

# DISASTER RESILIENCE FOR YEARS 7-10

## Introduction

Australians have experienced many catastrophic natural disasters, both here and abroad, in recent times. We have seen long periods of drought followed by devastating floods. Each year communities face the prospect of blistering summer heat waves and a long, dangerous fire season. We witness tropical cyclones and massive floods. Severe storms threaten almost anywhere. Natural hazards have the potential to cause significant loss and disruption – they can become natural disasters.

Many communities, including school communities, are situated in extremely hazard-prone environments. The National Strategy for Disaster Resilience is based on the notion of shared responsibility. It calls upon all sectors of society – governments, schools, households and individuals to play a part in preventing, preparing for, responding to, and recovering from, natural disasters.

Community leadership and education are crucial to building resilience to disasters. Teachers and supportive school leaders can help students understand their local hazards and risks, and how to work with others to prepare and respond safely. The latest information and safety advice is free and easily accessible. Each student has the right to learn how to live safely with natural hazards and this can begin in the classroom.



## ABOUT THIS LESSON PLAN

This lesson introduces the topic of disaster resilience. It invites investigation of local hazards and action to mitigate the associated risks. Further hazard-specific information and safety advice is freely available online at [emergency.vic.gov.au](http://emergency.vic.gov.au).



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## CURRICULUM CONNECTIONS

This content has been mapped to the Victorian Curriculum. The Victorian Curriculum F-10 incorporates the Australian Curriculum and reflects Victorian priorities and standards.

<b>Geography</b>	<p><b>Levels 7 and 8</b></p> <p>Causes of a geomorphological hazard and its impacts on places and human responses to it to minimise harmful effects on places in the future.</p> <p><b>Elaboration</b></p> <ul style="list-style-type: none"> <li>researching how the application of principles of prevention, mitigation and preparedness minimises the harmful effects of geomorphological hazards.</li> </ul> <p>Causes of an atmospheric or hydrological hazard and its impacts on places, and human responses to it to minimise harmful effects on places in the future.</p>
<b>Health and Physical Education</b>	<p><b>Levels 7 and 8</b></p> <p>Investigate and select strategies to promote health, safety and wellbeing.</p> <p><b>Levels 9 and 10</b></p> <p>Plan, implement and critique strategies to enhance the health, safety and wellbeing of their communities.</p>
<b>Civics and Citizenship</b>	<p><b>Levels 9 and 10</b></p> <p>Discuss how and why groups, including religious groups, participate in civic life.</p> <p><b>Elaboration</b></p> <ul style="list-style-type: none"> <li>researching the work of a non-government organisation (NGO), philanthropist or community group, and how and why they contribute to the Australian community.</li> </ul>

Sourced from [victoriancurriculum.vcaa.vic.edu.au](http://victoriancurriculum.vcaa.vic.edu.au) August 2017.



# NATURAL HAZARDS AND DISASTERS

Natural hazards are part of all environments. Each year we have fire seasons and cyclone seasons. Australia is prone to drought, heat waves and floods. Earthquakes are common and can trigger tsunamis. Severe storms can happen almost anywhere. Natural hazards such as these have the potential to cause widespread property damage, destruction, injury and loss of life. Entire communities can be impacted and need help to recover. When this happens, we often describe the event as a natural disaster.

Our region has experienced some of the world's most devastating natural disasters. Victoria is one of the most bushfire-prone places on earth. It has experienced many major bushfire disasters, including Black Friday in 1939, Ash Wednesday in 1983, and Black Saturday in 2009. Tropical cyclones regularly threaten Queensland, Western Australia and the Northern Territory. The most deadly cyclone disaster happened in Darwin in 1974. Cyclone Tracy showed how unprepared an entire city was. Severe Tropical Cyclone Yasi made landfall in 2011 and caused billions of dollars in damage, but claimed only one life. This example shows that we can learn from past disasters and better prepare for, respond to and recover from future disasters.



## 2009 BLACK SATURDAY BUSHFIRES

**February 7, 2009.** Tim Huggins is returning to his home in the Kinglake Ranges when he spots smoke drifting in from the north.

Living in the bush as he does, Huggins is always wary of bushfires. The State has seen bad days before, but never one like this. Following on from three days above 43 degrees Celsius the week before – and twelve years of drought before that – the forecast temperature today is an unbearable 45 degrees Celsius, with deadly winds tipped to reach an incredible 120 kilometers per hour.

Huggins is worried. He is a five-times national champion at Tae Kwon Do, a sport that has given him an instinctive sense of danger. Right now, those instincts are kicking in: he knows that when the predicted southerly change comes in, it will drive the fires up into Kinglake, where his wife, Linda, and their two children are waiting.

Huggins races up the mountain, foot to the floor, and arrives home around the time of the wind change. The day blackens, the winds become hysterical and fire comes roaring through the tree-tops, engulfing their home. Tim and Linda stay outside for as long as possible, swatting at flames, then retreat indoors. They fight for hours, smashing the fire as it breaks into their house, battling smoke, embers and radiant heat, protecting their children.

The family survive. Their planning, preparations and experience have saved them. Many others in their community are not as lucky – or as prepared. More than 2000 homes are destroyed.



*Smoke from fires in the Kinglake National Park on Black Saturday 7 February 2009. Photo by Trevor Boyd. Source: Museum Victoria*

Tim goes to check on their neighbours and finds the entire family has perished.

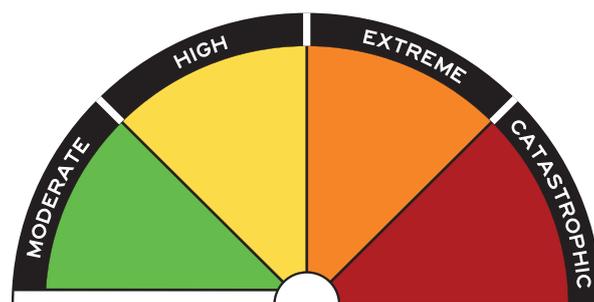
They are four out of a total of 173 people who will die in these few terrible hours.

## THE RESPONSE AND LESSONS LEARNED

Many Royal Commissions and Inquiries have investigated our major bushfire disasters. They have sought to understand what caused the disasters and what can be learned so that we can prevent future bushfires from having such tragic consequences.

All of these inquiries confirmed that dangerous bushfires will continue to threaten lives and property. They call on people living in bushfire-prone areas to better understand the risk and to take greater responsibility for their own safety.

The 2009 Black Saturday Royal Commission made 67 recommendations. These included better warnings and information for residents, more research, stricter building codes and better education programs.



*A new Australian Fire Danger Rating was introduced in 2022*

## TROPICAL CYCLONE TRACY 1974

The residents of Darwin are well-known for their relaxed attitude to life, and Christmas Eve, 1974, is no exception. There is a warning of a cyclone, but there have been warnings before; the most recent only ten days earlier. None of them amounted to much.

Kids go to bed early, many of the adults attend parties and barbecues. Then the wind and the rain increase and the air pressure plummets. By 10pm, people begin to be seriously concerned. By 3am they are smack in the middle of Tropical Cyclone Tracy, one of the most intense cyclones ever to be recorded in Australia.

Residents spend the night huddled in terror, scrambling for whatever shelter they can as the wind screams, the rain hammers and buildings disintegrate.

When they crawl out the next morning, they find the city virtually destroyed around them. Seventy-one people have died, often in the most horrific circumstances: crushed in rubble, cut apart by flying debris, drowned in the harbour. Over 80 percent of the houses are destroyed.



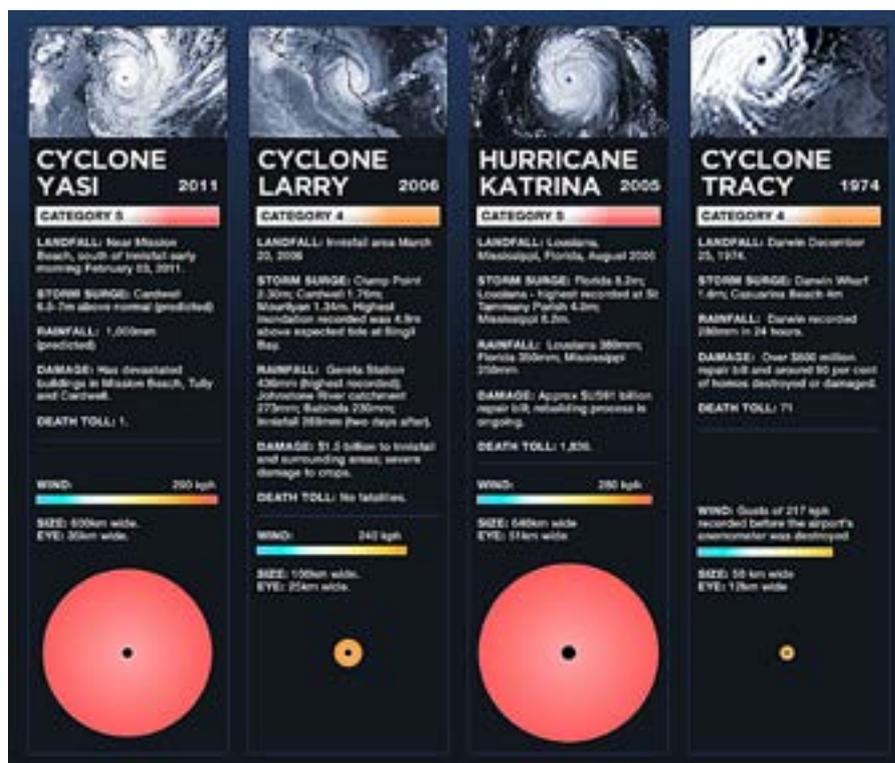
A scene of destruction after Cyclone Tracy passed over Darwin on Christmas Eve 1974. Source: [www.news.com.au](http://www.news.com.au)

## THE RESPONSE AND LESSONS LEARNED

Cyclone Tracy showed just how unprepared and vulnerable an entire city was. Six hundred and fifty people were injured and only 400 of the city's 11,200 homes remained.

Thirty thousand people were evacuated in the days after the disaster – almost the entire population.

Strict new building codes were introduced. Houses had to be pinned to their foundations and many were constructed in concrete. Better cyclone tracking and warning systems were also introduced.



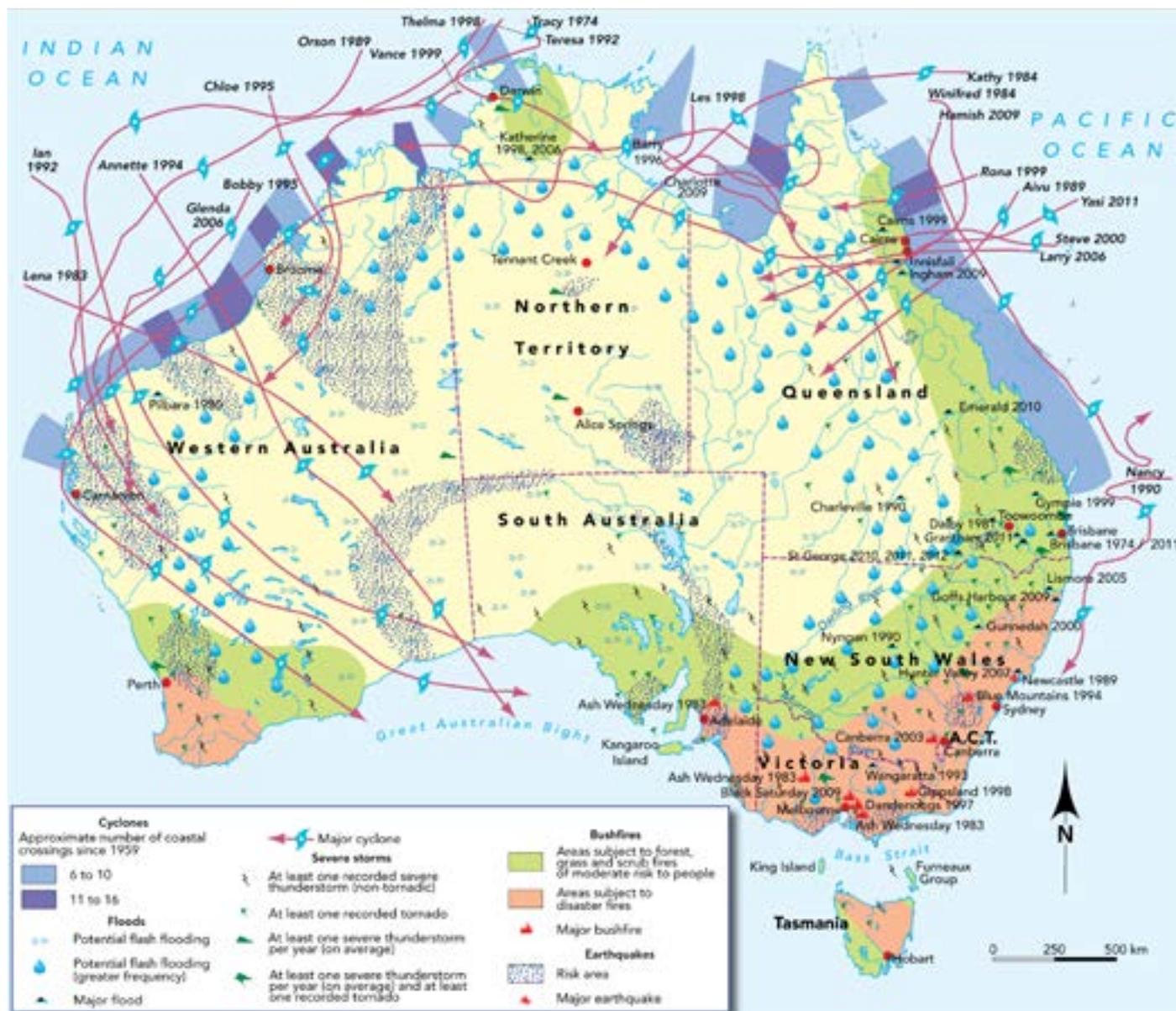
A comparison of four major cyclones  
Source: [www.abc.net.au](http://www.abc.net.au)





# PREPARE ACT SURVIVE

In Australia, individuals and households have a responsibility to learn about the hazards in their environment and take action to reduce their risk and respond appropriately to warnings and advice to stay safe.



Australian natural hazards and disasters

Once you have identified your local natural hazards, it's time to learn how to respond safely in an emergency and practise what you have learned. Why do we need to practise? During times of stress, such as in an emergency, good judgement and decision-making can be very difficult. People often panic. That is why it is important to have rehearsed your response – training makes it easier to act safely and to cope under stress.

The better prepared you are, the more likely you are to make safer decisions.

## QUESTIONS AND ACTIVITIES

- 01 Use the map on the previous page and your own inquiry to identify one or more local hazards and the latest safety advice from your state fire and emergency services websites. In Victoria, bushfire and home fire safety advice is available at Country Fire Authority (CFA) [cfa.vic.gov.au](http://cfa.vic.gov.au) and [emergency.vic.gov.au](http://emergency.vic.gov.au). Storm and flood safety information can be found at State Emergency Service (SES) [ses.vic.gov.au](http://ses.vic.gov.au), the Bureau of Meteorology (BOM) [bom.gov.au](http://bom.gov.au) and VicEmergency [emergency.vic.gov.au](http://emergency.vic.gov.au).
- 02 Design a safety booklet, presentation or social media campaign targeted for your age group.
- 03 How prepared is your household? Prepare an emergency kit and develop and practise an emergency survival plan at home.

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## CASE STUDY - TILLEY SMITH

Throughout life, we confront many challenges. We draw on personal attributes such as courage, adaptability, persistence and confidence to confront them and bounce back from difficulties. Each of us can develop resilience – the ability to recover quickly from difficulties. We can learn and adapt to our environment and live safely with natural hazards. We can become more disaster resilient.

Tilley Smith used her knowledge and persistence to save lives and reduce the tsunami. Watch the video and respond to the questions below.

### QUESTIONS

- 01 Where did Tilley learn about tsunamis?
- 02 What personal attributes did Tilley show?
- 03 What can we learn from Tilley's story?



*Tilley Smith video*

# DISASTER RESILIENCE: A SHARED RESPONSIBILITY

Federal, state and local governments, non-government organisations (NGOs), businesses and community groups all play a role in helping our communities and nation become better prepared for and more resilient to the threat of natural disasters.

The federal government funds the Australian Bureau of Meteorology, research, warning and monitoring programs. State and federal government departments and agencies work to help prevent, prepare for and respond to disasters. They also direct professional, volunteer and community-based emergency service organisations. Emergency service organisations work hard to protect lives and property. To do this, they issue warning and advice, publish safety information and run education programs.

Non-government organisations such as the Red Cross, Save the Children and the Salvation Army provide emergency relief and assistance and support communities and individuals to recover from disasters.

Businesses play a crucial role. They support emergency service volunteers, government and community efforts. They also play an important part in maintaining essential services such as getting power and water back up and running as soon as possible after a disaster.

Local governments, residents and community groups often work together before, during and after disasters. They help communities become more self-reliant and are able to reduce the immediate and long-term impacts of disasters.



## QUESTIONS AND ACTIVITIES

- 01** Make a list of the groups within your community. These could include sports clubs, faith-based groups, Rotary club, volunteer and professional fire and emergency service groups. What role might each group play before, during and after a disaster event?
- 02** Contact members of one of these community groups and interview them about the ways the group can help the community prepare for, respond to and recover from a natural disaster.
- 03** Develop a presentation about the group and its role in helping the community to become disaster resilient. Don't forget to include information about your local hazards. Present it to an audience. You could even invite members of the group to present with you.



*BlazeAid volunteers help rebuild fencing destroyed by bushfire*  
Source: [blazeaid.com](http://blazeaid.com)



*Emergency service and defence force personnel*