



# Natural Hazards

1.1



DFES  
Department of Fire & Emergency Services

Engage

## Natural Hazards

*To introduce students to the natural hazards which occur in Western Australia and their risk.*

Western Australia experiences a range of *natural hazards* each year, which include bushfire, severe storms, floods, cyclones, earthquake and possibly tsunamis. These are called *natural hazards* because they are elements of nature that can be extreme and dangerous. These hazards (apart from some bushfires) cannot be stopped and their impact on communities and the environment can be devastating. Governments, emergency services and scientists endeavour to learn more about these events and plan for them as much as possible to minimise or reduce their impact.

Severe weather natural hazards include bushfire, severe storms, floods and tropical cyclones. Geological natural hazards include earthquake, tsunami and landside.

A natural hazard is dangerous and poses the threat of causing injury, loss of life, and creating damage to property, agriculture and the environment. A natural hazard can temporarily or permanently affect normal day-to-day life.

A natural disaster is a natural hazard that is beyond the day-to-day capacity of emergency services and requires special mobilisation and organisation of resources than are normally available. The Department of Fire & Emergency Services (DFES) responds to all natural hazards in Western Australia. When there is a natural disaster, DFES can draw on resources from other states and territories, the military, as well as call on overseas assistance.

**Objective:** *At the end of the lesson the children will have increased knowledge of natural hazards in Western Australia and of their own and their community's risk to natural hazards.*

### Natural Hazards in Western Australia – Are we at risk?

- What is a personal disaster or emergency? What is a community disaster or emergency? Brainstorm Natural Hazards. In groups, ask students to list natural hazards under three headings – *geological, meteorological* and *other*. Discuss. Introduce the concepts of geological, meteorological and other hazards. (*Refer to Teacher Notes*)
- Immerse students in *Natural Disasters in Western Australia* video footage. Students list the natural hazards that are likely to occur in Western Australia. Ask students to create definitions for 'hazard' and 'disaster'. Record and share. Introduce concepts of natural disaster versus man-made disaster, emergency and other disaster-related terms. Are natural disasters and natural hazards the same thing? Class or small group discussion. Students define the given terms, or create their own glossary of terms (*Natural Hazards 1.2*)
- Examine images of various natural disasters, provided. Divide the class into seven groups. By observing the images only, students complete a Natural Hazards Chart (*Natural Hazards 1.3*). On completion of the chart, discuss each hazard in detail as a class. Extension: Using the internet, students comprise a list of natural disasters that have occurred in Western Australia. Students research one of the listed disasters. Include where it happened, when it happened, the damage that occurred and whether it could have been prevented.
- Return to the original Natural Hazards brainstorm and discuss the risk of experiencing each hazard.



**Glossary of Terms** – Create a list of terms that are used when learning about natural hazards and disasters.

WORD	DEFINITION
hazard	
disaster	
natural disaster	
man-made disaster	
risk	
impact	
emergency	
warning	
alert	
emergency management	
WESTPLAN	
resilience	

**Natural Hazards Chart** – Use the images provided and answer the questions for each image. You may even want to write your own question.

1. NAME the Natural Hazard	2. Describe WHAT has happened?	3. HOW do you think people can prepare for this hazard?	4. WHAT can people learn from this experience?	5.

## Answers:

## Classifying Natural Hazards

Students classify hazards in terms of geological (e.g. earthquake, tsunami), meteorological (atmospheric hazards such as tropical cyclone, severe storm) and other (e.g. pandemic)

<b>GEOLOGICAL</b>	<b>METEOROLOGICAL</b>	<b>OTHER</b>
earthquake	tropical cyclone	pandemic
tsunami	severe storm	
land slide	hailstorm	
volcano	drought	
avalanche	heat wave	
sinkholes	tornado	
	flood – broad scale flooding	
	flood - flash flooding	
	bushfire	
	storm surge	

Please note: Tropical Cyclone, Hurricane and Typhoon are different names for the same hazard.

## Natural Hazards in Western Australia

Western Australia experiences a range of natural hazards each year, which include bushfires, severe storms (including hailstorms and tornadoes), floods, cyclones, earthquakes and possibly tsunami. There are no active volcanos in Western Australia.

## Images provided in this lesson

1. Margaret River Bushfire, WA
2. Campsite at Steep Point, WA - Tsunami as a result of 2006 earthquake in Java
3. Severe Tropical Cyclone Laurence, QLD 2009 (Category 5)
4. Meckering Earthquake, WA 14<sup>th</sup> October 1968 (6.9 magnitude)
5. Severe Storm, WA
6. Kings Park Landslide, WA 22 March 2010
7. Truck rolled over in flood waters, Nullagine River, near Marble Bar, WA 2008

## Natural Hazards – Images



Image courtesy of Wallcliffe Bush Fire Brigade, DFES





Image courtesy of Paul Dickenson



Image courtesy of DFES



## Natural Hazards – Images



Image courtesy WA Newspapers





Image courtesy DFES

NATURAL  
HAZARDS

## Natural Hazards – Images



Image courtesy DFES

Image 6



NATURAL  
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## Natural Hazards – Images



Image courtesy of George Grieve