Statewide Framework Document for: 030201

Standards may be added to this document prior to submission, but may not be removed from the framework to meet state credit equivalency requirements. Performance assessments may be developed at the local level. In order to earn state approval, performance assessments must be submitted within this framework. **This course is eligible for 1 credit of Biology or 1 credit of laboratory science.** The Washington State Science Standards performance expectations for high school blend core ideas (Disciplinary Core Ideas, or DCIs) with scientific and engineering practices (SEPs) and crosscutting concepts (CCCs) to support students in developing usable knowledge that can be applied across the science disciplines. These courses are to be taught in a three-dimensional manner. The details about each performance expectation can be found at Next Generation Science Standards, and the supporting evidence statements can be found under Resources.

Natural Resources Management and Policy

Course Title: Natural Resources Management and Policy		**Total Framework Hours: 180**
CIP Code: 030201	☐ **Exploratory** ☒ **Preparatory**	**Date Last Modified: May 4, 2015**
Career Cluster: Agriculture, Food, and Natural Resources		**Cluster Pathway: Natural Resource Systems**
Eligible for Equivalent Credit in: ☐ **Math** ☒ **Science**		**Total Number of Units: 9**

Course Overview

Summary:
This course prepares individuals to plan, develop, manage, and evaluate programs to protect and regulate natural habitats and renewable natural resources. The course includes instruction in the principles of wildlife and conservation biology, environmental science, animal population surveying, natural resource economics, management techniques for various habitats, applicable law and policy, administrative and communications skills, and public relations.

As with all agriculture courses, instruction and assessment in the Supervised Agriculture Experience (SAE) is a requirement. The Supervised Agriculture Experience includes placing a student in a position where he or she will learn the practices of entrepreneurship and the fundamentals of research and experimentation in the agricultural field. Participants in the SAE will conduct exploratory projects with the purpose of learning about and improving practices in their surroundings.

Unit 1: Fundamentals of Environmental Science	Total Learning Hours for Unit: 12

Performance Assessments:
Performance assessments may be developed at the local level. In order to earn approval at the state level, performance assessments must be submitted within this framework.

Students will demonstrate understanding of course content by completing:

- The Internet activity *What is your ecological footprint?*
- The *Tragedy of the Commons* lab.
- The *Personal Energy Consumption* lab.
- The *Alternative Energy Solution* lab.

Leadership Alignment:

- Leadership activities should include 21st Century Skills embedded in curriculum and instruction for this unit of instruction. Include leadership skills that are being taught and assessed within the class for all students.
- The event, activity, or project and the associated 21st Century Skill should be clearly articulated.
  Example: Students will demonstrate the ability to communicate clearly through their group project presentation.

Students will demonstrate the ability to access information and apply technology while determining their ecological footprint.

Industry Standards and Competencies

Agriculture, Food, and Natural Resources (AFNR) Standards - Natural Resource Systems (NRS) Pathway:

NRS.01.01. Performance Indicator: Apply knowledge of natural resource components to the management of natural resource systems.
- Level I: NRS.01.01.01.a. Identify natural resources.
- Level II: NRS.01.01.01.b. Differentiate between renewable and nonrenewable natural resources.
- Level I: NRS.01.01.02.a. Define ecosystem and related terms.

NRS.02.01. Performance Indicator: Develop a safety plan for work with natural resources.
- Level I: NRS.02.01.01.a. Identify hazards associated with the outdoor environment.
- Level II: NRS.02.01.01.b. Demonstrate safety practices when working in an outdoor environment.
- Level III: NRS.02.01.01.c. Demonstrate appropriate responses to accidents and injuries that occur in an outdoor environment.
- Level I: NRS.02.01.02.a. Recognize biohazards associated with natural resources.
- Level II: NRS.02.01.02.b. Use appropriate techniques and equipment when working with biohazards.

NRS.02.06. Performance Indicator: Apply ecological concepts and principles to natural resource systems.
- Level I: NRS.02.06.01.a. Identify biogeochemical cycles.
- Level II: NRS.02.06.01.b. Diagram biogeochemical cycles and explain the processes.

NRS.05.01. Performance Indicator: Communicate natural resource information to the public.
- Level I: NRS.05.01.01.a. Identify ways in which a message regarding natural resources may be communicated to the public.

Aligned Washington State Standards

Washington Science Standards (Next Generation Science Standards):

HS-ESS2-2. Analyze geoscience data to make the claim that one change to Earth's surface can create feedbacks that cause changes to other Earth systems.

HS-ESS3-1. Construct an explanation based on evidence for how the availability of natural resources, occurrence of natural hazards, and changes in climate have influenced human activity.

HS-ETS1-1. Analyze a major global challenge to specify qualitative and quantitative criteria and constraints for solutions that account for societal needs and wants.

HS-ETS1-2. Design a solution to a complex real-world problem by breaking it down into smaller, more manageable problems that can be solved through engineering.
HS-ETS1-3. Evaluate a solution to a complex real-world problem based on prioritized criteria and trade-offs that account for a range of constraints, including cost, safety, reliability, and aesthetics as well as possible social, cultural, and environmental impacts.

Additional Science and Engineering Practices (SEPs), Disciplinary Core Ideas (DCIs), and Crosscutting Concepts (CCCs):
The local level must list one or more projects to be completed in this unit that will cumulatively address all of the following additional SEPs, DCIs, and CCCs.

Specific Project Title(s): MUST BE ADDED AT LOCAL LEVEL

Science and Engineering Practice	Disciplinary Core Idea	Crosscutting Concept
Asking Questions and Defining Problems	ESS3A: Natural Resources	Cause and Effect
Developing and Using Models	LS2C: Ecosystems Dynamics, Functioning and Resilience	Systems and System Models
Engaging in Argument from Evidence	ESS3A: Natural Resources	Cause and Effect
Obtaining, Evaluating, and Communicating Information	ESS3A: Natural Resources	Cause and Effect

Washington English Language Arts Standards (Common Core State Standards) - Science and Technology Literacy Standards (Grades 9-10):
RST.9-10.1 Cite specific textual evidence to support analysis of science and technical texts, attending to the precise details of explanations or descriptions.
RST.9-10.2 Determine the central ideas or conclusions of a text; trace the text's explanation or depiction of a complex process, phenomenon, or concept; provide an accurate summary of the text.
RST.9-10.4 Determine the meaning of symbols, key terms, and other domain-specific words and phrases as they are used in a specific scientific or technical context relevant to grades 9-10 texts and topics.
RST.9-10.7 Translate quantitative or technical information expressed in words in a text into visual form (e.g., a table or chart) and translate information expressed visually or mathematically (e.g., in an equation) into words.
RST.9-10.10 By the end of grade 10, read and comprehend science/technical texts in the grades 9-10 text complexity band independently and proficiently.

Unit 2: Soil and Soil Dynamics | Total Learning Hours for Unit: 12

Performance Assessments:
Performance assessments may be developed at the local level. In order to earn approval at the state level, performance assessments must be submitted within this framework.

Students will demonstrate understanding of course content by completing:
- A field activity in which they conduct a soil analysis on school property.
- The *Soil Sampling and Testing* lab.
- The *Rock Cycle and Soil Formation* lab.
- The *Plate Tectonics* lab. Students will research volcanic eruptions and earthquakes using the USGS website.
- A written report on soil pollution, followed by a group presentation.

Leadership Alignment:

- Leadership activities should include 21st Century Skills embedded in curriculum and instruction for this unit of instruction. Include leadership skills that are being taught and assessed within the class for all students.
- The event, activity, or project and the associated 21st Century Skill should be clearly articulated.
  Example: Students will demonstrate the ability to communicate clearly through their group project presentation.

Students will think creatively, collaborate with others, and interact effectively with others to complete the soil analysis field activity. Students will communicate clearly, use and manage information, and produce results to complete a report on soil pollution.

Industry Standards and Competencies

Agriculture, Food, and Natural Resources (AFNR) Standards - Natural Resource Systems (NRS) Pathway:

NRS.01.01. Performance Indicator: Apply knowledge of natural resource components to the management of natural resource systems.
Level I: NRS.01.01.01.a. Identify natural resources.
NRS.01.02. Performance Indicator: Classify natural resources.
Level I: NRS.01.02.05.a. Demonstrate techniques used to identify rock, mineral and soil types.
Level II: NRS.01.02.05.b. Identify rock, mineral and soil types.
Level III: NRS.01.02.05.c. Conduct a field inventory of rock, mineral and soil types, and record and document findings.
NRS.05.01. Performance Indicator: Communicate natural resource information to the public.
Level II: NRS.05.01.01.b. Design and construct a display that communicates a natural resource topic, and discuss the topic in a public forum.

Aligned Washington State Standards

Washington Science Standards (Next Generation Science Standards):

HS-ESS1-5. Evaluate evidence of the past and current movements of continental and oceanic crust and the theory of plate tectonics to explain the ages of crustal rocks.
HS-ESS2-2. Analyze geoscience data to make the claim that one change to Earth's surface can create feedbacks that cause changes to other Earth systems.
HS-ESS2-5. Plan and conduct an investigation of the properties of water and its effects on Earth materials and surface processes.
HS-ESS2-6. Develop a quantitative model to describe the cycling of carbon among the hydrosphere, atmosphere, geosphere, and biosphere.
HS-ETS1-1. Analyze a major global challenge to specify qualitative and quantitative criteria and constraints for solutions that account for societal needs and wants.
HS-ETS1-3. Evaluate a solution to a complex real-world problem based on prioritized criteria and trade-offs that account for a range of constraints, including cost, safety, reliability, and aesthetics as well as possible social, cultural, and environmental impacts.

Additional Science and Engineering Practices (SEPs), Disciplinary Core Ideas (DCIs), and Crosscutting Concepts (CCCs):
The local level must list one or more projects to be completed in this unit that will cumulatively address all of the following additional SEPs, DCIs, and CCCs.

Specific Project Title(s): MUST BE ADDED AT LOCAL LEVEL
ALL BLANK DIMENSIONS BELOW MUST BE ADDED AT LOCAL LEVEL

Science and Engineering Practice	Disciplinary Core Idea	Crosscutting Concept
Asking Questions and Defining Problems	ESS2A: Earth Materials and Systems	Energy and Matter: Flows, Cycles, and Conservation
Obtaining, Evaluating, and Communicating Information	LS1D: Information Processing	Energy and Matter: Flows, Cycles, and Conservation
Planning and Carrying Out Investigations	ESS1C: The History of Planet Earth	Energy and Matter: Flows, Cycles, and Conservation
Engaging in Argument from Evidence	ESS2C: The Role of Water in Earth's Surface Processes	

Washington English Language Arts Standards (Common Core State Standards) - Science and Technology Literacy Standards (Grades 9-10):
RST.9-10.1 Cite specific textual evidence to support analysis of science and technical texts, attending to the precise details of explanations or descriptions.
RST.9-10.2 Determine the central ideas or conclusions of a text; trace the text's explanation or depiction of a complex process, phenomenon, or concept; provide an accurate summary of the text.
RST.9-10.4 Determine the meaning of symbols, key terms, and other domain-specific words and phrases as they are used in a specific scientific or technical context relevant to grades 9-10 texts and topics.
RST.9-10.7 Translate quantitative or technical information expressed in words in a text into visual form (e.g., a table or chart) and translate information expressed visually or mathematically (e.g., in an equation) into words.
RST.9-10.10 By the end of grade 10, read and comprehend science/technical texts in the grades 9-10 text complexity band independently and proficiently.

Unit 3: The Living World | Total Learning Hours for Unit: 24

Performance Assessments:
Performance assessments may be developed at the local level. In order to earn approval at the state level, performance assessments must be submitted within this framework.

Students will demonstrate understanding of course content by completing:

- A field activity where they study a wetland biome at a local property. Students will identify plants and become familiar with the aspects of the biome.
- The invasive species wanted poster.
- A food web that they design.
- The *Schoolyard Car* lab, employing the Shannon-Wiener index.
- The *Ecosystem Column* lab.

- A report on the U.S. National Park Service. Students will research one of America's national parks and write a report that explains the challenges that rangers face in maintaining the park, and the features that attract visitors to the park.

Leadership Alignment:

- Leadership activities should include 21st Century Skills embedded in curriculum and instruction for this unit of instruction. Include leadership skills that are being taught and assessed within the class for all students.
- The event, activity, or project and the associated 21st Century Skill should be clearly articulated.
  Example: Students will demonstrate the ability to communicate clearly through their group project presentation.

Students will work creatively with others, communicate clearly, and collaborate with others as they complete their field activity.

Industry Standards and Competencies

Agriculture, Food, and Natural Resources (AFNR) Standards - Natural Resource Systems (NRS) Pathway:

NRS.01.01. Performance Indicator: Apply knowledge of natural resource components to the management of natural resource systems.
- Level I: NRS.01.01.01.a. Identify natural resources.
- Level III: NRS.01.01.01.c. Research and debate one or more current issues related to the conservation or preservation of natural resources.
- Level I: NRS.01.01.02.a. Define ecosystem and related terms.
- Level II: NRS.01.01.02.b. Describe the interdependence of organisms within an ecosystem.
- Level III: NRS.01.01.02.c. Conduct a field study of an ecosystem, and record and document observations of species interactions.

NRS.01.02. Performance Indicator: Classify natural resources.
- Level I: NRS.01.02.01.a. Describe morphological characteristics used to identify trees and other woody plants.
- Level II: NRS.01.02.01.b. Identify trees and other woody plants.
- Level III: NRS.01.02.01.c. Conduct a field inventory of trees and other woody plants, and record and document findings.
- Level II: NRS.01.02.02.b. Identify herbaceous plants.
- Level III: NRS.01.02.02.c. Conduct a field inventory of herbaceous plants, and record and document findings.
- Level I: NRS.01.02.03.a. Describe morphological characteristics used to identify wildlife species.
- Level II: NRS.01.02.03.b. Identify wildlife species.
- Level I: NRS.01.02.04.a. Describe morphological characteristics used to identify aquatic species.
- Level II: NRS.01.02.04.b. Identify aquatic species.

NRS.02.04. Performance Indicator: Demonstrate natural resource enhancement techniques.
- Level I: NRS.02.04.01.a. Identify the different kinds of streams.
- Level II: NRS.02.04.01.b. Identify indicators of the biological health of a stream.
- Level I: NRS.02.04.03.a. Identify characteristics of a healthy wildlife habitat.
- Level II: NRS.02.04.03.b. Identify methods of wildlife habitat improvement.
- Level III: NRS.02.04.03.c. Conduct a survey of a habitat and devise a comprehensive improvement plan.

NRS.03.01. Performance Indicator: Produce, harvest, process and use natural resource products.
- Level I: NRS.03.01.03.a. Identify wildlife species that can be sustainably harvested.
- Level II: NRS.03.01.03.b. Describe techniques used in the harvesting of wildlife.
- Level I: NRS.03.01.04.a. Identify products obtained from wildlife species.
- Level I: NRS.03.01.09.a. Identify aquatic species harvested for commercial and recreational purposes.

NRS.05.01. Performance Indicator: Communicate natural resource information to the public.
- Level II: NRS.05.01.01.b. Design and construct a display that communicates a natural resource topic and discuss the topic in a public forum.

Aligned Washington State Standards

Washington Science Standards (Next Generation Science Standards):

HS-PS3-1. Create a computational model to calculate the change in the energy of one component in a system when the change in energy of the other component(s) and energy flows in and out of the system are known.
HS-LS1-5. Use a model to illustrate how photosynthesis transforms light energy into stored chemical energy.
HS-LS1-7. Use a model to illustrate that cellular respiration is a chemical process whereby the bonds of food molecules and oxygen molecules are broken and the bonds in new compounds are formed resulting in a net transfer of energy.
HS-LS2-2. Use mathematical representations to support and revise explanations based on evidence about factors affecting biodiversity and populations in ecosystems of different scales.
HS-LS2-3. Construct and revise an explanation based on evidence for the cycling of matter and flow of energy in aerobic and anaerobic conditions.
HS-LS2-4. Use mathematical representations to support claims for the cycling of matter and flow of energy among organisms in an ecosystem.
HS-LS2-5. Develop a model to illustrate the role of photosynthesis and cellular respiration in the cycling of carbon among the biosphere, atmosphere, hydrosphere, and geosphere.
HS-LS2-6. Evaluate the claims, evidence, and reasoning that the complex interactions in ecosystems maintain relatively consistent numbers and types of organisms in stable conditions, but changing conditions may result in a new ecosystem.
HS-LS2-7. Design, evaluate, and refine a solution for reducing the impacts of human activities on the environment and biodiversity.
HS-LS2-8. Evaluate the evidence for the role of group behavior on individual and species' chances to survive and reproduce.
HS-LS3-3. Apply concepts of statistics and probability to explain the variation and distribution of expressed traits in a population.
HS-LS4-4. Construct an explanation based on evidence for how natural selection leads to adaptation of populations.
HS-LS4-5. Evaluate the evidence supporting claims that changes in environmental conditions may result in: (1) increases in the number of individuals of some species, (2) the emergence of new species over time, and (3) the extinction of other species.
HS-ESS2-4. Use a model to describe how variations in the flow of energy into and out of Earth's systems result in changes in climate.
HS-ETS1-1. Analyze a major global challenge to specify qualitative and quantitative criteria and constraints for solutions that account for societal needs and wants.
HS-ETS1-3. Evaluate a solution to a complex real-world problem based on prioritized criteria and trade-offs that account for a range of constraints, including cost, safety, reliability, and aesthetics as well as possible social, cultural, and environmental impacts.

Additional Science and Engineering Practices (SEPs), Disciplinary Core Ideas (DCIs), and Crosscutting Concepts (CCCs):

The local level must list one or more projects to be completed in this unit that will cumulatively address all of the following additional SEPs, DCIs, and CCCs.

Specific Project Title(s): MUST BE ADDED AT LOCAL LEVEL
ALL BLANK DIMENSIONS BELOW MUST BE ADDED AT LOCAL LEVEL

Science and Engineering Practice	Disciplinary Core Idea	Crosscutting Concept
Constructing Explanations and Designing Solutions	LS2B: Cycles of Matter and Energy Transfer in Ecosystems	Energy and Matter: Flows, Cycles, and Conservation
Obtaining, Evaluating, and Communicating Information	LS1C: Organization for Matter and Energy Flow in Organisms	Energy and Matter: Flows, Cycles, and Conservation
Obtaining, Evaluating, and Communicating Information	LS2C: Ecosystems Dynamics, Functioning and Resilience	Cause and Effect
Planning and Carrying Out Investigations	ESS3A: Natural Resources	Energy and Matter: Flows, Cycles, and Conservation

	LS2A: Interdependent Relationships in Ecosystems	Structure and Function

Washington English Language Arts Standards (Common Core State Standards) - Science and Technology Literacy Standards (Grades 9-10):
RST.9-10.1 Cite specific textual evidence to support analysis of science and technical texts, attending to the precise details of explanations or descriptions.
RST.9-10.2 Determine the central ideas or conclusions of a text; trace the text's explanation or depiction of a complex process, phenomenon, or concept; provide an accurate summary of the text.
RST.9-10.4 Determine the meaning of symbols, key terms, and other domain-specific words and phrases as they are used in a specific scientific or technical context relevant to grades 9-10 texts and topics.
RST.9-10.7 Translate quantitative or technical information expressed in words in a text into visual form (e.g., a table or chart) and translate information expressed visually or mathematically (e.g., in an equation) into words.
RST.9-10.10 By the end of grade 10, read and comprehend science/technical texts in the grades 9-10 text complexity band independently and proficiently.

Unit 4: Population | Total Learning Hours for Unit: 16

Performance Assessments:
Performance assessments may be developed at the local level. In order to earn approval at the state level, performance assessments must be submitted within this framework.

Students will demonstrate understanding of course content by completing:

- The *Population Dynamics* lab.
- The *Something Fishy* lab.
- The *Owl Pellet Dissection* lab.
- The *Power of the Pyramids* lab.
- A report on the actions of another nation that have positive or negative impacts on the global environment. Students should propose solutions that would improve a nation's "report card."
- A brochure on one of the endangered species.

Leadership Alignment:

- Leadership activities should include 21st Century Skills embedded in curriculum and instruction for this unit of instruction. Include leadership skills that are being taught and assessed within the class for all students.
- The event, activity, or project and the associated 21st Century Skill should be clearly articulated.
  Example: Students will demonstrate the ability to communicate clearly through their group project presentation.

Students will access and evaluate information, think creatively, and use systems thinking to complete the population dynamics lab. Students will work creatively with others, collaborate with others, and produce results to create the endangered species brochure.

Industry Standards and Competencies

Agriculture, Food, and Natural Resources (AFNR) Standards - Natural Resource Systems (NRS) Pathway:
NRS.02.06. Performance Indicator: Apply ecological concepts and principles to natural resource systems.
Level II: NRS.02.06.05.b. Give examples of primary succession and secondary succession species in a community of organisms.
Level III: NRS.02.06.05.c. Conduct a field study to determine the stages of ecological succession in a community of organisms.

Level I: NRS.02.06.06.a. Explain population ecology, population density and population dispersion.
Level II: NRS.02.06.06.b. Discuss factors that influence population density and population dispersion.
Level I: NRS.02.06.07.a. Define invasive species.
Level II: NRS.02.06.07.b. Discuss factors that influence the establishment and spread of invasive species.
Level III: NRS.02.06.07.c. Develop and implement a plan to reduce the impact of invasive species on natural resources.

Aligned Washington State Standards

Washington Science Standards (Next Generation Science Standards):

HS-LS2-1. Use mathematical and/or computational representations to support explanations of factors that affect carrying capacity of ecosystems at different scales.
HS-LS2-2. Use mathematical representations to support and revise explanations based on evidence about factors affecting biodiversity and populations in ecosystems of different scales.
HS-LS2-6. Evaluate the claims, evidence, and reasoning that the complex interactions in ecosystems maintain relatively consistent numbers and types of organisms in stable conditions, but changing conditions may result in a new ecosystem.
HS-LS2-7. Design, evaluate, and refine a solution for reducing the impacts of human activities on the environment and biodiversity.
HS-LS2-8. Evaluate the evidence for the role of group behavior on individual and species' chances to survive and reproduce.
HS-LS4-4. Construct an explanation based on evidence for how natural selection leads to adaptation of populations.
HS-LS4-5. Evaluate the evidence supporting claims that changes in environmental conditions may result in: (1) increases in the number of individuals of some species, (2) the emergence of new species over time, and (3) the extinction of other species.
HS-ESS3-1. Construct an explanation based on evidence for how the availability of natural resources, occurrence of natural hazards, and changes in climate have influenced human activity.
HS-ESS3-4. Evaluate or refine a technological solution that reduces impacts of human activities on natural systems.
HS-ESS3-6. Use a computational representation to illustrate the relationships among Earth systems and how those relationships are being modified due to human activity.
HS-ETS1-3. Evaluate a solution to a complex real-world problem based on prioritized criteria and trade-offs that account for a range of constraints, including cost, safety, reliability, and aesthetics as well as possible social, cultural, and environmental impacts.

Additional Science and Engineering Practices (SEPs), Disciplinary Core Ideas (DCIs), and Crosscutting Concepts (CCCs):

The local level must list one or more projects to be completed in this unit that will cumulatively address all of the following additional SEPs, DCIs, and CCCs.

Specific Project Title(s): MUST BE ADDED AT LOCAL LEVEL
ALL BLANK DIMENSIONS BELOW MUST BE ADDED AT LOCAL LEVEL

Science and Engineering Practice	Disciplinary Core Idea	Crosscutting Concept
Asking Questions and Defining Problems	LS2D: Social Interactions and Group Behavior	Cause and Effect
Engaging in Argument from Evidence	ETS1B: Developing Possible Solutions	Stability and Change
	LS4D: Biodiversity and Humans	Systems and System Models

Washington English Language Arts Standards (Common Core State Standards) - Science and Technology Literacy Standards (Grades 9-10):

RST.9-10.1 Cite specific textual evidence to support analysis of science and technical texts, attending to the precise details of explanations or descriptions.

RST.9-10.2 Determine the central ideas or conclusions of a text; trace the text's explanation or depiction of a complex process, phenomenon, or concept; provide an accurate summary of the text.

RST.9-10.4 Determine the meaning of symbols, key terms, and other domain-specific words and phrases as they are used in a specific scientific or technical context relevant to grades 9-10 texts and topics.

RST.9-10.7 Translate quantitative or technical information expressed in words in a text into visual form (e.g., a table or chart) and translate information expressed visually or mathematically (e.g., in an equation) into words.

RST.9-10.10 By the end of grade 10, read and comprehend science/technical texts in the grades 9-10 text complexity band independently and proficiently.

Unit 5: Land and Water Use | Total Learning Hours for Unit: 22

Performance Assessments:

Performance assessments may be developed at the local level. In order to earn approval at the state level, performance assessments must be submitted within this framework.

Students will demonstrate understanding of course content by completing:

- An activity on nonrenewable resource depletion.
- The *Fishing in the Commons* lab.
- A project on land use planning.
- The *Radiation of Radish Seeds* Lab.

Leadership Alignment:

- Leadership activities should include 21st Century Skills embedded in curriculum and instruction for this unit of instruction. Include leadership skills that are being taught and assessed within the class for all students.
- The event, activity, or project and the associated 21st Century Skill should be clearly articulated.
  Example: Students will demonstrate the ability to communicate clearly through their group project presentation.

Students will manage goals and time, be self-directed learners, and produce results to complete the fishing in the commons and radiation of radish seeds lab.

Industry Standards and Competencies

Agriculture, Food, and Natural Resources (AFNR) Standards - Natural Resource Systems (NRS) Pathway:

NRS.01.01. Performance Indicator: Apply knowledge of natural resource components to the management of natural resource systems.

Level I: NRS.01.01.01.a. Identify natural resources.
Level II: NRS.01.01.01.b. Differentiate between renewable and nonrenewable natural resources.
Level III: NRS.01.01.01.c. Research and debate one or more current issues related to the conservation or preservation of natural resources.

NRS.01.02. Performance Indicator: Classify natural resources.

Level I: NRS.01.02.01.a. Describe morphological characteristics used to identify trees and other woody plants.
Level II: NRS.01.02.01.b. Identify trees and other woody plants.
Level I: NRS.01.02.02.a. Describe morphological characteristics used to identify herbaceous plants.
Level II: NRS.01.02.02.b. Identify herbaceous plants.
Level I: NRS.01.02.04.a. Describe morphological characteristics used to identify aquatic species.

NRS.02.02. Performance Indicator: Demonstrate cartographic skills to aid in developing, implementing and evaluating natural resource management plans.
Level I: NRS.02.02.01.a. Demonstrate how to use maps to identify directions and features, calculate actual distance and determine the elevations of points.
Level II: NRS.02.02.01.b. Locate natural resources using a land survey and geographic coordinate system.
Level III: NRS.02.02.01.c. Employ Global Positioning System and Geographic Information Systems technologies to inventory features in natural resource management.
NRS.02.04. Performance Indicator: Demonstrate natural resource enhancement techniques.
Level I: NRS.02.04.01.a. Identify the different kinds of streams.
Level II: NRS.02.04.01.b. Identify indicators of the biological health of a stream.
Level III: NRS.02.04.01.c. Create and implement a stream enhancement plan.
Level I: NRS.02.04.02.a. Identify characteristics of a healthy forest.
Level II: NRS.02.04.02.b. Identify ways in which forest stands may be improved.
Level I: NRS.02.04.04.a. Identify characteristics of healthy rangeland.
Level I: NRS.02.04.05.a. Identify natural resource characteristics desirable for recreational purposes.
Level II: NRS.02.04.05.b. Identify natural resource management techniques for improving recreation opportunities.
NRS.02.06. Performance Indicator: Apply ecological concepts and principles to natural resource systems.
Level I: NRS.02.06.02.a. Describe properties of watersheds and identify the boundaries of local watersheds.
Level II: NRS.02.06.02.b. Relate the function of watersheds to natural resources.
Level III: NRS.02.06.02.c. Analyze ecosystem functions of a watershed.
Level I: NRS.02.06.03.a. Compare and contrast groundwater and surface-water flow.
Level II: NRS.02.06.03.b. Explain stream hydrology and structure, and determine the different classes of streams.
Level I: NRS.02.06.04.a. Define riparian zones and riparian buffers, and explain their functions.
Level II: NRS.02.06.04.b. Identify techniques used in the creation, enhancement and management of riparian zones and riparian buffers.
NRS.03.01. Performance Indicator: Produce, harvest, process and use natural resource products.
Level I: NRS.03.01.01.a. Describe forest harvesting methods.
Level II: NRS.03.01.01.b. Determine when to harvest forest products.
Level I: NRS.03.01.02.a. Describe uses of tree species.
Level II: NRS.03.01.02.b. Describe processing of forest products.
Level III: NRS.03.01.03.c. Formulate a management plan for protecting wildlife from overexploitation.
Level I: NRS.03.01.09.a. Identify aquatic species harvested for commercial and recreational purposes.
Level II: NRS.03.01.09.b. Describe techniques used to harvest aquatic species.
Level III: NRS.03.01.09.c. Harvest aquatic species according to sustainable management principles.
NRS.04.01. Performance Indicator: Manage fires in natural resource systems.
Level I: NRS.04.01.01.a. Differentiate between desirable and undesirable fires and prepare a report on the role fire plays in a healthy ecosystem.
NRS.04.02. Performance Indicator: Diagnose plant and wildlife diseases and follow protocol to prevent their spread.
Level I: NRS.04.02.01.a. Identify causes of diseases in plants.
Level III: NRS.04.02.01.c. Explain management techniques used to reduce infection and spread of plant diseases in natural resources.
NRS.04.03. Performance Indicator: Manage insect infestations of natural resources.
Level I: NRS.04.03.01.a. Identify harmful and beneficial insects and signs of insect damage to natural resources.
Level III: NRS.04.03.01.c. Describe techniques used to manage pests of natural resources.

Aligned Washington State Standards

Washington Science Standards (Next Generation Science Standards):

HS-ESS2-5. Plan and conduct an investigation of the properties of water and its effects on Earth materials and surface processes.

HS-ETS1-3. Evaluate a solution to a complex real-world problem based on prioritized criteria and tradeoffs that account for a range of constraints, including cost, safety, reliability, and aesthetics as well as possible social, cultural, and environmental impacts.

Additional Science and Engineering Practices (SEPs), Disciplinary Core Ideas (DCIs), and Crosscutting Concepts (CCCs):
The local level must list one or more projects to be completed in this unit that will cumulatively address all of the following additional SEPs, DCIs, and CCCs.

Specific Project Title(s): MUST BE ADDED AT LOCAL LEVEL
ALL BLANK DIMENSIONS BELOW MUST BE ADDED AT LOCAL LEVEL

Science and Engineering Practice	Disciplinary Core Idea	Crosscutting Concept
Asking Questions and Defining Problems	ESS2C: The Role of Water in Earth's Surface Processes	Stability and Change
Constructing Explanations and Designing Solutions	ESS3C: Human Impacts on Earth Systems	Structure and Function
Developing and Using Models	ESS3C: Human Impacts on Earth Systems	Cause and Effect
Planning and Carrying Out Investigations	ESS3C: Human Impacts on Earth Systems	Cause and Effect
Asking Questions and Defining Problems	ETS1B: Developing Possible Solutions	

Washington English Language Arts Standards (Common Core State Standards) - Science and Technology Literacy Standards (Grades 9-10):
RST.9-10.1 Cite specific textual evidence to support analysis of science and technical texts, attending to the precise details of explanations or descriptions.
RST.9-10.2 Determine the central ideas or conclusions of a text; trace the text's explanation or depiction of a complex process, phenomenon, or concept; provide an accurate summary of the text.
RST.9-10.4 Determine the meaning of symbols, key terms, and other domain-specific words and phrases as they are used in a specific scientific or technical context relevant to grades 9-10 texts and topics.
RST.9-10.7 Translate quantitative or technical information expressed in words in a text into visual form (e.g., a table or chart) and translate information expressed visually or mathematically (e.g., in an equation) into words.
RST.9-10.10 By the end of grade 10, read and comprehend science/technical texts in the grades 9-10 text complexity band independently and proficiently.

Unit 6: Energy Resources and Consumption | Total Learning Hours for Unit: 22

Performance Assessments:
Performance assessments may be developed at the local level. In order to earn approval at the state level, performance assessments must be submitted within this framework.

Students will demonstrate understanding of course content by completing:

- The *Half-Life in a Box* activity.
- The *Capturing the Wind* lab.
- The *That's the Way the Cookie Crumbles* lab.
- The *Fossil Fuels* lab.

Leadership Alignment:

- Leadership activities should include 21st Century Skills embedded in curriculum and instruction for this unit of instruction. Include leadership skills that are being taught and assessed within the class for all students.
- The event, activity, or project and the associated 21st Century Skill should be clearly articulated.
  Example: Students will demonstrate the ability to communicate clearly through their group project presentation.

Students will solve problems, collaborate with others, and produce results as they complete the labs and activities associated with energy resources and consumption.

Industry Standards and Competencies

Agriculture, Food, and Natural Resources (AFNR) Standards - Natural Resource Systems (NRS) Pathway:

NRS.01.01. Performance Indicator: Apply knowledge of natural resource components to the management of natural resource systems.
- Level II: NRS.01.01.01.b. Differentiate between renewable and nonrenewable natural resources.
- Level III: NRS.01.01.01.c. Research and debate one or more current issues related to the conservation or preservation of natural resources.

NRS.02.06. Performance Indicator: Apply ecological concepts and principles to natural resource systems.
- Level III: NRS.02.06.01.c. Determine the human influence on biogeochemical cycles.

NRS.03.01. Performance Indicator: Produce, harvest, process and use natural resource products.
- Level I: NRS.03.01.05.a. Describe the value of minerals and ores to the economy.
- Level II: NRS.03.01.05.b. Describe economically important minerals and ores that are extracted and processed.
- Level I: NRS.03.01.06.a. Describe the value of fossil fuels to the economy.
- Level II: NRS.03.01.06.b. Describe sources of fossil fuels and products made from fossil fuels.
- Level III: NRS.03.01.06.c. Give examples of methods used to extract and process fossil fuels.
- Level I: NRS.03.01.07.a. Describe the benefits of hydroelectric generation.
- Level II: NRS.03.01.07.b. Describe characteristics of sites that lend themselves to hydroelectric generation.
- Level III: NRS.03.01.07.c. Describe hydroelectric generation techniques and procedures, and prepare a report on the impacts of hydroelectric dams on aquatic systems.

Aligned Washington State Standards

Washington Science Standards (Next Generation Science Standards):

HS-ESS3-2. Evaluate competing design solutions for developing, managing, and utilizing energy and mineral resources based on cost-benefit ratios.

HS-ESS3-4. Evaluate or refine a technological solution that reduces impacts of human activities on natural systems.

HS-ETS1-3. Evaluate a solution to a complex real-world problem based on prioritized criteria and tradeoffs that account for a range of constraints, including cost, safety, reliability, and aesthetics as well as possible social, cultural, and environmental impacts.

Additional Science and Engineering Practices (SEPs), Disciplinary Core Ideas (DCIs), and Crosscutting Concepts (CCCs):
The local level must list one or more projects to be completed in this unit that will cumulatively address all of the following additional SEPs, DCIs, and CCCs.

Specific Project Title(s): MUST BE ADDED AT LOCAL LEVEL
ALL BLANK DIMENSIONS BELOW MUST BE ADDED AT LOCAL LEVEL

Science and Engineering Practice	Disciplinary Core Idea	Crosscutting Concept
Asking Questions and Defining Problems	PS3A: Definitions of Energy	Systems and System Models
Constructing Explanations and Designing Solutions	PS3A: Definitions of Energy	Cause and Effect
Developing and Using Models	PS3C: Relationship Between Energy and Forces	Systems and System Models
Engaging in Argument from Evidence	ESS3C: Human Impacts on Earth Systems	Systems and System Models
Obtaining, Evaluating, and Communicating Information	ESS3C: Human Impacts on Earth Systems	Cause and Effect
Planning and Carrying Out Investigations	ESS3A: Natural Resources	Energy and Matter: Flows, Cycles, and Conservation
	PS3B: Conservation of Energy and Energy Transfer	Scale, Proportion, and Quantity

Washington English Language Arts Standards (Common Core State Standards) - Science and Technology Literacy Standards (Grades 9-10):
RST.9-10.1 Cite specific textual evidence to support analysis of science and technical texts, attending to the precise details of explanations or descriptions.
RST.9-10.2 Determine the central ideas or conclusions of a text; trace the text's explanation or depiction of a complex process, phenomenon, or concept; provide an accurate summary of the text.
RST.9-10.4 Determine the meaning of symbols, key terms, and other domain-specific words and phrases as they are used in a specific scientific or technical context relevant to grades 9-10 texts and topics.
RST.9-10.7 Translate quantitative or technical information expressed in words in a text into visual form (e.g., a table or chart) and translate information expressed visually or mathematically (e.g., in an equation) into words.
RST.9-10.10 By the end of grade 10, read and comprehend science/technical texts in the grades 9-10 text complexity band independently and proficiently.

Unit 7: Pollution | Total Learning Hours for Unit: 36

Performance Assessments:
Performance assessments may be developed at the local level. In order to earn approval at the state level, performance assessments must be submitted within this framework.

Students will demonstrate understanding of course content by completing:
- Water testing at a creek nearby or on school property.

- The *Parts per Million* lab.
- The *Personal Solid Waste Inventory* lab.
- A lab studying the effects of salinization on seed germination.
- The *Ecocolumn* lab (ongoing for 5-6 weeks).

Leadership Alignment:

- Leadership activities should include 21st Century Skills embedded in curriculum and instruction for this unit of instruction. Include leadership skills that are being taught and assessed within the class for all students.
- The event, activity, or project and the associated 21st Century Skill should be clearly articulated.
  Example: Students will demonstrate the ability to communicate clearly through their group project presentation.

Students will reason effectively, work creatively with others, and be responsible to others as they complete water-testing projects. Students will use systems thinking, solve problems, and communicate clearly their personal solid waste inventory.

Industry Standards and Competencies

Agriculture, Food, and Natural Resources (AFNR) Standards - Natural Resource Systems (NRS) Pathway:

NRS.02.06. Performance Indicator: Apply ecological concepts and principles to natural resource systems.
- Level I: NRS.02.06.08.a. Describe sources of pollution and delineate between point and nonpoint source pollution.
- Level II: NRS.02.06.08.b. Describe the impact of pollution on natural resources.
- Level III: NRS.02.06.08.c. Create and implement a plan to prevent or limit the effects of pollution on natural resources.

NRS.03.01. Performance Indicator: Produce, harvest, process and use natural resource products.
- Level I: NRS.03.01.06.a. Describe the value of fossil fuels to the economy.
- Level II: NRS.03.01.06.b. Describe sources of fossil fuels and products made from fossil fuels.

NRS.05.01. Performance Indicator: Communicate natural resource information to the public.
- Level II: NRS.05.01.01.b. Design and construct a display that communicates a natural resource topic and discuss the topic in a public forum.

Aligned Washington State Standards

Washington Science Standards (Next Generation Science Standards):

HS-LS2-7. Design, evaluate, and refine a solution for reducing the impacts of human activities on the environment and biodiversity.

HS-LS4-6. Create or revise a simulation to test a solution to mitigate adverse impacts of human activity on biodiversity.

HS-ESS3-1. Construct an explanation based on evidence for how the availability of natural resources, occurrence of natural hazards, and changes in climate have influenced human activity.

HS-ESS3-4. Evaluate or refine a technological solution that reduces impacts of human activities on natural systems.

HS-ETS1-2. Design a solution to a complex real-world problem by breaking it down into smaller, more manageable problems that can be solved through engineering.

HS-ETS1-3. Evaluate a solution to a complex real-world problem based on prioritized criteria and trade-offs that account for a range of constraints, including cost, safety, reliability, and aesthetics as well as possible social, cultural, and environmental impacts.

Additional Science and Engineering Practices (SEPs), Disciplinary Core Ideas (DCIs), and Crosscutting Concepts (CCCs):
The local level must list one or more projects to be completed in this unit that will cumulatively address all of the following additional SEPs, DCIs, and CCCs.

Specific Project Title(s): MUST BE ADDED AT LOCAL LEVEL

Science and Engineering Practice	Disciplinary Core Idea	Crosscutting Concept
Asking Questions and Defining Problems	ESS2D: Weather and Climate	Cause and Effect
Asking Questions and Defining Problems	ESS3C: Human Impacts on Earth Systems	Cause and Effect
Constructing Explanations and Designing Solutions	ESS3C: Human Impacts on Earth Systems	Cause and Effect
Developing and Using Models	ESS3C: Human Impacts on Earth Systems	Cause and Effect

Washington English Language Arts Standards (Common Core State Standards) - Science and Technology Literacy Standards (Grades 9-10):
RST.9-10.1 Cite specific textual evidence to support analysis of science and technical texts, attending to the precise details of explanations or descriptions.
RST.9-10.2 Determine the central ideas or conclusions of a text; trace the text's explanation or depiction of a complex process, phenomenon, or concept; provide an accurate summary of the text.
RST.9-10.4 Determine the meaning of symbols, key terms, and other domain-specific words and phrases as they are used in a specific scientific or technical context relevant to grades 9-10 texts and topics.
RST.9-10.7 Translate quantitative or technical information expressed in words in a text into visual form (e.g., a table or chart) and translate information expressed visually or mathematically (e.g., in an equation) into words.
RST.9-10.10 By the end of grade 10, read and comprehend science/technical texts in the grades 9-10 text complexity band independently and proficiently.

Unit 8: Health Hazards | Total Learning Hours for Unit: 14

Performance Assessments:
Performance assessments may be developed at the local level. In order to earn approval at the state level, performance assessments must be submitted within this framework.

Students will demonstrate understanding of course content by completing:

- A risk-assessment activity in groups.
- A study of air quality using test kits.
- The *Airborne Particulates* lab.
- The *Exhausting Problems* lab.

Leadership Alignment:

- Leadership activities should include 21st Century Skills embedded in curriculum and instruction for this unit of instruction. Include leadership skills that are being taught and assessed within the class for all students.
- The event, activity, or project and the associated 21st Century Skill should be clearly articulated.
  Example: Students will demonstrate the ability to communicate clearly through their group project presentation.

Students will collaborate with others, interact effectively with others, and produce results to complete the group risk-assessment activity. Students will use systems thinking, solve problems, and access and evaluate information to complete air quality testing.

Industry Standards and Competencies

Agriculture, Food, and Natural Resources (AFNR) Standards - Natural Resource Systems (NRS) Pathway:

NRS.02.05. Performance Indicator: Interpret laws related to natural resource management and protection.

Level I: NRS.02.05.01.a. Identify laws associated with natural resource systems.

Level II: NRS.02.05.01.b. Identify the purposes of laws associated with natural resource systems.

NRS.04.01. Performance Indicator: Manage fires in natural resource systems.

Level I: NRS.04.01.01.a. Differentiate between desirable and undesirable fires and prepare a report on the role fire plays in a healthy ecosystem.

Aligned Washington State Standards

Washington Science Standards (Next Generation Science Standards):

HS-LS2-7. Design, evaluate, and refine a solution for reducing the impacts of human activities on the environment and biodiversity.

HS-LS4-6. Create or revise a simulation to test a solution to mitigate adverse impacts of human activity on biodiversity.

HS-ESS3-1. Construct an explanation based on evidence for how the availability of natural resources, occurrence of natural hazards, and changes in climate have influenced human activity.

Additional Science and Engineering Practices (SEPs), Disciplinary Core Ideas (DCIs), and Crosscutting Concepts (CCCs):

The local level must list one or more projects to be completed in this unit that will cumulatively address all of the following additional SEPs, DCIs, and CCCs.

Specific Project Title(s): MUST BE ADDED AT LOCAL LEVEL

Science and Engineering Practice	Disciplinary Core Idea	Crosscutting Concept
Asking Questions and Defining Problems	ESS3C: Human Impacts on Earth Systems	Cause and Effect
Engaging in Argument from Evidence	ESS3C: Human Impacts on Earth Systems	Cause and Effect

Washington English Language Arts Standards (Common Core State Standards) - Science and Technology Literacy Standards (Grades 9-10):

RST.9-10.1 Cite specific textual evidence to support analysis of science and technical texts, attending to the precise details of explanations or descriptions.

RST.9-10.2 Determine the central ideas or conclusions of a text; trace the text's explanation or depiction of a complex process, phenomenon, or concept; provide an accurate summary of the text.

RST.9-10.4 Determine the meaning of symbols, key terms, and other domain-specific words and phrases as they are used in a specific scientific or technical context relevant to grades 9-10 texts and topics.

RST.9-10.7 Translate quantitative or technical information expressed in words in a text into visual form (e.g., a table or chart) and translate information expressed visually or mathematically (e.g., in an equation) into words.

RST.9-10.10 By the end of grade 10, read and comprehend science/technical texts in the grades 9-10 text complexity band independently and proficiently.

Unit 9: Global Change	Total Learning Hours for Unit: 22

Performance Assessments:
Performance assessments may be developed at the local level. In order to earn approval at the state level, performance assessments must be submitted within this framework.

Students will demonstrate understanding of course content by completing:

- The *How Hot Is It Here on Earth?* lab.
- The *Global Warming and Greenhouse Effects* lab.
- The APES portfolio.
- Research about global change by reading an article from a credible magazine journal. Students will write a summary report of what they learn.

Leadership Alignment:

- Leadership activities should include 21st Century Skills embedded in curriculum and instruction for this unit of instruction. Include leadership skills that are being taught and assessed within the class for all students.
- The event, activity, or project and the associated 21st Century Skill should be clearly articulated.
  Example: Students will demonstrate the ability to communicate clearly through their group project presentation.

Students will manage goals and time, work independently, and produce results to complete the heat on earth lab. Students will access and evaluate information, collaborate with others, and think creatively to create their global change report and portfolio products.

Industry Standards and Competencies

Agriculture, Food, and Natural Resources (AFNR) Standards - Natural Resource Systems (NRS) Pathway:

NRS.01.01. Performance Indicator: Apply knowledge of natural resource components to the management of natural resource systems.
Level III: NRS.01.01.01.c. Research and debate one or more current issues related to the conservation or preservation of natural resources.
NRS.02.05. Performance Indicator: Interpret laws related to natural resource management and protection.
Level I: NRS.02.05.01.a. Identify laws associated with natural resource systems.
Level II: NRS.02.05.01.b. Identify the purposes of laws associated with natural resource systems.
NRS.02.06. Performance Indicator: Apply ecological concepts and principles to natural resource systems.
Level I: NRS.02.06.09.a. Describe climatic factors that influence natural resources.
Level II: NRS.02.06.09.b. Describe the impact climate has on natural resources.
NRS.05.01. Performance Indicator: Communicate natural resource information to the public.
Level II: NRS.05.01.01.b. Design and construct a display that communicates a natural resource topic and discuss the topic in a public forum.

Aligned Washington State Standards

Washington Science Standards (Next Generation Science Standards):

HS-LS2-7. Design, evaluate, and refine a solution for reducing the impacts of human activities on the environment and biodiversity.
HS-LS4-5. Evaluate the evidence supporting claims that changes in environmental conditions may result in: (1) increases in the number of individuals of some species, (2) the emergence of new species over time, and (3) the extinction of other species.
HS-LS4-6. Create or revise a simulation to test a solution to mitigate adverse impacts of human activity on biodiversity.
HS-ESS3-1. Construct an explanation based on evidence for how the availability of natural resources, occurrence of natural hazards, and changes in climate have influenced human activity.
HS-ESS3-4. Evaluate or refine a technological solution that reduces impacts of human activities on natural systems.
HS-ESS3-6. Use a computational representation to illustrate the relationships among Earth systems and how those relationships are being modified due to human activity.

HS-ETS1-1. Analyze a major global challenge to specify qualitative and quantitative criteria and constraints for solutions that account for societal needs and wants.

Additional Science and Engineering Practices (SEPs), Disciplinary Core Ideas (DCIs), and Crosscutting Concepts (CCCs):
The local level must list one or more projects to be completed in this unit that will cumulatively address all of the following additional SEPs, DCIs, and CCCs.

Specific Project Title(s): MUST BE ADDED AT LOCAL LEVEL

Science and Engineering Practice	Disciplinary Core Idea	Crosscutting Concept
Engaging in Argument from Evidence	LS4D: Biodiversity and Humans	Cause and Effect

Washington English Language Arts Standards (Common Core State Standards) - Science and Technology Literacy Standards (Grades 9-10):
RST.9-10.1 Cite specific textual evidence to support analysis of science and technical texts, attending to the precise details of explanations or descriptions.
RST.9-10.2 Determine the central ideas or conclusions of a text; trace the text's explanation or depiction of a complex process, phenomenon, or concept; provide an accurate summary of the text.
RST.9-10.4 Determine the meaning of symbols, key terms, and other domain-specific words and phrases as they are used in a specific scientific or technical context relevant to grades 9-10 texts and topics.
RST.9-10.7 Translate quantitative or technical information expressed in words in a text into visual form (e.g., a table or chart) and translate information expressed visually or mathematically (e.g., in an equation) into words.
RST.9-10.10 By the end of grade 10, read and comprehend science/technical texts in the grades 9-10 text complexity band independently and proficiently.

21st Century Skills		
Students will demonstrate in this course:		
LEARNING & INNOVATION **Creativity and Innovation** ☒Think Creatively ☒Work Creatively with Others ☒Implement Innovations **Critical Thinking and Problem Solving** ☒Reason Effectively ☒Use Systems Thinking ☒Make Judgments and Decisions ☒Solve Problems **Communication and Collaboration** ☒Communicate Clearly ☒Collaborate with Others	**INFORMATION, MEDIA & TECHNOLOGY SKILLS** **Information Literacy** ☒Access and Evaluate Information ☒Use and Manage Information **Media Literacy** ☒Analyze Media ☒Create Media Products **Information, Communications and Technology (ICT Literacy)** ☒Apply Technology Effectively	**LIFE & CAREER SKILLS** **Flexibility and Adaptability** ☒Adapt to Change ☒Be Flexible **Initiative and Self-Direction** ☒Manage Goals and Time ☒Work Independently ☒Be Self-Directed Learners **Social and Cross-Cultural** ☒Interact Effectively with Others ☒Work Effectively in Diverse Teams **Productivity and Accountability** ☒Manage Projects ☒Produce Results **Leadership and Responsibility** ☒Guide and Lead Others ☒Be Responsible to Others