


Teacher lesson plan Stage One – The urban water cycle			
KLAs : Science and Technology, HSIE	Class :	Length:	
Outcomes and indicators Science and Technology ST1-4WS: Investigates questions and predictions by collecting and recording data, sharing and reflecting on their experiences and comparing what they and others know. ST1-11LW: Describes ways that different places in the environment provide for the needs of living things. ST1-12MW: Identifies ways that everyday materials can be physically changed and combined for a particular purpose. Human Society and its Environment SSS1.7: Explains how people and technologies in systems link to provide goods and services to satisfy needs and wants. ENS1.5 Compares and contrasts natural and built features in their local area and the ways in which people interact with these features. ENS1.6 Demonstrates an understanding of the relationship between environments and people. Australian Curriculum ACSIS024: Making predictions about familiar objects and events and the outcomes of investigations. ACSIS040: Using a range of methods to sort information, including drawings and provided tables to match objects and events based on easily observable characteristics. ACSSU211: Describe how some different places in a local land or aquatic environment provide for the needs of the animals or plants that live there. ACSSU18: Explore how some everyday materials can be physically changed by actions, eg bending, twisting, stretching or heating.			Resources provided <ul style="list-style-type: none"> • Interactive whiteboard (IWB) resource – <i>Stage 2 The urban water cycle</i> • Song - <i>How water gets to us (also included in IWB resource)</i> • <i>How does water get to our taps</i> activity sheet Sydney Water webpages to support this lesson plan <ul style="list-style-type: none"> • The urban water cycle • Amazing water Resources required <ul style="list-style-type: none"> • IWB with internet connection or computer and data projector • Cup, ice and kettle • Colouring pencils
Cross curriculum priorities Sustainability			

<p>General capabilities</p> <p>Students learn about:</p> <ul style="list-style-type: none"> • where school water comes from • how people modify the environment to make a permanent water supply • how water gets to taps, bubblers, toilets and showers. <p>Students learn to:</p> <ul style="list-style-type: none"> • identify areas of the school where water is found. 					
<p>Teaching and learning</p> <p>This lesson sequence involves students singing a song about how water gets to homes and schools, recognising parts of a basic managed water cycle and investigating school water devices.</p> <p>The learning sequence involves four lessons and is designed so teachers can use all or part/s of the sequence best suited to the needs and interests of the class and time available.</p>		Assessment	Evaluation	Timing	Resources
Register	<p>Lesson 1 - Types of water</p> <p>Emphasise that water can come in different forms like:</p> <ul style="list-style-type: none"> • hard (solid) like ice or hail • gas (misty) like steam, fog or clouds • liquid like running water. <p>These can change from one form to another with different temperatures. You can demonstrate this by melting some ice in a glass in the sun and boiling a kettle to demonstrate water changing to steam. Discuss the dangers of different types of water or water environments like:</p> <ul style="list-style-type: none"> • being careful near water because you could drown. Students should always have an adult with them when going to a pool, 				

	<p>beach or other large area of water</p> <ul style="list-style-type: none"> • staying out of big storms with hail or lightning • not touching hot water or steam in case of burns • not touching dirty or polluted water. <p>Discuss with students that there are many different places we could get water, but not all water is safe to drink. However, we can do different things with different types of water.</p>				
	<p>Lesson 2 – The urban water cycle</p> <p>1. Recap how water falls as rain and flows to rivers and into dams. Discuss how:</p> <ul style="list-style-type: none"> • rain provides all of our water • people store rainwater for when it doesn't rain in dams and rainwater tanks • water from dams goes through pipes to a water filtration plant that cleans the water • water flows through more pipes to buildings (houses, schools and industry). <p>2. Draw a simple urban water cycle on the board using the following features:</p> <ul style="list-style-type: none"> • rain falling from clouds • water flowing over the ground into rivers • rivers flowing into a dam • pipes leading from the dam to a water filtration plant (to clean the water) • pipes going underground along streets to peoples' houses and other buildings • pipes going under our houses and schools to taps 				

	<p>bubblers and toilets.</p> <p>3. Colour in and complete the '<i>How does water get to our taps</i> activity sheet.</p>				
	<p>Lesson 3 - Water pipe investigation</p> <ol style="list-style-type: none"> 1. Conduct a guided walk around the school grounds to identify as many different places water comes from. Follow the water supply pipes of taps, bubblers and toilets to show where they enter the ground. Often these pipes can be seen on the outside of buildings like toilet blocks. 2. Find the main school water meter (usually at the front of the school), and explain how all the school's water comes from this water main, which is connected to 21,000 km of pipes in Sydney's water supply network. If accessible, allow the students to see the meter ticking over showing water use. 3. For schools that have installed water tanks, show the students the tank and discuss how this provides an alternative supply of water that can be used for flushing toilets or watering the garden. <p>Show the students how the tank works by pointing out the downpipes leading from the roof into the tank.</p>				
	<p>Lesson 4 - How water gets to us Sing the song <i>How water gets to us</i>, to help students understand how water gets to taps, bubblers and toilets. Perform the item on the assembly using props and water drop costumes.</p>				