

Year 2

Lesson 2

Caring for Catchments

www.logan.qld.gov.au

Learning Objectives

Students will be able to:

- understand what a catchment is
- understand the importance of managing catchments
- understand the threats to catchments and the role of various community members in protecting and improving catchment health

Learning Outcomes

Subject	Strand & Content Descriptors
Geography	<p>Geographical Knowledge & Understanding</p> <ul style="list-style-type: none">• Environment: The environment is the source of every material thing we use or consume.• Environment: The significance of an environment or place contributes to how it is managed or used. <p>Geographical Skills & Inquiry</p> <ul style="list-style-type: none">• Observing and questioning: Pose and respond to several questions for an inquiry, based on a variety of question stems and stimulus.• Observing and questioning: Collect information about the local area.• Processing, analysing, interpreting and concluding: Draw conclusions based on their investigations and share these conclusions.• Communicating: Present findings, using appropriate communication methods, geographical tools and skills in geographical vocabulary.
Science	<p>Science as a Human Endeavour</p> <ul style="list-style-type: none">• People use science in their daily lives, including when caring for the environment and living things (ACSHE035) <p>Science Inquiry Skills</p> <ul style="list-style-type: none">• Respond to and pose questions, and make predictions about familiar objects and events (ACSIS037)• Compare observations with those of others (ACSIS042)

Important Questions

- What impacts do urban developments have on catchments and water quality?
- What geographical features influence catchment processes?
- How can I take better care of my catchment?



Background Information - Linking Locally

Information on:

- Relevant catchments – size, management, and connection with water supplies
- Brief overview of the role of catchments in water supply
- Threats to catchment health (removal of vegetation; point/non-point pollution; litter; stormwater input etc.)

Lesson Steps

This lesson links concepts associated with catchments and catchment management to develop an awareness of the various threats to catchments and how these can impact on water quality and other factors.

- If required reinforce concepts and processes associated with the water cycle, including the movement of water through the cycle and its change in form over time.
- Using a map of the local area (in hard copy or via appropriate ICT program) identify key local water features, such as rivers, creeks, oceans and wetlands. Develop a class list of the various users and uses of these assets (e.g. farmers – irrigation for stock or crops; surfers – recreation).
- Ask students to identify the flow of water in the region or local area– where does the water travel to and from; what geographical features direct the flow of water. Asking students about their observations of water flow during storms in their neighbourhood or the school grounds may assist understanding.
- Introduce the term catchment; explaining that a catchment extends from the highest to the lowest point (commonly from the mountains to the sea) and we all live in a catchment. Reinforce this point by asking students to identify key features on the map such as the school, their home, local shopping centres and community facilities etc.
- Using the information on users and uses of the catchment, as a group identify some of the threats to catchment health and water quality. Students then select one user and undertake research to identify;
 - How they use the water in the catchment
 - What impact the users behaviour might have on the catchment and water quality (both positive and negative)
 - How they could modify their actions to improve the health of the catchment
 - Students should also identify personal actions (such as littering; tree planting or water monitoring) that may impact on catchment health.
- Key users may include: rangers (involved in caring for upper catchments – tree planting; removing weeds etc.); catchment groups; landholders; fishermen or surfers. Consider other users with indirect impacts e.g. motorists; industry; or commercial properties
- Students can present findings highlighting key points, using various oral, graphic or digital communication methods. Findings may be presented collaboratively using a large scale map or regional representation.



www.logan.qld.gov.au

Additional Activities

Catchment process can be modelled using artificial catchments including catchments made in sand pits or similar areas or using modelling clay or similar materials; these can be used to demonstrate water flow; runoff characteristics and the impact of development.

Local area study: a brief excursion in areas adjacent to the school can be useful to identify and collect data (digital photographs) of impacts on the catchment (eg litter; role of stormwater drains; weeds; and various pollutants such as oil).