CIMC CURRICULUM

NATURAL RESOURCES

Embedded PASS Core Curriculum

- Science----------Met minimal to moderate PASS requirements

CIMC CURRICULUM

NATURAL RESOURCES

TABLE OF CONTENTS

*The initial crosswalk analysis suggested these sections be noted as “N/A”

NATURAL RESOURCES

SCIENCE

PHYSICAL SCIENCE

Oklahoma Career Tech Curriculum:
Embedded PASS Skills

Natural Resources: Science

CIMC Developed/
Recommended Curriculum: Natural Resources

PASS Skills
Core Curriculum Area: Science

PASS Skills Sub-Core: Physical Science

PASS Content Standard Area I.
Observing and Measuring

Content Skill Knowledge (common to all sub-cores)	**Matching Curriculum Objectives**
A. Identify similar or different characteristics in a given set of objects, organisms, or events.	**1:3** List ten items that should be found in a basic first-aid kit. **2:5** Explain the importance of natural resources. **2:8** Distinguish between preservation and conservation of natural resources. **2:11** Match categories of solid waste with the descriptions. **2:15** Distinguish between recyclables and nonrecyclables.

	3:6 Complete statements concerning surface water. **3:10** Compare the state of the environment of 1960 and 1995. **3:15** List career opportunities in water resource management. **3:16** Survey your area to identify water pollution sources. **4:2** Complete statements concerning how soils are formed. **4:3** Match types of rocks with their definitions. **4:6** Distinguish among the major soil texture classes. **4:16** List cause of erosion. **4:18** Select from a list the contributors to erosion pollution. **4:19** List methods of controlling erosion on the farm.

	4:25 List career opportunities in land management. **4:30** Take a lawn and garden soil sample. **5:7** Select true statements concerning air quality regulations. **5:8** List methods of controlling motor vehicle emissions. **6:2** Classify energy resources as renewable or nonrenewable. **6:8** Complete statements concerning biomass energy resources. **6:13** Draw a pie chart showing the uses of oil resources in the United States. **6:16** List careers in energy resources. **7:17** Identify measuring instruments used in forestry. **7:18** List forest enemies.

B. Select qualitative (descriptive) or quantitative (numerical) observations in a given set of objects, organisms, or events.	**2:21** Explain the difference between renewable and nonrenewable natural resources. **3:6** Complete statements concerning surface water. **3:10** Compare the state of the environment of 1960 and 1995. **3:12** Match federal legislation for environmental protection of water resources with their intended purposes. **3:16** Survey your area to identify water pollution resources. **3:18** Calculate water measurements. **4:2** List weathering factors. **4:16** List causes of erosion. **5:2** Draw a pie chart depicting the composition and percentages of air components. **5:8** List methods of controlling motor vehicle emissions.

	5:11 Discuss global considerations in air resource management. **5:15** Observe particulate matter collected on a petroleum jelly pad. **6:8** Complete statements concerning biomass energy resources. **6:17** Discuss the effects of a Middle East oil embargo. **7:18** List forest enemies.
C. (5-00 Update) Identify qualitative (descriptive) or quantitative (numerical) changes given conditions before, during, or after an event.	**2:20** Report on a local natural resource problem. **2:21** Report on a current event affecting natural resources. **3:10** Compare the state of the environment of 1960 and 1995. **4:10** Match land capability classes with their definitions. **4:16** List causes of erosion.

	4:19 List methods of controlling erosion on the farm. **4:27** Complete a land use planning summary. **4:28** Read a soil survey map. **4:29** Read a conservation map. **4:30** Take a lawn and garden soil sample. **4:31** Perform a soil test to determine organic matter. **5:15** Observe particulate matter collected on a petroleum jelly pad.
D. Use the appropriate Systems International (SI) units (grams, meters, liters, and degrees Celsius) to measure objects, organisms, or events.	**1:15** Read wind chill index and water survival charts. **3:18** Calculate water measurements. **3:19** Calculate the cost of water. **4:30** Take a lawn and garden soil sample. **4:31** Perform a soil test to determine organic matter.

	4:32 Determine percent of soil particles. **5:2** Draw a pie chart depicting the composition and percentages of air components. **5:10** Read a graph on air quality trends in the United States. **7:28** Solve cord measurement problems.

Oklahoma Career Tech Curriculum:
Embedded PASS Skills

Natural Resources: Science

CIMC Developed/
Recommended Curriculum: Natural Resources

PASS Skills
Core Curriculum Area: Science

PASS Skills Sub-Core: Physical Science

PASS Content Standard Area II.
Classifying

Content Skill Knowledge (common to all sub-cores)	**Matching Curriculum Objectives**
A. Use observable properties to classify a set of objects, organisms, or events.	**1:4** Describe the two types of poisonous snakes found in the United States. **3:16** Survey your area to identify water pollution sources.
B. Identify the properties on which a given classification system is based.	**See supplement booklet to meet this PASS requirement**
C. Place an object, organism or event into a classification system.	**1:4** Describe the two types of poisonous snakes found in the United States. **3:16** Survey your area to identify water pollution sources. **6:2** Complete statements concerning nuclear energy resources.

Oklahoma Career Tech Curriculum:
Embedded PASS Skills

Natural Resources: Science

CIMC Developed/
Recommended Curriculum: Natural Resources

PASS Skills
Core Curriculum Area: Science

PASS Skills Sub-Core: Physical Science

PASS Content Standard Area III.
Experimenting

Content Skill Knowledge (common to all sub-cores)	**Matching Curriculum Objectives**
A. Arrange the steps of a scientific problem in logical order.	**3:18** Calculate water measurements. **5:15** Observe particulate matter collected on a petroleum jelly pad.
B. Identify the independent variables, dependent variables, and control in an experimental set-up.	**5:15** Observe particulate matter collected on a petroleum jelly pad.
C. Use mathematics to show relationships within a given set of observations.	**3:18** Calculate water measurements. **3:19** Calculate the cost of water. **4:27** Complete a land use planning summary. **4:32**

	Determine percent of soil particles. **5:2** Draw a pie chart depicting the composition and percentages of air components. **7:28** Solve cord measurement problems. **7:30** Measure diameter of a tree. **7:31** Measure merchantable of a tree.
D. Identify a hypothesis for a given problem.	**3:16** Survey your area to identify water pollution sources. **3:17** Evaluate your source of drinking water.

Oklahoma Career Tech Curriculum:
Embedded PASS Skills

Natural Resources: Science

CIMC Developed/
Recommended Curriculum: Natural Resources

PASS Skills
Core Curriculum Area: Science

PASS Skills Sub-Core: Physical Science

PASS Content Standard Area IV.
Interpreting

Content Skill Knowledge (common to all sub-cores)	**Matching Curriculum Objectives**
A. Select appropriate predictions based on previously observed patterns of evidence.	**1:15** Read wind chill index and water survival charts. **3:16** Survey your area to identify water pollution sources. **5:8** List methods of controlling motor vehicle emissions. **6:8** Complete statements concerning biomass energy resources. **6:20** Perform an energy audit of your home.

B. Report data in an appropriate manner.	**1:4** Describe the two types of poisonous snakes found in the United States. **1:9** Match classes of fires with their definitions. **1:15** Read wind chill index and water survival charts. **3:6** Complete statements concerning surface water. **3:12** Match federal legislation for environmental protection of water resources with their intended purposes. **3:15** List career opportunities in water resource management. **3:18** Calculate water measurements. **4:16** List causes of erosion. **4:25** List career opportunities in land management. **4:27** Complete a land use planning summary.

	4:30 Take a lawn and garden soil sample. **4:31** Perform a soil test to determine organic matter. **5:2** Draw a pie chart depicting the composition and percentages of air components (unpolluted). **5:8** List methods of controlling motor vehicle emissions. **6:8** Complete statements concerning biomass energy resources. **7:18** List forest enemies. **7:27** Determine uses of wood and wood by-products. **8:8** Distinguish between small mammals and large mammals. **8:22** Identify wildlife you see in a certain time span.
C. Predict data points not included on a given graph.	**See supplement booklet to meet this PASS requirement**
D. Interpret line, bar, and circle graphs.	**4:26** Read a soil test report.

	5:2 Draw a pie chart depicting the composition and percentages of air components (unpolluted). **5:10** Read a graph on air quality trends in the United States. **6:13** Draw a pie chart showing the uses of oil resources in the United States. **10:13** Interpret graphs on future trends in outdoor recreation.
E. Identify data that support or reject stated hypothesis.	**See supplement booklet to meet this PASS requirement**
F. Accept or reject hypothesis when given results of an investigation.	**See supplement booklet to meet this PASS requirement**
G. Identify discrepancies between stated hypothesis and actual results.	**See supplement booklet to meet this PASS requirement**
H. Select the most logical conclusion for given experimental data.	**4:30** Take a lawn and garden soil sample. **4:32** Determine percent of soil particles. **8:10** List U.S. endangered species.

Oklahoma Career Tech Curriculum:
Embedded PASS Skills

Natural Resources: Science

CIMC Developed/
Recommended Curriculum: Natural Resources

PASS Skills
Core Curriculum Area: Science

PASS Skills Sub-Core: Physical Science

PASS Content Standard Area V.
Communicating

Content Skill Knowledge (common to all sub-cores)	**Matching Curriculum Objectives**
A. Prepare a written report describing the sequence, results, and interpretation of an investigation or event.	**5:14** Write a report on a global environmental problem related to air quality. **5:15** Observe particulate matter collected on a petroleum jelly pad. **6:17** Discuss the effects of a Middle east oil embargo. **6:18** Compare electricity production from coal and nuclear fuel. **6:19** Research and report on using agricultural products as alternative energy resources.

	10:12 Make a presentation about an outdoor recreation activity.
B. Communicate and defend a scientific argument.	**1:8** Explain how the components of the fire triangle work. **3:12** Match federal legislation for environmental protection of water resources with their intended purposes. **4:2** Complete statements concerning how soils are formed. **4:16** List causes of erosion. **7:18** List forest enemies.
C. Identify or create an appropriate graph or chart from collected data, table, or written description.	**6:13** Draw a pie chart showing the uses of oil resources in the United States.

Oklahoma Career Tech Curriculum:
Embedded PASS Skills

Natural Resources: Science

CIMC Developed/
Recommended Curriculum: Natural Resources

PASS Skills
Core Curriculum Area: Science

PASS Skills Sub-Core: Physical Science

PASS Content Standard Area VI.
Modeling

Content Skill Knowledge (common to all sub-cores)	**Matching Curriculum Objectives**
A. Select a model, which explains a given set of observations.	**See supplement booklet to meet this PASS requirement**
B. Select predictions based on models.	**See supplement booklet to meet this PASS requirement**
C. Compare a given model to the real world.	**3:15** List career opportunities in water resource management. **4:25** List career opportunities in land management.

Oklahoma Career Tech Curriculum:
Embedded PASS Skills

Natural Resources: Science

CIMC Developed/
Recommended Curriculum: Natural Resources

PASS Skills
Core Curriculum Area: Science

PASS Skills Sub-Core: Physical Science

PASS Content Standard Area VII.
Safety in the Science Classroom

Content Skill Knowledge (common to all sub-cores)	**Matching Curriculum Objectives**
A. Recognize potential hazards within a science activity.	**1:13** Analyze scenarios to determine appropriate safety and first-aid procedures. **1:14** Interpret portable fire-extinguisher symbols.
B. Practice safety procedures in all science activities.	**1:17** Operate a fire extinguisher. **4:3** List weathering factors.

Oklahoma Career Tech Curriculum:
Embedded PASS Skills

Natural Resources: Science

CIMC Developed/
Recommended Curriculum: Natural Resources

PASS Skills
Core Curriculum Area: Science

PASS Skills Sub-Core: Physical Science

PASS Content Standard Area VIII.
Inquiry

Content Skill Knowledge (common to all sub-cores)	**Matching Curriculum Objectives**
A. Formulate a testable hypothesis and design an appropriate experiment relating to the world.	**See supplement booklet to meet this PASS requirement**
B. Design and conduct scientific investigations in which variables are identified and controlled.	**See supplement booklet to meet this PASS requirement**
C. Use a variety of technologies, such as hand tools, measuring instruments, and computers to collect, analyze, and display data.	**See supplement booklet to meet this PASS requirement**

D. Inquiries should lead to the formation of explanations or models (physical, conceptual, and mathematical). In answering questions, students should engage in discussions (based on scientific knowledge, the use of logic, and evidence from the investigations) and arguments that encourage the revision of their explanations, leading to further inquiry.	

Oklahoma Career Tech Curriculum:
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Natural Resources: Science

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PASS Skills
Core Curriculum Area: Science

PASS Skills Sub-Core: Physical Science

PASS Content Standard Area IX.
Structure and Properties of Matter

Content Skill Knowledge (unique to this sub-core)	**Matching Curriculum Objectives**
A. Matter is made up of minute particles called atoms, and atoms are composed of even smaller components.	**See supplement booklet to meet this PASS requirement**
B. An element is composed of a single type of atom. When elements are listed in order according to the number of protons (called the atomic number), repeating patterns of physical and chemical properties identify families of elements with similar properties.	**See supplement booklet to meet this PASS requirement**
C. Matter has characteristic properties, such as boiling points, melting points, solubility, and density, which distinguish pure substances and can be used to separate one substance from another.	**See supplement booklet to meet this PASS requirement**

Oklahoma Career Tech Curriculum:
Embedded PASS Skills

Natural Resources: Science

CIMC Developed/
Recommended Curriculum: Natural Resources

PASS Skills
Core Curriculum Area: Science

PASS Skills Sub-Core: Physical Science

PASS Content Standard Area X.
Chemical Reactions

Content Skill Knowledge (unique to this sub-core)	**Matching Curriculum Objectives**
A. Substances react chemically in characteristic ways with other substances to form new substances (compounds) with different characteristic properties. In chemical reactions, the total mass is converted.	**See supplement booklet to meet this PASS requirement**
B. The rate of chemical reactions is affected by the concentration and temperature of the reacting material.	**See supplement booklet to meet this PASS requirement**

Oklahoma Career Tech Curriculum:
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Natural Resources: Science

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PASS Skills
Core Curriculum Area: Science

PASS Skills Sub-Core: Physical Science

PASS Content Standard Area XI.
Motion and Forces

Content Skill Knowledge (unique to this sub-core)	**Matching Curriculum Objectives**
A. Objects change their motion only when a net force is applied. Laws of motion are used to determine the effects of forces on the motion of objects.	**See supplement booklet to meet this PASS requirement**
B. Gravitation is a universal force that each mass exerts on any other mass.	**See supplement booklet to meet this PASS requirement**

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Embedded PASS Skills

Natural Resources: Science

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PASS Skills
Core Curriculum Area: Science

PASS Skills Sub-Core: Physical Science

PASS Content Standard Area XII.
Interactions of Energy and Matter

Content Skill Knowledge (unique to this sub-core)	**Matching Curriculum Objectives**
A. All energy can be considered to be either kinetic energy, which is the energy of motion: potential energy, which depends on relative position: or energy contained by a field, such as electromagnetic waves.	**See supplement booklet to meet this PASS requirement**
B. Waves, including sounds and seismic waves, waves on water, and light waves, have energy and can transfer energy when they interact with matter.	**See supplement booklet to meet this PASS requirement**

Oklahoma Career Tech Curriculum:
Embedded PASS Skills

Natural Resources: Science

CIMC Developed/
Recommended Curriculum: Natural Resources

PASS Skills
Core Curriculum Area: Science

PASS Skills Sub-Core: Physical Science

PASS Content Standard Area XIII.
The Earth System

Content Skill Knowledge (unique to this sub-core)	**Matching Curriculum Objectives**
A. Geologic time can be estimated by observing rock sequences and using fossils to correlate the sequences at various locations.	**See supplement booklet to meet this PASS requirement**
B. The solid crust of the earth consist of separate plates that move very slowly pressing against one another in some places and pulling apart in other places.	**See supplement booklet to meet this PASS requirement**

Oklahoma Career Tech Curriculum:
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Natural Resources: Science

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PASS Skills
Core Curriculum Area: Science

PASS Skills Sub-Core: Physical Science

PASS Content Standard Area XIV.
The Universe

Content Skill Knowledge (unique to this sub-core)	**Matching Curriculum Objectives**
A. The stars differ from each other in size, temperature, and age, but they appear to be made up of the same elements that are found on the earth.	**See supplement booklet to meet this PASS requirement**
B. Stars condense by gravity out of clouds of molecules of the lightest elements until nuclear fusion of the light elements into heavier ones began to occur. Fusion released great amounts of energy over millions of years. Eventually, some stars exploded, producing clouds of heavy elements from which other stars and planets could later condense. The process of star formation and destruction continues.	**See supplement booklet to meet this PASS requirement**

NATURAL RESOURCES

SCIENCE

BIOLOGY

Oklahoma Career Tech Curriculum:
Embedded PASS Skills

Natural Resources: Science

CIMC Developed/
Recommended Curriculum: Natural Resources

PASS Skills
Core Curriculum Area: Science

PASS Skills Sub-Core: Biology

PASS Content Standard Area I.
Observing and Measuring

Content Skill Knowledge (common to all sub-cores)	**Matching Curriculum Objectives**
A. Identify similar or different characteristics in a given set of objects, organisms, or events.	**1:4** Describe the two types of poisonous snakes found in the United States. **1:5** Distinguish among types of poisonous plants found in the United States. **2:2** Explain the difference between renewable and nonrenewable natural resources. **2:9** List preservation activities. **5:15** Observe particulate matter collected on a petroleum jelly pad.

	7:2 Distinguish among the main parts of a tree. **7:3** Identify the parts of the crown. **7:4** Identify the parts of the trunk. **7:5** Distinguish among the types of roots in a root system. **7:12** List government agencies involved in forestry. **7:13** Identify the major forest regions of the United States. **7:17** Identify measuring instruments used in forestry. **7:22** List benefits of controlled burns. **7:23** List career opportunities related to forestry. **7:24** Identify specific trees. **7:27** Determine uses of wood and wood by-products.

	8:2 Complete statements concerning a food chain. **8:5** Complete statements concerning the history of wildlife in the United States. **8:21** List fish and wildlife in your area. **8:22** Identify wildlife you see in a certain time span. **9:2** Match the components of a habitat with their descriptions. **9:6** Classify actions taken to improve wildlife habitats. **9:11** Complete statements concerning wetland habitats. **9:17** Identify ways to improve a wetland habitat. **10:9** List employment opportunities in outdoor recreation. **10:14** Evaluate a local outdoor recreation site.

B. Select qualitative (descriptive) or quantitative (numerical) observations in a given set of objects, organisms, or events.	**7:27** Determine uses of wood and wood by-products. **8:2** Complete statements concerning a food chain. **8:8** Distinguish between small mammals and large mammals. **9:11** Complete statements concerning wetland habitat. **10:14** Evaluate a local outdoor recreation site.
C. (5-00 Update) Identify qualitative (descriptive) or quantitative (numerical) chances given conditions before, during, or after an event.	**See supplement booklet to meet this PASS requirement.**
D. Use the appropriate Systems International (SI) units (grams, meters, liters, and degrees Celsius) to measure objects, organisms, or events.	**See supplement booklet to meet this PASS requirement.**

Oklahoma Career Tech Curriculum:
Embedded PASS Skills

Natural Resources: Science

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PASS Skills
Core Curriculum Area: Science

PASS Skills Sub-Core: Biology

PASS Content Standard Area II.
Classifying

Content Skill Knowledge (common to all sub-cores)	**Matching Curriculum Objectives**
A. Use observable properties to classify a set of objects, organisms, or events.	**1:4** Describe the two types of poisonous found in the United States. **7:24** Identify specific trees. **7:26** Determine uses of wood and wood by-products.
B. Identify the properties on which a given classification system is based.	**7:26** Determine uses of wood and wood by-products.
C. Place an object, organism or event into a classification system.	**1:4** Describe the two types of poisonous snakes found in the United States. **7:24** Identify specific trees.

	7:26 Determine uses of wood and wood by-products.

Oklahoma Career Tech Curriculum:
Embedded PASS Skills

Natural Resources: Science

CIMC Developed/
Recommended Curriculum: Natural Resources

PASS Skills
Core Curriculum Area: Science

PASS Skills Sub-Core: Biology

PASS Content Standard Area III.
Experimenting

Content Skill Knowledge (common to all sub-cores)	**Matching Curriculum Objectives**
A. Arrange the steps of a scientific problem in logical order.	**See supplement booklet to meet this PASS requirement.**
B. Identify the independent variables, dependent variables, and control in an experimental set-up.	**See supplement booklet to meet this PASS requirement.**
C. Use mathematics to show relationships within a given set of observations.	**9:19** Determine the carrying capacity of a range land habitat.
D. Identify a hypothesis for a given problem.	**See supplement booklet to meet this PASS requirement.**

Oklahoma Career Tech Curriculum:
Embedded PASS Skills

Natural Resources: Science

CIMC Developed/
Recommended Curriculum: Natural Resources

PASS Skills
Core Curriculum Area: Science

PASS Skills Sub-Core: Biology

PASS Content Standard Area IV.
Interpreting

Content Skill Knowledge (common to all sub-cores)	**Matching Curriculum Objectives**
A. Select appropriate predictions based on previously observed patterns of evidence.	**9:17** Identify ways to improve a wetland habitat. **10:9** List employment opportunities in outdoor recreation. **10:15** Plan and design a new outdoor recreation area.
B. Report data in an appropriate manner.	**9:11** Complete statements concerning wetland habitats. **10:15** Plan and design a new outdoor recreation area.
C. Predict data points not included on a given graph.	**See supplement booklet to meet this PASS requirement.**

D. Interpret line, bar, and circle graphs.	**See supplement booklet to meet this PASS requirement.**
E. Identify data that support or reject stated hypothesis.	**See supplement booklet to meet this PASS requirement.**
F. Accept or reject hypothesis when given results of an investigation.	**See supplement booklet to meet this PASS requirement.**
G. Identify discrepancies between stated hypothesis and actual results.	**See supplement booklet to meet this PASS requirement.**
H. Select the most logical conclusion for given experimental data.	**See supplement booklet to meet this PASS requirement.**

Oklahoma Career Tech Curriculum:
Embedded PASS Skills

Natural Resources: Science

CIMC Developed/
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PASS Skills
Core Curriculum Area: Science

PASS Skills Sub-Core: Biology

PASS Content Standard Area V.
Communicating

Content Skill Knowledge (common to all sub-cores)	**Matching Curriculum Objectives**
A. Prepare a written report describing the sequence, results, and interpretation of an investigation or event.	**8:23** Compile a profile of a wildlife species.
B. Communicate and defend a scientific argument.	**8:5** Complete statements concerning the history of wildlife in the United States. **8:19** Explain effect on a food chain when parts are removed. **9:11** Complete statements concerning wetland habitats.
C. Identify or create an appropriate graph or chart from collected data, table, or written description.	**See supplement booklet to meet this PASS requirement.**

Oklahoma Career Tech Curriculum:
Embedded PASS Skills

Natural Resources: Science

CIMC Developed/
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PASS Skills
Core Curriculum Area: Science

PASS Skills Sub-Core: Biology

PASS Content Standard Area VI.
Modeling

Content Skill Knowledge (common to all sub-cores)	**Matching Curriculum Objectives**
A. Select a model, which explains a given set of observations.	**9:16** Layout and identify ways to improve a local habitat. **9:17** Identify ways to improve a wetland habitat. **10:15** Plan and design a new outdoor recreation area.
B. Select predictions based on models.	**See supplement booklet to meet this PASS requirement.**
C. Compare a given model to the real world.	**See supplement booklet to meet this PASS requirement.**

Oklahoma Career Tech Curriculum:
Embedded PASS Skills

Natural Resources: Science

CIMC Developed/
Recommended Curriculum: Natural Resources

PASS Skills
Core Curriculum Area: Science

PASS Skills Sub-Core: Biology

PASS Content Standard Area VII.
Safety in the Science Classroom

Content Skill Knowledge (common to all sub-cores)	**Matching Curriculum Objectives**
A. Recognize potential hazards within a science activity.	**See supplement booklet to meet this PASS requirement.**
B. Practice safety procedures in all science activities.	**7:29** Plant a bareroot tree. **7:30** Measure diameter of a tree. **7:31** Measure merchantable height of a tree.

Oklahoma Career Tech Curriculum:
Embedded PASS Skills

Natural Resources: Science

CIMC Developed/
Recommended Curriculum: Natural Resources

PASS Skills
Core Curriculum Area: Science

PASS Skills Sub-Core: Biology

PASS Content Standard Area VIII.
Inquiry

Content Skill Knowledge (common to all sub-cores)	**Matching Curriculum Objectives**
A. Formulate a testable hypothesis and design an appropriate experiment relating to the world.	**See supplement booklet to meet this PASS requirement.**
B. Design and conduct scientific investigations in which variables are identified and controlled.	**See supplement booklet to meet this PASS requirement.**
C. Use a variety of technologies, such as hand tools, measuring instruments, and computers to collect, analyze, and display data.	**7:25** Determine the age of a tree. **7:30** Measure diameter of a tree. **7:31** Measure merchantable height of a tree.

D. Inquiries should lead to the formation of explanations or models (physical, conceptual, and mathematical). In answering questions, students should engage in discussions (based on scientific knowledge, the use of logic, and evidence from the investigations) and arguments that encourage the revision of their explanations, leading to further inquiry.	**See supplement booklet to meet this PASS requirement.**

Oklahoma Career Tech Curriculum:
Embedded PASS Skills

Natural Resources: Science

CIMC Developed/
Recommended Curriculum: Natural Resources
PASS Skills
Core Curriculum Area: Science

PASS Skills Sub-Core: Biology

PASS Content Standard Area IX.
The Cell

Content Skill Knowledge (unique to this sub-core)	**Matching Curriculum Objectives**
A. Cells are the fundamental unit of life, comprised of a variety of structures that perform functions, such as transport information and synthesis of molecules.	**See supplement booklet to meet this PASS requirement.**
B. Cells function according to the information contained in DNA.	**See supplement booklet to meet this PASS requirement.**
C. Cells can differentiate and may develop into complex multi-cellular organisms.	**See supplement booklet to meet this PASS requirement.**

Oklahoma Career Tech Curriculum:
Embedded PASS Skills

Natural Resources: Science

CIMC Developed/
Recommended Curriculum: Natural Resources

PASS Skills
Core Curriculum Area: Science

PASS Skills Sub-Core: Biology

PASS Content Standard Area X.
The Molecular Basis of Heredity

Content Skill Knowledge (unique to this sub-core)	**Matching Curriculum Objectives**
A. In all organisms, the instructions for specifying the characteristics of the organism are carried in DNA, and changes in DNA (mutations) occur spontaneously at low rates.	**See supplement booklet to meet this PASS requirement.**
B. A sorting and recombination of genes in production results in a great variety of possible gene combinations from the offspring of any two parents.	**See supplement booklet to meet this PASS requirement.**

Oklahoma Career Tech Curriculum:
Embedded PASS Skills

Natural Resources: Science

CIMC Developed/
Recommended Curriculum: Natural Resources

PASS Skills
Core Curriculum Area: Science

PASS Skills Sub-Core: Biology

PASS Content Standard Area XI.
Biological Diversity

Content Skill Knowledge (unique to this sub-core)	**Matching Curriculum Objectives**
A. Different species might look dissimilar, but the unity among organisms becomes apparent from an analysis of internal structures, the similarity of their chemical processes, and the evidence of common ancestry.	**7:5** Distinguish among the types of roots in a root system. **7:9** Distinguish between the classifications of trees. **8:21** Create a food web.

B. Diversity of species is developed through gradual processes over many generations. Species acquire many of their unique characteristics through biological adaptation, which involves the selection of naturally occurring variations in populations. Biological adaptations include changes in structures, behaviors, or physiology, that enhance survival and reproductive success in a particular environment.	**8:23** Compile a profile of a wildlife species. **9:17** Identify ways to improve a wetland habitat. **9:18** Determine the carrying capacity of a pond. **9:19** Determine the carrying capacity of a range land habitat.
C. Extension occurs when the environment changes and the adaptive characteristics of a species are insufficient to its survival.	**See supplement booklet to meet this PASS requirement.**

Oklahoma Career Tech Curriculum:
Embedded PASS Skills

Natural Resources: Science

CIMC Developed/
Recommended Curriculum: Natural Resources

PASS Skills
Core Curriculum Area: Science

PASS Skills Sub-Core: Biology

PASS Content Standard Area XII.
The Interdependence of Organisms

Content Skill Knowledge (unique to this sub-core)	**Matching Curriculum Objectives**
A. Matter on the earth cycles among the living and nonliving components of the biosphere.	**See supplement booklet to meet this PASS requirement.**
B. Energy flows through ecosystems in one direction.	**8:2** Complete statements concerning a food chain.
C. Organisms both cooperate and compete in ecosystems.	**8:2** Complete statements concerning a food chain. **8:3** Show interconnections in a food web. **8:19** Explain effects on a food chain when parts are removed. **8:20** Create a food web.

	9:18 Determine the carrying capacity of a pond.
D. Living organisms have the capacity to produce populations of infinite size, but environments and resources limit population size.	**9:18** Determine the carrying capacity of a pond. **9:19** Determine the carrying capacity of a range land habitat.

Oklahoma Career Tech Curriculum:
Embedded PASS Skills

Natural Resources: Science

CIMC Developed/
Recommended Curriculum: Natural Resources
PASS Skills
Core Curriculum Area: Science

PASS Skills Sub-Core: Biology

PASS Content Standard Area XIII.
Matter, Energy, and Organization in Living Systems

Content Skill Knowledge (unique to this sub-core)	**Matching Curriculum Objectives**
A. The complexity and organization of organisms accommodates the need for obtaining, transforming, transporting, releasing, and eliminating the matter and energy used to sustain the organism.	**8:19** Explain effects on a food chain when parts are removed. **8:20** Create a food web.
B. As matter and energy flow through different levels of organizations of living systems—cells , organs, organisms, and communities—and between living systems and the physical environment, chemical elements are recombined in different ways by different structures. Each recombination results in storage, use, and dissipation of energy into the environment as heat. Matter and energy are conserved in each change.	**8:19** Explain effects on a food chain when parts are removed. **8:20** Create a food web.

Oklahoma Career Tech Curriculum:
Embedded PASS Skills

Natural Resources: Science

CIMC Developed/
Recommended Curriculum: Natural Resources

PASS Skills
Core Curriculum Area: Science

PASS Skills Sub-Core: Biology

PASS Content Standard Area XIV.
The Behavior of Organisms

Content Skill Knowledge (unique to this sub-core)	**Matching Curriculum Objectives**
A. Organisms have behavioral responses to internal changes and to external stimuli.	**See supplement booklet to meet this PASS requirement.**
B. Broad patterns of behavior exhibited by animals have adapted to ensure reproductive success.	**See supplement booklet to meet this PASS requirement.**

NATURAL RESOURCES

SCIENCE

SUMMARY

SUMMARY

PASS Skills in this particular analysis of Career Tech Curriculum

Curriculum: Natural Resources

PASS: Science—Physical Science

PASS Summary and Strengths

The core curriculum area met a minimal to moderate amount of PASS standard requirements. Of the fourteen PASS content standards seven were addressed. Of the forty-four content skills within the PASS content standards eighteen were addressed.

PASS Standards/Skills Not Addressed

A number of PASS items need to be added to this curriculum to meet all relevant PASS requirements.

SUMMARY
PASS Skills in this particular analysis of Career Tech Curriculum

Curriculum: Natural Resources

PASS: Science—Biology

PASS Summary and Strengths

The core curriculum area met a minimal to moderate amount of PASS standard requirements. Of the fourteen PASS content standards eleven were addressed. Of the forty-seven content skills within the PASS content standards twenty were addressed.

PASS Standards/Skills Not Addressed

A number of PASS items need to be added to this curriculum to meet all relevant PASS requirements.