

Grade 10

Activity: **Color Me a Watershed**

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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>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.</p> <p>>Human populations grow due to advances in agriculture, medicine, construction and the use of energy.</p> <p>> Humans modify ecosystems as a result of rapid population growth, use of technology and consumption of resources.</p>	<ol style="list-style-type: none"> 1. Recognize that population growth and settlement cause changes in land use. 2. Analyze how land use variations in a watershed can affect the runoff of water. 	<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**

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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>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.</p> <p>>Human populations grow due to advances in agriculture, medicine, construction and the use of energy.</p> <p>>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**

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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>10.5 Evolution and biodiversity are the result of genetic changes that occur over time in constantly changing environments.</p> <p>>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**

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<p>10.2 Microorganisms have an essential role in life processes and cycles on Earth. >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"> 1. Identify the role of water in transmitting diseases. 2. Compare symptoms of several waterborne diseases. 3. Analyze the characteristics of environments that promote the transmission of these diseases around the world. 	<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**

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<p>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. >Human populations grow due to advances in agriculture, medicine, construction and the use of energy. >Humans modify ecosystems as a result of rapid population growth, use of technology and</p>	<ol style="list-style-type: none"> 1. Develop an awareness of various volumes of water. 2. Appreciate today's readily available water supplies. 3. Relate how easy access to water can encourage people to use large amounts of water. 	<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**

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<p>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.</p> <p>>Human populations grow due to advances in agriculture, medicine, construction and the use of energy.</p> <p>>Humans modify ecosystems as a result of rapid population growth, use of technology and consumption of resources.</p>	<ol style="list-style-type: none"> 1. Analyze the influence of river crossings on settlement patterns. 2. Describe the water related transportation problems that faced early explorers and settlers. 	<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?**

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