



Core units: Exemplars – Year 5

Illustration 1: Bushfire stories

The GeoSix and the bushfire

Chapter One

Dominic, Antonia, Sophie, Hannah, Joshua and Jonty were going away together again. After their last adventure they had decided to call themselves the GeoSix because there was six of them and they had found that they were all interested in geography. Joshua and Jonty were fascinated with living things, Hannah watched the weather events closely, Sophie liked trees and plants, Dominic wanted to know more about other countries, and Antonia was a close observer of every building, street, and activity around her.

This time, they were travelling to Dominic's friend's house in the country in Victoria. His friend, Sam, lived in a beautiful hills area, and had invited Dominic and his cousins there during the January holidays. Sam's house was surrounded by trees and it was almost on the top of a hill with great views.

As the five cousins drove towards Sam's house they admired the dense forests.

'Living here must be so different to living in our suburb,' said Jonty. 'No noises, no nuisances, plenty of hills to ride our bikes.'

'I want to climb that tree,' said Hannah. 'I bet I will be able to see forever.'

'You might,' said Sam, 'but not today. It is going to be a really hot, windy day and we should go to a sheltered spot in the cool shade.'

So the five cousins and their friend set out for an area that Sam knew well. It was a clearing in the trees where they could have a picnic, kick a ball and ride their bikes. It was cooler and more sheltered than elsewhere, but the weather was not improving. The temperature was rising and the wind was getting stronger.

By lunchtime the wind was so strong that Sam said: 'This is a really bad day for bushfires. If anyone lit a fire today, it could easily get out of control. See the dead leaves on the ground? They burn easily and the wind blows them around. The fire would climb from the grass to these trees and they would burn easily because of the eucalyptus oil in their leaves.'

'Let's go back to Sam's house,' said Antonia. 'It will be cooler there. Did you notice that the trees were cleared near the house so there is less danger from fires?'

'And we keep the dead grass and leaves away from the house and especially the gutters,' said Sam.

They set off on their bikes, pushing hard against the strong wind. Suddenly Joshua shouted, 'What are those people doing?'

The others followed his pointing finger. They saw three men and a barbecue. But something was wrong! The barbecue fire had spread to the grass, and the men were jumping around trying to stamp out the fire. As fast as they stamped it out, it erupted somewhere else. The leaves and grass were catching fire and the wind was blowing it this way and that.

At this point you can think about the story so far. You might write your own version of what you think will happen next.

Chapter Two

After their experiences with the barbecue fire that got away, the six cousins became very aware of the dangers of bushfire. They had seen how quickly a fire could spread, and how dangerous it could be.

'We should find out more about the causes of bushfires,' said Antonia, 'I know that there have been bushfire disasters in Australia, but I would like to know why.'

'Let's talk to other people, and look up some books and websites,' said Joshua. The others agreed. They decided that they would compare notes in a week's time.

'Wait!' said Dominic. 'We have to be a bit more organised. Let's make a list of the things for us to find out, and then divide up the jobs.'

'What are the things we need to investigate? The effects of the strong wind must be one of them,' said Hannah.

'Yes, and the type of trees must also be important,' said Sophie.

'Not only the trees, but also the amount of grass,' said Jonty.

'Okay,' said Dominic, 'let's start with these and see what we can discover.'

At this point your class might do the activities suggested by the Geosix. When you have completed the gathering of information you will be able to compare it to what the GeoSix found.

The GeoSix got together a week later. They had all investigated pieces of information, and they were keen to tell each other.

Hannah was bursting to tell her cousins what she had discovered about wind.

'North winds are the most dangerous in Victoria, New South Wales and South Australia,' she said. 'Because they come from the north, they bring very dry and hot air from the deserts into the south of Australia. On days when they are strong they can blow bits of burning material for hundreds of metres, sending the fire into new places very quickly.'

'Yes, and it is burning pieces of leaves and branches from gum trees that those winds blow,' added Sophie. 'I discovered that Australian gum trees (eucalypts) are particularly dangerous in bushfires because they contain eucalyptus oil which vaporises and burns when the fire around it is very hot. Did you know that people have seen gum trees almost exploding in the heat of fierce bushfires?'

'I found out about grass,' contributed Jonty. 'I remember the barbecue fire that we saw getting out of control was spreading quickly through the grass. Because it was January, the grass was completely dry, and it burned easily. The higher and thicker the grass, the more easily the fire spread.'

Dominic concluded, 'If we put all this together, we have found how dangerous the combination of strong dry winds, eucalypt trees and dry grass can be. But all of these things existed a long time before people were here. Do you think bushfires have always happened here?'

Chapter Three

'Have bushfires always happened here?'

This was the question that the six puzzled over. If bushfires had always been so fierce, why hadn't the forests been destroyed when there was nothing to extinguish them? If they had not been so fierce, what had changed to increase the danger from bushfires?

Sam was the person who helped to answer the first question. Because he had lived in the hills all his life, he seemed to know all about the trees and other plants.

'Eucalypts are very difficult to kill,' he told his friends. 'Even after a very big fire, when they look black and charred, their trunks soon become covered in tiny green leaves. These leaves help the tree to survive until the branches sprout the regular leaves.'

'The first people here, the local Aboriginal people, knew this. They also knew that fires burned old dry grass and encouraged new grass to grow. Animals could be driven to waiting hunters by fire, also. Aboriginal people in central and northern Australia still use this method of land management.'

'Well that answers the first part of our question,' said Dominic, 'but what has changed to make bushfires into the dangerous monsters they have become?'

At this point you can think about answers to Dominic's question: '... but what has changed to make bushfires into the dangerous monsters they have become? This may lead to class discussion and debate, before the next section is read.

'Let's think about this,' said Sophie. 'What are the things that have changed most?'

'Well,' said Jonty, 'I suppose the buildings and the farms are the biggest changes.'

'And over the other side of the hill, there are even more houses on the edge of a large town,' said Joshua. 'All of these buildings are very close to the trees and they are surrounded by dry grass. I think that it must be much more dangerous now there are lots of houses very close to trees than it was when there were just trees.'

Antonia thought about this. 'If people who have built these houses know about the danger of bushfires, surely they should be taking precautions? What are the things that we would do if we lived in a bushfire area?'

At this point you can think about answers to Antonia's question: 'What are the things that we would do if we lived in a bushfire area?' Think about individual and community precautions and preparations for bushfires.

Chapter Four

After Antonia had posed the question: 'What are the things that we would do if we lived in a bushfire area?' The GeoSix decided that the best way to answer this would be to do some fieldwork.

If you are a geographer and you want to find out answers to a problem, a good starting point is fieldwork. You go outside and look carefully at everything you can see around you that relates to your question.

This is what the GeoSix realised they must do: walk around the hills where they were staying, and take careful note of any precautions that people had taken against fires.

'We must also be creative,' said Hannah, 'and think about not only what people have done, but also what else they could do.'

The six cousins tramped up and down the streets and country roads looking at houses, farm buildings, trees and grass. They also noticed different types of fences, some small dams, and a lot of water tanks.

They noticed that some houses were surrounded by trees, with big branches even overhanging the roof. Other houses had a wide area around them cleared of all trees and grass. Some houses also had sprinklers on the gutters all around the roof. Dominic looked closely at some of these, and discovered that the pipes supplying water to the sprinklers came from the swimming pool.

Sophie and Hannah were looking closely at the houses. Some of them had metal shutters which could be lowered to cover each window.

'Do you think that the shutters stop fire getting into a house through the windows?' Hannah asked Sophie.

'Yes,' replied Sophie, 'but look! Some houses have other places where fires can get in under the roof. They have gaps which are open. That looks dangerous!'

In their fieldwork travels, Sophie and Hannah found some houses which were made from wood that looked as if they would burn easily, and others which were made of metal, and one which had earth on some sides and on its roof.

Out on the roads, Jonty and Joshua were looking at the warning signs which told people not to light fires between October and March. They also noticed that electricity powerlines overhead had spacers to hold them apart so they did not touch during times of strong winds. Along the roads, each house had a number plate on its front gate showing a map reference number.

In the town centre, Antonia found the local Country Fire Service station, which had a siren to call volunteers when they were needed to fight a fire. At the post office and in the shop, she collected some brochures with hints on how to prepare for fires and to prevent them from becoming disasters.

After a lot of walking, and a great deal of finding out, the GeoSix got together for a proper meeting. They all had some information they had gathered, and they listened carefully to each other.

At this point your teacher will introduce some final activities, for example:

A mock meeting where different children take roles as members of the GeoSix and talk about what they have discovered about bushfire precautions and dangers.

- *Making a list of all the dangerous features and the good precautions that the GeoSix observed in their fieldwork.*
- *Looking up fire prevention on websites and add other facts to the list.*
- *Preparing a report on the good and bad techniques of building and living in bushfire hazard areas.*