

MS 217 Robert A Van Wyck The Green Magnet School - Science Grade 6 Course Sample

Unit	1. Simple and Complex Machines	2. Weather	3. Diversity of Life	4. Interdependence
Essential Question	How do machines impact our lives?	How do we affect the weather?	How does diversity create a vibrant community?	How are we all interconnected?
Careers	Engineer, Urban Planner, Analyst	Climatologist, Meteorologist, Physicist, Politician	Ecologist, Environmental Researcher, Naturalist, Zoologist	Ecologist, Environmental Researcher
Month(s)	Sept – Oct	Nov – Dec	Jan - Mar	Apr-June
What Magnet Standard(s) Can you connect to?	Sustainability Inquiry Technology	Sustainability Inquiry Technology	Sustainability Inquiry Technology	Sustainability Inquiry Technology
What is a culminating project you can do for this unit?	Using multimedia technology, create a study of a famous example of a simple or a complex machine (Archimedes screw, trebuchet, etc.) and find a creative use for one in modern life. Have a classmate analyze your use of the machine and write a conclusion explaining why your use of the machine is or is not sustainable.	Select a recent notable weather event (Hurricane Andrew, Katrina, California Wildfires, NYC Thunderstorm) and using a multimedia presentation explain the environmental factors that lead to the event. Explain how human behavior affects those environmental factors now, in the past and in the future. Considering what you’ ve learned from your research, what is likely to happen to similar weather events as global climate change goes on?	Create a personal field guide to your neighborhood. Research and identify at least 15 plants, 10 insects, 15 birds, and as many mammals as you can (if there are fish, reptiles and amphibians you can find, add them for extra credit). For each organism, create a page identifying them, with an image, a short physical description, a short description of habits and/or behavior, country of origin, place in the food chain with likely prey and predators). Create a multimedia presentation showing how all the organisms you discovered fit in the food web of your neighborhood, highlighting the roles each play in the web. Note all the organisms that are not native to this part of North America.	Research an interdependent relationship between 2 or more organisms (bees and flowers, sharks and remoras, weaver finches and trees, etc) and using a multimedia presentation explain the kind of relationship it is (symbiosis, commensalism, parasitism, or predation), what roles does each organism play in the relationship, and how human actions have affected the relationship or the species involved. Alternate project: Research and present in a similar manner an interdependent relationship between humans and one or more other species.

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<p>How will the project connect to the standard</p>	<p>The student will demonstrate an understanding of the function of at least one simple or complex machine and how it relates to modern life and the idea of sustainability.</p> <p>The student will demonstrate how the built environment must balance the needs of nature and humans.</p> <p>The student will demonstrate analytical skills through an examination of a design proposal.</p>	<p>The student will demonstrate knowledge of weather systems and how they can be affected by human interference.</p> <p>The student will demonstrate analytical skills through research and analysis of gathered data.</p>	<p>The student will demonstrate knowledge his or her local food web.</p> <p>The student will demonstrate knowledge of how human altered the local food web by bringing non-native organisms wherever they travel.</p>	<p>The student will demonstrate knowledge of the effects of anthropogenic environmental pressures on other organisms.</p> <p>The students will demonstrate a knowledge of interdependence and how humans rely on similar relationships for daily life.</p>
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