

# AG4 Floods

## Geography Stage 5 – 5A2 Changing Australian Environments

This activity involves:

1. Researching and reporting on the causes and extend of flooding in the UPRC.
2. Mapping the proportion of pervious and impervious surfaces in the school grounds.
3. Developing strategies to reduce the run-off from the school grounds.

Teaching and Learning Activities	Curriculum Links
<p><b>Impacts of flooding - background</b></p> <p>1. Students research the impacts history of flooding in the upper Parramatta River catchment: Refer to:</p> <ul style="list-style-type: none"> <li>▪ Environmental Issues Information Sheets “Flooding” and “Impacts of Urban Development” (UPRCT 2002)</li> <li>▪ Darling Mills Creek Stormwater Management Strategy (UPRCT 1994)</li> </ul> <p>2. Divide students into groups, each to prepare a ½ page summary and 5 minute presentation on the following issues:</p> <ul style="list-style-type: none"> <li>▪ History of flooding in UPRC</li> <li>▪ Impacts of urban development on flooding in UPRC</li> <li>▪ Impacts of flooding on the UPRC community</li> <li>▪ Catchment strategies to reduce flooding</li> <li>▪ Household strategies to reduce flooding</li> </ul>	<p><b>Outcomes</b></p> <p>5.1 identifies, gathers and evaluates geographical information</p> <p>5.2 analyses, organises and synthesises geographical information</p> <p>5.3 selects and uses appropriate written, oral and graphic forms to communicate geographical issues</p>
<p><b>Map school surfaces</b></p> <ol style="list-style-type: none"> <li>a. Walk through the school grounds and identify the different kinds of surfaces (for example: rooves, paths, garden, lawn and sporting fields etc).</li> <li>b. Devise a system of symbols to represent these surfaces.</li> <li>c. Use a school map and graph paper to draw a detailed map of the various surfaces.</li> <li>d. Mark on the map any systems that your school has installed to reduce the area of impervious surfaces within the school grounds.</li> <li>e. Use the “Impacts of Urban Development” information sheet to rate each surface on permeability.</li> <li>f. Record your results in a table.</li> </ol>	<p><b>Outcomes</b></p> <p>5.1 identifies, gathers and evaluates geographical information</p> <p>5.2 analyses, organises and synthesises geographical information</p> <p>5.3 selects and uses appropriate written, oral and graphic forms to communicate geographical issues</p>

<p><b>Develop an action plan</b></p> <p>How can your school reduce its flooding impact?</p> <ol style="list-style-type: none"> <li>As a class, brainstorm strategies to reduce the schools volume of stormwater runoff impact on the local creek and upper Parramatta River catchment.</li> <li>Conduct research into Water Sensitive Urban Design (WSUD) to assist the development of a school action plan.</li> <li>Prepare a report and action plan.</li> <li>Organise a meeting with your school principal and school executive to report on the results of your investigations and present the ideas developed in your action plan.</li> <li>With the agreement of your school executive, it may be possible to extend your action plan to become a “Sustainable Design” school implementation plan.</li> </ol>	<p><b>Outcomes</b></p> <p>5.1 identifies, gathers and evaluates geographical information</p> <p>5.2 analyses, organises and synthesises geographical information</p> <p>5.3 selects and uses appropriate written, oral and graphic forms to communicate geographical issues</p> <p>5.9 applies geographical knowledge, understanding and skills to demonstrate active and informed citizenship</p>
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## Resources and Links

### Water Sensitive Urban Design

- Upper Parramatta River Catchment Trust website [www.uprct.nsw.gov.au](http://www.uprct.nsw.gov.au) - click on “Sustainable Water”

### UPRCT Catchment Education Kit

- Hydrology Information Sheet
- Flooding Information Sheet
- ESD Information Sheet

Upper Parramatta River Catchment Management Coalition – An alternative voice on flooding in the upper Parramatta River catchment <http://homepage.idx.com.au/pkrav/index.htm>