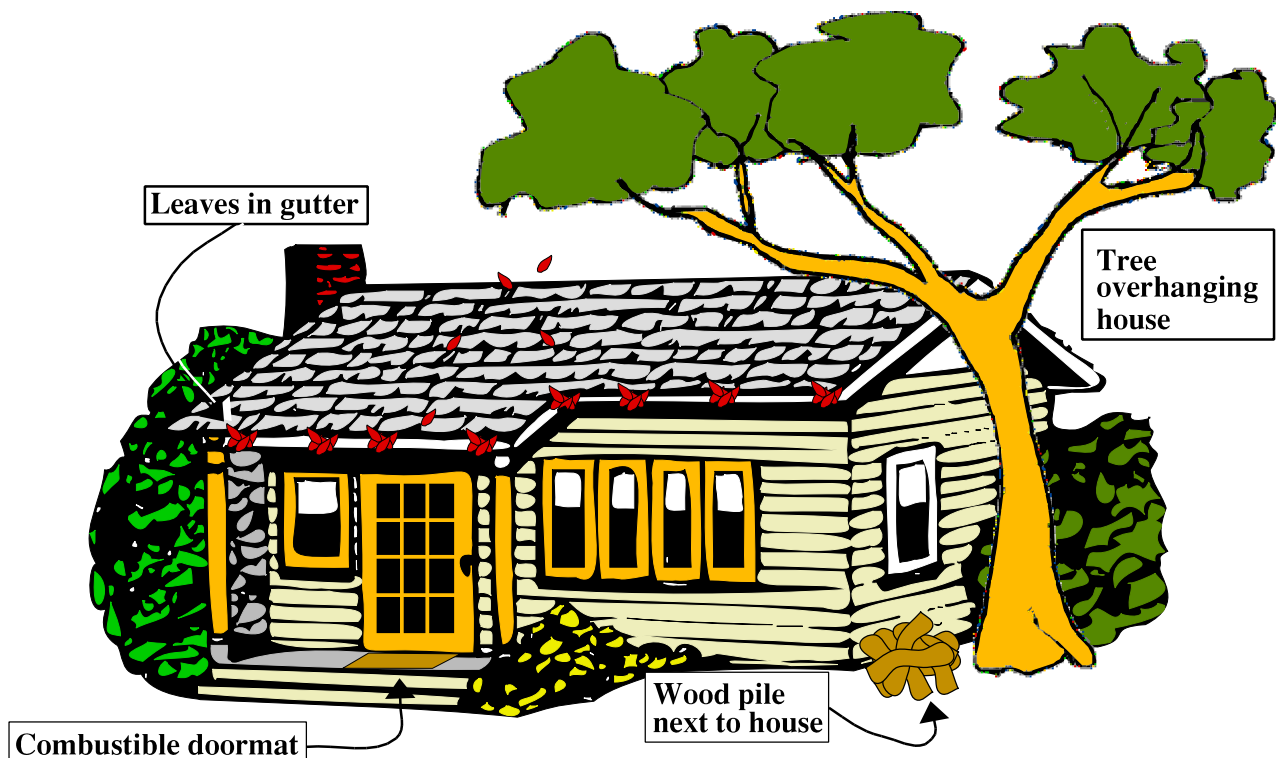
c Share your results with other groups.

d Choose one of the true statements and design a poster for it.

e Draw a sketch of your house and identify any potential fire starting spots and where, if any, flammable materials are kept. Figures 4.6 suggest a couple of ideas to get you started.

f Make a list of ways to make your house and property less vulnerable to fire, e.g. install a sprinkler system around your house.

g Invite a guest speaker from your local fire authority to speak to the class. In groups record the main points of this talk and then use these points to write a report. Submit the best report written in your class to the school administration for publication in a parent newsletter or school magazine.



Potential fire hazards and spots where fire may begin to burn

Figure 4.6 Here are some potential fire starting spots.
Can you think of others at your house?