

Overview of Learning

In the Stage 3 learning sequence students use geographical tools to build understanding of the natural features of the environment of the Hawkesbury-Nepean Valley, the effects of these features on the flooding of places and the impacts of floods on people in those places. Students investigate water movement and flows through 3D modelling and apply their understanding when investigating interconnections in the Hawkesbury-Nepean Valley. Students interpret geographical data and information presented in maps, graphs, videos and infographics to further their understanding of influences of the natural environment on places and people, with a focus on flood risk and flood preparedness actions. In response to their inquiry, students design and develop a game that reinforces good decisions for flood preparedness and good choices for flood safety. There are three learning sequences, each containing three or four teaching and learning activities that support Stage 3 syllabus outcomes.

Geography K-10 Syllabus Outcomes

- **GE3-1** describes the diverse features and characteristics of places and environments
- **GE3-2** explains interactions and connections between people, places and environments
- **GE3-4** acquires, processes and communicates geographical information using geographical tools for inquiry

Summary of Teaching and Learning Activities

SEQUENCE	ACTIVITIES	INQUIRY QUESTIONS	GEOGRAPHICAL TOOLS
1. Natural Environment of the Hawkesbury-Nepean	1.1 Features of the Hawkesbury-Nepean River and its Catchment	<ul style="list-style-type: none"> ▪ Where is the Hawkesbury-Nepean Valley? ▪ What are the features of its catchment? 	Visual representations – photographs Maps – online, small scale Spatial technologies – satellite images
	1.2 Crumpled Paper Catchment Model	<ul style="list-style-type: none"> ▪ How does water flow and behave in a catchment? 	Visual representations – 3D modelling Worksheet 1 – procedure, diagrams
	1.3 Unique Landscape of the Hawkesbury-Nepean Valley	<ul style="list-style-type: none"> ▪ What are the unique natural features of the Hawkesbury-Nepean Valley? ▪ How do they affect river flows in floods? 	Visual representations – video, graphic Fieldwork – school grounds Worksheet 2 – cause and effect table
	1.4 Natural Warning Signs	<ul style="list-style-type: none"> ▪ What are the natural warning signs of floods? ▪ Where can people obtain information? 	Visual representations – picture book, mime, soundscape
2. People and Floods in the Hawkesbury-Nepean Valley	2.1 History of Floods in the Hawkesbury-Nepean Valley	<ul style="list-style-type: none"> ▪ What is the history of floods in the Hawkesbury-Nepean Valley? 	Visual representations – video, graphic organiser Worksheet 3 – consequences wheel

SEQUENCE	ACTIVITIES	INQUIRY QUESTIONS	GEOGRAPHICAL TOOLS
	2.2 How the Experts Know it Will Flood	<ul style="list-style-type: none"> How do we know that the Hawkesbury-Nepean Valley will flood again? What is the pattern of flood cycles in the Hawkesbury-Nepean Valley? How is flood and geographical data acquired, processed and communicated? 	Visual representations – infographic Maps – flood maps Graphs and statistics – tables, dot plot graph Worksheet 4 – data and graphic interpretation
	2.3 Knowing the Flood Risk	<ul style="list-style-type: none"> What is our flood risk? 	Spatial technologies – online flood maps Worksheet 5 – summary table
	2.4 Flood Responsibilities	<ul style="list-style-type: none"> Who is responsible for flood preparation and response? What can we do to prepare? 	Visual representations – video, graphic organiser, ‘rap’
3. Flood Decision Making	3.1 Dangers of Floods	<ul style="list-style-type: none"> What are the dangers of floods to people? What are good decisions and safe choices in floods? 	Visual representations – videos, picture book Worksheet 6 – word cloud
	3.2 Flood Choices Game Design Task	<ul style="list-style-type: none"> How should we prepare for floods? How can we be flood ready? What are good decisions and safe choices in floods? 	Visual representations – photographs, drawings, role play, mime, games Worksheet 7 – planning table
	3.3 Flood Ready	<ul style="list-style-type: none"> How can we promote being prepared for flood? 	Visual representations – photographs