

GRADE LEVEL: NINTH

SUBJECT: ENVIRONMENTAL SCIENCE

DATE: 2016-2017

MONTH/GRADING PERIOD: QUARTER 1

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CONTENT	STANDARD INDICATORS	SKILLS	ASSESSMENT	VOCAB	PRIORITY
Nature of Science and Ecology basics					
<ul style="list-style-type: none"> • Cyclical changes 	Env.1.1 Understand and explain that ecosystems have cyclic fluctuations, such as seasonal changes or changes in population, as a result of migration, birth, and mortality.	<ul style="list-style-type: none"> • Explain that ecosystems have cyclic fluctuations, such as seasonal changes or changes in population, as a result of migration, birth, and mortality. 	<ul style="list-style-type: none"> • Unit Exam 	<ul style="list-style-type: none"> • Tilt • Rotation • Seasons • Angle 	ADDITIONAL
<ul style="list-style-type: none"> • Humans in the ecosystem 	Env.1.2 Understand and explain that human beings are part of Earth's ecosystems and give examples of how human activities can, deliberately or inadvertently, alter ecosystems.	<ul style="list-style-type: none"> • Explain that human beings are part of Earth's ecosystems. • Give examples of how human activities can, deliberately or inadvertently, alter ecosystems. 	<ul style="list-style-type: none"> • Unit Exam 	<ul style="list-style-type: none"> • Deliberately • Inadvertently 	CRITICAL
<ul style="list-style-type: none"> • Systems in Equilibrium • Systems in disequilibrium • Negative feedback loop • Positive feedback loop 	Env.1.3 Recognize and describe the difference between systems in equilibrium and systems in disequilibrium. Describe how steady state is achieved through negative and positive feedback loops.	<ul style="list-style-type: none"> • Describe the difference between systems in equilibrium and systems in disequilibrium. • Describe how steady state is achieved through negative and positive feedback loops. 	<ul style="list-style-type: none"> • Unit Exam 	<ul style="list-style-type: none"> • Equilibrium • Disequilibrium • Steady State • Positive feedback • Negative feedback 	ADDITIONAL

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Nature of Science and Ecology basics					
<ul style="list-style-type: none"> • Nutrient Cycles -carbon -nitrogen -phosphorus -water 	Env.1.4 Diagram the cycling of carbon, nitrogen, phosphorus, and water and describe the human impacts on each.	<ul style="list-style-type: none"> • Label key portions of the following cycles: -Carbon -Nitrogen -Phosphorous -Water • Describe the human impacts on each cycle. 	<ul style="list-style-type: none"> • Nutrient cycle coloring sheets • Unit Exam 		IMPORTANT
<ul style="list-style-type: none"> • Factors of an ecosystem -biological -chemical -physical 	Env.1.5 Identify and measure biological, chemical, and physical (abiotic and biotic) factors within an ecosystem.	<ul style="list-style-type: none"> • Identify biological, chemical, and physical (abiotic and biotic) factors within an ecosystem. 	<ul style="list-style-type: none"> • Oh, deer! lab • Unit Exam 	<ul style="list-style-type: none"> • Biotic • Abiotic 	CRITICAL
<ul style="list-style-type: none"> • Matter cycles -food chains -food webs 	Env.2.1 Describe how matter cycles through sources and sinks and how energy is transferred. Explain how matter and energy move between and within components of an environmental system.	<ul style="list-style-type: none"> • Create a food chain. • Create a food web. • Compare and contrast food chains and webs. • Explain how matter moves from one sphere to another. 	<ul style="list-style-type: none"> • Food chain and webs game • Energy Web quest • Unit Exam 	<ul style="list-style-type: none"> • Energy Cycles • Food web • Food chain • Producer • Consumer • Decomposer • Autotroph • Heterotroph • Predator • Prey • Apex predator • Keystone species • Sink • Biosphere • Hydrosphere • Lithosphere 	CRITICAL

CONTENT	STANDARD INDICATORS	SKILLS	ASSESSMENT	VOCAB	PRIORITY
Nature of Science and Ecology basics					
<ul style="list-style-type: none"> • Law of Conservation of Energy 	<p>Env.2.2 Identify the different forms of energy and understand that energy may be converted from one form to another, but cannot be created nor destroyed.</p>	<ul style="list-style-type: none"> • Identify the different forms of energy. • Demonstrate how energy may be converted from one form to another. • Explain that energy cannot be created nor destroyed. 	<ul style="list-style-type: none"> • Unit Exam 	<ul style="list-style-type: none"> • Energy • Work • Law of conservation of Energy • Potential energy • Chemical energy • Electrical energy 	IMPORTANT
<ul style="list-style-type: none"> • Limiting Factors • Recycling organic material 	<p>Env.2.3 Recognize and explain that the amount of life any environment can support is limited by the available energy, water, oxygen, nutrients and minerals, and by the ability of ecosystems to recycle organic materials from the remains of dead organisms.</p>	<ul style="list-style-type: none"> • Explain that the amount of life any environment can support is limited by the available energy, water, oxygen, nutrients and minerals. • Explain that the amount of life any environment can support is limited by the ability of ecosystems to recycle organic materials from the remains of dead organisms. 	<ul style="list-style-type: none"> • Oh, deer! lab • Unit Exam 	<ul style="list-style-type: none"> • Oxygen • Dissolved oxygen • Nutrient • Phosphorous • Nitrogen 	IMPORTANT
<ul style="list-style-type: none"> • Energy from the sun 	<p>Env.2.4 Recognize and describe the different sources of energy, including fossil fuels, nuclear, and alternative sources of energy provided by water, wind, geothermal, biomass/biofuels, and the sun.</p>	<ul style="list-style-type: none"> • Explain that all energy on Earth originates from the sun. • Explain how organisms pass energy through the food web. 	<ul style="list-style-type: none"> • NOT DIRECTLY ASSESSED IN THIS UNIT. 		ADDITIONAL

STANDARD INDICATORS	SCIENCE AND ENGINEERING	LITERACY IN SCIENCE
<p>Env.1.1 Understand and explain that ecosystems have cyclic fluctuations, such as seasonal changes or changes in population, as a result of migration, birth, and mortality.</p>	<p>SEPS.1: Posing questions and defining problems.</p> <p>SEPS.2: Developing and using models and tools.</p> <p>SEPS.3: Construct and perform investigation.</p> <p>SEPS.4: Analyze and interpret data.</p> <p>SEPS.5: Use mathematics and computational thinking.</p> <p>SEPS.6: Construct explanations and design solutions.</p> <p>SEPS.7: Engage in argument from evidence.</p> <p>SEPS.8: Obtain, evaluate, and communicate information.</p>	<p>LST.1: Learning Outcome</p> <ul style="list-style-type: none"> • Read and comprehend science and technical texts. • Write routinely for a range of tasks, purposes, and audiences. <p>LST.2: Key Ideas and Textual Support</p> <ul style="list-style-type: none"> • Cite specific textual evidence to support texts. • Follow a multistep procedure when carrying out experiments, taking measurement, or performing technical tasks. <p>LST.3: Structural Elements and Organization</p> <ul style="list-style-type: none"> • Determine the meaning of symbols, key terms, and phrases. • Analyze how the text structures information or ideas into categories or hierarchies, demonstrating understanding of the information or ideas. • Analyze the author’s purpose in providing an explanation, describing a procedure, or discussing an experiment in a text, identifying important issues that remain unresolved. <p>LST.4: Synthesis and Connection of Ideas</p> <ul style="list-style-type: none"> • Integrate and evaluate multiple sources of information presented in diverse formats and media (e.g., quantitative data, video, multimedia) in order to address a question or solve a problem. • Evaluate the hypotheses, data, analysis, and conclusions in a science or technical text, verifying the data when possible and corroborating or challenging conclusions with other sources of information.

STANDARD INDICATORS	SCIENCE AND ENGINEERING	LITERACY IN SCIENCE
<p>Env.1.2 Understand and explain that human beings are part of Earth’s ecosystems and give examples of how human activities can, deliberately or inadvertently, alter ecosystems.</p>	<p>SEPS.1: Posing questions and defining problems.</p> <p>SEPS.2: Developing and using models and tools.</p> <p>SEPS.3: Construct and perform investigation.</p> <p>SEPS.4: Analyze and interpret data.</p> <p>SEPS.5: Use mathematics and computational thinking.</p> <p>SEPS.6: Construct explanations and design solutions.</p> <p>SEPS.7: Engage in argument from evidence.</p> <p>SEPS.8: Obtain, evaluate, and communicate information.</p>	<p>LST.1: Learning Outcome</p> <ul style="list-style-type: none"> • Read and comprehend science and technical texts. • Write routinely for a range of tasks, purposes, and audiences. <p>LST.2: Key Ideas and Textual Support</p> <ul style="list-style-type: none"> • Cite specific textual evidence to support texts. • Follow a multistep procedure when carrying out experiments, taking measurement, or performing technical tasks. <p>LST.3: Structural Elements and Organization</p> <ul style="list-style-type: none"> • Determine the meaning of symbols, key terms, and phrases. • Analyze how the text structures information or ideas into categories or hierarchies, demonstrating understanding of the information or ideas. • Analyze the author’s purpose in providing an explanation, describing a procedure, or discussing an experiment in a text, identifying important issues that remain unresolved. <p>LST.4: Synthesis and Connection of Ideas</p> <ul style="list-style-type: none"> • Integrate and evaluate multiple sources of information presented in diverse formats and media (e.g., quantitative data, video, multimedia) in order to address a question or solve a problem. • Evaluate the hypotheses, data, analysis, and conclusions in a science or technical text, verifying the data when possible and corroborating or challenging conclusions with other sources of information. • Synthesize information from a range of sources (e.g., texts, experiments, simulations) into a coherent understanding of a process, phenomenon, or concept, resolving conflicting information when possible.

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<p>Env.1.3 Recognize and describe the difference between systems in equilibrium and systems in disequilibrium. Describe how steady state is achieved through negative and positive feedback loops.</p>	<p>SEPS.1: Posing questions and defining problems.</p> <p>SEPS.2: Developing and using models and tools.</p> <p>SEPS.3: Construct and perform investigation.</p> <p>SEPS.4: Analyze and interpret data.</p> <p>SEPS.5: Use mathematics and computational thinking.</p> <p>SEPS.6: Construct explanations and design solutions.</p> <p>SEPS.7: Engage in argument from evidence.</p> <p>SEPS.8: Obtain, evaluate, and communicate information.</p>	<p>LST.1: Learning Outcome</p> <ul style="list-style-type: none"> • Read and comprehend science and technical texts. • Write routinely for a range of tasks, purposes, and audiences. <p>LST.2: Key Ideas and Textual Support</p> <ul style="list-style-type: none"> • Cite specific textual evidence to support texts. • Follow a multistep procedure when carrying out experiments, taking measurement, or performing technical tasks. <p>LST.3: Structural Elements and Organization</p> <ul style="list-style-type: none"> • Determine the meaning of symbols, key terms, and phrases. • Analyze how the text structures information or ideas into categories or hierarchies, demonstrating understanding of the information or ideas. • Analyze the author’s purpose in providing an explanation, describing a procedure, or discussing an experiment in a text, identifying important issues that remain unresolved. <p>LST.4: Synthesis and Connection of Ideas</p> <ul style="list-style-type: none"> • Integrate and evaluate multiple sources of information presented in diverse formats and media (e.g., quantitative data, video, multimedia) in order to address a question or solve a problem. • Evaluate the hypotheses, data, analysis, and conclusions in a science or technical text, verifying the data when possible and corroborating or challenging conclusions with other sources of information. • Synthesize information from a range of sources (e.g., texts, experiments, simulations) into a coherent understanding of a process, phenomenon, or concept, resolving conflicting information when possible.

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<p>Env.1.4 Diagram the cycling of carbon, nitrogen, phosphorus, and water and describe the human impacts on each.</p>	<p>SEPS.1: Posing questions and defining problems.</p> <p>SEPS.2: Developing and using models and tools.</p> <p>SEPS.3: Construct and perform investigation.</p> <p>SEPS.4: Analyze and interpret data.</p> <p>SEPS.5: Use mathematics and computational thinking.</p> <p>SEPS.6: Construct explanations and design solutions.</p> <p>SEPS.7: Engage in argument from evidence.</p> <p>SEPS.8: Obtain, evaluate, and communicate information.</p>	<p>LST.1: Learning Outcome</p> <ul style="list-style-type: none"> • Read and comprehend science and technical texts. • Write routinely for a range of tasks, purposes, and audiences. <p>LST.2: Key Ideas and Textual Support</p> <ul style="list-style-type: none"> • Cite specific textual evidence to support texts. • Follow a multistep procedure when carrying out experiments, taking measurement, or performing technical tasks. <p>LST.3: Structural Elements and Organization</p> <ul style="list-style-type: none"> • Determine the meaning of symbols, key terms, and phrases. • Analyze how the text structures information or ideas into categories or hierarchies, demonstrating understanding of the information or ideas. • Analyze the author’s purpose in providing an explanation, describing a procedure, or discussing an experiment in a text, identifying important issues that remain unresolved. <p>LST.4: Synthesis and Connection of Ideas</p> <ul style="list-style-type: none"> • Integrate and evaluate multiple sources of information presented in diverse formats and media (e.g., quantitative data, video, multimedia) in order to address a question or solve a problem. • Evaluate the hypotheses, data, analysis, and conclusions in a science or technical text, verifying the data when possible and corroborating or challenging conclusions with other sources of information. • Synthesize information from a range of sources (e.g., texts, experiments, simulations) into a coherent understanding of a process, phenomenon, or concept, resolving conflicting information when possible.

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<p>Env.1.5 Identify and measure biological, chemical, and physical (abiotic and biotic) factors within an ecosystem.</p>	<p>SEPS.1: Posing questions and defining problems.</p> <p>SEPS.2: Developing and using models and tools.</p> <p>SEPS.3: Construct and perform investigation.</p> <p>SEPS.4: Analyze and interpret data.</p> <p>SEPS.5: Use mathematics and computational thinking.</p> <p>SEPS.6: Construct explanations and design solutions.</p> <p>SEPS.7: Engage in argument from evidence.</p> <p>SEPS.8: Obtain, evaluate, and communicate information.</p>	<p>LST.1: Learning Outcome</p> <ul style="list-style-type: none"> • Read and comprehend science and technical texts. • Write routinely for a range of tasks, purposes, and audiences. <p>LST.2: Key Ideas and Textual Support</p> <ul style="list-style-type: none"> • Cite specific textual evidence to support texts. • Follow a multistep procedure when carrying out experiments, taking measurement, or performing technical tasks. <p>LST.3: Structural Elements and Organization</p> <ul style="list-style-type: none"> • Determine the meaning of symbols, key terms, and phrases. • Analyze how the text structures information or ideas into categories or hierarchies, demonstrating understanding of the information or ideas. • Analyze the author’s purpose in providing an explanation, describing a procedure, or discussing an experiment in a text, identifying important issues that remain unresolved. <p>LST.4: Synthesis and Connection of Ideas</p> <ul style="list-style-type: none"> • Integrate and evaluate multiple sources of information presented in diverse formats and media (e.g., quantitative data, video, multimedia) in order to address a question or solve a problem. • Evaluate the hypotheses, data, analysis, and conclusions in a science or technical text, verifying the data when possible and corroborating or challenging conclusions with other sources of information. • Synthesize information from a range of sources (e.g., texts, experiments, simulations) into a coherent understanding of a process, phenomenon, or concept, resolving conflicting information when possible.

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STANDARD INDICATORS	SCIENCE AND ENGINEERING	LITERACY IN SCIENCE
<p>Env.2.4 Recognize and describe the different sources of energy, including fossil fuels, nuclear, and alternative sources of energy provided by water, wind, geothermal, biomass/biofuels, and the sun.</p>	<p>SEPS.1: Posing questions and defining problems.</p> <p>SEPS.2: Developing and using models and tools.</p> <p>SEPS.3: Construct and perform investigation.</p> <p>SEPS.4: Analyze and interpret data.</p> <p>SEPS.5: Use mathematics and computational thinking.</p> <p>SEPS.6: Construct explanations and design solutions.</p> <p>SEPS.7: Engage in argument from evidence.</p> <p>SEPS.8: Obtain, evaluate, and communicate information.</p>	<p>LST.1: Learning Outcome</p> <ul style="list-style-type: none"> • Read and comprehend science and technical texts. • Write routinely for a range of tasks, purposes, and audiences. <p>LST.2: Key Ideas and Textual Support</p> <ul style="list-style-type: none"> • Cite specific textual evidence to support texts. • Follow a multistep procedure when carrying out experiments, taking measurement, or performing technical tasks. <p>LST.3: Structural Elements and Organization</p> <ul style="list-style-type: none"> • Determine the meaning of symbols, key terms, and phrases. • Analyze how the text structures information or ideas into categories or hierarchies, demonstrating understanding of the information or ideas. • Analyze the author’s purpose in providing an explanation, describing a procedure, or discussing an experiment in a text, identifying important issues that remain unresolved. <p>LST.4: Synthesis and Connection of Ideas</p> <ul style="list-style-type: none"> • Integrate and evaluate multiple sources of information presented in diverse formats and media (e.g., quantitative data, video, multimedia) in order to address a question or solve a problem. • Evaluate the hypotheses, data, analysis, and conclusions in a science or technical text, verifying the data when possible and corroborating or challenging conclusions with other sources of information. • Synthesize information from a range of sources (e.g., texts, experiments, simulations) into a coherent understanding of a process, phenomenon, or concept, resolving conflicting information when possible.

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SUBJECT: ENVIRONMENTAL SCIENCE

DATE: 2016-2017

MONTH/GRADING PERIOD: Q2

MASTER COPY 5-17-17

CONTENT	STANDARD INDICATORS	SKILLS	ASSESSMENT	VOCAB	PRIORITY
ORGANISMAL INTERACTIONS					
<ul style="list-style-type: none"> Population growth rates 	Env.6.1 Demonstrate, calculate, and explain how factors such as birth rate, death rate, and migration rate determine growth rates of populations.	<ul style="list-style-type: none"> Calculate growth rates of populations. 	<ul style="list-style-type: none"> Populations Web quest pHet simulation Unit Exam 	<ul style="list-style-type: none"> Population Growth Rate Immigration Emigration Birth Rate Death Rate 	IMPORTANT
<ul style="list-style-type: none"> Intergenerational impacts 	Env.6.3 Describe and give examples about how the decisions of one generation both provide and limit the range of possibilities open to the next generation.	<ul style="list-style-type: none"> Give examples of the decisions of one generation both providing and limiting the range of possibilities open to the next generation in the natural world. 	<ul style="list-style-type: none"> Unit Exam 		ADDITIONAL
<ul style="list-style-type: none"> Carrying Capacity 	Env.6.4 Explain how the carrying capacity of an ecosystem may change as availability of resources changes.	<ul style="list-style-type: none"> Identify the carrying capacity of an ecosystem graphically. Explain how the carrying capacity of an ecosystem changes in response to changing conditions. 	<ul style="list-style-type: none"> Oh, Deer! Lab II Unit Exam 	<ul style="list-style-type: none"> Carrying Capacity Limiting factor 	IMPORTANT

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ORGANISMAL INTERACTIONS					
<ul style="list-style-type: none"> Threats to biodiversity 	Env.5.5 Identify the indirect and direct threats to biodiversity (e.g. habitat loss and destruction, invasion by exotic species, commercial over fishing and hunting, pollution, climate change, and bioaccumulation and biomagnification of toxins).	<ul style="list-style-type: none"> Explain how bioaccumulation and biomagnification of toxins threaten humans. 	<ul style="list-style-type: none"> Invasive Species Exit Ticket Invasive Species project Unit Exam 	<ul style="list-style-type: none"> Non-native species Invasive species Bioaccumulation Biomagnification 	CRITICAL
THE HUMAN POPULATION					
<ul style="list-style-type: none"> Human tools and technology 	Env.1.7 Identify tools and technologies used to adapt and alter environments and natural resources in order to meet human physical and cultural needs.	<ul style="list-style-type: none"> Identify tools and technologies that humans use to alter the environment. 	<ul style="list-style-type: none"> Unit Exam 	<ul style="list-style-type: none"> Mining Deforestation 	ADDITIONAL
<ul style="list-style-type: none"> Population growth rates 	Env.6.1 Demonstrate, calculate, and explain how factors such as birth rate, death rate, and migration rate determine growth rates of populations.	<ul style="list-style-type: none"> Calculate growth rates of the human population. 	<ul style="list-style-type: none"> Population Growth Calculations Unit Exam 	<ul style="list-style-type: none"> Life Expectancy 	IMPORTANT
<ul style="list-style-type: none"> Human population growth rate 	Env.6.2 Explain how the size and rate of growth of the human population in any location is affected by economic, political, religious, technological, and environmental (resource availability) factors.	<ul style="list-style-type: none"> Explain how the size and rate of growth of the human population in any location is affected by economic, political, religious, technological, and environmental (resource availability) factors. 	<ul style="list-style-type: none"> Unit Exam 		ADDITIONAL

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THE HUMAN POPULATION					
<ul style="list-style-type: none"> • Intergenerational impacts 	Env.6.3 Describe and give examples about how the decisions of one generation both provide and limit the range of possibilities open to the next generation.	<ul style="list-style-type: none"> • Explain how the decisions of one generation both provide and limit the range of possibilities open to the next generation in the human population. 	<ul style="list-style-type: none"> • Letters to generations 		ADDITIONAL
<ul style="list-style-type: none"> • Natural and human pollution 	Env.7.2 Differentiate between natural pollution and pollution caused by humans.	<ul style="list-style-type: none"> • Identify natural sources of (trash) pollution • Identify human sources of (trash) pollution. 	<ul style="list-style-type: none"> • Unit Exam 	<ul style="list-style-type: none"> • Pollution • Anthropogenic 	IMPORTANT
<ul style="list-style-type: none"> • Environmental stressors 	Env.7.3 Compare and contrast the effects of environmental stressors (i.e. herbicides, pesticides) on plants and animals. Give examples of secondary effects on other environmental components.	<ul style="list-style-type: none"> • Give examples of secondary effects on other environmental components (acid deposition, photochemical smog). 	<ul style="list-style-type: none"> • Air Pollutants • Unit Exam 	<ul style="list-style-type: none"> • Acid deposition • Photochemical smog • Primary pollutant • Secondary pollutant 	CRITICAL
<ul style="list-style-type: none"> • Burning of fossil fuel waste 	Env.7.6 Understand and explain how the burning of fossil fuels releases energy, waste heat, and matter (air pollutants)	<ul style="list-style-type: none"> • Explain how the burning of fossil fuels releases energy, waste heat, and matter (air pollutants). 	<ul style="list-style-type: none"> • Air Pollutants • Unit Exam 	<ul style="list-style-type: none"> • Scrubber 	IMPORTANT
<ul style="list-style-type: none"> • Product life cycle 	Env.7.7 Describe and explain the product life cycle and waste stream and its implications to waste management. Explain the difference between reduce, reuse, and recycle.	<ul style="list-style-type: none"> • Explain the product life cycle and waste stream and its implications to waste management. • Explain the difference between reduce, reuse, and recycle. 	<ul style="list-style-type: none"> • Unit Exam • The Story of Stuff Exit Ticket 		IMPORTANT

CONTENT	STANDARD INDICATORS	SKILLS	ASSESSMENT	VOCAB	PRIORITY
THE HUMAN POPULATION					
<ul style="list-style-type: none"> Natural resource distribution (U.S. and the world) 	Env.8.1 Demonstrate a knowledge of the distribution of natural resources in the U.S. and the world, and explain how natural resources influence relationships among nations.	<ul style="list-style-type: none"> Explain how unequal distribution of resources leads to conflicts. 	<ul style="list-style-type: none"> Unit Exam 	<ul style="list-style-type: none"> Famine Environmental Refugee Food insecurity 	CRITICAL
<ul style="list-style-type: none"> Integrated natural resource management 	Env.8.2 Understand and describe the concept of integrated natural resource management and the values of managing natural resources as an ecological unit.	<ul style="list-style-type: none"> Describe the concept of integrated natural resource management Explain the value of managing natural resources as an ecological unit. 	<ul style="list-style-type: none"> Unit Exam 	<ul style="list-style-type: none"> Integrated natural resource management 	ADDITIONAL
<ul style="list-style-type: none"> Water control 	Env.8.5 Describe and examine how water is controlled in developed and undeveloped nations.	<ul style="list-style-type: none"> Describe how water is controlled and supplied in developing nations. 	<ul style="list-style-type: none"> Unit Exam 	<ul style="list-style-type: none"> Developed countries Developing countries Demographic transition 	ADDITIONAL
<ul style="list-style-type: none"> Nutrient Cycles 	Env.8.6 Understand and describe the concept and the importance of natural and human recycling in conserving our natural resources.	<ul style="list-style-type: none"> Describe the concept of natural and human recycling. Describe the importance of natural and human recycling in conserving our natural resources. 	<ul style="list-style-type: none"> Recycling Web Quest Unit Exam 	<ul style="list-style-type: none"> Reduce Reuse Recycle 	CRITICAL

CONTENT	STANDARD INDICATORS	SKILLS	ASSESSMENT	VOCAB	PRIORITY
THE HUMAN POPULATION					
<ul style="list-style-type: none"> Waste management 	<p>Env.8.7 Understand and explain that waste management includes considerations of quantity, safety, degradability, and cost. Also understand that waste management requires social and technological innovations because waste-disposal problems are political and economic as well as technical.</p>	<ul style="list-style-type: none"> Explain that waste management includes considerations of quantity, safety, degradability, and cost. Explain that waste management requires social and technological innovations because waste-disposal problems are political and economic as well as technical. 	<ul style="list-style-type: none"> Trash Day Exit ticket Unit Exam 	<ul style="list-style-type: none"> Trash Hazardous materials Radioactive waste e-waste Grey water 	<p>IMPORTANT</p>
RISK AND HUMAN HEALTH					
<ul style="list-style-type: none"> Plate tectonics 	<p>Env.3.1 Identify and describe geomorphic processes controlled by tectonics (i.e. volcanic activity, uplift, and shaping of landforms).</p>	<ul style="list-style-type: none"> Identify and describe geomorphic processes controlled by tectonics (i.e. volcanic activity, uplift, and shaping of landforms). 	<ul style="list-style-type: none"> Plotting fault lines lab Unit Exam 	<ul style="list-style-type: none"> Tectonics Geomorphic Uplift Convection 	<p>IMPORTANT</p>

CONTENT	STANDARD INDICATORS	SKILLS	ASSESSMENT	VOCAB	PRIORITY
RISK AND HUMAN HEALTH					
<ul style="list-style-type: none"> Natural Earth hazards 	<p>Env.3.4 Identify natural Earth hazards, such as earthquakes and hurricanes, and identify the regions in which they occur as well as the short-term and long-term effects on the environment and on people.</p>	<ul style="list-style-type: none"> Identify earthquakes. Identify the regions in which earthquakes occur. Discuss short-term and long-term effects on the environment and on people of earthquakes. Identify hurricanes. Identify the regions in which hurricanes occur as well as the short-term and long-term effects on the environment and on people. Discuss short-term and long-term effects on the environment and on people of hurricanes. 	<ul style="list-style-type: none"> Unit Exam 	<ul style="list-style-type: none"> Earthquake Fault High pressure Low pressure hurricane 	IMPORTANT
<ul style="list-style-type: none"> Natural and human pollution 	<p>Env.7.2 Differentiate between natural pollution and pollution caused by humans.</p>	<ul style="list-style-type: none"> Identify natural sources of indoor air pollution. Identify human sources of indoor air pollution. 	<ul style="list-style-type: none"> Unit Exam 		IMPORTANT

CONTENT	STANDARD INDICATORS	SKILLS	ASSESSMENT	VOCAB	PRIORITY
RISK AND HUMAN HEALTH					
<ul style="list-style-type: none"> Environmental stressors 	<p>Env.7.3 Compare and contrast the effects of environmental stressors (i.e. herbicides, pesticides) on plants and animals. Give examples of secondary effects on other environmental components.</p>	<ul style="list-style-type: none"> Discuss how humans directly contribute to secondary effects on other environmental components (acid deposition, photochemical smog). 	<ul style="list-style-type: none"> Air Pollutants Unit Exam 	<ul style="list-style-type: none"> Acid deposition Photochemical smog Primary pollutant Secondary pollutant 	CRITICAL
<ul style="list-style-type: none"> Household toxins 	<p>Env.7.4 Explain what common household toxins are, what to do in an emergency, and how to properly dispose.</p>	<ul style="list-style-type: none"> Identify common household toxins. Explain what to do in the case of an emergency with a household toxin. Explain how to properly dispose of 1 household toxin. 	<ul style="list-style-type: none"> Home Hazmat Survey Unit Exam 	<ul style="list-style-type: none"> Toxin Toxicity Dose Response 	CRITICAL
<ul style="list-style-type: none"> Sources and impact of air pollutants 	<p>Env.7.5 Identify and describe the major air pollutants and their sources and impacts on the environment and human health.</p>	<ul style="list-style-type: none"> Identify the major air pollutants. Identify the sources of major air pollutants. Describe the impacts on the environment and human health from the major air pollutants. 	<ul style="list-style-type: none"> Air Pollutants Unit Exam 	<ul style="list-style-type: none"> Pollutant VOCs Allergens 	IMPORTANT

STANDARD INDICATORS	SCIENCE AND ENGINEERING	LITERACY IN SCIENCE
<p>Env.6.1 Demonstrate, calculate, and explain how factors such as birth rate, death rate, and migration rate determine growth rates of populations.</p>	<p>SEPS.1: Posing questions and defining problems.</p> <p>SEPS.4: Analyze and interpret data.</p> <p>SEPS.5: Use mathematics and computational thinking.</p> <p>SEPS.6: Construct explanations and design solutions.</p>	<p>LST.1: Learning Outcome</p> <ul style="list-style-type: none"> • Read and comprehend science and technical texts. • Write routinely for a range of tasks, purposes, and audiences. <p>LST.2: Key Ideas and Textual Support</p> <ul style="list-style-type: none"> • Cite specific textual evidence to support texts. • Follow a multistep procedure when carrying out experiments, taking measurement, or performing technical tasks. <p>LST.3: Structural Elements and Organization</p> <ul style="list-style-type: none"> • Determine the meaning of symbols, key terms, and phrases. <p>LST.4: Synthesis and Connection of Ideas</p> <ul style="list-style-type: none"> • Integrate and evaluate multiple sources of information presented in diverse formats and media (e.g., quantitative data, video, multimedia) in order to address a question or solve a problem. • Synthesize information from a range of sources (e.g., texts, experiments, simulations) into a coherent understanding of a process, phenomenon, or concept, resolving conflicting information when possible.

STANDARD INDICATORS	SCIENCE AND ENGINEERING	LITERACY IN SCIENCE
<p>Env.6.3 Describe and give examples about how the decisions of one generation both provide and limit the range of possibilities open to the next generation.</p>	<p>SEPS.1: Posing questions and defining problems.</p> <p>SEPS.4: Analyze and interpret data.</p> <p>SEPS.5: Use mathematics and computational thinking</p> <p>SEPS.6: Construct explanations and design solutions.</p> <p>SEPS.7: Engage in argument from evidence</p> <p>SEPS.8: Obtain, evaluate, and communicate information.</p>	<p>LST.1: Learning Outcome</p> <ul style="list-style-type: none"> • Read and comprehend science and technical texts. • Write routinely for a range of tasks, purposes, and audiences. <p>LST.2: Key Ideas and Textual Support</p> <ul style="list-style-type: none"> • Cite specific textual evidence to support texts. <p>LST.3: Structural Elements and Organization</p> <ul style="list-style-type: none"> • Analyze how the text structures information or ideas into categories or hierarchies, demonstrating understanding of the information or ideas. • Analyze the author’s purpose in providing an explanation, describing a procedure, or discussing an experiment in a text, identifying important issues that remain unresolved. <p>LST.4: Synthesis and Connection of Ideas</p> <ul style="list-style-type: none"> • Integrate and evaluate multiple sources of information presented in diverse formats and media (e.g., quantitative data, video, multimedia) in order to address a question or solve a problem. • Synthesize information from a range of sources (e.g., texts, experiments, simulations) into a coherent understanding of a process, phenomenon, or concept, resolving conflicting information when possible.

STANDARD INDICATORS	SCIENCE AND ENGINEERING	LITERACY IN SCIENCE
<p>Env.6.4 Explain how the carrying capacity of an ecosystem may change as availability of resources changes.</p>	<p>SEPS.1: Posing questions and defining problems.</p> <p>SEPS.2: Developing and using models and tools.</p> <p>SEPS.3: Construct and perform investigation.</p> <p>SEPS.4: Analyze and interpret data.</p> <p>SEPS.5: Use mathematics and computational thinking</p> <p>SEPS.6: Construct explanations and design solutions.</p> <p>SEPS.7: Engage in argument from evidence</p> <p>SEPS.8: Obtain, evaluate, and communicate information.</p>	<p>LST.1: Learning Outcome</p> <ul style="list-style-type: none"> • Write routinely for a range of tasks, purposes, and audiences. <p>LST.2: Key Ideas and Textual Support</p> <ul style="list-style-type: none"> • Cite specific textual evidence to support texts. • Follow a multistep procedure when carrying out experiments, taking measurement, or performing technical tasks. <p>LST.3: Structural Elements and Organization</p> <ul style="list-style-type: none"> • Determine the meaning of symbols, key terms, and phrases. <p>LST.4: Synthesis and Connection of Ideas</p> <ul style="list-style-type: none"> • Integrate and evaluate multiple sources of information presented in diverse formats and media (e.g., quantitative data, video, multimedia) in order to address a question or solve a problem. • Evaluate the hypotheses, data, analysis, and conclusions in a science or technical text, verifying the data when possible and corroborating or challenging conclusions with other sources of information. • Synthesize information from a range of sources (e.g., texts, experiments, simulations) into a coherent understanding of a process, phenomenon, or concept, resolving conflicting information when possible.

STANDARD INDICATORS	SCIENCE AND ENGINEERING	LITERACY IN SCIENCE
<p>Env.5.5 Identify the indirect and direct threats to biodiversity (e.g. habitat loss and destruction, invasion by exotic species, commercial over fishing and hunting, pollution, climate change, and bioaccumulation and biomagnification of toxins).</p>	<p>SEPS.1: Posing questions and defining problems.</p> <p>SEPS.3: Construct and perform investigation.</p> <p>SEPS.4: Analyze and interpret data.</p> <p>SEPS.6: Construct explanations and design solutions.</p> <p>SEPS.7: Engage in argument from evidence</p> <p>SEPS.8: Obtain, evaluate, and communicate information.</p>	<p>LST.1: Learning Outcome</p> <ul style="list-style-type: none"> • Read and comprehend science and technical texts. • Write routinely for a range of tasks, purposes, and audiences. <p>LST.2: Key Ideas and Textual Support</p> <ul style="list-style-type: none"> • Cite specific textual evidence to support texts. <p>LST.3: Structural Elements and Organization</p> <ul style="list-style-type: none"> • Determine the meaning of symbols, key terms, and phrases. <ul style="list-style-type: none"> • Analyze how the text structures information or ideas into categories or hierarchies, demonstrating understanding of the information or ideas. • Analyze the author’s purpose in providing an explanation, describing a procedure, or discussing an experiment in a text, identifying important issues that remain unresolved. <p>LST.4: Synthesis and Connection of Ideas</p> <ul style="list-style-type: none"> • Integrate and evaluate multiple sources of information presented in diverse formats and media (e.g., quantitative data, video, multimedia) in order to address a question or solve a problem. • Evaluate the hypotheses, data, analysis, and conclusions in a science or technical text, verifying the data when possible and corroborating or challenging conclusions with other sources of information. • Synthesize information from a range of sources (e.g., texts, experiments, simulations) into a coherent understanding of a process, phenomenon, or concept, resolving conflicting information when possible.

STANDARD INDICATORS	SCIENCE AND ENGINEERING	LITERACY IN SCIENCE
<p>Env.6.1 Demonstrate, calculate, and explain how factors such as birth rate, death rate, and migration rate determine growth rates of populations.</p>	<p>SEPS.1: Posing questions and defining problems.</p> <p>SEPS.2: Developing and using models and tools.</p> <p>SEPS.3: Construct and perform investigation.</p> <p>SEPS.4: Analyze and interpret data.</p> <p>SEPS.5: Use mathematics and computational thinking</p> <p>SEPS.6: Construct explanations and design solutions.</p> <p>SEPS.8: Obtain, evaluate, and communicate information.</p>	<p>LST.1: Learning Outcome</p> <ul style="list-style-type: none"> • Read and comprehend science and technical texts. • Write routinely for a range of tasks, purposes, and audiences. <p>LST.2: Key Ideas and Textual Support</p> <ul style="list-style-type: none"> • Cite specific textual evidence to support texts. • Follow a multistep procedure when carrying out experiments, taking measurement, or performing technical tasks. <p>LST.3: Structural Elements and Organization</p> <ul style="list-style-type: none"> • Determine the meaning of symbols, key terms, and phrases. <ul style="list-style-type: none"> • Analyze how the text structures information or ideas into categories or hierarchies, demonstrating understanding of the information or ideas. • Analyze the author’s purpose in providing an explanation, describing a procedure, or discussing an experiment in a text, identifying important issues that remain unresolved. <p>LST.4: Synthesis and Connection of Ideas</p> <ul style="list-style-type: none"> • Integrate and evaluate multiple sources of information presented in diverse formats and media (e.g., quantitative data, video, multimedia) in order to address a question or solve a problem. • Evaluate the hypotheses, data, analysis, and conclusions in a science or technical text, verifying the data when possible and corroborating or challenging conclusions with other sources of information. • Synthesize information from a range of sources (e.g., texts, experiments, simulations) into a coherent understanding of a process, phenomenon, or concept, resolving conflicting information when possible.

STANDARD INDICATORS	SCIENCE AND ENGINEERING	LITERACY IN SCIENCE
<p>Env.6.2 Explain how the size and rate of growth of the human population in any location is affected by economic, political, religious, technological, and environmental (resource availability) factors.</p>	<p>SEPS.1: Posing questions and defining problems.</p> <p>SEPS.2: Developing and using models and tools.</p> <p>SEPS.4: Analyze and interpret data.</p> <p>SEPS.5: Use mathematics and computational thinking</p> <p>SEPS.6: Construct explanations and design solutions.</p> <p>SEPS.7: Engage in argument from evidence</p> <p>SEPS.8: Obtain, evaluate, and communicate information.</p>	<p>LST.1: Learning Outcome</p> <ul style="list-style-type: none"> • Read and comprehend science and technical texts. • Write routinely for a range of tasks, purposes, and audiences. <p>LST.2: Key Ideas and Textual Support</p> <ul style="list-style-type: none"> • Cite specific textual evidence to support texts. <p>LST.3: Structural Elements and Organization</p> <ul style="list-style-type: none"> • Determine the meaning of symbols, key terms, and phrases. <p>LST.4: Synthesis and Connection of Ideas</p> <ul style="list-style-type: none"> • Integrate and evaluate multiple sources of information presented in diverse formats and media (e.g., quantitative data, video, multimedia) in order to address a question or solve a problem. • Evaluate the hypotheses, data, analysis, and conclusions in a science or technical text, verifying the data when possible and corroborating or challenging conclusions with other sources of information. • Synthesize information from a range of sources (e.g., texts, experiments, simulations) into a coherent understanding of a process, phenomenon, or concept, resolving conflicting information when possible.

STANDARD INDICATORS	SCIENCE AND ENGINEERING	LITERACY IN SCIENCE
<p>Env.6.3 Describe and give examples about how the decisions of one generation both provide and limit the range of possibilities open to the next generation.</p>	<p>SEPS.1: Posing questions and defining problems.</p> <p>SEPS.4: Analyze and interpret data.</p> <p>SEPS.5: Use mathematics and computational thinking</p> <p>SEPS.6: Construct explanations and design solutions.</p> <p>SEPS.7: Engage in argument from evidence</p> <p>SEPS.8: Obtain, evaluate, and communicate information.</p>	<p>LST.1: Learning Outcome</p> <ul style="list-style-type: none"> • Read and comprehend science and technical texts. • Write routinely for a range of tasks, purposes, and audiences. <p>LST.2: Key Ideas and Textual Support</p> <ul style="list-style-type: none"> • Cite specific textual evidence to support texts. <p>LST.3: Structural Elements and Organization</p> <ul style="list-style-type: none"> • Analyze how the text structures information or ideas into categories or hierarchies, demonstrating understanding of the information or ideas. • Analyze the author’s purpose in providing an explanation, describing a procedure, or discussing an experiment in a text, identifying important issues that remain unresolved. <p>LST.4: Synthesis and Connection of Ideas</p> <ul style="list-style-type: none"> • Integrate and evaluate multiple sources of information presented in diverse formats and media (e.g., quantitative data, video, multimedia) in order to address a question or solve a problem. • Synthesize information from a range of sources (e.g., texts, experiments, simulations) into a coherent understanding of a process, phenomenon, or concept, resolving conflicting information when possible.

STANDARD INDICATORS	SCIENCE AND ENGINEERING	LITERACY IN SCIENCE
<p>Env.6.4 Explain how the carrying capacity of an ecosystem may change as availability of resources changes.</p>	<p>SEPS.1: Posing questions and defining problems.</p> <p>SEPS.2: Developing and using models and tools.</p> <p>SEPS.3: Construct and perform investigation.</p> <p>SEPS.4: Analyze and interpret data.</p> <p>SEPS.5: Use mathematics and computational thinking</p> <p>SEPS.6: Construct explanations and design solutions.</p> <p>SEPS.7: Engage in argument from evidence</p> <p>SEPS.8: Obtain, evaluate, and communicate information.</p>	<p>LST.1: Learning Outcome</p> <ul style="list-style-type: none"> • Write routinely for a range of tasks, purposes, and audiences. <p>LST.2: Key Ideas and Textual Support</p> <ul style="list-style-type: none"> • Cite specific textual evidence to support texts. • Follow a multistep procedure when carrying out experiments, taking measurement, or performing technical tasks. <p>LST.3: Structural Elements and Organization</p> <ul style="list-style-type: none"> • Determine the meaning of symbols, key terms, and phrases. <p>LST.4: Synthesis and Connection of Ideas</p> <ul style="list-style-type: none"> • Integrate and evaluate multiple sources of information presented in diverse formats and media (e.g., quantitative data, video, multimedia) in order to address a question or solve a problem. • Evaluate the hypotheses, data, analysis, and conclusions in a science or technical text, verifying the data when possible and corroborating or challenging conclusions with other sources of information. • Synthesize information from a range of sources (e.g., texts, experiments, simulations) into a coherent understanding of a process, phenomenon, or concept, resolving conflicting information when possible.

STANDARD INDICATORS	SCIENCE AND ENGINEERING	LITERACY IN SCIENCE
<p>Env.7.1 Identify evidence, consequences, and prevention for climate change produced by anthropogenic sources.</p>	<p>SEPS.1: Posing questions and defining problems.</p> <p>SEPS.2: Developing and using models and tools.</p> <p>SEPS.3: Construct and perform investigation.</p> <p>SEPS.4: Analyze and interpret data.</p> <p>SEPS.5: Use mathematics and computational thinking</p> <p>SEPS.6: Construct explanations and design solutions.</p> <p>SEPS.7: Engage in argument from evidence</p> <p>SEPS.8: Obtain, evaluate, and communicate information.</p>	<p>LST.1: Learning Outcome</p> <ul style="list-style-type: none"> • Read and comprehend science and technical texts. • Write routinely for a range of tasks, purposes, and audiences. <p>LST.2: Key Ideas and Textual Support</p> <ul style="list-style-type: none"> • Cite specific textual evidence to support texts. • Follow a multistep procedure when carrying out experiments, taking measurement, or performing technical tasks. <p>LST.3: Structural Elements and Organization</p> <ul style="list-style-type: none"> • Determine the meaning of symbols, key terms, and phrases. <ul style="list-style-type: none"> • Analyze how the text structures information or ideas into categories or hierarchies, demonstrating understanding of the information or ideas. • Analyze the author’s purpose in providing an explanation, describing a procedure, or discussing an experiment in a text, identifying important issues that remain unresolved. <p>LST.4: Synthesis and Connection of Ideas</p> <ul style="list-style-type: none"> • Integrate and evaluate multiple sources of information presented in diverse formats and media (e.g., quantitative data, video, multimedia) in order to address a question or solve a problem. • Evaluate the hypotheses, data, analysis, and conclusions in a science or technical text, verifying the data when possible and corroborating or challenging conclusions with other sources of information. • Synthesize information from a range of sources (e.g., texts, experiments, simulations) into a coherent understanding of a process, phenomenon, or concept, resolving conflicting information when possible.

STANDARD INDICATORS	SCIENCE AND ENGINEERING	LITERACY IN SCIENCE
<p>Env.7.2 Differentiate between natural pollution and pollution caused by humans.</p>	<p>SEPS.1: Posing questions and defining problems.</p> <p>SEPS.2: Developing and using models and tools.</p> <p>SEPS.4: Analyze and interpret data.</p> <p>SEPS.5: Use mathematics and computational thinking</p> <p>SEPS.6: Construct explanations and design solutions.</p> <p>SEPS.7: Engage in argument from evidence</p> <p>SEPS.8: Obtain, evaluate, and communicate information.</p>	<p>LST.1: Learning Outcome</p> <ul style="list-style-type: none"> • Read and comprehend science and technical texts. • Write routinely for a range of tasks, purposes, and audiences. <p>LST.2: Key Ideas and Textual Support</p> <ul style="list-style-type: none"> • Cite specific textual evidence to support texts. <p>LST.3: Structural Elements and Organization</p> <ul style="list-style-type: none"> • Determine the meaning of symbols, key terms, and phrases. <ul style="list-style-type: none"> • Analyze how the text structures information or ideas into categories or hierarchies, demonstrating understanding of the information or ideas. • Analyze the author’s purpose in providing an explanation, describing a procedure, or discussing an experiment in a text, identifying important issues that remain unresolved. <p>LST.4: Synthesis and Connection of Ideas</p> <ul style="list-style-type: none"> • Integrate and evaluate multiple sources of information presented in diverse formats and media (e.g., quantitative data, video, multimedia) in order to address a question or solve a problem. • Synthesize information from a range of sources (e.g., texts, experiments, simulations) into a coherent understanding of a process, phenomenon, or concept, resolving conflicting information when possible.

STANDARD INDICATORS	SCIENCE AND ENGINEERING	LITERACY IN SCIENCE
<p>Env.7.3 Compare and contrast the effects of environmental stressors (i.e. herbicides, pesticides) on plants and animals. Give examples of secondary effects on other environmental components.</p>	<p>SEPS.1: Posing questions and defining problems.</p> <p>SEPS.2: Developing and using models and tools.</p> <p>SEPS.4: Analyze and interpret data.</p> <p>SEPS.5: Use mathematics and computational thinking</p> <p>SEPS.6: Construct explanations and design solutions.</p> <p>SEPS.7: Engage in argument from evidence</p> <p>SEPS.8: Obtain, evaluate, and communicate information.</p>	<p>LST.1: Learning Outcome</p> <ul style="list-style-type: none"> • Read and comprehend science and technical texts. • Write routinely for a range of tasks, purposes, and audiences. <p>LST.2: Key Ideas and Textual Support</p> <ul style="list-style-type: none"> • Cite specific textual evidence to support texts. <p>LST.3: Structural Elements and Organization</p> <ul style="list-style-type: none"> • Determine the meaning of symbols, key terms, and phrases. <ul style="list-style-type: none"> • Analyze how the text structures information or ideas into categories or hierarchies, demonstrating understanding of the information or ideas. • Analyze the author’s purpose in providing an explanation, describing a procedure, or discussing an experiment in a text, identifying important issues that remain unresolved. <p>LST.4: Synthesis and Connection of Ideas</p> <ul style="list-style-type: none"> • Integrate and evaluate multiple sources of information presented in diverse formats and media (e.g., quantitative data, video, multimedia) in order to address a question or solve a problem. • Synthesize information from a range of sources (e.g., texts, experiments, simulations) into a coherent understanding of a process, phenomenon, or concept, resolving conflicting information when possible.

STANDARD INDICATORS	SCIENCE AND ENGINEERING	LITERACY IN SCIENCE
<p>Env.7.4 Explain what common household toxins are, what to do in an emergency, and how to properly dispose.</p>	<p>SEPS.1: Posing questions and defining problems.</p> <p>SEPS.3: Construct and perform investigation.</p> <p>SEPS.4: Analyze and interpret data.</p> <p>SEPS.6: Construct explanations and design solutions.</p> <p>SEPS.7: Engage in argument from evidence</p> <p>SEPS.8: Obtain, evaluate, and communicate information.</p>	<p>LST.1: Learning Outcome</p> <ul style="list-style-type: none"> • Read and comprehend science and technical texts. • Write routinely for a range of tasks, purposes, and audiences. <p>LST.2: Key Ideas and Textual Support</p> <ul style="list-style-type: none"> • Cite specific textual evidence to support texts. • Follow a multistep procedure when carrying out experiments, taking measurement, or performing technical tasks. <p>LST.3: Structural Elements and Organization</p> <ul style="list-style-type: none"> • Determine the meaning of symbols, key terms, and phrases. <p>LST.4: Synthesis and Connection of Ideas</p> <ul style="list-style-type: none"> • Integrate and evaluate multiple sources of information presented in diverse formats and media (e.g., quantitative data, video, multimedia) in order to address a question or solve a problem. • Evaluate the hypotheses, data, analysis, and conclusions in a science or technical text, verifying the data when possible and corroborating or challenging conclusions with other sources of information. • Synthesize information from a range of sources (e.g., texts, experiments, simulations) into a coherent understanding of a process, phenomenon, or concept, resolving conflicting information when possible.

<p>Env.7.5 Identify and describe the major air pollutants and their sources and impacts on the environment and human health.</p>	<p>SEPS.1: Posing questions and defining problems.</p> <p>SEPS.3: Construct and perform investigation.</p> <p>SEPS.4: Analyze and interpret data.</p> <p>SEPS.6: Construct explanations and design solutions.</p> <p>SEPS.7: Engage in argument from evidence</p> <p>SEPS.8: Obtain, evaluate, and communicate information.</p>	<p>LST.1: Learning Outcome</p> <ul style="list-style-type: none"> • Read and comprehend science and technical texts. • Write routinely for a range of tasks, purposes, and audiences. <p>LST.2: Key Ideas and Textual Support</p> <ul style="list-style-type: none"> • Cite specific textual evidence to support texts. • Follow a multistep procedure when carrying out experiments, taking measurement, or performing technical tasks. <p>LST.3: Structural Elements and Organization</p> <ul style="list-style-type: none"> • Determine the meaning of symbols, key terms, and phrases. <p>LST.4: Synthesis and Connection of Ideas</p> <ul style="list-style-type: none"> • Integrate and evaluate multiple sources of information presented in diverse formats and media (e.g., quantitative data, video, multimedia) in order to address a question or solve a problem. • Synthesize information from a range of sources (e.g., texts, experiments, simulations) into a coherent understanding of a process, phenomenon, or concept, resolving conflicting information when possible.
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STANDARD INDICATORS	SCIENCE AND ENGINEERING	LITERACY IN SCIENCE
<p>Env.7.6 Understand and explain how the burning of fossil fuels releases energy, waste heat, and matter (air pollutants)</p>	<p>SEPS.1: Posing questions and defining problems.</p> <p>SEPS.4: Analyze and interpret data.</p> <p>SEPS.5: Use mathematics and computational thinking</p> <p>SEPS.6: Construct explanations and design solutions.</p> <p>SEPS.7: Engage in argument from evidence</p> <p>SEPS.8: Obtain, evaluate, and communicate information.</p>	<p>LST.1: Learning Outcome</p> <ul style="list-style-type: none"> • Read and comprehend science and technical texts. • Write routinely for a range of tasks, purposes, and audiences. <p>LST.2: Key Ideas and Textual Support</p> <ul style="list-style-type: none"> • Cite specific textual evidence to support texts. • Follow a multistep procedure when carrying out experiments, taking measurement, or performing technical tasks. <p>LST.3: Structural Elements and Organization</p> <ul style="list-style-type: none"> • Determine the meaning of symbols, key terms, and phrases. <ul style="list-style-type: none"> • Analyze how the text structures information or ideas into categories or hierarchies, demonstrating understanding of the information or ideas. • Analyze the author’s purpose in providing an explanation, describing a procedure, or discussing an experiment in a text, identifying important issues that remain unresolved. <p>LST.4: Synthesis and Connection of Ideas</p> <ul style="list-style-type: none"> • Integrate and evaluate multiple sources of information presented in diverse formats and media (e.g., quantitative data, video, multimedia) in order to address a question or solve a problem. • Evaluate the hypotheses, data, analysis, and conclusions in a science or technical text, verifying the data when possible and corroborating or challenging conclusions with other sources of information. • Synthesize information from a range of sources (e.g., texts, experiments, simulations) into a coherent understanding of a process, phenomenon, or concept, resolving conflicting information when possible.

STANDARD INDICATORS	SCIENCE AND ENGINEERING	LITERACY IN SCIENCE
<p>Env.7.7 Describe and explain the product life cycle and waste stream and its implications to waste management. Explain the difference between reduce, reuse, and recycle.</p>	<p>SEPS.1: Posing questions and defining problems.</p> <p>SEPS.4: Analyze and interpret data.</p> <p>SEPS.5: Use mathematics and computational thinking</p> <p>SEPS.6: Construct explanations and design solutions.</p> <p>SEPS.7: Engage in argument from evidence</p> <p>SEPS.8: Obtain, evaluate, and communicate information.</p>	<p>LST.1: Learning Outcome</p> <ul style="list-style-type: none"> • Read and comprehend science and technical texts. • Write routinely for a range of tasks, purposes, and audiences. <p>LST.2: Key Ideas and Textual Support</p> <ul style="list-style-type: none"> • Cite specific textual evidence to support texts. • Follow a multistep procedure when carrying out experiments, taking measurement, or performing technical tasks. <p>LST.3: Structural Elements and Organization</p> <ul style="list-style-type: none"> • Determine the meaning of symbols, key terms, and phrases. <p>LST.4: Synthesis and Connection of Ideas</p> <ul style="list-style-type: none"> • Integrate and evaluate multiple sources of information presented in diverse formats and media (e.g., quantitative data, video, multimedia) in order to address a question or solve a problem. • Evaluate the hypotheses, data, analysis, and conclusions in a science or technical text, verifying the data when possible and corroborating or challenging conclusions with other sources of information. • Synthesize information from a range of sources (e.g., texts, experiments, simulations) into a coherent understanding of a process, phenomenon, or concept, resolving conflicting information when possible.

STANDARD INDICATORS	SCIENCE AND ENGINEERING	LITERACY IN SCIENCE
<p>Env.8.1 Demonstrate a knowledge of the distribution of natural resources in the U.S. and the world, and explain how natural resources influence relationships among nations.</p>	<p>SEPS.1: Posing questions and defining problems.</p> <p>SEPS.3: Construct and perform investigation.</p> <p>SEPS.4: Analyze and interpret data.</p> <p>SEPS.5: Use mathematics and computational thinking</p> <p>SEPS.6: Construct explanations and design solutions.</p> <p>SEPS.7: Engage in argument from evidence</p> <p>SEPS.8: Obtain, evaluate, and communicate information.</p>	<p>LST.1: Learning Outcome</p> <ul style="list-style-type: none"> • Read and comprehend science and technical texts. • Write routinely for a range of tasks, purposes, and audiences. <p>LST.2: Key Ideas and Textual Support</p> <ul style="list-style-type: none"> • Cite specific textual evidence to support texts. • Follow a multistep procedure when carrying out experiments, taking measurement, or performing technical tasks. <p>LST.3: Structural Elements and Organization</p> <ul style="list-style-type: none"> • Determine the meaning of symbols, key terms, and phrases. <ul style="list-style-type: none"> • Analyze how the text structures information or ideas into categories or hierarchies, demonstrating understanding of the information or ideas. • Analyze the author’s purpose in providing an explanation, describing a procedure, or discussing an experiment in a text, identifying important issues that remain unresolved. <p>LST.4: Synthesis and Connection of Ideas</p> <ul style="list-style-type: none"> • Integrate and evaluate multiple sources of information presented in diverse formats and media (e.g., quantitative data, video, multimedia) in order to address a question or solve a problem. • Evaluate the hypotheses, data, analysis, and conclusions in a science or technical text, verifying the data when possible and corroborating or challenging conclusions with other sources of information. • Synthesize information from a range of sources (e.g., texts, experiments, simulations) into a coherent understanding of a process, phenomenon, or concept, resolving conflicting information when possible.

STANDARD INDICATORS	SCIENCE AND ENGINEERING	LITERACY IN SCIENCE
<p>Env.8.2 Understand and describe the concept of integrated natural resource management and the values of managing natural resources as an ecological unit.</p>	<p>SEPS.1: Posing questions and defining problems.</p> <p>SEPS.4: Analyze and interpret data.</p> <p>SEPS.5: Use mathematics and computational thinking</p> <p>SEPS.6: Construct explanations and design solutions.</p> <p>SEPS.7: Engage in argument from evidence</p> <p>SEPS.8: Obtain, evaluate, and communicate information.</p>	<p>LST.1: Learning Outcome</p> <ul style="list-style-type: none"> • Read and comprehend science and technical texts. • Write routinely for a range of tasks, purposes, and audiences. <p>LST.2: Key Ideas and Textual Support</p> <ul style="list-style-type: none"> • Cite specific textual evidence to support texts. • Follow a multistep procedure when carrying out experiments, taking measurement, or performing technical tasks. <p>LST.3: Structural Elements and Organization</p> <ul style="list-style-type: none"> • Determine the meaning of symbols, key terms, and phrases. <ul style="list-style-type: none"> • Analyze how the text structures information or ideas into categories or hierarchies, demonstrating understanding of the information or ideas. • Analyze the author’s purpose in providing an explanation, describing a procedure, or discussing an experiment in a text, identifying important issues that remain unresolved. <p>LST.4: Synthesis and Connection of Ideas</p> <ul style="list-style-type: none"> • Integrate and evaluate multiple sources of information presented in diverse formats and media (e.g., quantitative data, video, multimedia) in order to address a question or solve a problem. • Evaluate the hypotheses, data, analysis, and conclusions in a science or technical text, verifying the data when possible and corroborating or challenging conclusions with other sources of information. • Synthesize information from a range of sources (e.g., texts, experiments, simulations) into a coherent understanding of a process, phenomenon, or concept, resolving conflicting information when possible.

STANDARD INDICATORS	SCIENCE AND ENGINEERING	LITERACY IN SCIENCE
<p>Env.8.3 Recognize and explain that in evolutionary change, the present arises from the materials of the past and in ways that can be explained, such as the formation of soil from rocks and dead organic matter.</p>	<p>SEPS.1: Posing questions and defining problems.</p> <p>SEPS.4: Analyze and interpret data.</p> <p>SEPS.5: Use mathematics and computational thinking</p> <p>SEPS.6: Construct explanations and design solutions.</p> <p>SEPS.7: Engage in argument from evidence</p> <p>SEPS.8: Obtain, evaluate, and communicate information.</p>	<p>LST.1: Learning Outcome</p> <ul style="list-style-type: none"> • Read and comprehend science and technical texts. • Write routinely for a range of tasks, purposes, and audiences. <p>LST.2: Key Ideas and Textual Support</p> <ul style="list-style-type: none"> • Cite specific textual evidence to support texts. <p>LST.3: Structural Elements and Organization</p> <ul style="list-style-type: none"> • Determine the meaning of symbols, key terms, and phrases. <ul style="list-style-type: none"> • Analyze how the text structures information or ideas into categories or hierarchies, demonstrating understanding of the information or ideas. • Analyze the author’s purpose in providing an explanation, describing a procedure, or discussing an experiment in a text, identifying important issues that remain unresolved. <p>LST.4: Synthesis and Connection of Ideas</p> <ul style="list-style-type: none"> • Integrate and evaluate multiple sources of information presented in diverse formats and media (e.g., quantitative data, video, multimedia) in order to address a question or solve a problem. • Synthesize information from a range of sources (e.g., texts, experiments, simulations) into a coherent understanding of a process, phenomenon, or concept, resolving conflicting information when possible.

STANDARD INDICATORS	SCIENCE AND ENGINEERING	LITERACY IN SCIENCE
<p>Env.8.4 Describe how agricultural technology requires trade-offs between increased production and environmental harm and between efficient production and social values.</p>	<p>SEPS.1: Posing questions and defining problems.</p> <p>SEPS.3: Construct and perform investigation.</p> <p>SEPS.4: Analyze and interpret data.</p> <p>SEPS.5: Use mathematics and computational thinking</p> <p>SEPS.6: Construct explanations and design solutions.</p> <p>SEPS.7: Engage in argument from evidence</p> <p>SEPS.8: Obtain, evaluate, and communicate information.</p>	<p>LST.1: Learning Outcome</p> <ul style="list-style-type: none"> • Read and comprehend science and technical texts. • Write routinely for a range of tasks, purposes, and audiences. <p>LST.2: Key Ideas and Textual Support</p> <ul style="list-style-type: none"> • Cite specific textual evidence to support texts. • Follow a multistep procedure when carrying out experiments, taking measurement, or performing technical tasks. <p>LST.3: Structural Elements and Organization</p> <ul style="list-style-type: none"> • Determine the meaning of symbols, key terms, and phrases. <ul style="list-style-type: none"> • Analyze how the text structures information or ideas into categories or hierarchies, demonstrating understanding of the information or ideas. • Analyze the author’s purpose in providing an explanation, describing a procedure, or discussing an experiment in a text, identifying important issues that remain unresolved. <p>LST.4: Synthesis and Connection of Ideas</p> <ul style="list-style-type: none"> • Integrate and evaluate multiple sources of information presented in diverse formats and media (e.g., quantitative data, video, multimedia) in order to address a question or solve a problem. • Evaluate the hypotheses, data, analysis, and conclusions in a science or technical text, verifying the data when possible and corroborating or challenging conclusions with other sources of information. • Synthesize information from a range of sources (e.g., texts, experiments, simulations) into a coherent understanding of a process, phenomenon, or concept, resolving conflicting information when possible.

STANDARD INDICATORS	SCIENCE AND ENGINEERING	LITERACY IN SCIENCE
<p>Env.8.5 Describe and examine how water is controlled in developed and undeveloped nations.</p>	<p>SEPS.1: Posing questions and defining problems.</p> <p>SEPS.3: Construct and perform investigation.</p> <p>SEPS.4: Analyze and interpret data.</p> <p>SEPS.5: Use mathematics and computational thinking</p> <p>SEPS.6: Construct explanations and design solutions.</p> <p>SEPS.7: Engage in argument from evidence</p> <p>SEPS.8: Obtain, evaluate, and communicate information.</p>	<p>LST.1: Learning Outcome</p> <ul style="list-style-type: none"> • Read and comprehend science and technical texts. • Write routinely for a range of tasks, purposes, and audiences. <p>LST.2: Key Ideas and Textual Support</p> <ul style="list-style-type: none"> • Cite specific textual evidence to support texts. <p>LST.3: Structural Elements and Organization</p> <ul style="list-style-type: none"> • Determine the meaning of symbols, key terms, and phrases. <ul style="list-style-type: none"> • Analyze how the text structures information or ideas into categories or hierarchies, demonstrating understanding of the information or ideas. • Analyze the author’s purpose in providing an explanation, describing a procedure, or discussing an experiment in a text, identifying important issues that remain unresolved. <p>LST.4: Synthesis and Connection of Ideas</p> <ul style="list-style-type: none"> • Integrate and evaluate multiple sources of information presented in diverse formats and media (e.g., quantitative data, video, multimedia) in order to address a question or solve a problem. • Synthesize information from a range of sources (e.g., texts, experiments, simulations) into a coherent understanding of a process, phenomenon, or concept, resolving conflicting information when possible.

STANDARD INDICATORS	SCIENCE AND ENGINEERING	LITERACY IN SCIENCE
<p>Env.8.6 Understand and describe the concept and the importance of natural and human recycling in conserving our natural resources.</p>	<p>SEPS.1: Posing questions and defining problems.</p> <p>SEPS.2: Developing and using models and tools.</p> <p>SEPS.3: Construct and perform investigation.</p> <p>SEPS.4: Analyze and interpret data.</p> <p>SEPS.5: Use mathematics and computational thinking</p> <p>SEPS.6: Construct explanations and design solutions.</p> <p>SEPS.7: Engage in argument from evidence</p> <p>SEPS.8: Obtain, evaluate, and communicate information.</p>	<p>LST.1: Learning Outcome</p> <ul style="list-style-type: none"> • Read and comprehend science and technical texts. • Write routinely for a range of tasks, purposes, and audiences. <p>LST.2: Key Ideas and Textual Support</p> <ul style="list-style-type: none"> • Cite specific textual evidence to support texts. • Follow a multistep procedure when carrying out experiments, taking measurement, or performing technical tasks. <p>LST.3: Structural Elements and Organization</p> <ul style="list-style-type: none"> • Determine the meaning of symbols, key terms, and phrases. <p>LST.4: Synthesis and Connection of Ideas</p> <ul style="list-style-type: none"> • Integrate and evaluate multiple sources of information presented in diverse formats and media (e.g., quantitative data, video, multimedia) in order to address a question or solve a problem. • Evaluate the hypotheses, data, analysis, and conclusions in a science or technical text, verifying the data when possible and corroborating or challenging conclusions with other sources of information. • Synthesize information from a range of sources (e.g., texts, experiments, simulations) into a coherent understanding of a process, phenomenon, or concept, resolving conflicting information when possible.

STANDARD INDICATORS	SCIENCE AND ENGINEERING	LITERACY IN SCIENCE
<p>Env.8.7 Understand and explain that waste management includes considerations of quantity, safety, degradability, and cost. Also understand that waste management requires social and technological innovations because waste-disposal problems are political and economic as well as technical.</p>	<p>SEPS.1: Posing questions and defining problems.</p> <p>SEPS.2: Developing and using models and tools.</p> <p>SEPS.3: Construct and perform investigation.</p> <p>SEPS.4: Analyze and interpret data.</p> <p>SEPS.5: Use mathematics and computational thinking</p> <p>SEPS.6: Construct explanations and design solutions.</p> <p>SEPS.7: Engage in argument from evidence</p> <p>SEPS.8: Obtain, evaluate, and communicate information.</p>	<p>LST.1: Learning Outcome</p> <ul style="list-style-type: none"> • Read and comprehend science and technical texts. • Write routinely for a range of tasks, purposes, and audiences. <p>LST.2: Key Ideas and Textual Support</p> <ul style="list-style-type: none"> • Cite specific textual evidence to support texts. • Follow a multistep procedure when carrying out experiments, taking measurement, or performing technical tasks. <p>LST.3: Structural Elements and Organization</p> <ul style="list-style-type: none"> • Determine the meaning of symbols, key terms, and phrases. <ul style="list-style-type: none"> • Analyze how the text structures information or ideas into categories or hierarchies, demonstrating understanding of the information or ideas. • Analyze the author’s purpose in providing an explanation, describing a procedure, or discussing an experiment in a text, identifying important issues that remain unresolved. <p>LST.4: Synthesis and Connection of Ideas</p> <ul style="list-style-type: none"> • Integrate and evaluate multiple sources of information presented in diverse formats and media (e.g., quantitative data, video, multimedia) in order to address a question or solve a problem. • Evaluate the hypotheses, data, analysis, and conclusions in a science or technical text, verifying the data when possible and corroborating or challenging conclusions with other sources of information. • Synthesize information from a range of sources (e.g., texts, experiments, simulations) into a coherent understanding of a process, phenomenon, or concept, resolving conflicting information when possible.

STANDARD INDICATORS	SCIENCE AND ENGINEERING	LITERACY IN SCIENCE
<p>Env.7.2 Differentiate between natural pollution and pollution caused by humans.</p>	<p>SEPS.1: Posing questions and defining problems.</p> <p>SEPS.3: Construct and perform investigation.</p> <p>SEPS.4: Analyze and interpret data.</p> <p>SEPS.5: Use mathematics and computational thinking</p> <p>SEPS.6: Construct explanations and design solutions.</p> <p>SEPS.7: Engage in argument from evidence</p> <p>SEPS.8: Obtain, evaluate, and communicate information.</p>	<p>LST.1: Learning Outcome</p> <ul style="list-style-type: none"> • Read and comprehend science and technical texts. • Write routinely for a range of tasks, purposes, and audiences. <p>LST.2: Key Ideas and Textual Support</p> <ul style="list-style-type: none"> • Cite specific textual evidence to support texts. • Follow a multistep procedure when carrying out experiments, taking measurement, or performing technical tasks. <p>LST.3: Structural Elements and Organization</p> <ul style="list-style-type: none"> • Determine the meaning of symbols, key terms, and phrases. <ul style="list-style-type: none"> • Analyze how the text structures information or ideas into categories or hierarchies, demonstrating understanding of the information or ideas. • Analyze the author’s purpose in providing an explanation, describing a procedure, or discussing an experiment in a text, identifying important issues that remain unresolved. <p>LST.4: Synthesis and Connection of Ideas</p> <ul style="list-style-type: none"> • Integrate and evaluate multiple sources of information presented in diverse formats and media (e.g., quantitative data, video, multimedia) in order to address a question or solve a problem. • Evaluate the hypotheses, data, analysis, and conclusions in a science or technical text, verifying the data when possible and corroborating or challenging conclusions with other sources of information. • Synthesize information from a range of sources (e.g., texts, experiments, simulations) into a coherent understanding of a process, phenomenon, or concept, resolving conflicting information when possible.

STANDARD INDICATORS	SCIENCE AND ENGINEERING	LITERACY IN SCIENCE
<p>Env.7.3 Compare and contrast the effects of environmental stressors (i.e. herbicides, pesticides) on plants and animals. Give examples of secondary effects on other environmental components.</p>	<p>SEPS.1: Posing questions and defining problems.</p> <p>SEPS.3: Construct and perform investigation.</p> <p>SEPS.4: Analyze and interpret data.</p> <p>SEPS.5: Use mathematics and computational thinking</p> <p>SEPS.6: Construct explanations and design solutions.</p> <p>SEPS.7: Engage in argument from evidence</p> <p>SEPS.8: Obtain, evaluate, and communicate information.</p>	<p>LST.1: Learning Outcome</p> <ul style="list-style-type: none"> • Read and comprehend science and technical texts. • Write routinely for a range of tasks, purposes, and audiences. <p>LST.2: Key Ideas and Textual Support</p> <ul style="list-style-type: none"> • Cite specific textual evidence to support texts. <p>LST.3: Structural Elements and Organization</p> <ul style="list-style-type: none"> • Determine the meaning of symbols, key terms, and phrases. <ul style="list-style-type: none"> • Analyze how the text structures information or ideas into categories or hierarchies, demonstrating understanding of the information or ideas. • Analyze the author’s purpose in providing an explanation, describing a procedure, or discussing an experiment in a text, identifying important issues that remain unresolved. <p>LST.4: Synthesis and Connection of Ideas</p> <ul style="list-style-type: none"> • Integrate and evaluate multiple sources of information presented in diverse formats and media (e.g., quantitative data, video, multimedia) in order to address a question or solve a problem. • Synthesize information from a range of sources (e.g., texts, experiments, simulations) into a coherent understanding of a process, phenomenon, or concept, resolving conflicting information when possible.

STANDARD INDICATORS	SCIENCE AND ENGINEERING	LITERACY IN SCIENCE
<p>Env.7.4 Explain what common household toxins are, what to do in an emergency, and how to properly dispose.</p>	<p>SEPS.1: Posing questions and defining problems.</p> <p>SEPS.3: Construct and perform investigation.</p> <p>SEPS.4: Analyze and interpret data.</p> <p>SEPS.5: Use mathematics and computational thinking</p> <p>SEPS.6: Construct explanations and design solutions.</p> <p>SEPS.7: Engage in argument from evidence</p> <p>SEPS.8: Obtain, evaluate, and communicate information.</p>	<p>LST.1: Learning Outcome</p> <ul style="list-style-type: none"> • Read and comprehend science and technical texts. • Write routinely for a range of tasks, purposes, and audiences. <p>LST.2: Key Ideas and Textual Support</p> <ul style="list-style-type: none"> • Cite specific textual evidence to support texts. • Follow a multistep procedure when carrying out experiments, taking measurement, or performing technical tasks. <p>LST.3: Structural Elements and Organization</p> <ul style="list-style-type: none"> • Determine the meaning of symbols, key terms, and phrases. <ul style="list-style-type: none"> • Analyze how the text structures information or ideas into categories or hierarchies, demonstrating understanding of the information or ideas. • Analyze the author’s purpose in providing an explanation, describing a procedure, or discussing an experiment in a text, identifying important issues that remain unresolved. <p>LST.4: Synthesis and Connection of Ideas</p> <ul style="list-style-type: none"> • Integrate and evaluate multiple sources of information presented in diverse formats and media (e.g., quantitative data, video, multimedia) in order to address a question or solve a problem. • Evaluate the hypotheses, data, analysis, and conclusions in a science or technical text, verifying the data when possible and corroborating or challenging conclusions with other sources of information. • Synthesize information from a range of sources (e.g., texts, experiments, simulations) into a coherent understanding of a process, phenomenon, or concept, resolving conflicting information when possible.

STANDARD INDICATORS	SCIENCE AND ENGINEERING	LITERACY IN SCIENCE
<p>Env.7.5 Identify and describe the major air pollutants and their sources and impacts on the environment and human health.</p>	<p>SEPS.1: Posing questions and defining problems.</p> <p>SEPS.3: Construct and perform investigation.</p> <p>SEPS.4: Analyze and interpret data.</p> <p>SEPS.5: Use mathematics and computational thinking</p> <p>SEPS.6: Construct explanations and design solutions.</p> <p>SEPS.7: Engage in argument from evidence</p> <p>SEPS.8: Obtain, evaluate, and communicate information.</p>	<p>LST.1: Learning Outcome</p> <ul style="list-style-type: none"> • Read and comprehend science and technical texts. • Write routinely for a range of tasks, purposes, and audiences. <p>LST.2: Key Ideas and Textual Support</p> <ul style="list-style-type: none"> • Cite specific textual evidence to support texts. • Follow a multistep procedure when carrying out experiments, taking measurement, or performing technical tasks. <p>LST.3: Structural Elements and Organization</p> <ul style="list-style-type: none"> • Determine the meaning of symbols, key terms, and phrases. <ul style="list-style-type: none"> • Analyze how the text structures information or ideas into categories or hierarchies, demonstrating understanding of the information or ideas. • Analyze the author’s purpose in providing an explanation, describing a procedure, or discussing an experiment in a text, identifying important issues that remain unresolved. <p>LST.4: Synthesis and Connection of Ideas</p> <ul style="list-style-type: none"> • Integrate and evaluate multiple sources of information presented in diverse formats and media (e.g., quantitative data, video, multimedia) in order to address a question or solve a problem. • Evaluate the hypotheses, data, analysis, and conclusions in a science or technical text, verifying the data when possible and corroborating or challenging conclusions with other sources of information. • Synthesize information from a range of sources (e.g., texts, experiments, simulations) into a coherent understanding of a process, phenomenon, or concept, resolving conflicting information when possible.

GRADE LEVEL: NINTH

SUBJECT: ENVIRONMENTAL SCIENCE

DATE: 2016-2017

MONTH/GRADING PERIOD: Q3

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CONTENT	STANDARD INDICATORS	SKILLS	ASSESSMENT	VOCAB	PRIORITY
Biodiversity and Conservation					
<ul style="list-style-type: none"> Genetic variation increases the chances of survival. 	<p>Env.5.1 Explain how variation within a species increases the chances of survival of the species under changing environmental conditions.</p>	<ul style="list-style-type: none"> Explain how variation within a species increases the chances of survival of the species under changing environmental conditions. 	<ul style="list-style-type: none"> Biodiversity web quest Surviving a Natural Disaster Lab Unit Exam 	<ul style="list-style-type: none"> Genetic diversity 	<p>IMPORTANT</p>
<ul style="list-style-type: none"> Species diversity increases the chance of survival. 	<p>Env.5.2 Explain how the great diversity of species increases the chance that at least some living organisms will survive in the event of major global changes.</p>	<ul style="list-style-type: none"> Explain how the great diversity of species increases the chance that at least some living organisms will survive in the event of major global changes. 	<ul style="list-style-type: none"> Biodiversity web quest Surviving a Natural Disaster Lab Endangered Species Lab Written Conversation Unit Exam 	<ul style="list-style-type: none"> Species diversity 	<p>IMPORTANT</p>

CONTENT	STANDARD INDICATORS	SKILLS	ASSESSMENT	VOCAB	PRIORITY
Biodiversity and Conservation					
<ul style="list-style-type: none"> • Indirect and direct threats to biodiversity 	<p>Env.5.5 Identify the indirect and direct threats to biodiversity (e.g. habitat loss and destruction, invasion by exotic species, commercial over fishing and hunting, pollution, climate change, and bioaccumulation and biomagnification of toxins).</p>	<ul style="list-style-type: none"> • Identify the indirect and direct threats to biodiversity. • Explain how climate change impacts biodiversity. • Explain how habitat loss and destruction impact biodiversity. • Explain how invasion by exotic species impacts biodiversity. • Explain how commercial over fishing and hunting impacts biodiversity. • Explain how pollution, impacts climate change. • Recall how climate change, and bioaccumulation and biomagnification of toxins. 	<ul style="list-style-type: none"> • Biodiversity web quest • Overharvesting Lab • See the past, foresee the future • Unit Exam 	<ul style="list-style-type: none"> • Bioaccumulation • Biomagnification • Extirpation • Endemic • Poaching • Threatened species • Biodiversity hotspot • Endangered Species Act • Genetic diversity • Endangered species • Habitat fragmentation 	CRITICAL
<ul style="list-style-type: none"> • Levels of biodiversity 	<p>Env.5.6 Identify and explain the three levels of biodiversity: genetic, species, and ecosystem.</p>	<ul style="list-style-type: none"> • Define genetic diversity • Explain the benefits of genetic diversity. • Define species diversity. • Explain the benefits of species diversity. • Define ecosystem diversity. • Explain the benefits of ecosystem diversity. 	<ul style="list-style-type: none"> • Unit Exam 		IMPORTANT

CONTENT	STANDARD INDICATORS	SKILLS	ASSESSMENT	VOCAB	PRIORITY
THE ATMOSPHERE AND CLIMATE CHANGE					
<ul style="list-style-type: none"> • Human beings as part of Earth's ecosystems • Human activities alter ecosystems 	Env.1.2 Understand and explain that human beings are part of Earth's ecosystems and give examples of how human activities can, deliberately or inadvertently, alter ecosystems.	<ul style="list-style-type: none"> • Explain that human beings are part of Earth's ecosystems and give examples of how human activities can deliberately alter ecosystems. • Explain that human beings are part of Earth's ecosystems and give examples of how human activities can inadvertently alter ecosystems. 	<ul style="list-style-type: none"> • Unit Exam 	<ul style="list-style-type: none"> • Atmosphere 	CRITICAL
<ul style="list-style-type: none"> • Weather and climate 	Env.1.6 Describe the difference between weather and climate. Locate, identify, and describe the major Earth biomes. Explain how biomes are determined by climate (temperature and precipitation patterns) that support specific kinds of plants.	<ul style="list-style-type: none"> • Describe the difference between weather and climate. 	<ul style="list-style-type: none"> • Unit Exam 	<ul style="list-style-type: none"> • Climate • Precipitation • Temperature • Weather • Convection • Conduction • Troposphere • Relative humidity 	IMPORTANT
<ul style="list-style-type: none"> • Factors that influence weather and climate 	Env.1.8 Explain the factors that influence weather and climate, the action of gravitational forces, and the rotation of the Earth.	<ul style="list-style-type: none"> • Explain how the action of gravitational forces influence weather and climate. • Explain how the action of the rotation of the Earth influence weather and climate. 	<ul style="list-style-type: none"> • Unit Exam 	<ul style="list-style-type: none"> • El Nino • La Nina 	ADDITIONAL

CONTENT	STANDARD INDICATORS	SKILLS	ASSESSMENT	VOCAB	PRIORITY
THE ATMOSPHERE AND CLIMATE CHANGE					
<ul style="list-style-type: none"> Advantages and disadvantages of renewable and nonrenewable fuels 	<p>Env.2.8 Cite examples of how all fuels, renewable and nonrenewable, have advantages and disadvantages that society must question when considering the trade-offs among them, such as how energy use contributes to the rising standard of living in the industrially developing nations. However, explain that this energy use also leads to more rapid depletion of Earth's energy resources and to environmental risks associated with the use of fossil and nuclear fuels.</p>	<ul style="list-style-type: none"> Identify advantages of renewable energy. Identify disadvantages of renewable energy. Identify advantages of nonrenewable energy. Identify disadvantages of nonrenewable energy. Discuss of how all fuels, renewable and nonrenewable, have advantages and disadvantages that society must question when considering the trade-offs among them, such as how energy use contributes to the rising standard of living in the industrially developing nations. Explain that energy use also leads to more rapid depletion of Earth's energy resources and to environmental risks associated with the use of fossil and nuclear fuels. 	<ul style="list-style-type: none"> Written Conversation Unit Exam 	<ul style="list-style-type: none"> Renewable energy source Nonrenewable energy source 	<p>IMPORTANT</p>

CONTENT	STANDARD INDICATORS	SKILLS	ASSESSMENT	VOCAB	PRIORITY
THE ATMOSPHERE AND CLIMATE CHANGE					
<ul style="list-style-type: none"> • Weather maps -pressure systems -fronts -changing weather patterns 	<p>Env.3.3 Read and describe a weather map in terms of pressure systems, fronts, and changing weather patterns.</p>	<ul style="list-style-type: none"> • Predict the weather based upon a weather map. 	<ul style="list-style-type: none"> • Weather person assessment • Unit Exam 	<ul style="list-style-type: none"> • Front • System • High Pressure • Low Pressure 	ADDITIONAL
<ul style="list-style-type: none"> • Environmental policies and organizations • The Clean Air Act 	<p>Env.4.1 Explain environmental policies/organizations (Clean Water Act, Clean Air Act, Endangered Species Act, Species Survival Plan, Resource Conservation and Recovery Act, Department of Energy, and the World Health Organization) and identify their impact.</p>	<ul style="list-style-type: none"> • Describe the Clean Air Act. • Explain how the Clean Air Act has impacted our atmosphere. 	<ul style="list-style-type: none"> • Clean Air Act web quest • Unit Exam 		IMPORTANT
<ul style="list-style-type: none"> • Negative and positive impacts of environmental policy 	<p>Env.4.2 Understand that environmental policies/decisions have negative and positive impacts on people, societies, and the environment.</p>	<ul style="list-style-type: none"> • Describe the negative impacts of the Clean Air Act on people, societies, and the environment. • Describe the positive impacts of the clean air act on people, societies, and the environment. 	<ul style="list-style-type: none"> • Environmental Policy written conversation • London and New York • Chapter 15 stations • Unit Exam 		IMPORTANT

CONTENT	STANDARD INDICATORS	SKILLS	ASSESSMENT	VOCAB	PRIORITY
THE ATMOSPHERE AND CLIMATE CHANGE					
<ul style="list-style-type: none"> • Threats to biodiversity <ul style="list-style-type: none"> -direct -indirect 	Env.5.5 Identify the indirect and direct threats to biodiversity (e.g. habitat loss and destruction, invasion by exotic species, commercial over fishing and hunting, pollution, climate change, and bioaccumulation and biomagnification of toxins).	<ul style="list-style-type: none"> • Explain how climate change impacts biodiversity. 	<ul style="list-style-type: none"> • Unit Exam 	<ul style="list-style-type: none"> • Biodiversity • Climate change 	IMPORTANT
<ul style="list-style-type: none"> • Climate change produced by anthropogenic sources. 	Env.7.1 Identify evidence, consequences, and prevention for climate change produced by anthropogenic sources.	<ul style="list-style-type: none"> • Identify evidence for climate change produced by anthropogenic sources. • Identify consequences of climate change produced by anthropogenic sources. • Identify prevention strategies for climate change produced by anthropogenic sources. 	<ul style="list-style-type: none"> • The Maldives and global climate change • Changing temperature of the atmosphere + atmospheric CO₂ and temperature change • Tracking CO₂ and temperature labs • Climate clues in ice • Climate change stations • Unit Exam 	<ul style="list-style-type: none"> • Anthropogenic • Greenhouse effect • Global warming • Coral bleaching • Carbon footprint • Carbon offset • Kyoto protocol • Carbon sequestration 	CRITICAL
<ul style="list-style-type: none"> • Sources of pollution 	Env.7.2 Differentiate between natural pollution and pollution caused by humans.	<ul style="list-style-type: none"> • Identify natural pollution sources. • Identify anthropogenic pollution sources. 	<ul style="list-style-type: none"> • Air pollutants web quest • Unit Exam 	<ul style="list-style-type: none"> • Pollutants 	IMPORTANT

CONTENT	STANDARD INDICATORS	SKILLS	ASSESSMENT	VOCAB	PRIORITY
THE ATMOSPHERE AND CLIMATE CHANGE					
<ul style="list-style-type: none"> • Sources of air pollutants • Impact of air pollutants on the environment. • Impact of air pollutants on human health. 	<p>Env.7.5 Identify and describe the major air pollutants and their sources and impacts on the environment and human health.</p>	<ul style="list-style-type: none"> • Identify the major air pollutants and their sources. • Explain the impacts of major air pollutants on the environment and human health. 	<ul style="list-style-type: none"> • What's in the air? Lab • Air Pollutants web quest • Unit Exam 	<ul style="list-style-type: none"> • Indoor air pollutant • Outdoor air pollutant • Temperature inversion • Chlorofluorocarbons (CFCs) • Ozone hole • Radiation • Smog • Scrubber • Acid deposition 	<p>IMPORTANT</p>
<ul style="list-style-type: none"> • Burning of fossil fuels 	<p>Env.7.6 Understand and explain how the burning of fossil fuels releases energy, waste heat, and matter (air pollutants).</p>	<ul style="list-style-type: none"> • Explain how the burning of fossil fuels releases energy, waste heat, and matter (air pollutants). 	<ul style="list-style-type: none"> • Air Pollutants web quest • Unit Exam 	<ul style="list-style-type: none"> • Heat 	<p>IMPORTANT</p>

CONTENT	STANDARD INDICATORS	SKILLS	ASSESSMENT	VOCAB	PRIORITY
SOIL AND MINING					
<ul style="list-style-type: none"> • Human beings as part of Earth's ecosystems • Human activities alter ecosystems 	<p>Env.1.2 Understand and explain that human beings are part of Earth's ecosystems and give examples of how human activities can, deliberately or inadvertently, alter ecosystems.</p>	<ul style="list-style-type: none"> • Explain how farming impacts Earth's ecosystems. • Explain how mining impacts Earth's ecosystems. 	<ul style="list-style-type: none"> • Farming Jigsaw • Mining Cookie lab • Unit Exam 	<ul style="list-style-type: none"> • Sustainable agriculture • Irrigation • Yield • Biological pest control • Traditional agriculture • Industrial agriculture 	CRITICAL
<ul style="list-style-type: none"> • Matter cycles through sources and sinks • Transfer of energy 	<p>Env.2.1 Describe how matter cycles through sources and sinks and how energy is transferred. Explain how matter and energy move between and within components of an environmental system.</p>	<ul style="list-style-type: none"> • Identify coal and petroleum beds as carbon sinks. • Explain that burning carbon releases energy in the form of heat. 	<ul style="list-style-type: none"> • Unit Exam • Carbon Cycle diagram 	<ul style="list-style-type: none"> • Coal bed 	ADDITIONAL

CONTENT	STANDARD INDICATORS	SKILLS	ASSESSMENT	VOCAB	PRIORITY
SOIL AND MINING					
<ul style="list-style-type: none"> • Coal Formation • Burning of fossil fuels 	<p>Env.2.6 Understand and describe how layers of energy-rich organic material have been gradually turned into great coal beds and oil pools by the pressure of the overlying earth. Recognize that by burning these fossil fuels, people are passing stored energy back into the environment as heat and releasing large amounts of matter such as carbon dioxide and other air pollutants.</p>	<ul style="list-style-type: none"> • Explain how coal is formed. 	<ul style="list-style-type: none"> • Burning the Future • Gas land • Unit Exam 		ADDITIONAL
<ul style="list-style-type: none"> • Depletion of energy sources 	<p>Env.2.9 Describe how decisions to slow the depletion of energy sources through efficient technologies can be made at many levels, from personal to national, and these technologies involve trade-offs of economic costs and social values.</p>	<ul style="list-style-type: none"> • Discuss personal choices that can slow the depletion of energy sources. • Explain national choices that can slow the depletion of energy sources. • Discuss the trade-offs of economic costs and social values. 	<ul style="list-style-type: none"> • Written Conversation • Unit Exam 	<ul style="list-style-type: none"> • Depletion 	IMPORTANT
<ul style="list-style-type: none"> • Natural resources and raw materials 	<p>Env.2.11 Recognize and describe the role of natural resources in providing the raw materials for an industrial society.</p>	<ul style="list-style-type: none"> • Explain the role of fossil fuels in providing the raw materials for an industrial society. 	<ul style="list-style-type: none"> • Unit Exam 	<ul style="list-style-type: none"> • Fossil fuel 	IMPORTANT

CONTENT	STANDARD INDICATORS	SKILLS	ASSESSMENT	VOCAB	PRIORITY
SOIL AND MINING					
<ul style="list-style-type: none"> Environmental Policy -Clean Air Act -Clean Water Act 	Env.4.1 Explain environmental policies/organizations (Clean Water Act, Clean Air Act, Endangered Species Act, Species Survival Plan, Resource Conservation and Recovery Act, Department of Energy, and the World Health Organization) and identify their impact.	<ul style="list-style-type: none"> Explain how the clean air and clean water acts are impacted by mining. Explain the role of the Department of Energy in legislating coal policies. 	<ul style="list-style-type: none"> Clean Water Act web quest Clean Air Act web quest 	<ul style="list-style-type: none"> Clean air act Clean water act 	IMPORTANT
<ul style="list-style-type: none"> Environmental policy impacts 	Env.4.2 Understand that environmental policies/decisions have negative and positive impacts on people, societies, and the environment.	<ul style="list-style-type: none"> Discuss the potential benefits of using fuels other than fossil fuels. Discuss the "farm bill" and its benefits and drawbacks. 	<ul style="list-style-type: none"> Environmental Policy investigation Environmental Policy written conversation Unit Exam 		CRITICAL
<ul style="list-style-type: none"> Implications of Genetic Engineering 	Env.5.3 Explain genetic engineering and identify implications on the environment and society.	<ul style="list-style-type: none"> Explain genetic engineering Identify implications on the environment and society of genetic engineering. 	<ul style="list-style-type: none"> Farming jigsaw GMO webquest Unit Exam 	<ul style="list-style-type: none"> Genetic engineering 	

CONTENT	STANDARD INDICATORS	SKILLS	ASSESSMENT	VOCAB	PRIORITY
SOIL AND MINING					
<ul style="list-style-type: none"> GMOs, organics, and traditional products 	<p>Env.5.4 Describe, provide examples, and contrast GMO products, organic products, and conventional products. Describe and explain the environmental concerns associated with GMOs.</p>	<ul style="list-style-type: none"> Describe GMO products, organic products, and conventional products. Provide examples of GMO products, organic products, and conventional products. Contrast GMO products, organic products, and conventional products. Describe and explain the environmental concerns associated with GMOs. 	<ul style="list-style-type: none"> Farming jigsaw GMO webquest Unit Exam 	<ul style="list-style-type: none"> GMO Organic Conventional Agriculture 	
<ul style="list-style-type: none"> Distribution of Natural Resources 	<p>Env.8.1 Demonstrate a knowledge of the distribution of natural resources in the U.S. and the world, and explain how natural resources influence relationships among nations.</p>	<ul style="list-style-type: none"> Explain why the U.S. needs allies to supply oil. Explain how their own actions impact the people of West Virginia. 	<ul style="list-style-type: none"> Environmental Policy investigation Environmental Policy written conversation Unit Exam 		CRITICAL
<ul style="list-style-type: none"> Evolution of soil 	<p>Env.8.3 Recognize and explain that in evolutionary change, the present arises from the materials of the past and in ways that can be explained, such as the formation of soil from rocks and dead organic matter.</p>	<ul style="list-style-type: none"> Explain that in evolutionary change, the present arises from the materials of the past and in ways that can be explained. 	<ul style="list-style-type: none"> Soil stations Unit Exam 	<ul style="list-style-type: none"> Evolution 	IMPORTANT

STANDARD INDICATORS	SCIENCE AND ENGINEERING	LITERACY IN SCIENCE
<p>Env.5.1 Explain how variation within a species increases the chances of survival of the species under changing environmental conditions.</p>	<p>SEPS.4: Analyze and interpret data.</p> <p>SEPS.5: Use mathematics and computational thinking.</p> <p>SEPS.6: Construct explanations and design solutions.</p> <p>SEPS.8: Obtain, evaluate, and communicate information.</p>	<p>LST.2: Key Ideas and Textual Support</p> <ul style="list-style-type: none"> • Follow a multistep procedure when carrying out experiments, taking measurement, or performing technical tasks. <p>LST.4: Synthesis and Connection of Ideas</p> <ul style="list-style-type: none"> • Integrate and evaluate multiple sources of information presented in diverse formats and media (e.g., quantitative data, video, multimedia) in order to address a question or solve a problem. • Evaluate the hypotheses, data, analysis, and conclusions in a science or technical text, verifying the data when possible and corroborating or challenging conclusions with other sources of information. • Synthesize information from a range of sources (e.g., texts, experiments, simulations) into a coherent understanding of a process, phenomenon, or concept, resolving conflicting information when possible.
<p>Env.5.2 Explain how the great diversity of species increases the chance that at least some living organisms will survive in the event of major global changes.</p>	<p>SEPS.4: Analyze and interpret data.</p> <p>SEPS.5: Use mathematics and computational thinking.</p> <p>SEPS.6: Construct explanations and design solutions.</p> <p>SEPS.7: Engage in argument from evidence.</p> <p>SEPS.8: Obtain, evaluate, and communicate information.</p>	<p>LST.4: Synthesis and Connection of Ideas</p> <ul style="list-style-type: none"> • Integrate and evaluate multiple sources of information presented in diverse formats and media (e.g., quantitative data, video, multimedia) in order to address a question or solve a problem. • Evaluate the hypotheses, data, analysis, and conclusions in a science or technical text, verifying the data when possible and corroborating or challenging conclusions with other sources of information. • Synthesize information from a range of sources (e.g., texts, experiments, simulations) into a coherent understanding of a process, phenomenon, or concept, resolving conflicting information when possible.

STANDARD INDICATORS	SCIENCE AND ENGINEERING	LITERACY IN SCIENCE
<p>Env.5.5 Identify the indirect and direct threats to biodiversity (e.g. habitat loss and destruction, invasion by exotic species, commercial over fishing and hunting, pollution, climate change, and bioaccumulation and biomagnification of toxins).</p>	<p>SEPS.1: Posing questions and defining problems.</p> <p>SEPS.3: Construct and perform investigation.</p> <p>SEPS.4: Analyze and interpret data.</p> <p>SEPS.6: Construct explanations and design solutions.</p> <p>SEPS.7: Engage in argument from evidence.</p> <p>SEPS.8: Obtain, evaluate, and communicate information.</p>	<p>LST.1: Learning Outcome</p> <ul style="list-style-type: none"> • Read and comprehend science and technical texts. • Write routinely for a range of tasks, purposes, and audiences. <p>LST.2: Key Ideas and Textual Support</p> <ul style="list-style-type: none"> • Cite specific textual evidence to support texts. • Follow a multistep procedure when carrying out experiments, taking measurement, or performing technical tasks. <p>LST.4: Synthesis and Connection of Ideas</p> <ul style="list-style-type: none"> • Integrate and evaluate multiple sources of information presented in diverse formats and media (e.g., quantitative data, video, multimedia) in order to address a question or solve a problem. • Evaluate the hypotheses, data, analysis, and conclusions in a science or technical text, verifying the data when possible and corroborating or challenging conclusions with other sources of information. • Synthesize information from a range of sources (e.g., texts, experiments, simulations) into a coherent understanding of a process, phenomenon, or concept, resolving conflicting information when possible.

STANDARD INDICATORS	SCIENCE AND ENGINEERING	LITERACY IN SCIENCE
<p>Env.5.6 Identify and explain the three levels of biodiversity: genetic, species, and ecosystem.</p>	<p>SEPS.4: Analyze and interpret data.</p> <p>SEPS.5: Use mathematics and computational thinking.</p> <p>SEPS.8: Obtain, evaluate, and communicate information.</p>	<p>LST.1: Learning Outcome</p> <ul style="list-style-type: none"> • Read and comprehend science and technical texts. • Write routinely for a range of tasks, purposes, and audiences. <p>LST.2: Key Ideas and Textual Support</p> <ul style="list-style-type: none"> • Cite specific textual evidence to support texts. <p>LST.4: Synthesis and Connection of Ideas</p> <ul style="list-style-type: none"> • Integrate and evaluate multiple sources of information presented in diverse formats and media (e.g., quantitative data, video, multimedia) in order to address a question or solve a problem. • Evaluate the hypotheses, data, analysis, and conclusions in a science or technical text, verifying the data when possible and corroborating or challenging conclusions with other sources of information. • Synthesize information from a range of sources (e.g., texts, experiments, simulations) into a coherent understanding of a process, phenomenon, or concept, resolving conflicting information when possible.

STANDARD INDICATORS	SCIENCE AND ENGINEERING	LITERACY IN SCIENCE
<p>Env.1.2 Understand and explain that human beings are part of Earth's ecosystems and give examples of how human activities can, deliberately or inadvertently, alter ecosystems.</p>	<p>SEPS.2: Developing and using models and tools.</p> <p>SEPS.4: Analyze and interpret data.</p> <p>SEPS.5: Use mathematics and computational thinking.</p> <p>SEPS.6: Construct explanations and design solutions.</p> <p>SEPS.7: Engage in argument from evidence.</p> <p>SEPS.8: Obtain, evaluate, and communicate information.</p>	<p>LST.1: Learning Outcome</p> <ul style="list-style-type: none"> • Read and comprehend science and technical texts. • Write routinely for a range of tasks, purposes, and audiences. <p>LST.2: Key Ideas and Textual Support</p> <ul style="list-style-type: none"> • Cite specific textual evidence to support texts. • Follow a multistep procedure when carrying out experiments, taking measurement, or performing technical tasks. <p>LST.3: Structural Elements and Organization</p> <ul style="list-style-type: none"> • Determine the meaning of symbols, key terms, and phrases. <p>LST.4: Synthesis and Connection of Ideas</p> <ul style="list-style-type: none"> • Integrate and evaluate multiple sources of information presented in diverse formats and media (e.g., quantitative data, video, multimedia) in order to address a question or solve a problem. • Evaluate the hypotheses, data, analysis, and conclusions in a science or technical text, verifying the data when possible and corroborating or challenging conclusions with other sources of information. • Synthesize information from a range of sources (e.g., texts, experiments, simulations) into a coherent understanding of a process, phenomenon, or concept, resolving conflicting information when possible.

STANDARD INDICATORS	SCIENCE AND ENGINEERING	LITERACY IN SCIENCE
<p>Env.1.6 Describe the difference between weather and climate. Locate, identify, and describe the major Earth biomes. Explain how biomes are determined by climate (temperature and precipitation patterns) that support specific kinds of plants.</p>	<p>SEPS.1: Posing questions and defining problems.</p> <p>SEPS.2: Developing and using models and tools.</p> <p>SEPS.4: Analyze and interpret data.</p> <p>SEPS.5: Use mathematics and computational thinking.</p> <p>SEPS.6: Construct explanations and design solutions.</p> <p>SEPS.7: Engage in argument from evidence.</p> <p>SEPS.8: Obtain, evaluate, and communicate information.</p>	<p>LST.1: Learning Outcome</p> <ul style="list-style-type: none"> • Write routinely for a range of tasks, purposes, and audiences. <p>LST.2: Key Ideas and Textual Support</p> <ul style="list-style-type: none"> • Cite specific textual evidence to support texts. • Follow a multistep procedure when carrying out experiments, taking measurement, or performing technical tasks. <p>LST.3: Structural Elements and Organization</p> <ul style="list-style-type: none"> • Determine the meaning of symbols, key terms, and phrases. <p>LST.4: Synthesis and Connection of Ideas</p> <ul style="list-style-type: none"> • Integrate and evaluate multiple sources of information presented in diverse formats and media (e.g., quantitative data, video, multimedia) in order to address a question or solve a problem.

STANDARD INDICATORS	SCIENCE AND ENGINEERING	LITERACY IN SCIENCE
<p>Env.1.8 Explain the factors that influence weather and climate, the action of gravitational forces, and the rotation of the Earth.</p>	<p>SEPS.1: Posing questions and defining problems.</p> <p>SEPS.8: Obtain, evaluate, and communicate information.</p>	<p>LST.1: Learning Outcome</p> <ul style="list-style-type: none"> • Read and comprehend science and technical texts. • Write routinely for a range of tasks, purposes, and audiences. <p>LST.2: Key Ideas and Textual Support</p> <ul style="list-style-type: none"> • Cite specific textual evidence to support texts. <p>LST.3: Structural Elements and Organization</p> <ul style="list-style-type: none"> • Determine the meaning of symbols, key terms, and phrases. <p>LST.4: Synthesis and Connection of Ideas</p> <ul style="list-style-type: none"> • Integrate and evaluate multiple sources of information presented in diverse formats and media (e.g., quantitative data, video, multimedia) in order to address a question or solve a problem. • Synthesize information from a range of sources (e.g., texts, experiments, simulations) into a coherent understanding of a process, phenomenon, or concept, resolving conflicting information when possible.

STANDARD INDICATORS	SCIENCE AND ENGINEERING	LITERACY IN SCIENCE
<p>Env.2.8 Cite examples of how all fuels, renewable and nonrenewable, have advantages and disadvantages that society must question when considering the trade-offs among them, such as how energy use contributes to the rising standard of living in the industrially developing nations. However, explain that this energy use also leads to more rapid depletion of Earth's energy resources and to environmental risks associated with the use of fossil and nuclear fuels.</p>	<p>SEPS.1: Posing questions and defining problems.</p> <p>SEPS.2: Developing and using models and tools.</p> <p>SEPS.4: Analyze and interpret data.</p> <p>SEPS.5: Use mathematics and computational thinking.</p> <p>SEPS.6: Construct explanations and design solutions.</p> <p>SEPS.7: Engage in argument from evidence.</p> <p>SEPS.8: Obtain, evaluate, and communicate information.</p>	<p>LST.1: Learning Outcome</p> <ul style="list-style-type: none"> • Read and comprehend science and technical texts. • Write routinely for a range of tasks, purposes, and audiences. <p>LST.2: Key Ideas and Textual Support</p> <ul style="list-style-type: none"> • Cite specific textual evidence to support texts. • Follow a multistep procedure when carrying out experiments, taking measurement, or performing technical tasks. <p>LST.3: Structural Elements and Organization</p> <ul style="list-style-type: none"> • Determine the meaning of symbols, key terms, and phrases. • Analyze how the text structures information or ideas into categories or hierarchies, demonstrating understanding of the information or ideas. • Analyze the author's purpose in providing an explanation, describing a procedure, or discussing an experiment in a text, identifying important issues that remain unresolved. <p>LST.4: Synthesis and Connection of Ideas</p> <ul style="list-style-type: none"> • Integrate and evaluate multiple sources of information presented in diverse formats and media (e.g., quantitative data, video, multimedia) in order to address a question or solve a problem. • Evaluate the hypotheses, data, analysis, and conclusions in a science or technical text, verifying the data when possible and corroborating or challenging conclusions with other sources of information. • Synthesize information from a range of sources (e.g., texts, experiments, simulations) into a coherent understanding of a process, phenomenon, or concept, resolving conflicting information when possible.

STANDARD INDICATORS	SCIENCE AND ENGINEERING	LITERACY IN SCIENCE
<p>Env.3.3 Read and describe a weather map in terms of pressure systems, fronts, and changing weather patterns.</p>	<p>SEPS.2: Developing and using models and tools.</p> <p>SEPS.6: Construct explanations and design solutions.</p> <p>SEPS.7: Engage in argument from evidence.</p> <p>SEPS.8: Obtain, evaluate, and communicate information.</p>	<p>LST.3: Structural Elements and Organization</p> <ul style="list-style-type: none"> Determine the meaning of symbols, key terms, and phrases. <p>LST.4: Synthesis and Connection of Ideas</p> <ul style="list-style-type: none"> Integrate and evaluate multiple sources of information presented in diverse formats and media (e.g., quantitative data, video, multimedia) in order to address a question or solve a problem. Evaluate the hypotheses, data, analysis, and conclusions in a science or technical text, verifying the data when possible and corroborating or challenging conclusions with other sources of information. Synthesize information from a range of sources (e.g., texts, experiments, simulations) into a coherent understanding of a process, phenomenon, or concept, resolving conflicting information when possible.
<p>Env.4.1 Explain environmental policies/organizations (Clean Water Act, Clean Air Act, Endangered Species Act, Species Survival Plan, Resource Conservation and Recovery Act, Department of Energy, and the World Health Organization) and identify their impact.</p>	<p>SEPS.4: Analyze and interpret data.</p> <p>SEPS.5: Use mathematics and computational thinking.</p> <p>SEPS.6: Construct explanations and design solutions.</p> <p>SEPS.7: Engage in argument from evidence.</p> <p>SEPS.8: Obtain, evaluate, and communicate information.</p>	<p>LST.1: Learning Outcome</p> <ul style="list-style-type: none"> Read and comprehend science and technical texts. Write routinely for a range of tasks, purposes, and audiences. <p>LST.2: Key Ideas and Textual Support</p> <ul style="list-style-type: none"> Cite specific textual evidence to support texts. <p>LST.3: Structural Elements and Organization</p> <ul style="list-style-type: none"> Determine the meaning of symbols, key terms, and phrases. Analyze how the text structures information or ideas into categories or hierarchies, demonstrating understanding of the information or ideas. <p>LST.4: Synthesis and Connection of Ideas</p> <ul style="list-style-type: none"> Evaluate the hypotheses, data, analysis, and conclusions in a science or technical text, verifying the data when possible and corroborating or challenging conclusions with other sources of information. Synthesize information from a range of sources (e.g., texts, experiments, simulations) into a coherent understanding of a process, phenomenon, or concept, resolving conflicting information when possible.

STANDARD INDICATORS	SCIENCE AND ENGINEERING	LITERACY IN SCIENCE
<p>Env.4.2 Understand that environmental policies/decisions have negative and positive impacts on people, societies, and the environment.</p>	<p>SEPS.1: Posing questions and defining problems.</p> <p>SEPS.6: Construct explanations and design solutions.</p> <p>SEPS.7: Engage in argument from evidence.</p> <p>SEPS.8: Obtain, evaluate, and communicate information.</p>	<p>LST.1: Learning Outcome</p> <ul style="list-style-type: none"> • Read and comprehend science and technical texts. • Write routinely for a range of tasks, purposes, and audiences. <p>LST.2: Key Ideas and Textual Support</p> <ul style="list-style-type: none"> • Cite specific textual evidence to support texts. • Follow a multistep procedure when carrying out experiments, taking measurement, or performing technical tasks. <p>LST.3: Structural Elements and Organization</p> <ul style="list-style-type: none"> • Determine the meaning of symbols, key terms, and phrases. • Analyze how the text structures information or ideas into categories or hierarchies, demonstrating understanding of the information or ideas. <p>LST.4: Synthesis and Connection of Ideas</p> <ul style="list-style-type: none"> • Integrate and evaluate multiple sources of information presented in diverse formats and media (e.g., quantitative data, video, multimedia) in order to address a question or solve a problem.
<p>Env.5.5 Identify the indirect and direct threats to biodiversity (e.g. habitat loss and destruction, invasion by exotic species, commercial over fishing and hunting, pollution, climate change, and bioaccumulation and biomagnification of toxins).</p>	<p>SEPS.1: Posing questions and defining problems.</p> <p>SEPS.3: Construct and perform investigation.</p> <p>SEPS.6: Construct explanations and design solutions.</p> <p>SEPS.8: Obtain, evaluate, and communicate information.</p>	<p>LST.1: Learning Outcome</p> <ul style="list-style-type: none"> • Write routinely for a range of tasks, purposes, and audiences. <p>LST.2: Key Ideas and Textual Support</p> <ul style="list-style-type: none"> • Cite specific textual evidence to support texts. <p>LST.4: Synthesis and Connection of Ideas</p> <ul style="list-style-type: none"> • Integrate and evaluate multiple sources of information presented in diverse formats and media (e.g., quantitative data, video, multimedia) in order to address a question or solve a problem.

STANDARD INDICATORS	SCIENCE AND ENGINEERING	LITERACY IN SCIENCE
<p>Env.7.1 Identify evidence, consequences, and prevention for climate change produced by anthropogenic sources.</p>	<p>SEPS.1: Posing questions and defining problems.</p> <p>SEPS.2: Developing and using models and tools.</p> <p>SEPS.4: Analyze and interpret data.</p> <p>SEPS.5: Use mathematics and computational thinking.</p> <p>SEPS.6: Construct explanations and design solutions.</p> <p>SEPS.7: Engage in argument from evidence.</p> <p>SEPS.8: Obtain, evaluate, and communicate information.</p>	<p>LST.1: Learning Outcome</p> <ul style="list-style-type: none"> • Read and comprehend science and technical texts. • Write routinely for a range of tasks, purposes, and audiences. <p>LST.2: Key Ideas and Textual Support</p> <ul style="list-style-type: none"> • Cite specific textual evidence to support texts. • Follow a multistep procedure when carrying out experiments, taking measurement, or performing technical tasks. <p>LST.3: Structural Elements and Organization</p> <ul style="list-style-type: none"> • Determine the meaning of symbols, key terms, and phrases. • Analyze how the text structures information or ideas into categories or hierarchies, demonstrating understanding of the information or ideas. • Analyze the author’s purpose in providing an explanation, describing a procedure, or discussing an experiment in a text, identifying important issues that remain unresolved. <p>LST.4: Synthesis and Connection of Ideas</p> <ul style="list-style-type: none"> • Integrate and evaluate multiple sources of information presented in diverse formats and media (e.g., quantitative data, video, multimedia) in order to address a question or solve a problem. • Evaluate the hypotheses, data, analysis, and conclusions in a science or technical text, verifying the data when possible and corroborating or challenging conclusions with other sources of information. • Synthesize information from a range of sources (e.g., texts, experiments, simulations) into a coherent understanding of a process, phenomenon, or concept, resolving conflicting information when possible.

STANDARD INDICATORS	SCIENCE AND ENGINEERING	LITERACY IN SCIENCE
Env.7.2 Differentiate between natural pollution and pollution caused by humans.	<p>SEPS.1: Posing questions and defining problems.</p> <p>SEPS.8: Obtain, evaluate, and communicate information.</p>	<p>LST.1: Learning Outcome</p> <ul style="list-style-type: none"> • Read and comprehend science and technical texts. • Write routinely for a range of tasks, purposes, and audiences. <p>LST.3: Structural Elements and Organization</p> <ul style="list-style-type: none"> • Determine the meaning of symbols, key terms, and phrases.
Env.7.5 Identify and describe the major air pollutants and their sources and impacts on the environment and human health.	<p>SEPS.1: Posing questions and defining problems.</p> <p>SEPS.4: Analyze and interpret data.</p> <p>SEPS.6: Construct explanations and design solutions.</p> <p>SEPS.8: Obtain, evaluate, and communicate information.</p>	<p>LST.3: Structural Elements and Organization</p> <ul style="list-style-type: none"> • Determine the meaning of symbols, key terms, and phrases. <p>LST.4: Synthesis and Connection of Ideas</p> <ul style="list-style-type: none"> • Integrate and evaluate multiple sources of information presented in diverse formats and media (e.g., quantitative data, video, multimedia) in order to address a question or solve a problem.
Env.7.6 Understand and explain how the burning of fossil fuels releases energy, waste heat, and matter (air pollutants).	<p>SEPS.1: Posing questions and defining problems.</p> <p>SEPS.4: Analyze and interpret data.</p> <p>SEPS.8: Obtain, evaluate, and communicate information.</p>	<p>LST.1: Learning Outcome</p> <ul style="list-style-type: none"> • Read and comprehend science and technical texts. • Write routinely for a range of tasks, purposes, and audiences. <p>LST.3: Structural Elements and Organization</p> <ul style="list-style-type: none"> • Determine the meaning of symbols, key terms, and phrases. <p>LST.4: Synthesis and Connection of Ideas</p> <ul style="list-style-type: none"> • Synthesize information from a range of sources (e.g., texts, experiments, simulations) into a coherent understanding of a process, phenomenon, or concept, resolving conflicting information when possible.

STANDARD INDICATORS	SCIENCE AND ENGINEERING	LITERACY IN SCIENCE
<p>Env.1.2 Understand and explain that human beings are part of Earth’s ecosystems and give examples of how human activities can, deliberately or inadvertently, alter ecosystems.</p>	<p>SEPS.2: Developing and using models and tools.</p> <p>SEPS.4: Analyze and interpret data.</p> <p>SEPS.5: Use mathematics and computational thinking.</p> <p>SEPS.6: Construct explanations and design solutions.</p> <p>SEPS.7: Engage in argument from evidence.</p> <p>SEPS.8: Obtain, evaluate, and communicate information.</p>	<p>LST.1: Learning Outcome</p> <ul style="list-style-type: none"> • Read and comprehend science and technical texts. • Write routinely for a range of tasks, purposes, and audiences. <p>LST.2: Key Ideas and Textual Support</p> <ul style="list-style-type: none"> • Cite specific textual evidence to support texts. • Follow a multistep procedure when carrying out experiments, taking measurement, or performing technical tasks. <p>LST.3: Structural Elements and Organization</p> <ul style="list-style-type: none"> • Determine the meaning of symbols, key terms, and phrases. <p>LST.4: Synthesis and Connection of Ideas</p> <ul style="list-style-type: none"> • Integrate and evaluate multiple sources of information presented in diverse formats and media (e.g., quantitative data, video, multimedia) in order to address a question or solve a problem. • Evaluate the hypotheses, data, analysis, and conclusions in a science or technical text, verifying the data when possible and corroborating or challenging conclusions with other sources of information. • Synthesize information from a range of sources (e.g., texts, experiments, simulations) into a coherent understanding of a process, phenomenon, or concept, resolving conflicting information when possible.

STANDARD INDICATORS	SCIENCE AND ENGINEERING	LITERACY IN SCIENCE
<p>Env.2.1 Describe how matter cycles through sources and sinks and how energy is transferred. Explain how matter and energy move between and within components of an environmental system.</p>	<p>SEPS.2: Developing and using models and tools.</p> <p>SEPS.3: Construct and perform investigation.</p> <p>SEPS.8: Obtain, evaluate, and communicate information.</p>	<p>LST.4: Synthesis and Connection of Ideas</p> <ul style="list-style-type: none"> Integrate and evaluate multiple sources of information presented in diverse formats and media (e.g., quantitative data, video, multimedia) in order to address a question or solve a problem.
<p>Env.2.6 Understand and describe how layers of energy-rich organic material have been gradually turned into great coal beds and oil pools by the pressure of the overlying earth. Recognize that by burning these fossil fuels, people are passing stored energy back into the environment as heat and releasing large amounts of matter such as carbon dioxide and other air pollutants.</p>	<p>SEPS.1: Posing questions and defining problems.</p> <p>SEPS.8: Obtain, evaluate, and communicate information.</p>	<p>LST.3: Structural Elements and Organization</p> <ul style="list-style-type: none"> Determine the meaning of symbols, key terms, and phrases.

STANDARD INDICATORS	SCIENCE AND ENGINEERING	LITERACY IN SCIENCE
<p>Env.2.9 Describe how decisions to slow the depletion of energy sources through efficient technologies can be made at many levels, from personal to national, and these technologies involve trade-offs of economic costs and social values.</p>	<p>SEPS.1: Posing questions and defining problems.</p> <p>SEPS.3: Construct and perform investigation.</p> <p>SEPS.6: Construct explanations and design solutions.</p> <p>SEPS.8: Obtain, evaluate, and communicate information.</p>	<p>LST.1: Learning Outcome</p> <ul style="list-style-type: none"> • Write routinely for a range of tasks, purposes, and audiences. <p>LST.2: Key Ideas and Textual Support</p> <ul style="list-style-type: none"> • Cite specific textual evidence to support texts. <p>LST.3: Structural Elements and Organization</p> <ul style="list-style-type: none"> • Determine the meaning of symbols, key terms, and phrases. <p>LST.4: Synthesis and Connection of Ideas</p> <ul style="list-style-type: none"> • Integrate and evaluate multiple sources of information presented in diverse formats and media (e.g., quantitative data, video, multimedia) in order to address a question or solve a problem.
<p>Env.2.11 Recognize and describe the role of natural resources in providing the raw materials for an industrial society.</p>	<p>SEPS.1: Posing questions and defining problems.</p> <p>SEPS.8: Obtain, evaluate, and communicate information.</p>	<p>LST.3: Structural Elements and Organization</p> <ul style="list-style-type: none"> • Determine the meaning of symbols, key terms, and phrases. <p>LST.4: Synthesis and Connection of Ideas</p> <ul style="list-style-type: none"> • Integrate and evaluate multiple sources of information presented in diverse formats and media (e.g., quantitative data, video, multimedia) in order to address a question or solve a problem.

STANDARD INDICATORS	SCIENCE AND ENGINEERING	LITERACY IN SCIENCE
<p>Env.4.1 Explain environmental policies/organizations (Clean Water Act, Clean Air Act, Endangered Species Act, Species Survival Plan, Resource Conservation and Recovery Act, Department of Energy, and the World Health Organization) and identify their impact.</p>	<p>SEPS.1: Posing questions and defining problems.</p> <p>SEPS.8: Obtain, evaluate, and communicate information.</p>	<p>LST.1: Learning Outcome</p> <ul style="list-style-type: none"> • Read and comprehend science and technical texts. • Write routinely for a range of tasks, purposes, and audiences. <p>LST.2: Key Ideas and Textual Support</p> <ul style="list-style-type: none"> • Cite specific textual evidence to support texts. <p>LST.3: Structural Elements and Organization</p> <ul style="list-style-type: none"> • Determine the meaning of symbols, key terms, and phrases. <p>LST.4: Synthesis and Connection of Ideas</p> <ul style="list-style-type: none"> • Integrate and evaluate multiple sources of information presented in diverse formats and media (e.g., quantitative data, video, multimedia) in order to address a question or solve a problem.
<p>Env.4.2 Understand that environmental policies/decisions have negative and positive impacts on people, societies, and the environment.</p>	<p>SEPS.1: Posing questions and defining problems.</p> <p>SEPS.6: Construct explanations and design solutions.</p> <p>SEPS.7: Engage in argument from evidence.</p> <p>SEPS.8: Obtain, evaluate, and communicate information.</p>	<p>LST.1: Learning Outcome</p> <ul style="list-style-type: none"> • Read and comprehend science and technical texts. • Write routinely for a range of tasks, purposes, and audiences. <p>LST.2: Key Ideas and Textual Support</p> <ul style="list-style-type: none"> • Cite specific textual evidence to support texts. • Follow a multistep procedure when carrying out experiments, taking measurement, or performing technical tasks. <p>LST.3: Structural Elements and Organization</p> <ul style="list-style-type: none"> • Determine the meaning of symbols, key terms, and phrases. • Analyze how the text structures information or ideas into categories or hierarchies, demonstrating understanding of the information or ideas. <p>LST.4: Synthesis and Connection of Ideas</p> <ul style="list-style-type: none"> • Integrate and evaluate multiple sources of information presented in diverse formats and media (e.g., quantitative data, video, multimedia) in order to address a question or solve a problem.

STANDARD INDICATORS	SCIENCE AND ENGINEERING	LITERACY IN SCIENCE
Env.8.1 Demonstrate a knowledge of the distribution of natural resources in the U.S. and the world, and explain how natural resources influence relationships among nations.	SEPS.1: Posing questions and defining problems. SEPS.2: Developing and using models and tools. SEPS.3: Construct and perform investigation. SEPS.6: Construct explanations and design solutions. SEPS.8: Obtain, evaluate, and communicate information.	LST.2: Key Ideas and Textual Support <ul style="list-style-type: none">• Cite specific textual evidence to support texts.

CONTENT (THE WHAT)	STANDARD INDICATORS	SKILLS (WHAT STUDENTS NEED TO KNOW AND BE ABLE TO DO)	ASSESSMENT	VOCAB	PRIORITY
Forestry and Water Resources					
<ul style="list-style-type: none"> • Human beings as part of Earth’s ecosystems • Human activities alter ecosystems 	<p>Env.1.2 Understand and explain that human beings are part of Earth’s ecosystems and give examples of how human activities can, deliberately or inadvertently, alter ecosystems.</p>	<ul style="list-style-type: none"> • Explain how human activities impact forests. • Explain how slash and burn agriculture reduces biodiversity in forests. • Explain how human contributions to increased levels of atmospheric carbon impact forests. • Explain how humans directly impact the water table. • Explain how humans indirectly impact the water table. 	<ul style="list-style-type: none"> • Lab Reports: Reforesting Africa, Forestation Change • S: Forestry and Water Resources Exam • Reading quizzes/guides • Battling over Clayoquats Big Trees • Making recycled paper 	<ul style="list-style-type: none"> • Slash and burn • Water table 	<p>IMPORTANT</p>
<ul style="list-style-type: none"> • Equilibrium • Feedback loops 	<p>Env.1.3 Recognize and describe the difference between systems in equilibrium and systems in disequilibrium. Describe how steady state is achieved through negative and positive feedback loops.</p>	<ul style="list-style-type: none"> • Describe the difference between systems in equilibrium and systems in disequilibrium. • Describe negative feedback loops. • Describe positive feedback loops. • Explain how feedback loops leads to steady state. 	<ul style="list-style-type: none"> • S: Forestry and Water Resources Exam 	<ul style="list-style-type: none"> • Equilibrium • Steady State • Positive feedback • Negative feedback 	<p>ADDITIONAL</p>

CONTENT (THE WHAT)	STANDARD INDICATORS	SKILLS (WHAT STUDENTS NEED TO KNOW AND BE ABLE TO DO)	ASSESSMENT	VOCAB	PRIORITY
Forestry and Water Resources					
<ul style="list-style-type: none"> • The Water Cycle • Human impact on the water cycle 	<p>Env.1.4 Diagram the cycling of carbon, nitrogen, phosphorus, and water and describe the human impacts on each.</p>	<ul style="list-style-type: none"> • Diagram the cycling of water. • Describe the human impacts on the cycling of water. 	<ul style="list-style-type: none"> • F: Water cycle diagram • S: Forestry and Water Resources Exam 	<ul style="list-style-type: none"> • Evaporation • Condensation • Sublimation • Fresh water • Surface water • Ground water • Aquifer • Permeable • Impermeable • Recharge zone • Desalinization • Point-source pollution • Nonpoint-source pollution • Wastewater • Algal Bloom 	<p>IMPORTANT</p>
<ul style="list-style-type: none"> • Biodiversity limitations -water -oxygen -nutrients/minerals 	<p>Env.2.3 Recognize and explain that the amount of life any environment can support is limited by the available energy, water, oxygen, nutrients and minerals, and by the ability of ecosystems to recycle organic materials from the remains of dead organisms.</p>	<ul style="list-style-type: none"> • Explain that the amount of life any environment can support is limited by the available water, oxygen, and nutrients and minerals. • Explain the impact of dissolved oxygen on aquatic life. 	<ul style="list-style-type: none"> • F: Dissolved oxygen lab • S: Forestry and Water Resources Exam 	<ul style="list-style-type: none"> • Dissolved oxygen 	<p>ADDITIONAL</p>

CONTENT (THE WHAT)	STANDARD INDICATORS	SKILLS (WHAT STUDENTS NEED TO KNOW AND BE ABLE TO DO)	ASSESSMENT	VOCAB	PRIORITY
Forestry and Water Resources					
<ul style="list-style-type: none"> • Role of natural resources in providing raw materials for society 	<p>Env.2.11 Recognize and describe the role of natural resources in providing the raw materials for an industrial society.</p>	<ul style="list-style-type: none"> • Describe how natural resources (including forests) provide resources for an industrial society. 	<ul style="list-style-type: none"> • F: Forest ecosystem services web quest • F: Making recycled paper • S: Forestry and Water Resources Exam 	<ul style="list-style-type: none"> • Ecosystem services 	<p>ADDITIONAL</p>
<ul style="list-style-type: none"> • Environmental policies and organizations -The Clean Water Act 	<p>Env.4.1 Explain environmental policies/organizations (Clean Water Act, Clean Air Act, Endangered Species Act, Species Survival Plan, Resource Conservation and Recovery Act, Department of Energy, and the World Health Organization) and identify their impact.</p>	<ul style="list-style-type: none"> • Describe the Clean Water Act. • Explain the impact of the Clean Water Act. • Explain environmental policies and organizations. 	<ul style="list-style-type: none"> • F: Clean Water act web quest • F: The water you drink • S: Forestry and Water Resources Exam 	<ul style="list-style-type: none"> • Point-source pollution • Non point-source pollution 	<p>ADDITIONAL</p>

CONTENT (THE WHAT)	STANDARD INDICATORS	SKILLS (WHAT STUDENTS NEED TO KNOW AND BE ABLE TO DO)	ASSESSMENT	VOCAB	PRIORITY
Forestry and Water Resources					
<ul style="list-style-type: none"> • Threats to biodiversity <ul style="list-style-type: none"> -direct -indirect 	<p>Env.5.5 Identify the indirect and direct threats to biodiversity (e.g. habitat loss and destruction, invasion by exotic species, commercial over fishing and hunting, pollution, climate change, and bioaccumulation and biomagnification of toxins).</p>	<ul style="list-style-type: none"> • Explain how indirect and direct threats, like deforestation (habitat loss and destruction,) reduce biodiversity. 	<ul style="list-style-type: none"> • F: Written Conversation • S: Forestry and Water Resources Exam 	<ul style="list-style-type: none"> • Biodiversity 	<p>ADDITIONAL</p>
<ul style="list-style-type: none"> • Effects of environmental stressors <ul style="list-style-type: none"> -Runoff -Water pollution -Secondary pollutants 	<p>Env.7.3 Compare and contrast the effects of environmental stressors (i.e. herbicides, pesticides) on plants and animals. Give examples of secondary effects on other environmental components.</p>	<ul style="list-style-type: none"> • Compare and contrast the effects of herbicides on plants and animals. • Compare and contrast the effects of pesticides on plants and animals. • Identify secondary effects on other environmental components. • Explain the impact of acid rain on plants, animals, and infrastructure. 	<ul style="list-style-type: none"> • F: Watershed boundaries • S: Forestry and Water Resources Exam 	<ul style="list-style-type: none"> • Secondary pollutant • Secondary effect 	<p>ADDITIONAL</p>

CONTENT (THE WHAT)	STANDARD INDICATORS	SKILLS (WHAT STUDENTS NEED TO KNOW AND BE ABLE TO DO)	ASSESSMENT	VOCAB	PRIORITY
Forestry and Water Resources					
<ul style="list-style-type: none"> Natural resources -distribution in the U.S. and the influence on international relations 	<p>Env.8.1 Demonstrate a knowledge of the distribution of natural resources in the U.S. and the world, and explain how natural resources influence relationships among nations.</p>	<ul style="list-style-type: none"> Draw a watershed boundary map. Explain how pollution in other portions of the watershed impact individuals in other portions of the watershed. Demonstrate a knowledge of the distribution of natural resources, like forests and water, in the U.S. Demonstrate a knowledge of the distribution of natural resources, like forests and water, in the world. Explain how natural resources influence relationships among nations. 	<ul style="list-style-type: none"> F: The water you drink Ogallala Aquifer S: Forestry and Water Resources Exam 	<ul style="list-style-type: none"> Watershed Runoff 	<p>IMPORTANT</p>

CONTENT (THE WHAT)	STANDARD INDICATORS	SKILLS (WHAT STUDENTS NEED TO KNOW AND BE ABLE TO DO)	ASSESSMENT	VOCAB	PRIORITY
Forestry and Water Resources					
<ul style="list-style-type: none"> • Agricultural runoff • Agricultural technology trade-offs <ul style="list-style-type: none"> -increased production and environmental harm -efficient production and social values 	<p>Env.8.4 Describe how agricultural technology requires trade-offs between increased production and environmental harm and between efficient production and social values.</p>	<ul style="list-style-type: none"> • Describe how agricultural technology requires trade-offs between increased production and environmental harm. • Describe how agricultural technology requires trade-offs between efficient production and social values. • Explain the benefits and drawbacks of pesticides. • Explain the benefits and drawbacks of herbicides. • Explain the benefits and drawbacks of various methods of ditch irrigation. • Explain the benefits and drawbacks of various methods of drip irrigation. • Explain the benefits and drawbacks of various methods of sprinkler irrigation. • Explain the benefits and drawbacks of genetically modified organisms. • Explain the benefits and drawbacks of hydroponics. 	<ul style="list-style-type: none"> • Watershed boundaries lab • S: Forestry and Water Resources Exam 	<ul style="list-style-type: none"> • GMO • Pest • Drip irrigation • Ditch irrigation • Sprinkler irrigation 	<p>IMPORTANT</p>

CONTENT (THE WHAT)	STANDARD INDICATORS	SKILLS (WHAT STUDENTS NEED TO KNOW AND BE ABLE TO DO)	ASSESSMENT	VOCAB	PRIORITY
Forestry and Water Resources					
<ul style="list-style-type: none"> • Water control -Developed countries -Developing countries 	<p>Env.8.5 Describe and examine how water is controlled in developed and undeveloped nations.</p>	<ul style="list-style-type: none"> • Describe how water is controlled and processed in developed countries (specifically, the U.S.). • Describe how water is controlled and processed in developing countries. 	<ul style="list-style-type: none"> • Wastewater treatment • Water quality reports • Water pollution lab • Global freshwater resources • Looking for water in the desert • S: Forestry and Water Resources Exam 		<p>IMPORTANT</p>
<ul style="list-style-type: none"> • Natural recycling • Human recycling • Conservation of natural resources 	<p>Env.8.6 Understand and describe the concept and the importance of natural and human recycling in conserving our natural resources.</p>	<ul style="list-style-type: none"> • Describe the importance of natural recycling related to water resources. • Describe the importance of human recycling related to water resources. 	<ul style="list-style-type: none"> • S: Forestry and Water Resources Exam 	<ul style="list-style-type: none"> • Natural recycling • Human recycling 	<p>IMPORTANT</p>

CONTENT (THE WHAT)	STANDARD INDICATORS	SKILLS (WHAT STUDENTS NEED TO KNOW AND BE ABLE TO DO)	ASSESSMENT	VOCAB	PRIORITY
Energy Resources					
<ul style="list-style-type: none"> • Forms of Energy • Conservation of Mass 	<p>Env.2.2 Identify the different forms of energy and understand that energy may be converted from one form to another, but cannot be created nor destroyed.</p>	<ul style="list-style-type: none"> • Identify the following types of energy: potential, kinetic, chemical, electrical, chemical. • Use specific examples to demonstrate the conservation of matter. 	<ul style="list-style-type: none"> • F: Reading Quizzes • S: Exam 	<ul style="list-style-type: none"> • Combustion • Incomplete combustion • Renewable energy • Non-Renewable energy • Nuclear energy • Nuclear fission • Nuclear reactor • Nuclear fusion • Law of Conservation of Mass 	CRITICAL
<ul style="list-style-type: none"> • Energy sources <ul style="list-style-type: none"> - Fossil Fuels - Nuclear energy - Hydropower - Biofuels - Solar energy - Wind power - Hydrogen fuel 	<p>Env.2.4 Recognize and describe the different sources of energy, including fossil fuels, nuclear, and alternative sources of energy provided by water, wind, geothermal, biomass/biofuels, and the sun.</p>	<ul style="list-style-type: none"> • Describe fossil fuels. • Describe nuclear energy. • Describe hydropower. • Describe geothermal energy. • Describe biomass/biofuel generated energy. • Describe solar energy. • Describe wind power. • Explain the use of hydrogen as a fuel. 	<ul style="list-style-type: none"> • F: Regional Renewable Energy • F: Compare Biofuels • F: Energy from wind • F: Reading Quizzes • S: Energy Resources Exam 	<ul style="list-style-type: none"> • Geothermal Energy • Hydropower • Tidal power • Biomass • Biofuel • Solar energy • Wind Power • Hydrogen fuel • Electrolysis • Fuel Cells 	CRITICAL

CONTENT (THE WHAT)	STANDARD INDICATORS	SKILLS (WHAT STUDENTS NEED TO KNOW AND BE ABLE TO DO)	ASSESSMENT	VOCAB	PRIORITY
Energy Resources					
<ul style="list-style-type: none"> • Non-Renewable energy - Coal - Petroleum - Nuclear energy 	<p>Env.2.5 Give examples of the various forms and uses of fossil fuels and nuclear energy in our society.</p>	<ul style="list-style-type: none"> • Describe the use of coal. • Describe the use of petroleum. • Describe the use of natural gas. • Describe nuclear fission. • Describe nuclear fusion. 	<ul style="list-style-type: none"> • F: Reading Quizzes • F: Reading Quizzes • S: Exam 	<ul style="list-style-type: none"> • Coal • Petroleum • Natural Gas • Fission • Fusion 	CRITICAL
<ul style="list-style-type: none"> • Fossil fuels • Burning of fossil fuels 	<p>Env.2.6 Understand and describe how layers of energy-rich organic material have been gradually turned into great coal beds and oil pools by the pressure of the overlying earth. Recognize that by burning these fossil fuels, people are passing stored energy back into the environment as heat and releasing large amounts of matter such as carbon dioxide and other air pollutants.</p>	<ul style="list-style-type: none"> • Describe how layers of energy-rich organic material have been gradually turned into great coal beds and oil pools by the pressure of the overlying earth. • Explain that by burning these fossil fuels, people are passing stored energy back into the environment as heat and releasing large amounts of matter such as carbon dioxide and other air pollutants. 	<ul style="list-style-type: none"> • F: Reading Quizzes • F: Global oil production and the Hubbert curve • F: Carbon dioxide from fossil fuels • F: Fossil Fuel use lab • S: Exam 	<ul style="list-style-type: none"> • Pressure • Matter 	CRITICAL

CONTENT (THE WHAT)	STANDARD INDICATORS	SKILLS (WHAT STUDENTS NEED TO KNOW AND BE ABLE TO DO)	ASSESSMENT	VOCAB	PRIORITY
Energy Resources					
<ul style="list-style-type: none"> • Renewable v. Nonrenewable energy source 	<p>Env.2.7 Differentiate between renewable and nonrenewable resources, and compare and contrast the pros and cons of using nonrenewable resources.</p>	<ul style="list-style-type: none"> • Differentiate between renewable and nonrenewable resources. • Compare and contrast the pros and cons of using nonrenewable resources. 	<ul style="list-style-type: none"> • F: Gasland, Burning the Future written conversation • S: Exam 	<ul style="list-style-type: none"> • Renewable resource • Non-renewable resource 	CRITICAL
<ul style="list-style-type: none"> • Advantages and disadvantages of renewable and nonrenewable energy sources • Decisions on energy sources 	<p>Env.2.8 Cite examples of how all fuels, renewable and nonrenewable, have advantages and disadvantages that society must question when considering the trade-offs among them, such as how energy use contributes to the rising standard of living in the industrially developing nations. However, explain that this energy use also leads to more rapid depletion of Earth's energy resources and to environmental risks associated with the use of fossil and nuclear fuels.</p>	<ul style="list-style-type: none"> • Explain that energy use also leads to more rapid depletion of Earth's energy resources. • Explain that energy use leads to environmental risks associated with the use of fossil and nuclear fuels. 	<ul style="list-style-type: none"> • F: Energy sources discussion • F: Gasland, Burning the Future Written conversation. • S: Exam 	<ul style="list-style-type: none"> • Depletion 	IMPORTANT

CONTENT (THE WHAT)	STANDARD INDICATORS	SKILLS (WHAT STUDENTS NEED TO KNOW AND BE ABLE TO DO)	ASSESSMENT	VOCAB	PRIORITY
Energy Resources					
<ul style="list-style-type: none"> • Decisions to slow the depletion of energy sources 	<p>Env.2.9 Describe how decisions to slow the depletion of energy sources through efficient technologies can be made at many levels, from personal to national, and these technologies involve trade-offs of economic costs and social values.</p>	<ul style="list-style-type: none"> • Describe how decisions to slow the depletion of energy sources through efficient technologies can be made at the personal level. • Describe how decisions to slow the depletion of energy sources through efficient technologies can be made at the community level. • Describe how decisions to slow the depletion of energy sources through efficient technologies can be made at the national level. 	<ul style="list-style-type: none"> • F: Germany's Big Bet on renewable energy. • S: Authentic assessment • S: Exam 		IMPORTANT
<ul style="list-style-type: none"> • Nuclear reactions • Uses of nuclear fission and fusion and implications for society 	<p>Env.2.10 Understand and describe how nuclear reactions release energy without the combustion products of burning fuels, but that the radioactivity of fuels and by-products poses other risks which may last for thousands of years. Understand and assess the uses of nuclear fission and fusion, including the implications for society.</p>	<ul style="list-style-type: none"> • Describe how nuclear reactions release energy without the combustion products of burning fuels. • Describe the risks from the radioactivity of fuels and by-products of nuclear reactions. • Summarize the uses of nuclear fission and fusion, including the implications for society. 	<ul style="list-style-type: none"> • S: Exam 	<ul style="list-style-type: none"> • Radioactivity 	IMPORTANT

CONTENT (THE WHAT)	STANDARD INDICATORS	SKILLS (WHAT STUDENTS NEED TO KNOW AND BE ABLE TO DO)	ASSESSMENT	VOCAB	PRIORITY
Energy Resources					
<ul style="list-style-type: none"> Natural Resources as energy sources 	Env.2.11 Recognize and describe the role of natural resources in providing the raw materials for an industrial society.	<ul style="list-style-type: none"> Describe the role of natural resources in providing energy sources for an industrial society. 	<ul style="list-style-type: none"> F: Are biofuels Better for the environment? F: Autos – the nation that runs on Ethanol (bellringer) F: Compare biofuels S: Exam 	<ul style="list-style-type: none"> Biofuel 	IMPORTANT
<ul style="list-style-type: none"> Burning of Fossil Fuel consequences 	Env.7.6 Understand and explain how the burning of fossil fuels releases energy, waste heat, and matter (air pollutants).	<ul style="list-style-type: none"> Identify the products of burning fossil fuels: energy, waste heat, matter. 	<ul style="list-style-type: none"> F: Gasland, Burning the Future Written Conversation S: Exam 	<ul style="list-style-type: none"> Combustion 	CRITICAL

STANDARD INDICATORS	SCIENCE AND ENGINEERING	LITERACY IN SCIENCE
<p>Env.1.2 Understand and explain that human beings are part of Earth’s ecosystems and give examples of how human activities can, deliberately or inadvertently, alter ecosystems.</p>	<p>SEPS.4: Analyze and interpret data.</p> <p>SEPS.5: Use mathematics and computational thinking</p> <p>SEPS.6: Construct explanations and design solutions.</p> <p>SEPS.7: Engage in argument from evidence</p> <p>SEPS.8: Obtain, evaluate, and communicate information.</p>	<p>LST.1: Learning Outcome</p> <ul style="list-style-type: none"> • Write routinely for a range of tasks, purposes, and audiences. <p>LST.2: Key Ideas and Textual Support</p> <ul style="list-style-type: none"> • Cite specific textual evidence to support texts. <p>LST.3: Structural Elements and Organization</p> <ul style="list-style-type: none"> • Determine the meaning of symbols, key terms, and phrases. • Analyze how the text structures information or ideas into categories or hierarchies, demonstrating understanding of the information or ideas. • Analyze the author’s purpose in providing an explanation, describing a procedure, or discussing an experiment in a text, identifying important issues that remain unresolved. <p>LST.4: Synthesis and Connection of Ideas</p> <ul style="list-style-type: none"> • Integrate and evaluate multiple sources of information presented in diverse formats and media (e.g., quantitative data, video, multimedia) in order to address a question or solve a problem. • Synthesize information from a range of sources (e.g., texts, experiments, simulations) into a coherent understanding of a process, phenomenon, or concept, resolving conflicting information when possible.

STANDARD INDICATORS	SCIENCE AND ENGINEERING	LITERACY IN SCIENCE
<p>Env.1.3 Recognize and describe the difference between systems in equilibrium and systems in disequilibrium. Describe how steady state is achieved through negative and positive feedback loops.</p>	<p>SEPS.4: Analyze and interpret data.</p> <p>SEPS.5: Use mathematics and computational thinking</p> <p>SEPS.8: Obtain, evaluate, and communicate information.</p>	<p>LST.1: Learning Outcome</p> <ul style="list-style-type: none"> • Read and comprehend science and technical texts. • Write routinely for a range of tasks, purposes, and audiences. <p>LST.2: Key Ideas and Textual Support</p> <ul style="list-style-type: none"> • Cite specific textual evidence to support texts. • Follow a multistep procedure when carrying out experiments, taking measurement, or performing technical tasks. <p>LST.3: Structural Elements and Organization</p> <ul style="list-style-type: none"> • Determine the meaning of symbols, key terms, and phrases. <p>LST.4: Synthesis and Connection of Ideas</p> <ul style="list-style-type: none"> • Integrate and evaluate multiple sources of information presented in diverse formats and media (e.g., quantitative data, video, multimedia) in order to address a question or solve a problem. • Evaluate the hypotheses, data, analysis, and conclusions in a science or technical text, verifying the data when possible and corroborating or challenging conclusions with other sources of information. • Synthesize information from a range of sources (e.g., texts, experiments, simulations) into a coherent understanding of a process, phenomenon, or concept, resolving conflicting information when possible.

STANDARD INDICATORS	SCIENCE AND ENGINEERING	LITERACY IN SCIENCE
<p>Env.1.4 Diagram the cycling of carbon, nitrogen, phosphorus, and water and describe the human impacts on each.</p>	<p>SEPS.1: Posing questions and defining problems.</p> <p>SEPS.4: Analyze and interpret data.</p> <p>SEPS.5: Use mathematics and computational thinking</p> <p>SEPS.6: Construct explanations and design solutions.</p> <p>SEPS.8: Obtain, evaluate, and communicate information.</p>	<p>LST.1: Learning Outcome</p> <ul style="list-style-type: none"> • Write routinely for a range of tasks, purposes, and audiences. <p>LST.2: Key Ideas and Textual Support</p> <ul style="list-style-type: none"> • Cite specific textual evidence to support texts. • Follow a multistep procedure when carrying out experiments, taking measurement, or performing technical tasks. <p>LST.3: Structural Elements and Organization</p> <ul style="list-style-type: none"> • Determine the meaning of symbols, key terms, and phrases. <p>LST.4: Synthesis and Connection of Ideas</p> <ul style="list-style-type: none"> • Integrate and evaluate multiple sources of information presented in diverse formats and media (e.g., quantitative data, video, multimedia) in order to address a question or solve a problem. • Evaluate the hypotheses, data, analysis, and conclusions in a science or technical text, verifying the data when possible and corroborating or challenging conclusions with other sources of information. • Synthesize information from a range of sources (e.g., texts, experiments, simulations) into a coherent understanding of a process, phenomenon, or concept, resolving conflicting information when possible.
<p>Env.2.3 Recognize and explain that the amount of life any environment can support is limited by the available energy, water, oxygen, nutrients and minerals, and by the ability of ecosystems to recycle organic materials from the remains of dead organisms.</p>	<p>SEPS.4: Analyze and interpret data.</p> <p>SEPS.5: Use mathematics and computational thinking</p> <p>SEPS.6: Construct explanations and design solutions.</p> <p>SEPS.7: Engage in argument from evidence</p> <p>SEPS.8: Obtain, evaluate, and communicate information.</p>	<p>LST.1: Learning Outcome</p> <ul style="list-style-type: none"> • Write routinely for a range of tasks, purposes, and audiences. <p>LST.2: Key Ideas and Textual Support</p> <ul style="list-style-type: none"> • Cite specific textual evidence to support texts. <p>LST.3: Structural Elements and Organization</p> <ul style="list-style-type: none"> • Determine the meaning of symbols, key terms, and phrases. <p>LST.4: Synthesis and Connection of Ideas</p> <ul style="list-style-type: none"> • Integrate and evaluate multiple sources of information presented in diverse formats and media (e.g., quantitative data, video, multimedia) in order to address a question or solve a problem. • Synthesize information from a range of sources (e.g., texts, experiments, simulations) into a coherent understanding of a process, phenomenon, or concept, resolving conflicting information when possible.

STANDARD INDICATORS	SCIENCE AND ENGINEERING	LITERACY IN SCIENCE
<p>Env.2.11 Recognize and describe the role of natural resources in providing the raw materials for an industrial society.</p>	<p>SEPS.1: Posing questions and defining problems.</p> <p>SEPS.4: Analyze and interpret data.</p> <p>SEPS.5: Use mathematics and computational thinking</p> <p>SEPS.6: Construct explanations and design solutions.</p> <p>SEPS.7: Engage in argument from evidence</p> <p>SEPS.8: Obtain, evaluate, and communicate information.</p>	<p>LST.1: Learning Outcome</p> <ul style="list-style-type: none"> • Read and comprehend science and technical texts. • Write routinely for a range of tasks, purposes, and audiences. <p>LST.2: Key Ideas and Textual Support</p> <ul style="list-style-type: none"> • Cite specific textual evidence to support texts. • Follow a multistep procedure when carrying out experiments, taking measurement, or performing technical tasks. <p>LST.3: Structural Elements and Organization</p> <ul style="list-style-type: none"> • Determine the meaning of symbols, key terms, and phrases. • Analyze how the text structures information or ideas into categories or hierarchies, demonstrating understanding of the information or ideas. • Analyze the author’s purpose in providing an explanation, describing a procedure, or discussing an experiment in a text, identifying important issues that remain unresolved. <p>LST.4: Synthesis and Connection of Ideas</p> <ul style="list-style-type: none"> • Integrate and evaluate multiple sources of information presented in diverse formats and media (e.g., quantitative data, video, multimedia) in order to address a question or solve a problem. • Evaluate the hypotheses, data, analysis, and conclusions in a science or technical text, verifying the data when possible and corroborating or challenging conclusions with other sources of information. • Synthesize information from a range of sources (e.g., texts, experiments, simulations) into a coherent understanding of a process, phenomenon, or concept, resolving conflicting information when possible.

STANDARD INDICATORS	SCIENCE AND ENGINEERING	LITERACY IN SCIENCE
<p>Env.5.5 Identify the indirect and direct threats to biodiversity (e.g. habitat loss and destruction, invasion by exotic species, commercial over fishing and hunting, pollution, climate change, and bioaccumulation and biomagnification of toxins).</p>	<p>SEPS.1: Posing questions and defining problems.</p> <p>SEPS.4: Analyze and interpret data.</p> <p>SEPS.5: Use mathematics and computational thinking</p> <p>SEPS.6: Construct explanations and design solutions.</p> <p>SEPS.7: Engage in argument from evidence</p> <p>SEPS.8: Obtain, evaluate, and communicate information.</p>	<p>LST.1: Learning Outcome</p> <ul style="list-style-type: none"> • Read and comprehend science and technical texts. • Write routinely for a range of tasks, purposes, and audiences. <p>LST.2: Key Ideas and Textual Support</p> <ul style="list-style-type: none"> • Cite specific textual evidence to support texts. <p>LST.3: Structural Elements and Organization</p> <ul style="list-style-type: none"> • Determine the meaning of symbols, key terms, and phrases. • Analyze how the text structures information or ideas into categories or hierarchies, demonstrating understanding of the information or ideas. • Analyze the author’s purpose in providing an explanation, describing a procedure, or discussing an experiment in a text, identifying important issues that remain unresolved. <p>LST.4: Synthesis and Connection of Ideas</p> <ul style="list-style-type: none"> • Integrate and evaluate multiple sources of information presented in diverse formats and media (e.g., quantitative data, video, multimedia) in order to address a question or solve a problem. • Synthesize information from a range of sources (e.g., texts, experiments, simulations) into a coherent understanding of a process, phenomenon, or concept, resolving conflicting information when possible.

STANDARD INDICATORS	SCIENCE AND ENGINEERING	LITERACY IN SCIENCE
<p>Env.4.1 Explain environmental policies/organizations (Clean Water Act, Clean Air Act, Endangered Species Act, Species Survival Plan, Resource Conservation and Recovery Act, Department of Energy, and the World Health Organization) and identify their impact.</p>	<p>SEPS.1: Posing questions and defining problems.</p> <p>SEPS.4: Analyze and interpret data.</p> <p>SEPS.5: Use mathematics and computational thinking</p> <p>SEPS.8: Obtain, evaluate, and communicate information.</p>	<p>LST.1: Learning Outcome</p> <ul style="list-style-type: none"> • Read and comprehend science and technical texts. • Write routinely for a range of tasks, purposes, and audiences. <p>LST.2: Key Ideas and Textual Support</p> <ul style="list-style-type: none"> • Cite specific textual evidence to support texts. <p>LST.3: Structural Elements and Organization</p> <ul style="list-style-type: none"> • Determine the meaning of symbols, key terms, and phrases. • Analyze how the text structures information or ideas into categories or hierarchies, demonstrating understanding of the information or ideas. • Analyze the author’s purpose in providing an explanation, describing a procedure, or discussing an experiment in a text, identifying important issues that remain unresolved. <p>LST.4: Synthesis and Connection of Ideas</p> <ul style="list-style-type: none"> • Integrate and evaluate multiple sources of information presented in diverse formats and media (e.g., quantitative data, video, multimedia) in order to address a question or solve a problem. • Synthesize information from a range of sources (e.g., texts, experiments, simulations) into a coherent understanding of a process, phenomenon, or concept, resolving conflicting information when possible.

STANDARD INDICATORS	SCIENCE AND ENGINEERING	LITERACY IN SCIENCE
<p>Env.7.3 Compare and contrast the effects of environmental stressors (i.e. herbicides, pesticides) on plants and animals. Give examples of secondary effects on other environmental components.</p>	<p>SEPS.1: Posing questions and defining problems.</p> <p>SEPS.2: Developing and using models and tools.</p> <p>SEPS.3: Construct and perform investigation.</p> <p>SEPS.4: Analyze and interpret data.</p> <p>SEPS.5: Use mathematics and computational thinking</p> <p>SEPS.6: Construct explanations and design solutions.</p> <p>SEPS.7: Engage in argument from evidence</p> <p>SEPS.8: Obtain, evaluate, and communicate information.</p>	<p>LST.1: Learning Outcome</p> <ul style="list-style-type: none"> • Read and comprehend science and technical texts. • Write routinely for a range of tasks, purposes, and audiences. <p>LST.2: Key Ideas and Textual Support</p> <ul style="list-style-type: none"> • Cite specific textual evidence to support texts. • Follow a multistep procedure when carrying out experiments, taking measurement, or performing technical tasks. <p>LST.3: Structural Elements and Organization</p> <ul style="list-style-type: none"> • Determine the meaning of symbols, key terms, and phrases. • Analyze how the text structures information or ideas into categories or hierarchies, demonstrating understanding of the information or ideas. • Analyze the author’s purpose in providing an explanation, describing a procedure, or discussing an experiment in a text, identifying important issues that remain unresolved. <p>LST.4: Synthesis and Connection of Ideas</p> <ul style="list-style-type: none"> • Integrate and evaluate multiple sources of information presented in diverse formats and media (e.g., quantitative data, video, multimedia) in order to address a question or solve a problem. • Evaluate the hypotheses, data, analysis, and conclusions in a science or technical text, verifying the data when possible and corroborating or challenging conclusions with other sources of information. • Synthesize information from a range of sources (e.g., texts, experiments, simulations) into a coherent understanding of a process, phenomenon, or concept, resolving conflicting information when possible.

STANDARD INDICATORS	SCIENCE AND ENGINEERING	LITERACY IN SCIENCE
<p>Env.8.1 Demonstrate a knowledge of the distribution of natural resources in the U.S. and the world, and explain how natural resources influence relationships among nations.</p>	<p>SEPS.1: Posing questions and defining problems.</p> <p>SEPS.4: Analyze and interpret data.</p> <p>SEPS.5: Use mathematics and computational thinking</p> <p>SEPS.6: Construct explanations and design solutions.</p> <p>SEPS.7: Engage in argument from evidence</p> <p>SEPS.8: Obtain, evaluate, and communicate information.</p>	<p>LST.1: Learning Outcome</p> <ul style="list-style-type: none"> • Read and comprehend science and technical texts. • Write routinely for a range of tasks, purposes, and audiences. <p>LST.2: Key Ideas and Textual Support</p> <ul style="list-style-type: none"> • Cite specific textual evidence to support texts. <p>LST.3: Structural Elements and Organization</p> <ul style="list-style-type: none"> • Determine the meaning of symbols, key terms, and phrases. • Analyze how the text structures information or ideas into categories or hierarchies, demonstrating understanding of the information or ideas. • Analyze the author’s purpose in providing an explanation, describing a procedure, or discussing an experiment in a text, identifying important issues that remain unresolved. <p>LST.4: Synthesis and Connection of Ideas</p> <ul style="list-style-type: none"> • Integrate and evaluate multiple sources of information presented in diverse formats and media (e.g., quantitative data, video, multimedia) in order to address a question or solve a problem. • Synthesize information from a range of sources (e.g., texts, experiments, simulations) into a coherent understanding of a process, phenomenon, or concept, resolving conflicting information when possible.

STANDARD INDICATORS	SCIENCE AND ENGINEERING	LITERACY IN SCIENCE
<p>Env.8.4 Describe how agricultural technology requires trade-offs between increased production and environmental harm and between efficient production and social values.</p>	<p>SEPS.1: Posing questions and defining problems.</p> <p>SEPS.3: Construct and perform investigation.</p> <p>SEPS.4: Analyze and interpret data.</p> <p>SEPS.5: Use mathematics and computational thinking</p> <p>SEPS.6: Construct explanations and design solutions.</p> <p>SEPS.7: Engage in argument from evidence</p> <p>SEPS.8: Obtain, evaluate, and communicate information.</p>	<p>LST.1: Learning Outcome</p> <ul style="list-style-type: none"> • Read and comprehend science and technical texts. • Write routinely for a range of tasks, purposes, and audiences. <p>LST.2: Key Ideas and Textual Support</p> <ul style="list-style-type: none"> • Cite specific textual evidence to support texts. <p>LST.3: Structural Elements and Organization</p> <ul style="list-style-type: none"> • Determine the meaning of symbols, key terms, and phrases. • Analyze how the text structures information or ideas into categories or hierarchies, demonstrating understanding of the information or ideas. • Analyze the author’s purpose in providing an explanation, describing a procedure, or discussing an experiment in a text, identifying important issues that remain unresolved. <p>LST.4: Synthesis and Connection of Ideas</p> <ul style="list-style-type: none"> • Integrate and evaluate multiple sources of information presented in diverse formats and media (e.g., quantitative data, video, multimedia) in order to address a question or solve a problem. • Synthesize information from a range of sources (e.g., texts, experiments, simulations) into a coherent understanding of a process, phenomenon, or concept, resolving conflicting information when possible.

STANDARD INDICATORS	SCIENCE AND ENGINEERING	LITERACY IN SCIENCE
<p>Env.8.5 Describe and examine how water is controlled in developed and undeveloped nations.</p>	<p>SEPS.1: Posing questions and defining problems.</p> <p>SEPS.3: Construct and perform investigation.</p> <p>SEPS.4: Analyze and interpret data.</p> <p>SEPS.5: Use mathematics and computational thinking</p> <p>SEPS.6: Construct explanations and design solutions.</p> <p>SEPS.7: Engage in argument from evidence</p> <p>SEPS.8: Obtain, evaluate, and communicate information.</p>	<p>LST.1: Learning Outcome</p> <ul style="list-style-type: none"> • Read and comprehend science and technical texts. • Write routinely for a range of tasks, purposes, and audiences. <p>LST.2: Key Ideas and Textual Support</p> <ul style="list-style-type: none"> • Cite specific textual evidence to support texts. <p>LST.3: Structural Elements and Organization</p> <ul style="list-style-type: none"> • Determine the meaning of symbols, key terms, and phrases. • Analyze how the text structures information or ideas into categories or hierarchies, demonstrating understanding of the information or ideas. • Analyze the author’s purpose in providing an explanation, describing a procedure, or discussing an experiment in a text, identifying important issues that remain unresolved. <p>LST.4: Synthesis and Connection of Ideas</p> <ul style="list-style-type: none"> • Integrate and evaluate multiple sources of information presented in diverse formats and media (e.g., quantitative data, video, multimedia) in order to address a question or solve a problem. • Synthesize information from a range of sources (e.g., texts, experiments, simulations) into a coherent understanding of a process, phenomenon, or concept, resolving conflicting information when possible.

STANDARD INDICATORS	SCIENCE AND ENGINEERING	LITERACY IN SCIENCE
<p>Env.8.6 Understand and describe the concept and the importance of natural and human recycling in conserving our natural resources.</p>	<p>SEPS.3: Construct and perform investigation.</p> <p>SEPS.4: Analyze and interpret data.</p> <p>SEPS.5: Use mathematics and computational thinking</p> <p>SEPS.6: Construct explanations and design solutions.</p> <p>SEPS.7: Engage in argument from evidence</p> <p>SEPS.8: Obtain, evaluate, and communicate information.</p>	<p>LST.1: Learning Outcome</p> <ul style="list-style-type: none"> • Read and comprehend science and technical texts. • Write routinely for a range of tasks, purposes, and audiences. <p>LST.2: Key Ideas and Textual Support</p> <ul style="list-style-type: none"> • Cite specific textual evidence to support texts. <p>LST.3: Structural Elements and Organization</p> <ul style="list-style-type: none"> • Determine the meaning of symbols, key terms, and phrases. • Analyze how the text structures information or ideas into categories or hierarchies, demonstrating understanding of the information or ideas. • Analyze the author’s purpose in providing an explanation, describing a procedure, or discussing an experiment in a text, identifying important issues that remain unresolved. <p>LST.4: Synthesis and Connection of Ideas</p> <ul style="list-style-type: none"> • Integrate and evaluate multiple sources of information presented in diverse formats and media (e.g., quantitative data, video, multimedia) in order to address a question or solve a problem. • Synthesize information from a range of sources (e.g., texts, experiments, simulations) into a coherent understanding of a process, phenomenon, or concept, resolving conflicting information when possible.