

Curriculum Map - Environmental Science

Month	Content	Skills	Assessment
September	<ul style="list-style-type: none"> • Environmental ethics • The use of keys to identify & classify organisms in the local environment. 	<ul style="list-style-type: none"> • Identify & describe the development ethic, the preservation ethic, & the conservation ethic. • Identify & describe their personal environmental ethic. • Identify, describe, & evaluate the views & agenda of the authors of articles related to environmental issues. • Identify wild flowers on the campus. 	<ul style="list-style-type: none"> • Persuasive essays • Oral presentations • Article reviews • Tests • Lab practical
October	<ul style="list-style-type: none"> • The use of keys to identify organisms in the local environment. • Dichotomous keys • Ecology 	<ul style="list-style-type: none"> • Identify trees on the campus. • Develop & use a dichotomous key. • Identify & describe ecology as the study of inter-relationships. • Identify & describe some basic inter-relationships in their environment. 	<ul style="list-style-type: none"> • Lab practical on tree identification • Exam using the student keys to identify organisms • Lab on micro-organisms • Article reviews • Essays/tests
November	<ul style="list-style-type: none"> • Ecological concepts such as habitat, niche, natural selection, & energy flow through an ecosystem 	<ul style="list-style-type: none"> • Identify & describe various habitats & niches. • Identify the niche & habitat of given organisms. • Draw food chains & food webs. 	<ul style="list-style-type: none"> • Lab reports dealing with field trips to various fresh water ecosystems (bog, streams, ponds, springs) • Article reviews • Essays/tests

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December	<ul style="list-style-type: none"> • Organism interactions • Describe the topography of the local environment. 	<ul style="list-style-type: none"> • Identify & describe predation, competition, & symbiotic relationships. • Read contour maps. 	<ul style="list-style-type: none"> • Article reviews • Predator/prey lab • Test • Open ended questions
January	<ul style="list-style-type: none"> • The use of physical models to perform simulations. 	<ul style="list-style-type: none"> • Construct a relief map of the Sherburne-Earlville area. 	<ul style="list-style-type: none"> • The map
February	<ul style="list-style-type: none"> • Land-use issues 	<ul style="list-style-type: none"> • Use their relief map & various community resource people to develop a land-use plan for the Sherburne-Earlville area. • Compare their plan with the actual development of this area. • Defend their plan before a simulated planning board committee made up of community members & school staff. 	<ul style="list-style-type: none"> • Open-ended summative & formative teacher assessment, peer assessment, & assessment by the members of the simulated planning board. The assessments will indicate levels of effort, the ability to obtain & use accurate data to draw reasonable conclusions, & the ability to clearly state & defend their conclusions.
March	<ul style="list-style-type: none"> • Ecosystems & communities • Populations 	<ul style="list-style-type: none"> • Identify & describe the major types of biomes: desert, grassland, savanna, tropical rainforest, temperate deciduous forest, taigu, tundra, marine, freshwater. • Identify & describe population characteristics, growth curves, & reproductive strategies. • Discuss & evaluate human population issues. 	<ul style="list-style-type: none"> • Research project on a chosen ecosystem culminating in a written, oral, or visual presentation of their findings. • Population growth curve lab • Article reviews • Essays • Test

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April	<ul style="list-style-type: none"> • Energy issues 	<ul style="list-style-type: none"> • Identify, describe, & evaluate the different forms of energy generation that have been used, are being used, & will be used in the future. 	<ul style="list-style-type: none"> • Article reviews • Essays/debates/oral presentations
May	<ul style="list-style-type: none"> • Pollution issues 	<ul style="list-style-type: none"> • Identify & describe the various forms of pollution. • Identify & describe specific cases of pollution. • Discuss issues involved in clean environment vs. job choices. 	<ul style="list-style-type: none"> • Lab exercises measuring the effect of various pollutants on air & water quality • Lab on the decomposition of solid wastes • Article reviews • Essays/tests
June	<ul style="list-style-type: none"> • Freshwater vertebrates 	<ul style="list-style-type: none"> • Collect & identify local freshwater vertebrates. • Identify & explain the relationship between the types of organisms they find & the quality of the water the organisms live in. 	<ul style="list-style-type: none"> • Lab practical • Written lab report

