

<b>Grade Level/Course:</b> 5 <sup>th</sup> Grade		<b>Concepts:</b> Waterways	
<b>Area of Emphasis/Topic/Theme/Unit:</b> Waterway ecosystems: hydrologic (water) cycle, water distribution on Earth, water runoff, properties of water (heat capacity), thermal water pollution and fish health		<b>Suggested Teaching Time Frame:</b> 1 quarter, preferably Spring	
<b>BIG IDEA – by the end of this course of study students will:</b> Describe characteristics of a healthy waterway ecosystem, compare healthy and unhealthy waterway ecosystems, explain the hydrologic cycle, describe the Earth’s water distribution and discriminate between drinkable and non-drinkable water sources, define water runoff and relate how runoff can lead to water pollution, identify heat capacity as being an important property of water and explain its importance to aquatic organisms, define and analyze the effects of thermal water pollution on a waterway ecosystem.			
<b>What?</b>	<b>How will you know?</b>	<b>How will you get there?</b>	
<b>Standards/Benchmarks</b>	<b>Assessment of Standards Assessed</b>	<b>Learning Strategies/Activities</b>	<b>Resources</b>
<p><b>Water Cycle:</b>  <b>Environmental:</b> A3, B1, B2, B5, B6, C2, C3  <b>Science:</b> 5.A1.2, 5.A1.6, 5.B1.6, 5.C1.8, 5.E1.1, 5.E1.5</p> <p><b>Drink Up!:</b>  <b>Environmental:</b> A2, A3, A4, B1, B3, B6, C1, C2, C3  <b>Science:</b> 5.B1.3, 5.E1.5</p> <p><b>Water Runoff at Your School:</b>  <b>Environmental:</b> A4, B2, B3, B6, C2  <b>Science:</b> 5.A1.2, 5.A1.4, 5.C1.8, 5.H1.1</p> <p><b>A Change in the Water Weather:</b>  <b>Environmental:</b> A2, A3, B1, B5, B6, C1, C2, C3  <b>Science:</b> 5.C1.8, 5.D2.6, 5.E1.1</p> <p><b>Hot Water Pollution:</b>  <b>Environmental:</b> A2, A3, A4, B1, B2, B3, B6, C2, C3  <b>Science:</b> 5.C1.8, 5.D2.6, 5.E1.1, 5.H1.1</p>	<p><b>Water Cycle:</b>  Transpiration activity and analysis and completion of transpiration follow-up activity sheet</p> <p><b>Drink Up!:</b>  Water distribution simulation activity and completion of follow-up activity sheet</p> <p><b>Water Runoff at Your School:</b>  Estimation of water runoff produced by school grounds activity</p> <p><b>A Change in the Water Weather:</b>  Heat capacity experiment and analysis of data</p> <p><b>Hot Water Pollution:</b>  Thermal pollution graphing activity and analysis sheet</p>	<p><b>Water Cycle:</b>  Create a diagram of water cycle, evaporation and condensation simulation demonstration</p> <p><b>Drink Up!:</b>  Water distribution estimation activity</p> <p><b>Water Runoff at Your School:</b>  Calculations of area of school grounds and monitoring of local precipitation</p> <p><b>A Change in the Water Weather:</b>  Observations of water and air temperature differences, heat capacity discussion</p> <p><b>Hot Water Pollution:</b>  Cool water and warm water habitat comparisons</p>	<p><b>Water Cycle:</b>  <u>Rivers Earth Science</u> pg 8,  <u>The Stream Scene</u> pg 13,  <u>Always a River</u> pg 79</p> <p><b>Drink Up!:</b>  <u>Rivers Earth Science</u> pgs 6, 19</p> <p><b>Water Runoff at Your School:</b>  <u>Project Wild Aquatic</u> pg 82</p> <p><b>A Change in the Water Weather:</b>  <u>Always a River</u> pgs 95, 101</p> <p><b>Hot Water Pollution:</b>  <u>The Stream Scene</u> pg 93</p>
<b>Area of Emphasis:</b> Waterway Ecosystems		<b>Big Idea #:</b> Waterways	