

WHOLE-OF-SCHOOL  
WATERCARE  
EDUCATION

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IDEAS FOR PRACTICE

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# WaterCare Education: Ideas for Practice

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## INTRODUCTION

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The information presented in this document provides some ideas for Watercare Education in South Australian schools from the earliest years through to Year 12

The ideas presented are by no means exhaustive and represent the collective feedback from a number of professional teacher training sessions delivered across the Patawalonga, Torrens, Onkaparinga and Northern Adelaide and Barossa Catchment Water Management Boards.

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## WHAT IS A WHOLE OF SCHOOL APPROACH?

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A whole of school approach in Watercare education typically involves classes or groups of students participating in any number of Watercare activities over time. A whole of school approach may involve a range of environmental themes of which Watercare education is one component. What is important about a whole of school approach is that a school prioritise environmental education and integrate Watercare education into that plan. There are also examples of schools who may not have Watercare/ environmental education as their major focus but can still benefit from a whole of school approach because it ensures that resources devoted to teaching in this area are used most effectively.

A whole school approach has been defined as follows:

*There is a commitment in the school to environmental education, the administration is extremely supportive and encourages ideas through brainstorming and the school is able to put the outcomes in place.<sup>1</sup>*

It is important that schools develop meaningful teaching and learning programs for students to develop knowledge, skills, understandings and attitudes in relation to the environment. This requires the development of whole of school programs which identify these values and incorporate them into the curriculum at **all levels**, within **each discipline**.

One of the benefits of environmental education is that there are many opportunities for hands-on and interactive learning. To maximise the learning outcomes from your whole of school approach to Watercare education, consider how you can incorporate both classroom learning and outdoor activities, including on-ground projects.

A vision of what is possible and meaningful is developed through wide consultation with school and community members. From this information a whole school program can be drafted. This includes considering:

- topics to include in the program,
- the scope of the topics,
- which curriculum areas teach the topics,
- how the program is to be structured to ensure sequential development of knowledge, skills, and understandings,
- how the program encourages the development of positive environmental values and attitudes,
- which year levels engage in particular activities.

Resource requirements to support the program need to be identified, including a budget allocation, allocation of time to develop the program and other support people enlisted. The formation of a representative group of the school community (consisting of staff, parents, students) will provide continuity and ensure that planning for environmental learning is identified in school priorities.

Discussions need to be documented and made available for feedback from the school community and other stakeholders. All stakeholders need to be part of the process to ensure ownership by the whole school community.

Many schools have found that the appointment of a **coordinator** to be useful. The downside from this approach is when the coordinator leaves, the programs often fold. It is very important to ensure there is involvement and ownership across the school community rather than relying only on one person to drive your program.

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<sup>1</sup> Despina Liarkos, Science Coordinator, Parafield Gardens High School.

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## BENEFITS OF ADOPTING WHOLE-OF-SCHOOL APPROACH

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- Reduces the occurrence of 'once off' activities where important environmental messages are not reinforced and not supported by broader learning experiences.
- A whole of school approach avoids 'doubling-up' and repetition of Watercare education activities over a number of years. With a planned approach, students benefit from a series of learning experiences that complement each other over time.
- If a whole of school approach revolves around the adoption of a 'Patch' or a 'Catchment Care' site, the work that students do to improve the site will be more effective if the whole school is behind the project, and on-ground activities are integrated with classroom learning.
- Buddy systems (define) can work very effectively via environmental education, especially through a 'Patch' or a 'Catchment Care' site.
- Watercare education can be part of broader environmental programs/activities – eg: in energy, waste/recycling, air quality, sustainable schools
- Teachers who may not otherwise undertake environmental education have a vehicle for incorporating Watercare education into their area of interest.
- As demand for Catchment Care and Waterwatch increases, project officers will have to rationalise their commitments and will naturally prioritise schools that demonstrate a holistic and medium to long-term commitment to Watercare education.

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## EXAMPLES OF WHOLE OF SCHOOL APPROACHES

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Below are five schools that have developed whole of school approaches that involve Watercare education. Information about these schools is available on the Catchment Care CD Rom or on the Internet at [www.watercare.net](http://www.watercare.net) (Catchment Care Section – Case Studies)

- Vale Park Primary School
- Happy Valley Primary School
- Marden Senior College
- Parafield Gardens High School
- Tanunda Primary School

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## IDEAS FOR PLANNING

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Vale Park Primary School and Community *Our Patch* is an environmental project set on approximately 0.8 hectares of riverbank, in two sections along the River Torrens Linear

Park in Vale Park. The original *Our Patch* site is located in council-owned Hamilton Park Reserve, in Stewart Avenue, just upstream of the Ascot Road Bridge. *Our Patch* activities have recently been extended downstream from the bridge at Willow Bend Reserve, (also a council reserve) and at Levi Caravan Park. The *Our Patch* site is in the Patawalonga and Torrens Catchment Water Management Board area. [The *Our Patch* project, which is available in the Onkaparinga Catchment Water Management Board area, has equivalent projects in the North Adelaide and Barossa Catchment Water Management Board area called *Catchment Care*]

Vale Park Primary School (see link above), developed two important tools for their whole of school approach. The first was a '**mind map**' and the second was a **class organisation guide**.

#### THE MIND MAP

The 'mind map' is a process of brain storming, research and planning that documents resources, ideas, activities and approaches to a project. The Vale Park example demonstrates how their *Our Patch* site on the Torrens River is part of, and a focus for, a wide range of planned environmental activities including Watercare education.

<b>Vale Park Primary School Our Patch Project Mind Map</b>	
<b>Developing the site</b>	Weeding, Planting, Nest boxes, Log placement, Litter collection, Photopoint monitoring, Aboriginal/Environmental Trail
<b>Visits</b>	Visits by buddy classes, Visits without buddy class, Water quality monitoring, Monitoring biodiversity, Class Project visits, Photopoint monitoring, Develop O.P Site
<b>Guest speakers</b>	Waterwatch, Our Patch, Aboriginal Ed., Urban Forests, PIRSA, RotaryWalk., Council, Murraylinks
<b>Design and Technology</b>	Design and make:, Tadpole trap, Frog trap, Yabbie trap, Butterfly trap, Community pamphlets, Web page design
<b>English</b>	Poetry, Journal, Reports to Govt., Community info. Pamphlet, Website critiques, Web page design
<b>Health and PE</b>	Water & Community Health, Outdoor safety, Orienteering trail, Walking, Physical activities during site development
<b>Maths</b>	Mapping, Graphs (growth), Length (growth), Pie Charts, Coordinates
<b>Science</b>	Water Science, Water at work, Geology, Lifecycles, Ecology, Biodiversity
<b>Arts</b>	Stobie Pole painting, Painting Fence murals, Message stick style, Realistic sketching, Landscapes, Photography, Photoessays, Songs, Web design
<b>Society and Environment</b>	History of area over time, Local Aboriginal Culture etc, Natural systems, Self and our environment, Environmental problems, Solving environmental problems, Acting for sustainable futures
<b>Integrated</b>	Futures, Identity, Interdependence, Thinking, Communication,

<b>Essential Learnings</b>	Information & Communication Technologies
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**CLASS ORGANISATION GUIDE**

Grades	6/7	6/7	5/6	4/5	3/4	3/4
<b>Special Our Patch Themes</b>  These themes include activities from many different projects managed by a variety of organisations	Aboriginal culture  Kurna food and resource links with Our Patch  Aboriginal plant identification  Trail signs & pamphlets  Planting etc  Website critiques	Mapping of OP  Trail Recording  Nestboxes mapping  Trail pamphlet (with others) & book (library)  Photo records  Orienteering trail  Planting, recording etc.  Website critiques	River tour  Water testing  Water audit  AMI testing  Develop water trail  OP Oliphant science awards/ Habitat awards  Frog Log Slope  Plant studies  MurrayLinks - Riverland camp.  Planting, recording etc.	River tour  Water testing  AMI testing  Design trail posts  Paint trail posts  Make nestboxes  Food webs down from the top?  Planting, recording etc.	Try out I D sheets  Flower spotting  Seed collection  Plant Propagation  Flowering record book for OP & Library  Plants & butterflies?  Planting, recording etc.	Bird I d  Water AMI 's  Land MI 's  Blue Tongue Lizard visit  Simple food chains  Frog visits  Planting, recording etc

### Junior Primary

Junior Primary to discuss topics/resources at JP meeting and with Buddy classes

All JP classes to visit in Autumn and Spring, maybe with buddy classes. In Spring do frog lessons & hear them -if possible September & October.  
Pre-School to have buddied visit.

#### Other possibilities

Nocturnal visits, Environmental scrapbooks, Fish studies/ Fishing day, Frog Info Frog census, Blue Tongue Lizard Visit, PIRSA Link to country school, Link to aboriginal school

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### WATERWATCH AND CATCHMENT CARE EDUCATION

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The CD Rom and Internet sites 'Water Learning and Living' and 'Catchment Care' provide links to resources, activities and helpful contacts to assist in the research and teaching about Waterwatch and Catchment Care. 'Water Learning and Living' and 'Catchment Care' provide Sustainability Outcomes and links to SACSA's Essential Learnings helping to justify Watercare education in what ever form the educator sees fit. To review these aspects of 'Water Learning and Living' and 'Catchment Care' go to the CD Roms or web site ([www.watercare.net](http://www.watercare.net)).

If you would like to see the **Coast and Marine Education** Framework go to [www.coasts.sa.gov.au/cmeducation.html](http://www.coasts.sa.gov.au/cmeducation.html)

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### SOME IDEAS FOR RESEARCH AND PRACTICE

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Below is another example of a whole of school approach template incorporating activities that may be undertaken at different year levels. Don't forget, this is only a very small selection of the total activities and resources available!

## Whole of School Planning Template

	<b>Early years</b>	<b>3/4</b>	<b>5/6</b>	<b>7/8</b>
<b>School Based Research using CD Rom and Internet sites</b>	Research properties of water through Earths water topic, US Geological Survey	Research the water cycle	Research Biodiversity in waterways Research threatened species	Research Catchment Care. Interactive tour of the Murray Basin
<b>School Based Research using CD Rom and Internet sites</b>	Animal life cycles	What is an ecosystem	Research threats to indigenous biodiversity	Researching food webs in freshwater habitats Food Web/Food chains
<b>Waterwatch</b>	Create a river habitat with Waterwatch	Create a river habitat with Waterwatch	Macro invertebrate monitoring	Waterwatch testing of water
<b>Waterwatch</b>	Research properties of Catchments through	Research stormwater and sewage & pollution	Research Catchment Crusaders web site activities in Water Learning & Living Virtual Catchment Crawl	Research wetlands and their role in cleaning stormwater Link wetland tour to tour of St Kilda mangroves and/or Barker Inlet
<b>Waterwatch</b>	Danny the Drip with Waterwatch or on own	Stormwater Videos “Drains to the Bay” & “Gutter Pirates” from Waterwatch	Yellow Fish Road Drain Stencilling with Waterwatch (buddy class with younger students)	Wild Wetland Tour with Waterwatch at Greenfield’s Wetlands
<b>Waterwatch</b>	Choose appropriate Waterwatch activities from the Waterwatch links on the Catchment Water Management Boards	Froggy Frenzy with Waterwatch (focusing on frogs as pollution indicators)	Gutter Guardians with Waterwatch or on own (researching stormwater pollution in Autumn)	Macro Madness – Senior with Waterwatch
<b>Catchment Care</b>	From Seed to Tree	Propagation of local native	Information technology	Relationships between Living

	<b>Early years</b>	<b>3/4</b>	<b>5/6</b>	<b>7/8</b>
	relationships/ growth of living things	species for local/strategic projects.	themes: monitoring plant growth/survival rates (Excel spreadsheets)	Things: Birds Project Part One - Investigate structure/features of birds (feeding habits, habitat needs, species etc)
<b>Catchment Care</b>	Local walk looking at biodiversity	Recycling Composting	Backyard biodiversity – applied to the local area	Biodiversity and invasive species eg weeds, feral animals
<b>Catchment Care</b>	Familiarity with local native species	Propagation & raising plants from seed Catchment Care CD	Gould League food web activities	Extension to propagation: eg control experiments/diffe rent techniques/weed mat planting/pioneer spp. etc
<b>Catchment Care</b>	Looking at a big tree as a big city	Understanding ecosystems through tactile senses		Biodiversity issues (Ie why conserve remnant vegetation and linkages etc)
<b>Catchment Care</b>	Investigating natural features: Junior Primary Bushgardens Adventure Game	Recycling	Learning about Sustainable Futures: Barossa Bushgardens Upper Primary Adventure Game	Weed herbarium: drawings/paintin gs/weed press
<b>Catchment Care</b>	Simple research a bioindicator species in the local area	Local walks looking at biodiversity. Discuss with Catchment Care Officer	Keeping native animals in the classroom	Research Lets plant trees and Plant adoption sheets Catchment Care CD

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## SACSA LESSON ACTIVITIES

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For a review of environmental topics and practical Lesson Activities for each Learning Area go to the SACSA web site and follow the pathway described below.

- ↪ <http://www.sacsa.sa.edu.au/splash.asp>
- ↪ Select [Ideas for Practice](#)
- ↪ Go to [Insites](#)
- ↪ Select [Enter Insites](#)
- ↪ Select the [Learning Area](#) you are interested in
- ↪ Select the [Topic Overview](#) to review topics
- ↪ Select a [Year Level](#)
- ↪ Click on the [Key Idea](#) that you are interested
- ↪ Review the [Lesson Activities](#)