

# Grade 10

## Activity: **Color Me a Watershed**

Page: 223

Science and Technology in Society  
 How do science and technology affect the quality of our lives?

Content Standards	Activity Objectives	CMT Correlation/Expected Performances
<p><b>10.6 Living organisms have the capability of producing population of unlimited size, but the environment can support only a limited number of individuals from each species.</b></p> <p>&gt;Human populations grow due to advances in agriculture, medicine, construction and the use of energy.</p> <p>&gt; Humans modify ecosystems as a result of rapid population growth, use of technology and consumption of resources.</p>	<ol style="list-style-type: none"> <li>1. Recognize that population growth and settlement cause changes in land use.</li> <li>2. Analyze how land use variations in a watershed can affect the runoff of water.</li> </ol>	<p>D43. Describe the factors that affect carrying capacity of the environment.</p> <p>D44. Explain how change in population density is affected by emigration, immigration, birth rate and death rate, and relate these factors to the exponential growth of human populations.</p> <p>D45. Explain how technological advances have affected the size and growth rate of human populations throughout history.</p>

Activity: **Dust Bowls and Failed Levees**

Page: 303

Science and Technology

How do science and technology affect the quality of our lives?

Content Standards (focus of standard)	Activity Objectives (from Project WET activity)	CMT Correlation/Expected Performances
<p><b>10.6 Living organisms have the capability of producing populations of unlimited size, but the environment can support only a limited number of individuals from each species.</b></p> <p>&gt;Human populations grow due to advances in agriculture, medicine, construction and the use of energy.</p> <p>&gt;Humans modify ecosystems as a result of rapid population growth, use of technology and consumption of resources.</p>	<p>1. Illustrate the effects of drought, flood, and other water-related disasters on human lives, through creative writing.</p>	<p>D43. Describe the factors that affect the carrying capacity of the environment.</p> <p>D44. Explain how change in population density is affected by emigration, immigration, birth rate, and death rate, and related these factors to the exponential growth of human population.</p>

Activity: **People of the Bog**

Page: 89

Heredity and Evolution

What processes are responsible for life's unity and diversity?

Content Standards (focus of standard)	Activity Objectives (from Project WET activity)	CMT Correlation/Expected Performances
<p><b>10.5 Evolution and biodiversity are the result of genetic changes that occur over time in constantly changing environments.</b></p> <p>&gt;Changes in the environment may result in the selection of organisms that are better able to survive and reproduce.</p>	<p>1. Describe characteristics of bog environments.</p> <p>2. Explain the conditions of bogs that allow for the preservation of artifacts from the past.</p>	<p>D41. Explain how the current theory of evolution provides a scientific explanation for fossil records of ancient life forms.</p> <p>D42. Describe how structural and behavioral adaptations increase the chances for organisms to survive in their environments.</p>

Activity: **Super Sleuths**

Page: 107

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<p><b>10.2 Microorganisms have an essential role in life processes and cycles on Earth.</b> &gt;Understanding the growth and spread patterns of viruses and bacteria enables the development of methods to prevent and treat infectious diseases.</p>	<ol style="list-style-type: none"> <li>1. Identify the role of water in transmitting diseases.</li> <li>2. Compare symptoms of several waterborne diseases.</li> <li>3. Analyze the characteristics of environments that promote the transmission of these diseases around the world.</li> </ol>	<p>D31. Describe the similarities and differences between bacteria and viruses.</p> <p>D32. Describe how bacterial and viral infectious diseases are transmitted, and explain the roles of sanitation, vaccination and antibiotic medications in the prevention and treatment of infectious diseases.</p>

Activity: **The Long Haul**

Page: 260

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<p><b>10.6 Living organisms have the capability of producing populations of unlimited size, but the environment can support only a limited number of individuals from each species.</b> &gt;Human populations grow due to advances in agriculture, medicine, construction and the use of energy. &gt;Humans modify ecosystems as a result of rapid population growth, use of technology and</p>	<ol style="list-style-type: none"> <li>1. Develop an awareness of various volumes of water.</li> <li>2. Appreciate today's readily available water supplies.</li> <li>3. Relate how easy access to water can encourage people to use large amounts of water.</li> </ol>	<p>D43. Describe the factors that affect the carrying capacity of the environment.</p> <p>D45. Explain how technological advances have affected the size and growth rate of human populations throughout history.</p>

consumption of resources.		
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Activity: **Water Crossings**

Page: 421

Science and Technology

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<p><b>10.6 Living organisms have the capability of producing populations of unlimited size, but the environment, can support only a limited number of individuals from each species.</b></p> <p>&gt;Human populations grow due to advances in agriculture, medicine, construction and the use of energy.</p> <p>&gt;Humans modify ecosystems as a result of rapid population growth, use of technology and consumption of resources.</p>	<ol style="list-style-type: none"> <li>1. Analyze the influence of river crossings on settlement patterns.</li> <li>2. Describe the water related transportation problems that faced early explorers and settlers.</li> </ol>	<p>D43. Describe the factors that affect the carrying capacity of the environment.</p> <p>D44. Explain how change in population density is affected by emigration, immigration, birth rate, and death rate, and relate these factors to the exponential growth of human populations.</p> <p>D45. Explain how technological advances have affected the size and growth rate of human populations throughout history.</p>

Activity: **Whose Problem is it?**

Page: 429

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