

---

# Activity 5.1 – Home Environmental Checklist

## Activity 5.2 – School Stormwater Pollution Checklist

---



### Introduction

The water quality of the local waterway will be affected by human activities within the catchment. Chemicals, sediment, sewage, litter and fertilisers enter the waterway through stormwater runoff. The following activities involve students in investigating where these pollutants come from – at home, at school and in the community.

### Outcomes

#### HSIE Stage 2

These activities meet the following syllabus outcomes: **Relationships with Places ENS 2.6** and **Patterns of Place and Location ENS 2.5**

#### Science and Technology K-6

##### Stage 2

**BE S2.1** (Activity 5.2), **PS S2.5** (Activity 5.1), **INV S2.7** (Activities 5.1 and 5.2)

##### Stage 3

**BE S3.1** (Activity 5.2), **PS S3.5** (Activity 5.1), **INV S3.7** (Activities 5.1 and 5.2)

### Keywords

- Pesticides
- Toxic
- Organic
- Chemical

### Background to Activities

The activities in section 5 involve students in investigating the various sources of stormwater pollution: in the home, the school and the local community.

#### Activity 5.1 – Home Environment Checklist

The home survey can be used to identify ways in which our homes could be contributing to stormwater pollution. This activity is an ideal homework assignment.

#### Activity 5.2 – School Pollution Checklist

This activity involves students in conducting a survey of school operations to identify potential sources of stormwater pollution.

## Activity 5.1 – Home Environment Checklist

Investigate the impact that your home may be having on the environment by completing this quiz. The higher the number of ‘yes’ responses – the better you are at preventing pollution.

**Table 5.1 – Home Environment Checklist**

Issue	Action	Yes	No
<b>Water use</b>	Water consumption/person/year =		
	Water saving devices are fitted to shower and toilet.		
	Leaking taps are promptly repaired.		
	Showers are kept to 3 minutes.		
	Low water use appliances (dishwasher/washing machine) are used.		
<b>Energy use</b>	Electricity consumption/person/year =		
	Energy saving lights are installed in all fittings.		
	All household appliances have AAA energy rating.		
	Use of heaters and dryers is minimised.		
	Ceiling and wall insulation is installed.		
	Cold water washing of clothes.		
	Solar hot water system is installed.		
	Low energy rating appliances are used.		
	‘Green Power’ is used for energy supply (renewable energy).		
<b>Transport</b>	Car use (km travelled/person/year =		
	Car use is minimised.		
	Bike or walking is used for local transport.		
	Public transport is our preferred option for travel.		
<b>Kitchen</b>	Food waste is composted.		
	Reusable shopping bags are used (cloth, heavy duty plastic).		
	Organic products are used whenever possible.		
	Australian grown products are used when possible.		
	When we buy take away food we take our own containers.		
<b>Cleaning</b>	Outdoor surfaces are kept clean by sweeping with a broom.		
	When outdoor surfaces are cleaned with a hose, no run-off escapes to the stormwater drains.		
	Least toxic alternatives are always used.		
	Paint brushes are cleaned away from stormwater drains and contaminated water is poured onto the garden or lawn.		
	Roadside gutters are regularly swept clean. Leaves etc are composted.		
<b>Car maintenance</b>	Car servicing is conducted at a reputable centre that implements best environmental practice or at home where drains are protected.		
	Car is washed at a car wash that recycles water and protects stormwater system or on the grass at home (no suds run to stormwater drains).		
	Used oil is recycled.		
	Car is kept well tuned to minimise air pollution.		

<b>Garden</b>	Garden waste is composted or mulched.		
	Water use minimised by mulching gardens.		
	Fertiliser use is minimised by using compost.		
	Pesticide use is avoided.		
	Least toxic alternatives are always used.		
	Rainwater tanks are installed and used for watering garden.		
	Mostly Australian native plants are used.		
	Area of paved and hard surfaces kept to a minimum.		
	Run-off from paved surfaces is channelled into gardens or tanks for re-use.		
<b>Clothing</b>	Clothing is purchased according to need rather than fashion.		
	Organic cotton, hemp or recycled clothing is used whenever possible.		
	Locally made clothing is used whenever possible.		
<b>Renovations</b>	Recycled or re-used materials are selected where possible.		
	Least toxic paints, floor sealers are used.		
	Builders implement effective sediment control measures.		
	Building waste is minimised or reused on-site.		

## Discussion

- Compare water use, energy use and car use across the class.
- Make a list of activities your home could undertake to reduce environmental impact.

**Water Use** – Reducing water use is an important step to take to protect waterways. Reduced water use means less sewage is generated and fewer dams are needed to provide water supplies.

**Energy Use** – By reducing household energy use and converting to green power, air pollution is reduced, the impact of the ‘Greenhouse Effect’ and climate change is reduced. In addition air pollutants such as carbon dioxide dissolve in rain and wash into waterways through the stormwater.

**Transport** – It may surprise you that stormwater run-off from roads is contaminated with lead from fuel, oil, grease, brake linings and other toxic by-products of car driving. By minimising your family car usage, you are also reducing stormwater pollution as well as reducing the impacts of the ‘Greenhouse Effect’ and climate change.

**Kitchen** – Reducing solid waste and packaging will reduce the quantity of litter that enters the stormwater system. Buying organic products will reduce the amount of pesticides entering waterways.

**Cleaning** – Using a hose to clean outdoor surfaces can contaminate stormwater. Using a broom and keeping your street gutter free of leaves and dirt will greatly reduce stormwater pollution. Hosing down driveways and footpaths so that the run-off enters the stormwater system is against the law under the POEO Act.

**Car Maintenance** – Keeping your car well tuned will reduce the risk of oil and grease dripping onto the road. Wash your car on the grass or at a reputable car wash to avoid suds polluting stormwater. If you change your own oil, recycle the used oil to ensure it doesn’t end up down the drain. When choosing a car repairer, go to one that has good pollution prevention practices. If not sure, ask how they prevent stormwater pollution.

**Garden** – Avoiding using fertiliser and pesticides to reduce stormwater pollution. Composting food and garden waste and mulching gardens also helps to reduce stormwater pollution and water use. Some garden plants shed seeds which enter the stormwater system and cause weeds to grow along creek banks and bushland. Native plants need less water, no fertiliser and will encourage birds and other wildlife to come to your garden.

**Clothing** – Buying locally made clothes will reduce the pollution caused by transporting goods across the country. Using clothes made from hemp and organic cotton will reduce pollution of rivers.

**Renovations** – When building or renovating, make sure that your builder knows how to prevent stormwater pollution. Correctly installed and maintained sediment fences, maintaining vegetation cover during construction to minimise bare earth and early connection of stormwater pipes will help.

## Activity 5.2 – School Stormwater Pollution Checklist

To investigate the ways in which the school may be contributing to stormwater pollution, divide the class into research teams. Each team can be allocated a portion of school activities to survey. The checklist will help to identify potential risk areas in the day-to-day operation of the school. The school cleaner and principal will be important sources of information.

### 1. School Grounds and Outdoor Surfaces

	Yes	No
(a) Outdoor surfaces are cleaned using a broom, vacuum or shovel (never hosed).		
(b) Sweepings are properly disposed of away from stormwater drains.		
(c) Run-off from graffiti cleaning is prevented from entering the stormwater drains.		
(d) School gardens are planted with local native plants.		
(e) School gardens are mulched to reduce water use.		

### 2. Maintaining Stormwater Drains

	Yes	No
(a) Garbage is covered and stored in an area where it cannot contaminate or pollute the stormwater drain during rain.		
(b) Spill clean up kits are kept on site and maintained.		
(c) Stormwater drains are kept free of litter, leaves and dirt.		

### 3. Handling and Storing Materials

	Yes	No
(a) Containers awaiting recycling or disposal are covered and properly labelled as to their contents.		
(b) Materials are handled carefully and the school is kept orderly to prevent spills.		
(c) Containers for storage of liquids are kept well away from stormwater drains and in properly covered and bunded areas.		
(d) Delivery areas are bunded to prevent possible contamination from spills and breakages occurring during transfer of goods.		
(e) Dumpsters and other waste containers are kept covered.		

### 4. Managing Wastes – List the kinds of waste that your school generates

<i>Type of Waste</i>	<i>Hazardous</i>	<i>Recycled</i>	How has the school reduced waste?

## 5 Education

	Yes	No
(a) School stormwater drains are clearly marked with a suitable sign e.g. 'This Drain is Only for Rain'.		
(b) Site signs are used to remind staff and students of ways to avoid pollution in the school.		
(c) School pollution prevention practices are publicised by the school.		
(d) The school community is educated about water quality, waste management and procedures for preventing pollution.		
(e) The school community is encouraged to attend workshops or have other continuing environmental management training.		

## 6 Protecting the Environment

	Yes	No
(a) When choosing products for use in your school, the most environmentally friendly product is always used.		
(b) Your school follows best environmental practice through all stages from purchasing through to minimisation and recycling of waste (whole life cycle).		
(c) Your school is actively involved in caring for the local environment.		

## 7 Stormwater Management

	Yes	No
(a) A spill prevention and clean-up plan has been developed by the school.		
(b) Appropriate spill clean-up equipment is kept on site.		
(c) The school community is familiar with the clean-up plan and know how to respond promptly to a spill.		
<b>(d) The school community is aware of the school's commitment to protecting the environment.</b>		
<b>(e) The school community is aware of current environmental legislation.</b>		

## 8 Identify School Risks

From the checklist, identify the areas of risk in the school operations. Make a list of the issues of concern. (Any 'no' responses indicate a potential pollution risk.)