



## **EDUCATION SHEET**

### **Australia's Great Flood**

#### **SCHOOL LEVEL**

Junior Secondary

Senior Secondary

#### **EDUCATION DESCRIPTION: Australia's Great Flood**

In early 2001, floods of biblical proportions strike Queensland. A freak inland tsunami smashes through towns and cities, wreaking widespread destruction and claiming lives. An unprecedented clash between two weather patterns produces a perfect storm beyond the imaginings of even the most creative meteorologist. In a strange convergence of frighteningly wild weather, the easterly trade winds trap warm water against the Australian coast. Annual cyclonic rains amplify the effect to create a cataclysmic deluge that sweeps across Queensland, destroying an area so large that only an army of eyewitnesses equipped with mobile phones, video cameras, Facebook and YouTube could cover it. This is the story of Australia's great flood, with stories and images captured by those who survived it.

#### **TEACHER BACKGROUND INFORMATION**

*Australia's Great Flood* is a gripping and poignant depiction of one of Queensland's worst natural disasters. Using original footage captured on mobile phones and home video recorders, the documentary relies on eyewitness accounts to piece together the events as they unfold. The result is a vivid recreation of a month of widespread inundation and its impact on the people and environments concerned.

On 10 January 2011, a super storm sweeps inland from the east coast and bears down on Toowoomba. As the storm intensifies, it dumps 102 mm of rain in an hour onto land saturated by weeks of rain. flash flooding inundates Toowoomba and an uncontrollable torrent engulfs its city centre.

A wall of water spills down the Great Dividing Range where a storm of even greater ferocity unleashes 130mm on the valley below. Floodwaters race at 60km per hour to the small town of Grantham overwhelming waterways, swallowing paddocks and highways. The following day, deadly floodwater heads for Brisbane, Australia's third-largest city. Winding through the city centre, the Brisbane River makes the city highly vulnerable to floods. Unlike the folk of Toowoomba and Grantham, Brisbane's two million residents have 48 hours to prepare.

In just three days an incredible 7.5 billion tonnes of rain ravages an area the size of Belgium, with 10 people confirmed dead and 78 missing in the valley.

Meanwhile, further north in the state, one of the worst cyclones in Australian history has 700 km of coastline adjacent to the Great Barrier Reef on full alert. Tropical Cyclone Yasi has a 500km-wide core, with a promise of life threatening storm surges.

Arising from the many first-hand accounts that bring these incredible weather events to life, resilience, optimism and bravery are key. Find out what actually happened, who was involved, and how they responded.

## **CURRICULUM POINTERS**

### **Junior Secondary Curriculum**

*The geographical characteristics of places studied include, but are not limited to, people, climate, production, landforms, built environment, soils, vegetation, communities, water resources, cultures, mineral resources and landscape. Some characteristics are tangible, such as rivers and buildings. Others are intangible, such as scenic quality and socioeconomic status.*

Shape of the Australian Geography Curriculum 2011: Introduction

## Senior Secondary Curriculum

*Geography provides students with a knowledge and understanding of their own place and of Australia. This supports their development as active and engaged citizens by promoting debate and fostering informed decision-making on a range of current local, state and national issues. Students also gain knowledge of the world, as the foundation for understanding international events and trends.*

Shape of the Australian Geography Curriculum 2011: Introduction

## CURRICULUM OUTCOMES

### Junior Secondary

In undertaking these tasks, students of Geography will:

- *Explore and gain a good understanding of geographical thinking including its perspectives, concepts and ways of explaining*
- *Become thoughtful and active local, national and global citizens, and ... understand how they can influence the futures of places*
- *Develop [their] ability to ask geographical questions, plan an inquiry, collect and analyse information, (particularly through fieldwork and spatial technologies), reach conclusions based on evidence and logical reasoning, and communicate their findings in effective ways.*

Shape of the Australian Geography Curriculum 2011: Aims

### Senior Secondary

In undertaking these tasks, students of Geography will:

- *Become thoughtful and active local, national and global citizens, and ... understand how they can influence the futures of places*
- *Develop [their] ability to ask geographical questions, plan an inquiry, collect and analyse information ... reach conclusions based on evidence and logical reasoning, and communicate their findings in effective ways*
- *Build the confident and creative use of geographical skills, and ... use these skills*

*to extend their knowledge; make sense of new situations, and to solve problems.*

Shape of the Australian Geography Curriculum 2011: Aims

## **STUDENT LEARNING TASKS**

### **Junior Secondary**

#### **Task 1**

Go to the following website:

<http://maps.nationalgeographic.com/maps>

Use the navigating and zoom toggles to find your way to Southeast Queensland. Frame a map of the area that includes Dalby in the west, Beerwah in the northeast, Moreton and Stradbroke islands in the east and Boonah in the south. Now download the map and save it to your files, or print it and paste it into your workbook.

Mark the township of Grantham on your map highlight it along with the following:

- Toowoomba
- Lockyer Valley
- Wivenhoe Dam
- Brisbane
- Brisbane River

#### **Task 2**

Write 20-30-word definitions for each of the following terms:

- La Nina
- Category 5 Tropical Cyclone
- Storm surge
- Flash flood
- Social media

### **Task 3**

Do some Internet research to find information for a 160-word report about the "wall of water" that swept through Toowoomba on 11 January 2011. In your report, include the following points:

- A timeline
- Three eyewitness statements (use direct quotes)
- Any official warnings that were given
- A description of weather in the weeks prior to the flooding

### **Task 4**

In 100 words, describe the part played by social media in the great Queensland flood. Comment on the different kinds of social media involved, and both positive and negative contributions they made.

### **Task 5**

Imagine you hear a warning that your town is about to be flooded. Describe ten things you could do to help mitigate (lessen) damage to yourself, your family and your property.

## **Senior Secondary**

### **Task 1**

Draw a diagram of the hydrologic cycle to show the movement of water between the atmosphere, land and oceans. Next to your diagram, sketch a map of southeast Queensland that includes Toowoomba, the Great Dividing Range, Lockyer Valley, the Brisbane River catchment area, the city of Brisbane and Moreton Bay.

## Task 2

Write a geographical description of the Lockyer Valley in 200 words, including the following aspects:

- Surrounding hills or mountains
- Rainfall
- Land zones
- Soil types
- Vegetation
- Agricultural history
- Water flow trends

The following websites provide information that will assist in completing this task.

[The Lockyer Valley: Living In The Landscape](#)

[Queensland Floods: Commission of Inquiry](#)

## Task 3

Choose five of the aspects listed in task 2 and explain in about 20 words each how they contributed to or were affected by the widespread flooding in early 2011. Now look at each of your chosen aspects and describe in 20 words for each a practical solution for overcoming the challenges posed in future flooding events.

The following websites provide information that will assist in completing this task.

[The Lockyer Valley: Living In The Landscape](#)

[Queensland Floods: Commission of Inquiry](#)

## Task 4

Climate scientists have predicted that extreme weather events are likely to increase in frequency and severity in the coming years. Imagine you are an urban planning advisor

to the Premier of Queensland. Write a 200-word brief to the Premier to outline a proposal for managing Brisbane metropolitan's riverine environment that would result in creating a city more resilient to flooding and storm surge. Include a sketch to illustrate your brief.

### **Task 5**

Do some Internet research to find out how releasing water from Wivenhoe Dam contributed to the flooding of Brisbane in early 2011. Write a 100-word summary of the event and another 100 words to describe what has been learned as a result of this action.