




UNIT PLANNING TEMPLATE

	Unit Topic / Guiding Question: Grade 2 Science: Water Conservation		
	<p>Rationale: The purpose of this lesson is to introduce students to the concept of water conservation, for the class to gain an understanding that fresh water is a limited resource and is not being replaced at the same rate as it is being used. Students have just completed a science unit on the water cycle, and have a good understanding of evaporation, condensation, precipitation, and runoff. Through these lessons, students will continue their learning about water and its importance to communities and the environment. Students will have the opportunity to engage in hands-on, experiential activities of building their own rain catchers and measure the rainfall over a period of time.</p>		
	UNDERSTAND	<p>Big Ideas</p> <p>Water is essential to all living things, and it cycles through the environment</p>	<p>Essential Questions</p> <ul style="list-style-type: none"> - Why is water important for all living things? - How can you conserve water in your home and school?
	DO	<p>Core Competencies:</p> <div style="display: flex; justify-content: space-between;"> <div style="width: 30%;"> <p> Communication</p> <ul style="list-style-type: none"> <input type="checkbox"/> Communicating <input type="checkbox"/> Collaborating <p>Collaborating: In familiar situations, I cooperate with others for specific purposes. I contribute during group activities, cooperate with others, and listen respectfully to their ideas. I can work with others for a specific purpose.</p> </div> <div style="width: 30%;"> <p> Thinking</p> <ul style="list-style-type: none"> <input type="checkbox"/> Creative Thinking <input type="checkbox"/> Critical & Reflective Thinking <p>Critical and Reflective Thinking: I can use evidence to make simple judgments. I can ask questions, make predictions, and use my senses to gather information. I can explore with a purpose in mind and use what I learn. I can contribute to and use simple criteria. I can find some evidence and make judgments.</p> </div> <div style="width: 30%;"> <p> Personal & Social</p> <ul style="list-style-type: none"> <input type="checkbox"/> Personal Awareness & Responsibility <input type="checkbox"/> Positive Personal & Cultural Identity <input type="checkbox"/> Social Awareness & Responsibility <p>Social Awareness & Responsibility: I can take purposeful action to support others and the environment. I can identify ways my actions and the actions of others affect my community and the natural environment. I look for ways to make my classroom, school, community, or natural world a better place and identify small things I can do that could make a difference.</p> </div> </div>	

		<p>Learning Standards – Curricular Competencies:</p> <ul style="list-style-type: none"> - Demonstrate curiosity and a sense of wonder about the world - Safely manipulate materials to test ideas and predictions - Make simple predictions about familiar objects and events - Make and record simple measurements using informal or non-standard methods - Consider some environmental consequences of their actions 	
	<p>KNOW</p>	<p>Learning Standards - Content: Students are expected to learn about water conservation, focusing on fresh water as a limited resource and how it is not being replaced at the same rate it is being used.</p>	
	<p>First Peoples Principles of Learning</p>	<ul style="list-style-type: none"> □ <i>Learning ultimately supports the well-being of the self, the family, the community, the land, the spirits, and the ancestors.</i> □ <i>Learning is holistic, reflexive, reflective, experiential, and relational (focused on connectedness, on reciprocal relationships, and a sense of place).</i> □ <i>Learning involves recognizing the consequences of one’s actions.</i> □ <i>Learning involves generational roles and responsibilities.</i> □ <i>Learning recognizes the role of indigenous knowledge.</i> □ <i>Learning is embedded in memory, history, and story.</i> □ <i>Learning involves patience and time.</i> □ <i>Learning requires exploration of one’s identity.</i> □ <i>Learning involves recognizing that some knowledge is sacred and only shared with permission and/or in certain situations.</i> 	<p>Comments on how you will address the FPPL: This lesson aligns with the FPPL, “Learning ultimately supports the well-being of the self, the family, the community, the land, the spirits, and the ancestors”. Students will engage in activities to demonstrate the connection between natural resources and local communities, and the importance of protecting these natural resources to preserve for future generations. Class discussions will include how previous generations and ancestors used natural resources and what they did to protect them. Students will discuss and engage in ways they can take small steps every day to conserve natural resources, specifically, freshwater resources.</p>
<p>Formative Assessment (Assessment as Learning and Assessment for Learning):</p>			
<p>I will be using formative assessment (assessment for learning) throughout this unit, as I will be observing students' responses in class discussion through random selection with popsicle sticks to gauge students' understanding of the water conservation concept. I'll also be asking group questions and using a personal communication method of “thumbs up” or “thumbs down” to assess if the materials should be reviewed further before moving on. I'll be observing student collaboration and communication efforts when working with their small groups to build their rain catchers and to measure the rainfall outcomes.</p>			
<p>Summative Assessment (Assessment of Learning):</p>			

I will be using summative assessment (assessment of learning) at the end of this unit, by reviewing each individual water conservation booklet based on their predictions, observations, and responses made to the raincatcher experiment. I will also be assessing their responses to ways of conserving water in daily life. For students who may not create written responses, I will also be assessing their illustrations as demonstration of their learning, and using verbal communication to assess their understanding of the concept.

Date/ Lesson	Learning Intentions	Instructional Activities (brief description here – lesson plans will be used to flesh out each lesson)
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#1	I can demonstrate curiosity and a sense of wonder about water conservation.	<ul style="list-style-type: none"> - Teacher introduces the learning intention of water conservation in connection with the previous unit on the water cycle, reviewing different water sources, water components in weather. - Play “The Power Of Water” video to introduce the lesson and hydroelectricity. - Class discussion on the carpet about how we use water in everyday life, brainstorm ideas to create anchor charts as a class.
#2	I can make simple predictions about familiar objects and events, in connection with rainfall and freshwater resources.	<ul style="list-style-type: none"> - Teacher reviews the discussion on everyday use of water in schools, communities, and at home. - Teacher reads a story to class on the carpet about freshwater. - Generate questions about how much rain and freshwater resources are generated everyday, and how much water is used every day. Play video “How Can I Save Water” by SciShow Kids. - Students complete their predictions in their water conservation booklet about the amount of rainfall/freshwater resources generated in comparison with the amount of water being used.
#3	I can safely manipulate materials to test ideas and predictions about freshwater resources.	<ul style="list-style-type: none"> - Teacher reviews the anchor chart and the predictions generated in the previous lessons. - Divide class into 5 groups (4 circle tables plus the rainbow table). Model the science experiment of building a rain catcher with the purpose to measure how much rainfalls after a period of time. - Students create their rain catcher in small groups, using a plastic bottle (top pre-cut by teacher with tape on top to cover sharp edge). Students place small pebbles and water in the bottom, use a marker to measure on the sides. - Teacher candidate brings home to catch rain and ensure the rain catchers stay safe.
#4	I can make and record simple measurements using informal or non-standard methods about freshwater resources.	<ul style="list-style-type: none"> - Teacher returns the rain catchers to their groups. - Students measure the side of the bottle in their small groups, recording their responses individually in their water conservation booklet. - Class discussion about observations, what students notice, connections with weather patterns. - Students record observations independently - students who finish early may colour in their booklet
#5	I can consider some environmental consequences of my actions in connection with water conservation.	<ul style="list-style-type: none"> - Teacher returns the rain catchers to their groups. - Students measure the side of the bottle in their small groups again to observe new findings, recording their responses individually in their water conservation booklet and comparing with previous findings - Teacher models different measurements of water to class (ex. what 1 litre looks like) and shows different images/statistics of how much water is used on average when brushing teeth, etc. - Class discussion to brainstorm ways we can conserve water every day. - Students record responses in their booklet, with illustrations to demonstrate their understanding

Resources needed:		
	<p>Resources: https://schools.bchydro.com/activities/conservation/catch-the-rain https://www.youtube.com/watch?v=6yCAPAqXodc</p> <p>Materials: 5 plastic water bottles (top pre-cut and taped by teacher candidate), small pebbles, water, rulers, markers, water conservation handout.</p> <p>Technology: Document camera, laptop</p>	
Interdisciplinary connections: (e.g. How did you weave ELA, Social Studies, Science, Math, Fine Arts, and/or ADST together in this instructional sequence?)		
	<p>The primary focus of this unit is Science. Throughout this unit, interdisciplinary connections are made with Language Arts, Math, Fine Arts, and ADST. Students will be sharing their predictions, observations, and responses through oral communication and written processes, in connection with English Language Arts curriculum. Students will also be measuring their raincatcher, practicing their measurement skill in connection with Mathematics. This lesson includes illustrative and drawing components for students to demonstrate their observations, in connection with the Fine Arts curriculum. Students will also be building their own raincatcher model, following specific criteria and using materials safely in their design processes, in connection with the ADST curriculum.</p>	
Reflection		
	<p>How did the unit go? How do I know?</p>	

	<p>Where to next?</p>
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