CTE Approval Self-Study Report

Natural Resources

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Self-study

> *Self-study is the first step in the career and technical education approval process. The self-study review is required for all existing programs and new programs seeking approval. Its purpose is to bring together partners to review the CTE program, propose relevant modifications, and evaluate the degree to which the program meets the policy requirements approved by the Board of Regents on February 6, 2001.*

Self-study review will include:

Curriculum review

Benchmarks for student performance and student assessment

Teacher certification and highly-qualified status of instructional staff

Work-based learning opportunities

Teacher and student schedules

Resources, including staff, facilities, and equipment

Accessibility for all students

Work skills employability profile

Professional development plans

Projected number of students to be served

Source: http://www.p12.nysed.gov/cte/ctepolicy/guide.html

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Environmental Scientists and Specialists

Quick Facts: Environmental Scientists and Specialists	
2015 Median Pay	$67,460 per year $32.43 per hour
Typical Entry-Level Education	Bachelor's degree
Work Experience in a Related Occupation	None
On-the-job Training	None
Number of Jobs, 2014	94,600
Job Outlook, 2014-24	11% (Faster than average)
Employment Change, 2014-24	10,200

What Environmental Scientists and Specialists Do

Environmental scientists and specialists use their knowledge of the natural sciences to protect the environment and human health. They may clean up polluted areas, advise policymakers, or work with industry to reduce waste.

Work Environment

Environmental scientists and specialists work in offices and laboratories. Some may spend time in the field gathering data and monitoring environmental conditions firsthand. Most environmental scientists and specialists work full time.

How to Become an Environmental Scientist or Specialist

Environmental scientists and specialists need at least a bachelor’s degree in a natural science or science-related field for most entry-level jobs.

Pay

The median annual wage for environmental scientists and specialists was $67,460 in May 2015.

Job Outlook

Employment of environmental scientists and specialists is projected to grow 11 percent from 2014 to 2024, faster than the average for all occupations. Heightened public interest in the hazards facing the environment, as well as the increasing demands placed on the environment by population growth, is expected to spur demand for environmental scientists and specialists.

Related Occupations

Occupational Title	SOC Code	Employment, 2014	Projected Employment, 2024	Change, 2014-24	
				Percent	Numeric
Environmental science and protection technicians, including health	19-4091	36,200	39,600	9	3,400
Conservation scientists	19-1031	21,100	22,500	7	1,400
Foresters	19-1032	15,500	16,800	8	1,300
Environmental engineers	17-2081	55,100	62,000	12	6,800
Geoscientists, except hydrologists and geographers	19-2042	36,400	40,200	10	3,800
Zoologists and wildlife biologists	19-1023	21,300	22,200	4	800

Bureau of Labor Statistics, U.S. Department of Labor, Occupational Outlook Handbook, 2016-17 Edition, Environmental Scientists and Specialists, on the Internet at https://www.bls.gov/ooh/life-physical-and-social-science/environmental-scientists-and-specialists.htm (visited February 15, 2017).

New York Employment Demand Profile: **Natural Resources**

Source: Labor Insight Jobs (Burning Glass Technologies), Summary Demand and Requirements Table by Occupation, New York state data, Mar. 01, 2016 - Feb. 28, 2017, Monday, March 6, 2017

Category:		**Demand and Employment**				**Salary**		**Education level based on posting requirements (*excluding NA)**					**Education level of employed individuals**		
Source:		**Burning Glass**	**BLS/OES, 2015**			**Burning Glass**	**BLS/OES, 2015**	**Burning Glass**					**ACS, 2014**		
SOC Code (ONET-6)	Occupation Title	Number of Job Postings	Number Employed	% Change in Employment, 2014-2015	Projected Statewide Change in Employment, 2016-2026	Mean Advertised Salary	Mean Salary	% Requiring high school*	% Requiring Post-Secondary or Associate's Degree*	% Requiring Bachelor's Degree*	% Requiring Graduate or Professional Degree*	% with Unspecified Education	% with a H.S. diploma or less	% with Some College or an Assoc.	% with a Bachelor's or higher
17-2081	**Environmental Engineers**	539	3,060	-3%	20.7%	$76,820	$90,220	0%	0%	96%	34%	23%	5%		88%
19-4091	**Environmental Science and Protection Technicians, Including Health**	338	2,450	-4%	21.7%	$49,874	$48,560	57%	19%	41%	4%	25%	18%		41%
19-2041	**Environmental Scientists and Specialists, Including Health**	255	3,440	25%	19.9%	$70,587	$75,780	0%	0%	84%	42%	17%	0%	5%	95%
19-1031	**Conservation Scientists**	120	390	0%	21.2%	$51,814	$70,200	41%	5%	82%	18%	53%	1%	13%	86%
19-2042	**Geoscientists, Except Hydrologists and Geographers**	89	900	-17%	21.7%	N/A	$78,320	0%	0%	96%	28%	16%	0%	5%	95%
19-1032	**Foresters**	70	200	-9%	8%	N/A	$62,800	2%	2%	95%	3%	11%	1%	13%	86%
19-1023	**Zoologists and Wildlife Biologists**	66	420	5%	4.2%	$59,350	$66,700	0%	0%	76%	49%	23%	0%	4%	96%

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A. Curriculum Review

> *The curriculum review is a step in the self-study process. It is an opportunity for members of the self-study team to evaluate the proposed curriculum for completeness in terms of the knowledge, skills, and competencies required in the program field. The team reviews the curriculum to ensure that course content in the career and technical education program meets State Education Department regulations, contributes to achievement of state and industry standards, and prepares students for successful completion of a technical assessment. Approved curriculum content is nonduplicative, challenging, organized along a continuum of difficulty, and free of bias.*
>
> *CTE program approval does not constitute Department approval or endorsement of proprietary curriculum or related curriculum products. Program approval indicates only that a school district or BOCES has provided the Department with assurances that the curriculum review has been completed.*

Process

- The school district or BOCES identifies the faculty members and other individuals who will be involved in conducting the curriculum review
- The school district or BOCES determines the procedures used in completing the curriculum review
- Reviewers confirm that CTE program content aligns with state CDOS standards, relevant state academic standards, and related business and industry standards
- Reviewers confirm that CTE program content includes integrated or specialized units of credit
- Reviewers confirm that the CTE program meets unit of credit and other distributive requirements
-

Documentation

Documentation of the curriculum review is maintained by the school district or BOCES and is updated whenever modifications are made to the approved CTE program. Recommendations from curricular review should be included in the self-study report and reviewed by the external committee.

Resources

New York State graduation requirements

http://www.emsc.nysed.gov/part100/pages/1005.html

Source: http://www.p12.nysed.gov/cte/ctepolicy/guide.html

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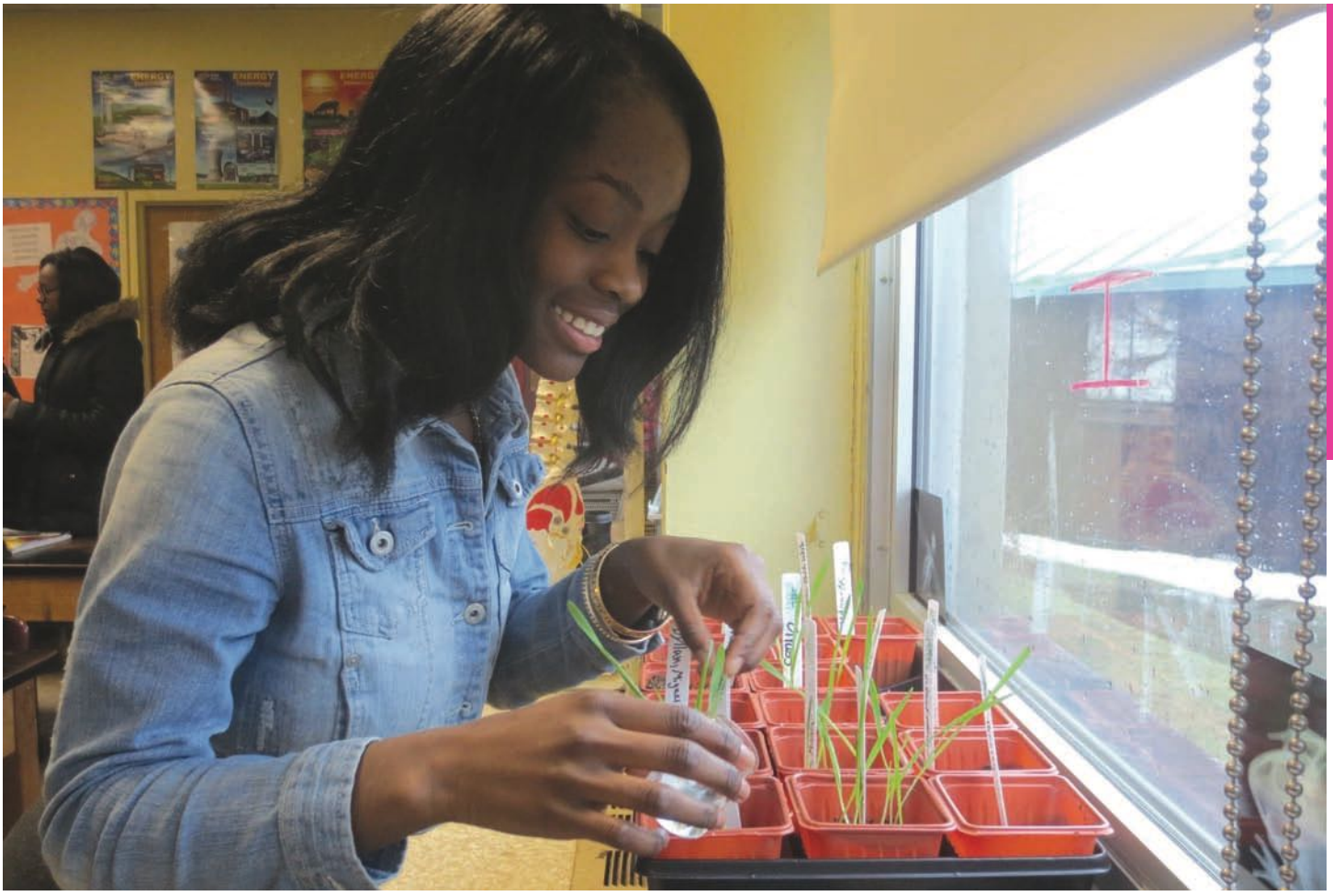

Natural Resources

The Earth is more than just the ground underneath us; it's our greatest Natural Resource. The study of Natural Resources is an interdisciplinary pathway offered at Nottingham High School.

In this program, you'll develop an integrated view of the biological, ecological and social dimensions of the environment. In addition to academic course work, you'll have the opportunity to learn about careers through guest lectures and field trips to businesses/industry and government agency partners.

Each student can choose to take CTE required courses, Regents level courses or courses with dual-enrollment from SUNY-ESF, Syracuse University Project Advance and Onondaga Community College.

Students enrolled in this pathway will acquire skills including, but not limited to:

- Planning and design
- Conservation management and environmental health
- Bioprocess engineering, biotechnology, chemistry and land surveying, park maintenance

CAREER OPPORTUNITIES:

Environmental Engineer/Scientist/Specialist, Natural Science Manager

Course of Study **Natural Resources**

9th Grade	10th Grade	11th Grade	12th Grade
■ Natural Resources 100 NAR100 (1 Credit CTE)	■ Natural Resources 200 NAR200 (1 Credit CTE)	■ Natural Resources 300 NAR300 (1 Credit CTE) ■ Natural Resources CTE Integrated Science CTE300 (1 Credit)	■ Natural Resources 400 NAR400 (1 Credit CTE) ■ Natural Resources CTE Integrated ELA CTE400 (1 Credit)

DISTRICT REQUIREMENTS

- Students must pass CTE Natural Resources 100, 200 300 and 400 to challenge the course approved technical assessment.
- All students in 10th grade will receive Career and Financial Management and Leadership credit.
- Student will have earned the 11th grade integrated science credit upon successful completion of the CTE Natural Resources 100, 200 and 300.
- Student will have earned the 12th grade integrated ELA credit upon successful completion of the CTE Natural Resources 100, 200, 300 and 400.
- Student will receive the CTE Endorsement upon successful completion of the CTE Natural Resources Program and must pass the prescribed technical assessment and complete a commencement level project.

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Syracuse City School District
Career and Technical Education Program
Course Syllabus
NAR100: Natural Resources 100

Course Description

This course introduces students to the study of natural resources in an outdoor and classroom setting through hands-on activities and learning. Students will work in groups to investigate and help solve environmental problems and will explore careers available in the natural resources pathways. Major areas of study include environmental health, science measurement and skills, ecology, biomes and ecosystems, population studies, tradeoff investigations, and mineral use and identification. Students will develop an integrated view of the biological, ecological and social dimensions of the environment and can earn credits from SUNY-ESF, Syracuse University Project Advance and Onondaga Community College.

Career opportunities include Environmental Engineer/Scientist/Specialist, Natural Science Manager

Course Objectives

1. Students will be able to identify different types of natural resources and describe their uses and any issues surrounding them.
2. Students will learn how to work in a group and be a good group member to help solve problems collectively.
3. Students will participate in several field trips to explore career opportunities in the natural resource field.

Integrated Academics

This course will help prepare students to be successful on the Living Environment and/or Earth Science Regents exam if needed.

Equipment and Supplies

- **School will provide**: Field trip opportunities, lab supplies and materials and any safety equipment when necessary.
- **Student will provide**: Composition notebook to be used as a field journal, 2-3 inch 3 ring binder to be used as students working portfolio, plastic sheet protectors.

Textbook

Environmental Science; Houghton, Mifflin, Harcourt 2013

Grading

Students will be provided with several opportunities to show their learning throughout the course. These opportunities will include homework and classwork assignments, vocabulary quizzes, laboratory reports, projects, unit exams, and hands-on lab practical exams.

Additional Course Policies

As with any science course safety is the number one priority for students at all times. Students must follow all safety rules and procedures and any additional safety precautions provided by the instructor. Any failure to comply with safety rules and procedures will result in removal from the classroom for that day and possible removal from the program if the unsafe behavior persists.

Course Calendar

Quarter	Units of Study
1	• Introduction to Science and the Environment • Ecology
2	• Populations • Water, Air and Land
3	• Minerals • Energy Resources
4	• Environmental Health • The Future • Review/Culminating Activities or Projects

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Syracuse City School District
Career and Technical Education Program
Scope and Sequence
NAR100: Natural Resources 100

Time Frame Unit of Study	Key Questions	Key Learning Targets (Students should know and be able to)	Assessment Evidence of Learning	Related Standards	CCLS Literacy, ELA, Math, Science Standards
Weeks 1-6 **Introduction to Science and the Environment**	• What is Environmental Science? • What 5 major fields of study contribute to Environmental Science? • How did each stage in human development affect the planet/environment? • What are the main environmental problems throughout history and today? • How do scientists solve problems and communicate their knowledge?	• Define and explain proper science lab and field safety procedures • Distinguish between types of resources (renewable, nonrenewable) • Scientific inquiry progresses through a continuous cycle of questioning, data collection, interpretation, analysis, and critical review by other scientists (the scientific method)	Labs: • Lab Safety/Introduction to field study • Let's Graph • Making Metric Measurements and Conversions • Microscope Measurement • Ecological Footprints Project: • Scientific Method Project HW: • Chapter Questions • Vocabulary • Skill Builders Class Work: • Journal Writing • Case Studies • Current Events • Readings and Text-based Questions Tests: • Chapter • Unit Quizzes: • Vocabulary • Metric Measurement and conversions • Lab Safety • Graphing	**Career Ready Practices** CRP2,4,5	**Literacy** RI.9-10.1,4 RST.9-10.1,3,4,7 WHST.9-10.2,6
				Cluster Standards AG2,3	**ELA** RSI.9-10.1-8 W.9-10.3,4,6,10 SL.9-10.1,4 L.9-10.1,2,3,4,6
				Pathway Standards AG-ENV1,5	**Math** HSS.IC.A.1 HSS.IC.B.3
					Science HS.ES2 HS.ES3 HS.ETS1

Time Frame Unit of Study	Key Questions	Key Learning Targets (Students should know and be able to)	Assessment Evidence of Learning	Related Standards	CCLS Literacy, ELA, Math, Science Standards
			Field Trip/Field work: • School Grounds • ESF forest in Tully		
Weeks 7-12 **Ecology**	• What are the components of an ecosystem? • How do organisms interact in an ecosystem? • What is a biome? • What are the different biomes and what determines them? • How are biomes related to ecosystems? • How do ecosystems change over time? • How do humans affect different ecosystems?	• Describe the biotic and abiotic factors that make up an ecosystem and how they interact • Describe how energy is transferred through an ecosystem from producers to consumers • Explain the relationship between producers and consumers • Describe the cycling of carbon, nitrogen, and phosphorous through an ecosystem • Identify ways human activities affect the cycling of materials • Describe the 2 types of ecological succession • Name and describe the biomes and explain why vegetation is used to classify them • Describe the diversity of species types on Earth • Explain why biodiversity is important to ecosystems and humans	Labs: • Ecosystem in a Jar • Pond Water Safari • Food Webs • Cycling Nutrients through an Ecosystem • Owl Pellet Dissection • Dichotomous Keys Project: Biomes of the World (presentation with PowerPoint or Prezi) HW: • Chapter Questions • Vocabulary • Skill builders Class work: • Journal Writing • Case Studies • Current Events • Reading passages with text dependent questions • Tests: • Chapter • Unit • Quizzes: • Vocabulary • Parts of an Ecosystem	**Career Ready Practices** CRP1,2,4,5,8 **Cluster Standards** AG1,2,6 **Pathway Standards** AG-ANI5 AG-ENV2,3	**Literacy** RI.9-10.1,4 RST.9-10.1,3,4,7 WHST.9-10.2,6 **ELA** RSI.9-10.1-8 W.9-10.3,4,6,10 SL.9-10.1,4,5 L.9-10.1,2,3,4,6 **Math** HSS.ID.C.7 HSS.ID.C.9 HSS.IC.A.1 HSS.IC.B.3 HSS.IC.B.6 **Science** HS.LS2 HS.LS4 HS.ES3

Time Frame Unit of Study	Key Questions	Key Learning Targets (Students should know and be able to)	Assessment Evidence of Learning	Related Standards	CCLS Literacy, ELA, Math, Science Standards
			• Food Webs • Biomes • Field Trip/Field work: • Using Field Guides to Identify Local Organisms		
Weeks 13-17 **Populations**	• What are populations? • What limits population growth? • How has the human population changed over time? • How does an increased human population affect finite resources?	• Describe the 3 main properties of a population • Describe logistic vs. exponential population growth • Explain how population sizes are regulated in nature • Explain carrying capacity and limiting factors • Explain predator and prey relationships and adaptations for survival • Explain density dependent and density independent limiting factors • Describe how the human population has changed over the last 200 years • Describe 3 problems caused by rapid human population growth	Labs: • Kaibab Deer • Predator-Prey Relationships • Population Growth • Sampling Methods • Human Population Growth • Calculating Generation Rate Projects: • Endangered Species Project (just written) HW: • Chapter Questions • Vocabulary • Skill Builders • Class Work: • Case Studies • Current Events • Reading passages with text dependent questions Tests: • Chapter • Unit Quizzes:	**Career Ready Practices** CRP1,2,4,5,7,811	**Literacy** RST.9-10.1,3,4,7 WHST.9-10.2,6
				Cluster Standards AG1,2,6	**ELA** RSI.9-10.1-8 W.9-10.1,3,4,5,6,9,10 SL.9-10.1,4,5 L.9-10.1,2,3,4,6
				Pathway Standards AG-NR1,2,3	**Math** HSS.ID.C.7 HSS.ID.C.9 HSS.IC.A.1 HSS.IC.B.3 HSS.IC.B.6
					Science HS.LS2 HS.ES3

Time Frame Unit of Study	Key Questions	Key Learning Targets (Students should know and be able to)	Assessment Evidence of Learning	Related Standards	CCLS Literacy, ELA, Math, Science Standards
			• Vocabulary Graphing population data • Map Skills Fieldtrip/Fieldwork: • Rosamond Gifford Zoo • Fish Hatchery • Sampling Practice (local)		
Weeks 18-22 **Water, Air and Land**	• What are the parts of the water cycle and how do humans affect each part? • How is our water supply protected? • What is the ozone field? • What are the causes and effects of pollution? • What causes acid precipitation and what are the effects? • What is climate change and what are the causes and effects? • How do we use land? • What is land management and why is it important? • How are policies made surrounding the use of air, water, and land? • What is a tradeoff and what role do they play in making environmental policies?	• Describe the water cycle. • Discuss the distribution of water on Earth • Explain why freshwater is a limited resource. • Identify patterns of global water use • Identify ways water can be conserved • Describe types of water pollution and their sources • Describe the laws designed to improve water quality • Name air pollutants and provide sources • Describe how air pollution affects human health • Explain the cause of acid rain and the effect it has on the environment • Explain how the ozone shield protects the Earth • Explain the greenhouse effect • Explain why the carbon dioxide level of the atmosphere is increasing and name the sources	Labs: • Water Cycle • Water Quality • Ground Water Filtration • Oil Spill • pH Lab • Acid Rain • Land Use • Topographic Maps • Climatographs Projects: • Public Service Announcement • Persuasive Writing (with debate) HW: • Chapter Questions • Vocabulary • Skill Builders • Reading passages and text dependent questions Class Work: • Case Studies • Daily Journal Writing • Current Events Tests: • Chapter • Unit	**Career Ready Practices** CRP2,4,5,6,7,8,11 **Cluster Standards** AG1,6 **Pathway Standards** AG-NR1,2	**Literacy** RST.9-10.1,3,4,7 WHST.9-10.2,6 **ELA** RSI.9-10.1-9 W.9-10.3,4,6,10 SL.9-10.1,4,5 L.9-10.1,2,3,4,6 **Math** HSS.ID.C.9 HSS.IC.B.6 HSS.IC.B.5 **Science** HS.ES2 HS.ES3 HS.LS2

Time Frame Unit of Study	Key Questions	Key Learning Targets (Students should know and be able to)	Assessment Evidence of Learning	Related Standards	CCLS Literacy, ELA, Math, Science Standards
		• Describe the effects of a warmer Earth • Determine the pro's and con's of environmental situations and use them to make a decision	Quizzes: • Vocabulary • Graphing • Map Skills Fieldtrip/Fieldwork • Waste Water Facility (Minoa) • Chittenango Falls		
Weeks 23-26 **Minerals**	• What is a mineral? • What are the properties of minerals? • How do minerals form? • What uses do we have for minerals? • What are the environmental impacts of mining minerals?	• Define the term mineral • Describe the properties of minerals and how to identify minerals based on their properties • Describe the process by which a mineral forms • Describe mineral extraction • Describe the methods used for mining minerals • Describe the possible environmental impacts of mineral mining and extraction • Describe the economic impacts of mining for countries • Describe how the government regulates mining	Labs: • Properties of Minerals • Identifying Minerals • Mining Minerals • Extraction of Copper from its Ore Projects: • Mining Information Brochure HW: • Chapter Questions • Vocabulary • Skill Builders Class Work: • Case Studies • Daily Journal Writing • Current Events • Reading passages with text dependent questions Tests: • Unit Quizzes: • Vocabulary • Identifying Minerals Fieldtrip/Fieldwork: • Herkimer Diamond Mines	**Career Ready Practices** CRP1,2,4,5,8,9,12 **Cluster Standards** AG1,2,6 **Pathway Standards** AG-ENV2 AG-NR1,2	**Literacy** RI9-10.1,4 RST.9-10.1,3,4,7 WHST.9-10.2,6 **ELA** RSI.9-10.1-9 W.9-10.3,4,6,10 SL.9-10.1,4 L.9-10.1,2,3,4,6 **Math** HSG.MG.A.2 HSS.IC.B.6 HSS.IC.B.5 **Science** HS.ES2 HS.ES3

Time Frame Unit of Study	Key Questions	Key Learning Targets (Students should know and be able to)	Assessment Evidence of Learning	Related Standards	CCLS Literacy, ELA, Math, Science Standards
			• Museum Of Science and Technology		
Weeks 27-31 **Energy Resources**	• What are renewable and nonrenewable energy resources? • How are fossil fuels formed? • How are fossil fuels used? • What are the consequences of using fossil fuels? • What is nuclear energy? • What is the energy use per country? • How can energy be conserved? • How is energy regulated?	• Name and list renewable energy resources and nonrenewable energy resources • List types of renewable energy and discuss the advantages and disadvantages of each • Explain how fossil fuels are formed and why they are considered nonrenewable • List the advantages and disadvantages of using nuclear power • Identify ways in which energy can be conserved in daily life • Explain energy efficient appliances and compare them	Labs: • Classifying Resources • Household Energy Consumption • Energy Efficient Appliance Comparison • Blowing in the Wind • Wind Power Projects: • Design an Energy Policy • Energy Use Debate HW: • Chapter Questions • Vocabulary • Skill Builders • Monitor Home Energy Use Class Work: • Case Studies • Daily Journal Writing • Current Events • Reading Passages with text dependent questions Tests: • Unit Quizzes: • Vocabulary • Energy Efficiency • Map Skills	**Career Ready Practices** CRP1,2,4,5,6,7,8,11 **Cluster Standards** AG1,2,6 **Pathway Standards** AG-NR2	**Literacy** RI.9-10.1,4,7 RST.9-10.1,3,4,7 WHST.9-10.2,6 **ELA** RSI.9-10.1-9 W.9-10.2,3,4,6, 10 SL.9-10.1-4,6 L.9-10.1,2,3,4,6 **Math** HSS.ID.C.9 HSS.IC.B.3 HSS.IC.B.5 HSS.IC.B.6 **Science** HS.ES2 HS.ES3

Time Frame Unit of Study	Key Questions	Key Learning Targets (Students should know and be able to)	Assessment Evidence of Learning	Related Standards	CCLS Literacy, ELA, Math, Science Standards
			Fieldtrip/Fieldwork: • Fenner Wind Farm • Morrisville College?		
Weeks 32-35 **Environmental Health**	• How is solid waste disposed of? • What are the environmental and health related problems caused by landfills and burning trash? • What are biodegradable materials and can they be cost effective? • What are the benefits of recycling? • How can waste be hazardous to human health? • What are biological hazards? • How do environmental changes contribute to an increase in infectious diseases?	• Describe how landfills work • Name environmental problems caused by landfills • Identify types of solid waste • Name the characteristics that make a material biodegradable • Identify ways by which the amount of solid waste can be reduced • Describe how consumer buying power can influence solid waste reduction • Discuss the law of supply and demand • List the benefits of composting • Name characteristics of hazardous waste • Describe how hazardous waste can be disposed of safely • Explain how scientists use toxicology and epidemiology • Describe the relationship between waste, pollution, and human health	Labs: • Garbage Lab • Composting • Lead Poisoning and Mental Ability • Lyme Disease Risk Projects: • Recycling Education Campaign HW: • Chapter Questions • Vocabulary • Skill Builders Class Work: • Case Studies • Daily Journal Writing • Current Events • Reading passages with text dependent questions Tests: • Unit Quizzes: • Vocabulary • Graphing • Map Skills Fieldtrip/Fieldwork: • OCCRA • Landfill • Waste to Energy Plant	**Career Ready Practices** CRP1,2,4,5,6,7,8,9	**Literacy** RI.9-10.1,4,5 RST.9-10.1,3,4,7 WHST.9-10.2,6
				Cluster Standards AG1,2,6	**ELA** RSI.9-10.1-8 W.9-10.3,4,6,10 SL.9-10.1,4 L.9-10.1,2,3,4,6
				Pathway Standards AG-ENV2,3	**Math** HSS.IC.B.5 HSS.IC.B.6
					Science HS.LS2 HS.ES2 HS.ES3

Time Frame Unit of Study	Key Questions	Key Learning Targets (Students should know and be able to)	Assessment Evidence of Learning	Related Standards	CCLS Literacy, ELA, Math, Science Standards
		• Describe how changes in the environment can lead to changes in infectious diseases	• Composting (local)		
Weeks 36-38 **The Future**	• What does sustainability mean? • What does it mean to live sustainably? • How do people determine the value of a product? • What are Environmental Impact Statements and what is their purpose? • How can individuals impact environmental policy?	• Describe some of the challenges of living sustainably • Explain how economics and environmental science are related • Explain how economics can limit environmental changes or choices • Give examples of how private efforts address environmental problems • Give examples of federal agencies that have environmental responsibilities • Identify ways in which the choices you make as an individual may affect the environment	Labs: • Internet Lab – Making Conservation Profitable • Price Comparison of going green • Projects: • Be an Environmental Scientist HW: • Chapter Questions • Vocabulary • Skill Builders Class Work: • Case Studies • Daily Journal Writing • Current Events • Reading passages with text dependent questions Tests: • Unit • Quizzes: • Vocabulary Fieldtrip/Fieldwork: • Farmers Market	**Career Ready Practices** CRP1,2,4,5,6,7,8	**Literacy** RI.9-10.1,4 RST.9-10.1,3,4,7 WHST.9-10.2,6
				Cluster Standards AG1,2,6	**ELA** RSI.9-10.1-8 W.9-10.3,4,6,10 SL.9-10.1,4 L.9-10.1,2,3,4,6
				Pathway Standards AG-ENV2,3 AG-NR1,2,3	**Math** HSS.IC.B.5 HSS.IC.B.6
					Science HS.LS2 HS.ES2 HS.ES3
Weeks 39-40 **Review and Culminating**	• How do we apply this information to real world problems?	• Apply information learned to research an environmental issue or	• Final Exam • Research Project and Presentations	**Career Ready Practices** CRP2,4,5,6,7,8,11	**Literacy** RI.9-10.1,4,7 RST.9-10.1,3,4,7

Time Frame Unit of Study	Key Questions	Key Learning Targets (Students should know and be able to)	Assessment Evidence of Learning	Related Standards	CCLS Literacy, ELA, Math, Science Standards
Activities		problem and present the findings			WHST.9-10.2,6
				Cluster Standards AG1,2,6	**ELA** RSI.9-10.1,3-8, 10 W.9-10.1,3,4,5, 6,7,8,9,10 SL.9-10.1,4,6 L.9-10.1,2,3,4,6
				Pathway Standards AG-ENV2,3 AG-NR2,3	**Math** HSS.IC.B.5 HSS.IC.B.6
					Science HS.LS2 HS.ES2 HS.ES3

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Syracuse City School District
Career and Technical Education Program
Course Syllabus
NAR200: Natural Resources 200

Course Description

Natural Resources 200 is the second course in the CTE pathway and includes additional hands-on learning opportunities both outdoors and inside the classroom. Students will work in groups to gain knowledge about natural resources, the ways they are used and how they are analyzed. Through these activities, they will gain an understanding of various careers options. Students will develop an integrated view of the biological, ecological and social dimensions of the environment and can earn credits from SUNY-ESF, Syracuse University Project Advance and Onondaga Community College.

Career opportunities include Environmental Engineer/Scientist/Specialist, Natural Science Manager

Course Objectives

1. Assess and monitor stream, soil, and forest health.
2. Collect and interpret from field testing.
3. Identify native plant species and the importance of plants in the ecosystem.
4. Understand minerals and mining types and processes and describe the positive and negative aspects of each.
5. Students will learn about different types of maps and create various types of maps to depict different types of information.
6. Discuss current environmental health issues and strategize ways to limit or control and environmental health issue.
7. Successfully complete the Red Cross CPR and First Aid Certification Exam.

Integrated Academics

This course will help prepare students to be successful on the Living Environment and/or Earth Science Regents exam if needed.

Equipment and Supplies

- **School will provide**: Field trip opportunities, lab supplies and materials and any safety equipment when necessary.
- **Student will provide**: Composition notebook to be used as a field journal, 2-3 inch 3 ring binders to be used as students working portfolio, plastic sheet protectors.

Textbook

Environmental Science; Houghton, Mifflin, Harcourt 2013

Grading

Students will be provided with several opportunities to show their learning throughout the course. These opportunities will include homework and classwork assignments, vocabulary quizzes, laboratory reports, projects, unit exams, and hands-on lab practical exams.

Additional Course Policies

As with any science course safety is the number one priority for students at all times. Students must follow all safety rules and procedures and any additional safety precautions provided by the instructor. Any failure to comply with safety rules and procedures will result in removal from the classroom for that day and possible removal from the program if the unsafe behavior persists.

Course Calendar

Quarter	Units of Study
1	• Streams, testing, data collection and interpretation. • Safety rules and regulations for field work. • CPR and First Aid Certification.
2	• Plant identification, classifications and propagation. • Plant Diseases. • Threats to local plant life and plant conservation.
3	• Maps used in environmental field work. • Map skills and map creation for field work. • Soil components, classifications and steps in soil formation.
4	• Nutrients cycled through the soil and identification of living organisms that help the cycling process. • Mineral extraction, mining and its impact on the environment. • Current environmental health issues, their effects on humans and other organisms. • Predicting future environmental health concerns, based on present day patterns and choices.

Return to TOC

Syracuse City School District
Career and Technical Education
Scope and Sequence
NAR200: Natural Resources 200

Time Frame Unit of study	Key Questions	• Key Learning Targets (Students will know and be able to)	Assessment Evidence of Learning	Related Standards	CCLS Literacy, ELA, Math, Science
Weeks 1-8: **Streams**	• What aspects of water quality can be measured? • What determines the quality of the water in a stream? • How can we determine the health of a stream? • What affects the health of a stream? • What role do humans play in the health of streams and their ecosystems? • How can we interpret macroinvertebrate data to get an idea of stream health? • What conservation methods can we utilize to protect streams?	• Describe what tests should be done to examine the water quality of a stream • Interpret the meaning of test outcomes • How things like pollution, run off, erosion, buffer zones, watersheds affect the overall health of streams • Use dichotomous keys to identify macroinvertebrates in local steams and create a food web from the data • Interpret the data from macroinvertebrate analysis to assess overall stream health • Identify ways to conserve water and help keep streams healthy	Labs: • Water pollution • Water analysis • Stream formation • Dichotomous keys • Macroinvertebrate Lab Project: • Macroinvertebrate Collection and ID for DEC, write a report to send to DEC HW: • Chapter questions • Vocabulary • Skill builders Classwork: • Case studies • Current events Tests: • Chapter • Unit Quizzes: • Vocabulary Fieldtrip/Fieldwork: Nottingham Campus	**Career Ready Practice** CRP1,2,4,5,7,8,11,12	**Literacy** 1,2,3,4, 7,9 WHST.9-10.1,2,10
				Cluster Standards AG2,6	**ELA** RSI.9-10.1-9 W.9-10.2,3,4,6,10 SL.9-10.1,3,4 L.9-10.1,2,3,4,6
				Pathway Standards AG-NR2,3	**Math** N-Q1,2,3 S-IC6 F-IF6 F-LE3 G-GMD3 G-MG1,2
					Science HS-LS1 HS-LS2 HS-LS4 HS-ES3
Weeks 9-12: **Safety and First**	• What are common first aid emergencies?	• Identify when common first aid should be used	Labs: • Basic First Aid	**Career Ready Practice** CRP1,2,3,4	**Literacy** RST.9-10.1,2,3,4,7 WHST.9-10.1,2,10

Time Frame Unit of study	Key Questions	• Key Learning Targets (Students will know and be able to)	Assessment Evidence of Learning	Related Standards	CCLS Literacy, ELA, Math, Science
Aid	• How should you respond to common first aid emergencies? • How should you respond to cardiac or breathing emergencies? • How are pediatric responses different than adult responses? • What should you do to stay safe in the field and prevent emergencies from occurring? • How can you survive in the field during an emergency?	• Decide what action should be taken when first aid is required • Demonstrate the correct action to take when first aid is required • Perform proper CPR techniques on both adults and infants • Explain how pediatric responses should be different than adult responses and demonstrate the differences • Describe proper safety rules and regulations when working in the field • Describe survival strategies for emergency situations	• CPR for all • Survival 101 Project: • Become First Aid Certified HW: • Chapter questions • Vocabulary • Skill builders Classwork: • Case studies • Current events • First aid demos Tests: • Chapter • Unit • Lab practical Quizzes: • Vocabulary Fieldtrip/Fieldwork: Nottingham Campus		**ELA** RSI.9-10.1-8 W.9-10.3,4,6,10 SL.9-10.1,3,4 L.9-10.1,2,3,4,6
				Cluster Standards AG3	**Math** N-Q1,2,3
				Pathway Standards AG-NR1	**Science** HS-ESS3
Weeks 13-20: **Plants (ID, Classification, Propagation and Diseases)**	• What are the main parts of plants, flowers, and trees? • What are the different classifications of plants? • What characteristics of plants can be used to identify them? • How are dichotomous keys used in the field to identify unknown plants? • How do plants reproduce? • What are the current	• Name and identify the parts of a leaf, flower, and tree • Determine the different groups of plants and how they are classified • Use both physical and molecular characteristics of plants to help identify the plant type and name • Use a dichotomous key to identify leaves and twigs • Describe different types of reproductive methods used by plants and their	Labs: • Dissecting a flower • Plant types • Plant ID • Dichotomous keys • Disease ID • Plant Conservation Project: • Leaf collection • Research project on plant disease HW: • Chapter questions • Vocabulary • Skill builders	**Career Ready Practice** CRP2,4,5,7,8,9,12	**Literacy** RST.9-10.1,2,3,4,5,6,7,8 WHST.9-10.1,2,7,10
				Cluster Standards AG6	**ELA** RSI.9-10.1-8 W.9-10.2,3,4,5,6,7,8,9,10 SL.9-10.1,2,4,5 L.9-10.1,2,3,4,6
				Pathway Standards AG-NR2 AG-PL2,3	**Math** N-G1 F-IF6 S-IC6 S-ID1-4,9

Time Frame Unit of study	Key Questions	• Key Learning Targets (Students will know and be able to)	Assessment Evidence of Learning	Related Standards	CCLS Literacy, ELA, Math, Science
	threats to local plant life in CNY? • What diseases affect plants and how can they be identified? • What are current methods being used to help conserve plants?	success rate • Identify and determine the consequences of the threats to local plant life. • Develop an action plan to help slow or eliminate the threats to local plant life • Identify plants with diseases and which disease they have contracted • Discuss the tradeoffs of current conservation methods for plants	Classwork: • Case studies • Current events Tests: • Chapter • Unit • Lab practical Quizzes: • Vocabulary Fieldtrip/Fieldwork: Nottingham Campus Local nursery/tree farm		F-LE3 G-GMD3 G-MG1,2,3 **Science** HS-LS1 HS-LS2 HS-LS4 HS-ES3 HS-ETS1
Weeks 21-26: **Map Skills**	• What role do maps play in field work? • What symbols are used on maps? • How are different types of maps used and for what purpose? • Which type of map would you use for different purposes? • How are maps created? • What must be included in a good map when making one?	• Describe situations when you would use a map when doing field work • Determine how symbols and scales are used on maps and demonstrate how to use them • Name the different types of maps and the function of each type • Read different types of maps, including road maps, topographic maps, political maps, climate map, resource map, and thematic maps • Create your own map using proper scale, direction, and symbols	Labs: • Map types • Reading maps • Creating maps • Topographic maps • Scales and Symbols Project: • Map Project HW: • Chapter questions • Vocabulary • Skill builders Classwork: • Case studies • Current events Tests: • Chapter • Unit Quizzes: • Vocabulary Fieldtrip/Fieldwork: Nottingham Campus	**Career Ready Practice** CRP1,2,4,5,6,8,11, 12	**Literacy** RST.9-10.1-5,7 WHST.9-10.1,2,10
				Cluster Standards AG2	**ELA** RSI.9-10.1-8 W.9-10.2,3,4,6,10 SL.9-10.1,4 L.9-10.1,2,3,4,6
				Pathway Standards AG-NR1	**Math** N-Q1,2,3 F-IF4,5,6 **Science** HS-ESS2 HS-ESS3 HS-ETS1

Time Frame Unit of study	Key Questions	• Key Learning Targets (Students will know and be able to)	Assessment Evidence of Learning	Related Standards	CCLS Literacy, ELA, Math, Science
Weeks 27-32: **Soil**	• What are the basic components, uses, and properties for soil? • How does soil form and what can affect the formation? • What interactions among living organisms occur within soil? • How does soil affect nutrient cycling? • How do nutrient deficiencies affect output from land and what can be done to manage nutrients within soil? • What can we learn from soil analysis and the processes that occur within and around the soil?	• Name the basic components of soil and describe different types of soils that exist • Describe how soils are classified and what characteristics determine that classification • Name and describe the uses for soil around the world and in previous cultures. • Describe the soil formation process using the steps outlined in CLORPT • Utilize data analysis to create a soil map. • Describe which nutrients are cycled through the soil and what living organisms help the cycling process • Interpret the interactions among the living organisms found within the soil • Analyze soil for content and be able to list any nutrient deficiencies and their possible cause • Develop a plan to manage soil and land use to prevent nutrient deficiencies • Investigate soil characteristics and processes such as pH,	Labs: • ID soil types • Porosity and Permeability • Soil Maps • Soil Analysis HW: • Chapter questions • Vocabulary • Skill builders Classwork: • Case studies • Current events Tests: • Chapter • Unit Quizzes: • Vocabulary Fieldtrip/Fieldwork: • Nottingham Campus • Hebeirg Forest (Mr. Ray on advisory board)	**Career Ready Practice** CRP1-5,7,8,11,12 **Cluster Standards** AG1,6 **Pathway Standards** AG-NR1 AG-PL1	**Literacy** RST.9-10.1-10 WHST.9-10.1,2,10 **ELA** RSI.9-10.1-8 W.9-10.3,4,6,10 SL.9-10.1,3,4 L.9-10.1,2,3,4,6 **Math** N-Q1,2,3 **Science** HS-ESS2 HS-LS4 HS-ES3

Time Frame Unit of study	Key Questions	• Key Learning Targets (Students will know and be able to)	Assessment Evidence of Learning	Related Standards	CCLS Literacy, ELA, Math, Science
		sorption, precipitation, oxidation and reduction reactions, and organic matter within the soil			
Weeks 33-36: **Mineral Extraction (Ores)**	• What use do we have for minerals and ores that need to be mined from the Earth? • How are mining sites located? • What types of mining exist and what are the positive and negative effects of each type? • What is the environmental impact of mining in the Earth? • How can we limit the effects mining practices have on the Earth? • What role does the NMA (National Mining Association) play in mining? • What technology is used to present day mining?	• Name the types of minerals and ores we mine for and that each mineral and ore is used for • Describe the process of identifying sites for mining of different minerals and ores • Describe the main types of mining, including surface, strip, subsurface, and solution mining • Determine positive and negative aspects of each type of mining • Name the cause and effects of acid mine drainage and how it can be limited or prevented • Explain how reclaiming and restoring land after mines have been abandoned would limit the effects on the environment	Labs: • Mineral ID • Mineral Extraction • Mineral Uses • Environmental Impact of Mining Project: • Mining "How To" Guide (with safety info, environmental impact info) HW: • Chapter questions • Vocabulary • Skill builders Classwork: • Case studies • Current events Tests: • Chapter • Unit Quizzes: • Vocabulary Fieldtrip/Fieldwork: Nottingham Campus • Herkimer Diamond Mine	**Career Ready Practice** CRP1,2,4,5,8,12	**Literacy** RST.9-10.1,2,3,7,8 WHST.9-10.1,2,9,10
				Cluster Standards AG1,2	**ELA** RSI.9-10.1-8,10 W.9-10.2,3,4,5,6,7,8,10 SL.9-10.1,4 L.9-10.1,2,3,4,6
				Pathway Standards AG-NR2,3	**Math** N-Q1,2,3 G-GMD3 S-IC6
					Science HS-ES2 HS-ES3 HS-LS2
Weeks 37-40: **Environmental Health (current)**	• What are the current environmental health issues we face today?	• Identify current health issues (including lead, zika virus, Ebola, flu	Labs: • Mapping diseases • Spreading	**Career Ready Practice** CRP1,2,4,5,8,12	**Literacy** RST.9-10.1,2.4,5,10 WHST.9-10.1,2,7,8,9,10

Time Frame Unit of study	Key Questions	• Key Learning Targets (Students will know and be able to)	Assessment Evidence of Learning	Related Standards	CCLS Literacy, ELA, Math, Science
	• What are the effects of these environmental health issues on humans and other organisms? • What can we do to help limit or eliminate the risks associated with these environmental health issues?	strains, diabetes, cancer, and other diseases or issues) • Describe how humans are affected by each health issue • Describe how each health issue affects other organisms • Develop an action plan to help limit or eliminate one cause of an environmental health issue • Predict future health issues based on present day environmental patterns or choices	infectious diseases • Predict Life Span Project: • Informational Brochure on health issue HW: • Chapter questions • Vocabulary • Skill builders Classwork: • Case studies • Current events Tests: • Chapter • Unit Quizzes: • Vocabulary Fieldtrip/Fieldwork: • Nottingham Campus • Health clinic	**Cluster Standards** AG1,2 **Pathway Standards** AG1,4,5 AG-NR2	**ELA** RSI.9-10.1-8 W.9-10.3,4,6,10 SL.9-10.1,4 L.9-10.1,2,3,4,6 **Math** N-Q1,2,3 F-IF4,6 F-LE3 S-ID1,2,3,4,9 S-IC1,2,3,6 **Science** HS-ES2,3 HS-L4

Return to TOC

Syracuse City School District
Career and Technical Education Program
Course Syllabus
NAR300: Natural Resources 300

Program Overview

This course introduces students to the study of natural resources in an outdoor and classroom setting through hands-on activities and learning. Students will work in groups to investigate and help solve environmental problems and will explore career options in the natural resources pathways. Major areas of study include environmental health, science measurement and skills, ecology, biomes and ecosystems, population studies, tradeoff investigations, and mineral use and identification. Students will develop an integrated view of the biological, ecological and social dimensions of the environment and can earn credits from SUNY-ESF, Syracuse University Project Advance and Onondaga Community College.

Career opportunities include Environmental Engineer/Scientist/Specialist, Natural Science Manager

Course Description

During this course students will identify the risks of natural disasters, prepare for hazardous conditions, learn map making and surveying skills, identify and classify animals, learn about plant and animal diseases, invasive species and research current environmental health concerns.

Pre-Requisites

Natural Resources 100 and 200

Course Objectives

- Create an emergency preparedness kit for any natural disaster or environmental emergency.
- Create a map using surveying techniques and skills.
- Identify animals using classification techniques, tracks, or other pieces of information.
- Identify plant and animal diseases and develop an action plan to prevent the spread.
- Design a plan to identify local invasive species and stop their spread.
- Research current issues that affect the health of the environment and human populations.

Integrated Academics

1 ELA Credit will be earned at the completion of this course.

Equipment and Supplies

- **School will provide***:* Field trip opportunities, lab supplies and materials and any safety equipment when necessary.
- **Student will provide:** Composition notebook, writing utensils.

Textbook

Environmental Science; Houghton, Mifflin, Harcourt 2013

Grading

Students will be provided with several opportunities to show their learning throughout the course. These opportunities will include homework and classwork assignments, vocabulary quizzes, laboratory reports, projects, unit exams, and hands-on lab practical exams.

Additional Course Policies

As with any science course safety is the number one priority for students at all times. Students must follow all safety rules and procedures and any additional safety precautions provided by the instructor. Any failure to comply with safety rules and procedures will result in removal from the classroom for that day and possible removal from the program if the unsafe behavior persists.

Course Calendar

Quarter	Units of Study
1	• Hazards and Natural Disasters
2	• Animal Classification, ID and Natural Tracking Skills • Plant and Animal Diseases
3	• Pests and Invasive Species • Map Making and Surveying Skills
4	• Environmental Health

Return to TOC

Syracuse City School District
Career and Technical Education
Scope and Sequence
NAR300: Natural Resources 300

Time Frame Unit of study	Key Questions	Key Learning Targets (Students will know and be able to)	Assessment Evidence of Learning	Related Standards	CCLS Literacy, ELA, Math, Science
Weeks 1-8: **Animal Classification and ID**	• How can animals be identified and what characteristics determine how they are classified? • What types of animal reproduction exist and how does the type of reproduction effect the continuation of the species? • What is tracking and why would we want to know how to track animals? • What role do animals play in ecosystems and natural environments and how do they change those areas? • How can animals be identified and what characteristics determine how they are classified? • What types of animal reproduction exist and how does the type of reproduction effect the continuation of the species? • What is tracking and why would we want to	• Determine major animal classification within the Animal Kingdom and the characteristics that define each • Use dichotomous keys to identify animals • Describe and analyze the system of animal classifications • Identify the names of animals using the KPCOFGS classification system, know 15 local animals by their scientific name • Examine animal reproduction and explain how each type is effective for the animal's lifestyle or habitat • Differentiate between internal and external reproduction and when/why each is used • Define the term "tracking," explain each type of "track," and ID animals using their tracks • Determine animal roles in the environment and identify how they contribute to changes in their natural environments • Determine major animal classification within the	Labs: • Classify Animals • Dichotomous Keys to ID Animals • Identify animal tracks • Animal Reproduction Project: • Animal Tracking Journal HW: • Chapter questions • Vocabulary • Skill builders • Classwork: • Case studies • Current events • Journal Writing Tests: • Chapter • Unit • Lab practical • Quizzes: • Vocabulary Fieldtrip/Fieldwork: • Nottingham Campus • Beaver Lake, ESF Heiberg Forest, Clarks Reservation (OR other outdoor space for tracking	**Career Ready Practice** CRP1,2,4,5,7,8,12 **Cluster Standards** AG1,2,4,6 **Pathway Standards** AG-ANI1,3,4,6 AG-NR3	**Literacy** RST.11-12.1,2,3,5,8,9 WHST.11-2.1,2,4,6,9,10 **ELA** RSI.11-12.1-8 W.11-12.2,3,4,6,10 SL.9-11-12.1,4 L.11-12.1,2,3,4,6 **Math** G-MG1,2,3 N-Q-A1,2,3 S.ICB4 S.ICB6 S.MDB7 HSS-IDC9 **Science** HS-LS1,2,4 HS-ESS3 HS-ETS1

Time Frame Unit of study	Key Questions	Key Learning Targets (Students will know and be able to)	Assessment Evidence of Learning	Related Standards	CCLS Literacy, ELA, Math, Science
	know how to track animals? • What role do animals play in ecosystems and natural environments and how do they change those areas?	Animal Kingdom and the characteristics that define each • Use dichotomous keys to identify animals • Describe and analyze the system of animal classifications • Identify the names of animals using the KPCOFGS classification system, know 15 local animals by their scientific name • Examine animal reproduction and explain how each type is effective for the animal's lifestyle or habitat • Differentiate between internal and external reproduction and when/why each is used • Define the term "tracking," explain each type of "track," and ID animals using their tracks • Determine animal roles in the environment and identify how they contribute to changes in their natural environments	animals) Labs: • Classify Animals • Dichotomous Keys to ID Animals • Identify animal tracks • Animal Reproduction Project: • Animal Tracking Journal HW: • Chapter questions • Vocabulary • Skill builders • Classwork: • Case studies • Current events • Journal Writing Tests: • Chapter • Unit • Lab practical • Quizzes: • Vocabulary Fieldtrip/Fieldwork: • Nottingham Campus • Beaver Lake, ESF Heiberg Forest, Clarks Reservation (OR other outdoor space for tracking animals)		
Weeks 9-16:	• What types of fish are in NY and what	• Identify all major groups of fish found in NYS and	Labs: • FISH ID	**Career Ready Practice**	**Literacy** RST.11-12.1,2,

Time Frame Unit of study	Key Questions	Key Learning Targets (Students will know and be able to)	Assessment Evidence of Learning	Related Standards	CCLS Literacy, ELA, Math, Science
Unit Topic: NYS Fisheries and Fisheries Management	adaptations do they have for survival? • What techniques exist for estimating fish population size? • What role has fishing played in civilization throughout history and what role does it currently play in today's society? • What occurrences are effecting fish populations today? • How can fisheries be managed effectively? • What role do fish play in NYS tourism? • What government agencies and programs exist to help monitor fish populations? • What does a fish hatchery do?	describe the characteristics of each group • ID fish caught and found in NYS by sight using identifying characteristics and reference guides • Name and describe adaptations fish have for survival in different habitats and explain why fish may be found in only selective habitats • Analyze different habitats to determine which types of fish would live there and why • Collect fish using various techniques such as trap nets, electrofishing, seining, and traditional rod and reel fishing and use that data to predict current fish populations and water quality conditions • Research and determine the role of fishing throughout history for different civilizations • Identify current uses for fish in today's culture • Research and determine the role fishing and fish play in NYS tourism and the economic value of fisheries in NYS • Determine the government agencies involved in managing NYS fisheries • Describe the role fish hatcheries play in	• Fish Population Study • Fish Adaptations • Fishing in the field (various techniques used) Project: • Trout In the Classroom • Fishing Techniques • Fish Tourism Project (Economic impact of fishing industry in NYS) HW: • Chapter questions • Vocabulary • Skill builders Classwork: • Case studies • Current events • Journal Writing Tests: • Chapter • Unit Quizzes: • Vocabulary Fieldtrip/Fieldwork: Nottingham Campus Barry Park, Onondaga Lake, Oneida Lake, Fish Hatchery	CRP1,2,4,5,6,7,8,9, 10,11,12 **Cluster Standards** AG-1,2,3,5,6 **Pathway Standards** AG-ANI1,2,3,4,5,6 AG-ENV2 AG-NR1,2,3	3,8,9,10 WHST.11-12.1, 2,4,6,9,10 **ELA** RSI.11-12.1,-9 W.11-12.3,4,6, 10 SL.11-12.1,3,4 L.11-12.1,2,3,4,6 **Math** N-Q.A1 HSS-MD.B5,6,7 HSS-IC.B3,5,6 HSS-ID.A2,3,4 HSS-ID.C9 **Science** HS-LS1,2,3,4 HS-ES2,3 HS-ETS1

Time Frame Unit of study	Key Questions	Key Learning Targets (Students will know and be able to)	Assessment Evidence of Learning	Related Standards	CCLS Literacy, ELA, Math, Science
		maintaining healthy NYS fisheries and researching fish populations and diseases • Identify and describe any causes of fish decline and explain the impact fish decline has on the ecosystem humans			
Weeks 17-24: **Wildlife Management**	• What are the needs of wildlife for cover, food, water, and living spaces? • What factors, both natural and human created, that effect wildlife populations? • What are the 4 major goals of wildlife management systems? • What federal, state, and local municipalities work to manage wildlife populations? • What is the importance of habitat management and monitoring land use patterns in maintaining wildlife populations? • What management options exist for different wildlife habitats? • What role to humans play in everyday wildlife population control?	• Determine the basic needs of animals given their native habitat • Determine any/all threats to animals within their native habitats using a cause and effect framework • Name and describe the 4 major goals of wildlife management systems and how these goals manage wildlife populations • Name and describe federal, state, and local municipalities and their management efforts to control wildlife populations • Assess the importance of managing land properly and its role in wildlife management and habitat conservation/protection • Analyze a habitat to determine which option for habitat conservation is best used for wildlife management • Identify and research	Labs: • ID wildlife habitats and animal needs • Managing wildlife population • Create Ideal wildlife habitat (backyard pollinator garden, insect hotels, other ideas) Project: • Research project – wildlife management system (oral presentation) HW: • Chapter questions • Vocabulary • Skill builders • Classwork: • Case studies • Current events • Journal Writing Tests: • Chapter	**Career Ready Practice** CRP1,2,4,5,6,7,8,9,10,11,12 **Cluster Standards** AG1,3,4,5,6 **Pathway Standards** AG-NR1,2,3,4 AG-ANI 5,6	**Literacy** RST.11-2.1,2,3,7,8,9,10 WHST.11-2.1,2,4,5,6,7,8,9,10, **ELA** RSI.11-12.1-9 W.11-12.2,3,4,6,5,7,8,9,10 SL.11-12.1-6 L.11-12.1,2,3,4,6 **Math** N-Q.A1,2,3 F-LEA.IB,IC HSS-ID.A2,3,4,9 HSS-IC.A1 HSS-IC.B 5, 6 HSS-MD.B5, 6, 7

Time Frame Unit of study	Key Questions	Key Learning Targets (Students will know and be able to)	Assessment Evidence of Learning	Related Standards	CCLS Literacy, ELA, Math, Science
	• What career opportunities exist in the field of wildlife management?	potential careers in wildlife management systems	• Unit • Quizzes: • Vocabulary Fieldtrip/Fieldwork: Nottingham campus Certified local habitats		**Science** HS-LS1,2,3,4 HS-ES 2,3 HS-ETS1
Weeks 25-32: **Plant and Animal Diseases**	• What diseases affect plants, and how are the diseases spread/acquired? • What negative consequences occur for the plants and for humans when plants acquire diseases? • What diseases affect animals, and how are the diseases acquired/ spread? • What negative consequences occur for the animals and for humans when animals acquire diseases? • How can the spread of plant and animal diseases be prevented? • How can diseases be managed within current populations of organisms? • What federal, state, and local municipalities exist that play a role in managing plant and animal diseases?	• Identify common diseases that affect local plants • Explain how diseases are spread among plants • Examine how disease can affects a plant's anatomy, physiology, propagation, and survival • Discuss the negative consequences of plant diseases • Identify and describe diseases affecting local animals • Explain how diseases can be transmitted from animal to animal (or species to species) • Explore how disease affects animal anatomy, physiology, reproduction, and survival • Detail the negative consequences for animals with diseases • Identify the role humans have in the spread of diseases in plants and animals • Create an action plan to slow or stop the spread of diseases and prevent the	Labs: • Identify plant disease • Identify animal disease • Determine evidence of plant and/or animal diseases Project: • Research project (plant or animal disease) • Action plan on disease prevention HW: • Chapter questions • Vocabulary • Skill builders Classwork: • Case studies • Current events • Journal writing Tests: • Chapter • Unit • Lab practical Quizzes: • Vocabulary Fieldtrip/Fieldwork: • Nottingham Campus	**Career Ready Practice** CRP 1,2,4,5,6,7,8,11,12 **Cluster Standards** AG1,2,3,6 **Pathway Standards** AG-ANI 6,7 AG-NR4	**Literacy** RST.11-12.1,2, 3,7,8,9 WHST.11-12.2, 4,5,6,7,8,9,10 **ELA** RSI.11-12.1-8 W.11-12.3,4,6, 10 SL.11-12.1,4 L.11-12.1,2,3,4,6 **Math** HSS.IDC9 S.ICB5 S.ICB6 S.MDB7 **Science** HS-LS1,2,3,4 HS-ETS1

Time Frame Unit of study	Key Questions	Key Learning Targets (Students will know and be able to)	Assessment Evidence of Learning	Related Standards	CCLS Literacy, ELA, Math, Science
		future spread of diseases in plants and animals	• Local nursery/tree farm • Cornell or ESF campus (or guest speaker to discuss diseases)		
Weeks 33-38: **Pests and Invasive Species**	• What makes an organism a "pest", and what characteristics help identify an organism as a "pest"? • What negative affects do pests have on plants and animals and how can we intervene in a sustainable, environmentally friendly manner? • What do you know about local invasive species, their negative effects and how they are spread? • How might the spread of invasive species be predicted, controlled or prevented in our local environment and what limitations might affect management efforts? • What federal, state, and local municipalities exist in controlling and managing invasive species?	• Describe a "pest's" distinguishing characteristics • Identify plant and animal pests in our local ecosystems and environment • Predict the effects of invasive species on ecosystems • Research and develop a plan to control or prevent a pest or invasive species, while protecting the environment • Discuss conditions favorable for invasive species and describe actions to control or prevent their transmission in our local environment	Labs: • ID invasive species • ID pests • Pest Population Study Project: • Research project on local pest/invasive species (both written and oral) HW: • Chapter questions • Vocabulary • Skill builders Classwork: • Case studies • Current events Tests: • Chapter • Unit Quizzes: • Vocabulary Fieldtrip/Fieldwork: • Nottingham Campus	**Career Ready Practice** CRP 1,2,4,5,6,7,8,9,11,12 **Cluster Standards** AG1,2,3,6 **Pathway Standards** AG-ANI 5 AG-NR4	**Literacy** RST. 11-2.1,2,3, 8 WHST.11-2.1,2, 4,5,6,7,8, 9,10 **ELA** RSI.11-12.1-8 W.11-12.3,4,6, 10 SL.11-12.1,4 L.11-12.1,2,3,4,6 **Math** HSS.IDC9 S.ICB5 S.ICB6 S.MDB7 **Science** HS-LS1,2,4 HS-ESS3 HS-ETS1
Weeks 39-40: **Environmental Health**	• What are the current environmental health issues we face today?	• Identify current health issues (including lead contamination, zika virus,	Labs: • Mapping diseases • Spreading	**Career Ready Practice** CRP1,2,4,5,8,12	**Literacy** RST.11-2.1,2,3, 5,6,7,8,9 WHST.11-1,2,

Time Frame Unit of study	Key Questions	Key Learning Targets (Students will know and be able to)	Assessment Evidence of Learning	Related Standards	CCLS Literacy, ELA, Math, Science
(current)	• What are the effects of these environmental health issues on humans and other organisms? • What can we do to help limit or eliminate the risks associated with these environmental health issues?	Ebola, flu strains, diabetes, cancer, and other diseases or issues) • Examine how humans are affected by each health issue • Describe how each health issue affects other organisms • Develop an action plan to help limit or eliminate one cause of an environmental health issue • Predict future health issues based on present day environmental patterns or choices	infectious diseases • Predict Life Span Project: • Informational Brochure on health issue HW: • Chapter questions • Vocabulary • Skill builders Classwork: • Case studies • Current events • Journal writing Tests: • Chapter • Unit Quizzes: • Vocabulary Fieldtrip/Fieldwork: • Nottingham Campus • Health clinic		4,6,7,8,9,10
				Cluster Standards AG-1,2	**ELA** RSI.11-12.1-8 W.11-12.3,4,6, 10 SL.11-12.1,4 L.11-12.1,2,3,4,6
				Pathway Standards AG1,4,5 AG-NR2	**Math** N-Q1,2,3 F-IF4,6 F-LE3 S-ID1,2,3,4,9 S-IC1,2,3,6
					Science HS-ES2,3 HS-LS2,4

Syracuse City School District
Career and Technical Education Program
Course Syllabus
NAR400: Natural Resources 400

Program Overview

This course introduces students to the study of natural resources in an outdoor and classroom setting through hands-on activities and learning. Students will work in groups to investigate and help solve environmental problems and will explore careers options in natural resources pathways. Major areas of study include environmental health, science measurement and skills, ecology, biomes and ecosystems, population studies, tradeoff investigations, and mineral use and identification. Students will develop an integrated view of the biological, ecological and social dimensions of the environment and can earn credits from SUNY-ESF, Syracuse University Project Advance and Onondaga Community College.

Career opportunities include Environmental Engineer/Scientist/Specialist, Natural Science Manager

Course Description

During this course students will identify NYS fish, learn about fish biology, fisheries management, NYS agriculture and food science, forestry, landscaping, sustainability systems, current environmental health issues, as well as the economics and ethics of governmental policies and ways of doing business within the realm of natural resources.

Pre-Requisites

Successful completion of Natural Resources 100, 200 and 300 courses

Course Objectives

- Identify NYS fish and describe the purpose and function of NYS fishery management programs.
- Create a tourism program that highlights NYS agriculture and products.
- Use proper landscaping techniques and terminology to design a landscape to meet a customer's request.
- Design a plan that meets all ethical, economic, and sustainability guidelines for a topic of interest in the field of natural resources.

Integrated Academics

Upon completion of the entire Natural Resources CTE pathway students will have earned 4 CTE credits, 1 ELA credit and 1 Science credit.

Equipment and Supplies

- School will provide: Field trip opportunities, lab supplies and materials and any safety equipment when necessary.
- Student will provide: Composition notebook, writing utensils

Textbook

Environmental Science; Houghton, Mifflin, Harcourt 2013

Grading

Students will be provided with several opportunities to show their learning throughout the course. These opportunities will include homework and classwork assignments, vocabulary quizzes, laboratory reports, projects, unit exams, and hands-on lab practical exams.

Additional Course Policies

As with any science course safety is the number one priority for students at all times. Students must follow all safety rules and procedures and any additional safety precautions provided by the instructor. Any failure to comply with safety rules and procedures will result in removal from the classroom for that day and possible removal from the program if the unsafe behavior persists.

Course Calendar

Quarter	Units of Study
1	• NYS fish and fisheries • Fishery Management
2	• NYS Agriculture and Food Science • Forests and Landscaping Management
3	• Economics and Ethics of Natural Resource Systems • Sustainability Systems in Natural Resources
4	• Environmental Health

Return to TOC

Syracuse City School District
Career and Technical Education
Scope and Sequence
NAR 400: Natural Resources 400

Time Frame Unit of study	Key Questions	Key Learning Targets (Students will know and be able to)	Assessment Evidence of Learning	Related Standards	CCLS Literacy, ELA, Math, Science
Weeks 1-8: **Unit Topic: NYS Agriculture and Food Science**	• What essential nutrients are necessary for the growth of crops? • What nutrients are limiting factors? • What is crop rotation and what use does it have in growing crops? • What are fertilizers and how do they work? • How do fertilizers lead to nutrient pollution? • How is irrigation used for crops? • Who regulates the use of land in the USA and NY? • Why are pollinators important and why should we save the bees? • Can you explain what "Certified Organic" means and identify the requirements for "organic"? • What other resources do farms consume? • What environmental issues are created by modern agricultural	• Determine the necessary nutrients for successful crop growth • Describe the use of crop rotation and explain the reasons crops are rotated • Name and describe different types of fertilizers and explain how fertilizers work • Determine the best type of fertilizer based on research and needs of a particular field or crop • Explain what nutrient pollution is and determine the cause and effects • Describe the different types of irrigation systems and their effectiveness • Calculate water use efficiency and determine ways to increase this figure • Compare and contrast commercial farming and local farming and determine the effect on the local, country, and global economy of each type of farm	Labs: • Agriculture Land Use • Concentrate the Solution • Fertilizer and the Environment • Plant Nutrient Deficiencies • Plant-Soil Interactions • Know Your Nitrogen • Souring Milk • Coliform Counts • Chain of Food, Energy and the Commodity Trace-Back • Conserving Bumble bees • Food Science-Bread Dough Challenge • Project: • Farm to Table Economic Impact HW: • Chapter questions • Vocabulary • Skill builders • Classwork:	**Career Ready Practice** CRP1,2,4,5,6,7,8,9,10,11,12 **Cluster Standards** AG-1,2,3,5,6 **Pathway Standards** AG-ANI1,2,3,4,5,6 AG-ENV2 AG-NR1,2,3	**Literacy** RST.11-12.1,2,3,8,9,10 WHST.11-12.1,2,4,6,9,10 **ELA** **Math** NQ-A1 HSSMD-B5,6,7 HSSIC-B3,5,6 HSSID-A2,3,4 HSSID-C9 **Science** HS-LS2,3,4 HS-ES3

Time Frame Unit of study	Key Questions	Key Learning Targets (Students will know and be able to)	Assessment Evidence of Learning	Related Standards	CCLS Literacy, ELA, Math, Science
	practices? • What risks are associated with food production and consumption? • What agricultural practices are currently used to raise livestock? • What agricultural products are most important for the NYS economy and how are those products developed?	• Explain the purpose of government organizations and policies in the agriculture business including the FDA and USDA • Explain the importance of bees and other pollinators and the effect on food production as a result of their decline • Determine the causes of the decline of bees • Determine the resources farms use and calculate the amount, including energy, water, land, etc. • Determine the risks associated with producing food, transporting food, and consuming food for both the farmer and the consumer • Track a NYS agriculture product from farm to table and determine economics of that product	• Case studies • Current events • Journal Writing Tests: • Chapter • Unit • Lab practical Quizzes: • Vocabulary • Fieldtrip/Fieldwork: • Nottingham Campus • Brady Faith Farm or Jubilee Farms (urban farm sites in Syracuse) • Restaurant that uses "farm to table" practices		
Weeks 9-16: **Agricultural Biotechnology (Agritech)**	• Why does agritech exist and what role does it serve in modern agriculture? • What is the goal of agritech? • What is the history of agritech? • What techniques does agritech include and what	• Determine the overall use and goal of biotechnology in agriculture by tracing its history through time • Determine how each technique is used and what the goal/outcome of each will be, including crossbreeding, mutagenesis, polyplody,	Labs: • DNA extraction • Food Label Analysis • Crossbreeding Analysis Project: • Debate-research both sides of the issue and present evidence for both	**Career Ready Practice** CRP1,2,4,5,6,7,8, 9,10,11,12 **Cluster Standards** AG-1,2,3,6	**Literacy** RST.11-12.1,2, 3,4,5,6,7,8,9,10 WHST.11-2.1,2, 4,5,6,8,9,10 **ELA** **Math** HSSIC-B5,6 HSSMD-B5,6,7

Time Frame Unit of study	Key Questions	Key Learning Targets (Students will know and be able to)	Assessment Evidence of Learning	Related Standards	CCLS Literacy, ELA, Math, Science
	is the purpose/outcome of each technique? • What effect does agritech have on the nutritional content of the crop? • What concerns or issues do GMO and agritech raise for human consumption? • What are the safety testing and regulations used to assure GMO's and agritech crops are safe for human consumption? • What federal, state, and local municipalities work to control agritech and the use of GMO's? • What jobs exist in the agritech field?	protoplast fusion, RNA interference, transgenics, genome editing • Analyze the nutritional content of GMO's and compare that content to organic (non GMO food products) • Analyze the public health concerns of consuming GMO's and address each concern using data collection and analysis • Identify all government agencies involved in agritech regulations and determine the role each plays • Research job opportunities in agritech field	HW: • Chapter questions • Vocabulary • Skill builders Classwork: • Case studies • Current events • Journal writing Tests: • Chapter • Unit Quizzes: • Vocabulary Fieldtrip/Fieldwork: • College Campus to visit DNA lab • Local Farm using agritech techniques	**Pathway Standards** AG-NR1,2,3 AG-FD2,4 AG-PL1,2	**Science** HS-LS1,2,3,4
Weeks 17-24: **Forest and Landscape Management**	• What is the ecology of a forest ecosystem? • How can you determine which trees are best suited for the ecosystem and environment at present? • How can forests be managed in terms of establishment, composition, growth and density to ensure the healthiest forest ecosystem?	• Describe a forest ecosystem in ecological terms including the role of each type of tree present • Identify and explain the limiting factors for tree growth and establishment • Determine which trees are biologically and economically suited for a forest site • Explain how forests can be regenerated both naturally and artificially	Labs: • Forest Ecology study • Assessing soil composition • Tree ID by leaf, twig, bark, and visual of entire tree • Collecting "tree data" and "mapping tree data" using GIS • Determining the Height of a Tree • Estimating the amount of standing timber in a	**Career Ready Practice** CRP1,2,4,5,6,7,8,9,10,11,12	**Literacy** RST.11-12.1,2,3,8,9,10 WHST.11-2.1,2,4,5,6,9,10
				Cluster Standards AG2,6	**ELA**
				Pathway Standards AG-ENV3 AG-NR1,2,3,4 AG-PL1,2,3,4	**Math** HSSIC-B3,5,6 GMG-A1 HSSMD-B5,6,7 NQ-A1

Time Frame Unit of study	Key Questions	Key Learning Targets (Students will know and be able to)	Assessment Evidence of Learning	Related Standards	CCLS Literacy, ELA, Math, Science
	• What reproduction methods exist for stand reproduction? • How can you determine which forest product the market needs and you can produce? • How can you ID trees? • How can timber cruising be used to estimate the amount of standing timber in a forest? • What tools are used in forest management? • How is firewood produced from start to finished product? • How can you assess a site for landscape needs? • How can you create a landscaping plan? • How can you determine which types of plants should be planted based on needs? • What should be done to assure that newly planted plants and trees become established? • What kinds of care do trees require?	• Describe reproduction methods for stand regeneration and discuss positive and negative aspects of each • Create a research plan to determine which tree products are marketable and can be grown in your ecosystem and environment • Identify trees using leaves, twigs, bark, and visual of the whole tree • Estimate the height of a tree using a clinometer • Estimate the amount of standing timber in a stand using timber cruising and accurate measurements • Use GIS to create a map of a stand of trees after collecting data and measurements • Discuss tool use and maintenance when logging (chain saw) • Describe methods to fell trees safely • Describe the process of creating firewood from start to finish • Assess a site for landscaping needs including soil composition, sunlight, water availability, and animal interactions	forest using timber cruising Project: • Landscape Plan (determine need, soil and climate characteristics, hydrozones, desired outcome, adhere to budget restrictions, implement planting schedule and design) • Leaf Litter Data Collection with Dr. Ruth Yanai from ESF HW: • Chapter questions • Vocabulary • Skill builders • Classwork: • Case studies • Current events • Journal Writing Tests: • Chapter • Unit Quizzes: • Vocabulary • Fieldtrip/Fieldwork: • Nottingham Campus • Local nursery/tree farm • Heiberg Forest • ESF-Dr. Yanai as guest speaker		**Science** HS-LS1,2,4

Time Frame Unit of study	Key Questions	Key Learning Targets (Students will know and be able to)	Assessment Evidence of Learning	Related Standards	CCLS Literacy, ELA, Math, Science
		• Determine hydrozones within the landscape area and determine which plants should be planted in each hydrozone based on needs • Assess the needs of the plants before deciding when and where to plant them in a landscape plan • Follow your research and gathered information to plant and create the landscape plan			
Weeks 25-32: **Economics and Ethics in Natural Resources**	• What are the laws of supply and demand and how are they related to our natural resources? • How are our natural resources currently allocated and who has control over this allocation process? • What is the overall goal of allocating resources? • How are the economy and natural resources interconnected? • How can we run an economy while taking into consideration the limitations of our natural resources? • What are the 3 pillars of sustainability and how are they interconnected? • How are recreational,	• Explain the laws of supply and demand in relation to specific natural resources (water, land, minerals, etc.) • Determine who has the authority to allocate resources and analyze how they make decisions • Examine how the allocation of resources effects an economy (both local and national level) • Determine the effects of limited resources on an economy • Explain the 3 pillars of sustainability and how they are interconnected • Determine the role recreation and commercial factors play when developing policies regarding the allocation	Labs: • Supply and Demand • Ethics 101 • Project: • Research project on an "hot topic" in ethics and natural resources HW: • Chapter questions • Vocabulary • Skill builders Classwork: • Case studies • Current events • Journal Tests: • Chapter • Unit Quizzes: • Vocabulary • Fieldtrip/Fieldwork:	**Career Ready Practice** CRP-1,2,4,5,6,7,8, 9,10,11,12 **Cluster Standards** AG-1,2,3,4,6 **Pathway Standards** AG-ENV2 AG-NR1,2	**Literacy** RST.11-12.1,2, 3,4,6,7,8,9,10 WHST.11-2.1,2, 4,5,6,7,8, 9,10 **ELA** **Math** HSSID-C9 HSSIC-B3,5,6 HSSMD-B5,6,7 **Science** HS-LS2,4 HS-ES2,3 HS-ET1

Time Frame Unit of study	Key Questions	Key Learning Targets (Students will know and be able to)	Assessment Evidence of Learning	Related Standards	CCLS Literacy, ELA, Math, Science
	commercial, and social policies considered when developing policies on natural resource allocation and use? • What do the terms perpetual and exhaustible mean in terms of natural resource use and allocation? • What ethical considerations should be made when developing policies about natural resources and their use and allocation? • What governmental agencies currently work in developing these policies?	and use of natural resources • Define the terms perpetual and exhaustible in the realm of natural resources and explain how these terms effect policy making decisions • Define the term "ethical" and relate the term to policies designed to manage natural resources • Determine and examine the governmental agencies involved in making policies surrounding the use and management of our natural resources			
Weeks 33-37: **Sustainability Systems**	• What does sustainability mean and what does it apply to? • What is your definition of sustainability? • Why is sustainability important and what role does it currently play in environmental issues? • What government policies, programs and organizations exist that help promote, regulate and control sustainability?	• Define sustainability in several different ways • Create your own working definition of sustainability • Identify places where sustainability is applied, encouraged, or necessary • Determine the importance of sustainability practices in multiple environmental science and natural resource fields • Identify and discuss the government agencies that promote and encourage sustainability, and	Labs: • Sustainable versus Not sustainable Project: • Design an environmental outreach program to promote sustainability HW: • Chapter questions • Vocabulary • Skill builders • Classwork: • Case studies • Current events	**Career Ready Practice** CRP-1,2,4,5,6,7,8, 9,10,11,12 **Cluster Standards** AG-1,2,3,4,6 **Pathway Standards** AG-NR1,2,3 AG-ENV2	**Literacy** RST.11-12.1,2, 3,4,5,6,7,8,9,10 WHST.11-2.1,2, 4,5,6,9,10 **Math** HSSMD-B5,6,7 NQ-A1 HSSIC-B3,5,6 **Science** HS-LS2,4 HS-ES2,3 HS-ET1

Time Frame Unit of study	Key Questions	Key Learning Targets (Students will know and be able to)	Assessment Evidence of Learning	Related Standards	CCLS Literacy, ELA, Math, Science
		describe programs that support sustainability efforts	Tests: • Chapter • Unit Quizzes: • Vocabulary • Fieldtrip/Fieldwork: • Nottingham Campus		
Weeks 37-40: **Environmental Health (current)**	• What are the current environmental health issues we face today? • What are the effects of these environmental health issues on humans and other organisms? • What can we do to help limit or eliminate the risks associated with these environmental health issues?	• Identify current health issues (including lead contamination, zika virus, Ebola, flu strains, diabetes, cancer, and other diseases or issues) • Examine how humans are affected by each health issue • Describe how each health issue affects other organisms • Develop an action plan to help limit or eliminate one cause of an environmental health issue • Predict future health issues based on present day environmental patterns or choices	Labs: • Mapping diseases • Spreading infectious diseases • Predict Life Span Project: • Informational Brochure on health issue HW: • Chapter questions • Vocabulary • Skill builders Classwork: • Case studies • Current events • Journal writing Tests: • Chapter • Unit Quizzes: • Vocabulary Fieldtrip/Fieldwork: • Nottingham Campus • Health clinic	**Career Ready Practice** CRP1,2,4,5,8,12	**Literacy** RST.11-12.1,2, 3,5,6,7,8,9 WHST.11-12.4, 6,7,8,9,10
				Cluster Standards AG-1,2	**ELA**
				Pathway Standards AG1,4,5 AG-NR2	**Math** N-Q1,2,3 F-IF4,6 F-LE3 S-ID1,2,3,4,9 S-IC1,2,3,6
					Science HS-ES2,3 HS-L4

Return to TOC

B. Teacher Certification

> *The self-study team reviews the teacher certification and training of the school or BOCES' instructional, paraprofessional, and support staff who deliver services within the CTE program seeking approval. New York State teacher certification review should include both CTE teachers and teachers of academic content within the proposed program.*

Process

- Reviewers confirm that all CTE teachers hold appropriate New York State teacher certification for the program in which they will teach.
- Reviewers confirm that all teachers of academic content hold appropriate New York State teacher certification for the program in which they will teach.
- Reviewers confirm the appropriate NCLB highly-qualified status for the CTE teachers in programs offering academic credit.
- Reviewers confirm that staff delivering instruction in programs where certification, licensure, or registration by an external entity have acquired the necessary credentials.
- Reviewers confirm that professional development opportunities exist within the school district or BOCES for instructional, paraprofessional, and support staff to acquire and improve skills and knowledge related to instructional enhancement of the CTE program.

Documentation

Recommendations from the review of teacher certification should be included in the self-study report and reviewed by the external committee. A list of all teachers for the program and the New York State teacher certification(s) held by each must be attached to the Application for Career and Technical Education Program Approval.

Resources

New York State Office of Teaching Initiatives
http://www.highered.nysed.gov/tcert/certificate/certprocess.htm

Source: http://www.p12.nysed.gov/cte/ctepolicy/guide.html

Account Information

Person Information

Name	JAIME L RODRIGUEZ	**SSN**	
Date of Birth	[redacted]	**Teacher Id**	
Gender	Female	**Address**	[redacted]

Certificates

Credential	Status	Application Type	Issued / Effective Date	Original Exp. Date	Time Extended Exp. Date	Control Number
Natural Resources & Ecology 7-12, Transitional A Certificate	Issued	CERTIFICATE	09/07/2017	01/31/2021		1170991171
Biology 7-12, Professional Certificate	Issued	CERTIFICATE	09/01/2010			412394101
Biology 7-12, Initial Certificate	Expired	CERTIFICATE	09/01/2005	08/31/2010		635254051
General Science 7-12 Extension, Initial Extension Annotation	Expired	CERTIFICATE	09/01/2005	08/31/2010		635255051

Applications are valid for three years or two evaluations, whichever comes first.

Applications

Credential	Cert Path	Application Type	Status	Application Date	Evaluation History	Application Paid?
No Data Found						

C. Technical Assessments Based on Industry Standards

> *The self-study team reviews the selection of a technical assessment for the program seeking approval. The selected technical assessment must be nationally-recognized and based on industry standards. It must be available to students enrolled in the approved program and must consist of three parts: written, student demonstration, and student project. Successful completion of the technical assessment is not a requirement for high school graduation, but is required for a student to earn a technical endorsement on the high school diploma*
>
> *The New York State Education Department does not approve, endorse, or certify any technical assessment.*

Process

- The school district or BOCES selects an appropriate industry standard technical assessment to measure student proficiency in the technical field for the program. The school district or BOCES may select a New York State licensing examination as the technical assessment.
- The school district or BOCES determines the scheduling and administration of technical assessments. It is not required that the technical assessment be administered at the conclusion of the program. Parts may be administered throughout a student's learning experience.
- The school district or BOCES determines the number of times a student may take a particular technical assessment.
- The school district or BOCES must comply with existing laws and regulations related to administration of technical assessments to students with disabling conditions and provide appropriate testing modifications. Restrictions on student eligibility for testing are the responsibility of the test producer.
- In the absence of an appropriate nationally-recognized industry standard based assessment, a consortium of local, regional, state, business and industry representatives may be formed to produce such an instrument.
    - Technical assessments must meet generally recognized psychometric criteria. Therefore, the consortium approach may be expensive because of the many steps required to insure assessment validity, reliability, and security.
    - An existing CTE advisory committee or craft committee is not a technical assessment consortium. The school district or BOCES must ensure that the assessment consortium adequately represents current business and industry standards for the specific career area for the program.
- Where an appropriate technical assessment exists, but consists of only one or two parts, a consortium must be formed to develop the missing part(s).
- The school district or BOCES must develop a system to collect student-level and program-level data on performance on the technical assessment.

Documentation

Recommendations on the technical assessment selection should be included in the self-study report and reviewed by the external committee.

Resources

New York State graduation requirements: http://www.emsc.nysed.gov/part100/pages/1005.html

Information on the Technical Endorsement: http://www.emsc.nysed.gov/cte/ctepolicy/endorsement.html

Source: http://www.p12.nysed.gov/cte/ctepolicy/guide.html

Return to TOC

NATURAL RESOURCE SCIENCE I (170)

DESCRIPTION

Students will demonstrate knowledge and skills related to production management and conservation of natural resources. Major units will include ecology, range resources, waste managements, and land use. Field and laboratory experiences will be emphasized.

Total Test Questions: 63	Levels: Grades 9-12	Units of Credit: 1.0
Prerequisites: None		

STANDARDS, OBJECTIVES, AND INDICATORS

STANDARD 1 — 3% of Exam Blueprint

- **STUDENTS WILL EXPLAIN THE ROLE OF FFA IN AGRICULTURAL EDUCATION.**

Objective 1: Discuss the history and organization of FFA as it relates to the complete program of agricultural education.

1. Explain the interrelationship of classroom and laboratory instruction, supervised agricultural experience, and FFA.
2. Describe how, when, and why FFA was organized.
3. Identify key FFA historical events.
4. Identify the mission and strategies, colors, motto, emblem and parts of the emblem, and organizational structure of FFA.
5. Recite and explain the meaning of the FFA Creed.
6. Discuss the meaning and purpose of a program of activities and its committee structure.
7. List FFA chapter officers, and discuss the role of each.

Objective 2: Identify opportunities in FFA.

1. Describe FFA opportunities that develop leadership skills, personal growth, and career success.
2. Summarize major state and national activities available to FFA members.

Objective 3: Describe FFA degrees, awards, and career development events (CDEs).

1. List and explain the FFA degree areas.
2. Identify FFA proficiency awards.
3. List and discuss various team and individual CDEs

STANDARD 2 — 3% of Exam Blueprint

- **STUDENTS WILL EXPLAIN THE ROLE OF SUPERVISED AGRICULTURAL EXPERIENCE (SAE) PROGRAMS IN AGRICULTURAL EDUCATION.**

Objective 1: Examine the responsibilities and benefits associated with an SAE.

1. Explain the meaning and benefits of supervised agricultural experience.

2. Explain the characteristics of an effective SAE program and the responsibilities of those involved.

Objective 2: Determine the types of SAE programs.

1. Compare entrepreneurship SAEs and placement SAEs.
2. Describe research/experimentation SAEs.
3. Describe exploratory SAEs.

Objective 3: Plan an SAE program.

1. Identify the steps in planning an SAE program.
2. Describe the function of a business/training plan and/or agreement in an SAE program.
3. Develop a short-range plan and a long-range plan for an SAE program.
4. Relate classroom and laboratory instruction to an SAE program.

Objective 4: Maintain and use SAE records.

1. Explain the importance of keeping records on an SAE program.
2. Explain how SAE records are organized.
3. Follow approved procedures to make entries in SAE records.

STANDARD 3 — 23% of Exam Blueprint

- **STUDENTS WILL EXAMINE NATURAL RESOURCE SCIENCE AND MANAGEMENT.**

Objective 1: Discuss the basics of natural resource science and management.

1. Identify types of natural resources.
2. Distinguish between renewable and nonrenewable resources.
3. Explain the difference between inexhaustible and exhaustible resources.
4. Explain the concept of interdependent relationships.

Objective 2: Examine the relationship between natural resources and society, including conflict management.

1. Define natural resource management.
2. Identify and compare major natural resource management agencies and companies.
3. Describe human demands on natural resources.
4. Explain natural resource conservation.
5. Provide examples of multiple uses of natural resources (e.g., recreation, mining, agriculture, forestry, etc.).
6. Explore and describe societal issues related to natural resource management.

Objective 3: Identify career opportunities in natural resource science.

1. Identify and describe the major areas of natural resource science.
2. Identify career opportunities in natural resource science, and determine the education and training they entail.

STANDARD 4 — 31% of Exam Blueprint

- **STUDENTS WILL INVESTIGATE ECOLOGICAL CONCEPTS AND SCIENCE PRINCIPLES RELATED TO NATURAL RESOURCE SYSTEMS.**

Objective 1: Examine ecology.

1. Define ecosystem and related terms.
2. Describe the interdependence of organisms within an ecosystem.
3. Describe the processes associated with ecological succession.
4. Explain population ecology, population density, and population dispersion.
5. Explain the importance of biodiversity.
6. Explain the process of natural selection.
7. Use taxonomy keys to identify common plants and animals.
8. Identify and classify game birds and other local birds.
9. Identify and classify game animals and other local animals.
10. Define invasive species, and discuss factors that influence the establishment and spread of invasive species.

Objective 2: Describe biological, physical, and chemical properties of soil.

1. Explain the importance of soil as a life-supporting layer.
2. Explain the roles of parent material, topography, organisms, time, weathering, and climate in soil formation.
3. Describe the physical characteristics of soil.
4. Describe the biodiversity found in soil and the contribution of biodiversity to the physical and chemical characteristics of soil.
5. Describe the chemical properties of soil.
6. Explain the characteristics of soil water.

Objective 3: Examine hydrology principles.

1. Describe the movement of water through the water cycle.
2. Compare and contrast ground water and surface-water flow.
3. Discriminate between point and nonpoint pollution sources.
4. Survey the local area for pollution sources.
5. Calculate water distribution for an irrigation district.
6. Compare and contrast water usage in flood irrigation systems and sprinkler irrigation systems.
7. Identify local drinking water sources and measures that may be taken to protect the quality of the drinking water.
8. Discuss current regulations associated with water quality and water pollution.

Objective 4: Investigate air resources.

1. Identify components and structural layers of the earth's atmosphere.
2. Identify sources of air pollution.
3. Describe the effects of air pollution on people and their environment.

4. Illustrate the formation of acid precipitation, and explain its impact on the environment

STANDARD 5 — 16% of Exam Blueprint

- **STUDENTS WILL RELATE RANGE RESOURCES AND MANAGEMENT TO NATURAL RESOURCES.**

Objective 1: Analyze the interrelationships between range management and other natural resource activities.

1. Identify characteristics of healthy rangeland.
2. Identify methods of rangeland improvement.
3. Evaluate a rangeland, and develop a management plan for improvement.
4. Discuss livestock use of rangeland.
5. Discuss wildlife use of rangeland.
6. Discuss additional uses of rangeland (e.g., recreation, mining, watershed, etc.).
7. Compare and contrast the effect of various uses of rangelands.
8. Describe plant environment interactions.
9. Explain range transects and their use in evaluating a specific location.

STANDARD 6 — 11% of Exam Blueprint

- **STUDENTS WILL EXAMINE WASTE MANAGEMENT.**

Objective 1: Investigate waste generation, waste reduction, and disposal.

1. Describe different types of solid waste.
2. Evaluate environmental hazards created by different types of solid waste, solid waste accumulation, and solid waste disposal.
3. Explain practical management options for treating solid waste.
4. Explain the importance of reducing, reusing, and recycling.
5. Describe recycling methods, and identify materials that can be recycled.
6. Define wastewater.
7. Diagram the steps in wastewater treatment.
8. Assess agriculture's impact on the environment through waste generation (e.g., animal waste, pesticide residue, fertilizer runoff, sedimentation/erosion, and odors/dust).
9. Discuss the meaning and use of nutrient management plans.

STANDARD 7 — 13% of Exam Blueprint

- **STUDENTS WILL EXPLAIN LAND CLASSIFICATION, RESOURCE INVENTORIES, AND MONITORING METHODS.**

Objective 1: Discuss land-use management planning.

1. Describe the interrelationships between land-use planning and natural resources.

2. Identify land uses, capability factors, and land capability classes.
3. Demonstrate how GIS/GPS applies to land-use planning.
4. Use a soil survey to determine the land capability classes for different parcels of land in an area.

Objective 2: Discuss monitoring of land use.

1. Identify the components of a monitoring plan.
2. Discuss the procedures for conducting resource inventories and population studies.
3. Analyze a current local Environmental Impact Statement (EIS), and determine the preferred alternative.
4. Develop and implement a basic plan for monitoring a natural resource project.
5. Participate in public involvement processes in land-use planning.

NATURAL RESOURCE SCIENCE I (170)

PRECISION EXAMS

PERFORMANCE STANDARD EVALUATION CHECKLIST

Student Name _____

Instructor's Name _____

School _____ District _____

Performance Rating Scale:

Limited Skills……..…Moderate Skills……High Skills

Performance assessments may be completed and evaluated at any time during the course. The following performance skills are to be used in connection with the associated written exam. To pass the performance standard the student must attain a performance standard average of **8 or higher** on the rating scale. Students may be encouraged to repeat the objectives until they average **8 or higher** for the following elements:

PERFORMANCE SKILLS STANDARDS	
1 – Attend an FFA meeting.	Score:
2 – Participate in a SAE as part of an integral system approach to Agricultural Education.	Score:
3 – Participate in a conflict management activity.	Score:
4 – Identify and classify common local flora and fauna.	Score:
5 – Test and analyze water quality.	Score:

6 – Demonstrate air-monitoring techniques.	Score:
7 – Collect and interpret weather data.	Score:
8 – Survey a site to determine potential land use.	Score:
9 – Analyze a current, local Environmental Impact Statement (EIS) and determine the preferred alternative.	Score:
10- Observe a professional in natural resource management.	
PERFORMANCE STANDARD AVERAGE	**Average:**

SCSD CTE Student Portfolio

Definition: Student portfolios are a collection of personal documents, which showcase an individual's learning experiences, goals and achievements. Student portfolios are created and controlled by the student, facilitated by the instructor, and evaluated by outside entities.

Purpose: Students should be able to leave a program with as many tools in their toolbox as possible. Student portfolios are a way to assist students in marketing themselves in future interviews, by using the portfolio to illustrate his or her skills and/or talents.

SCSD CTE Student Portfolio Requirements

☐	**Table of Contents:**	This should list each section and piece of the portfolio in the order it appears
☐	**Cover letter**	A cover letter introducing the student to a potential employer about a specific job in his or her chosen pathway. Should focus on why the student is the best candidate for the job. It should compliment the resume, not repeat it.
☐	**Resume**	Should be professionally formatted. Usually a one-page document listing the student's name, personal information (address, phone, and email), an objective, work history or extracurricular/community involvement, education, certifications/credentials, personal skills/interests, and references.
☐	**Letters of Recommendation**	Students must include at least two (2) reference letters, provided by people outside the school who are familiar with his or her work or character. The reference letters can be employment-related, personal, or they can attest to the character of the student.
☐	**Certifications/Credentials**	Students should include copies of any credentials and/or certifications they have earned as a result of their program.
☐	**Transcript**	Student provides a copy of his or her full academic transcript.
☐	**Employability Profile**	Per NYSED: The work skills employability profile is intended to document student attainment of technical knowledge and work-related skills. Documents to validate skills reported on the profile could include, but are not limited to, an employer/teacher review of student work based on learning standards and expectations in the workplace, performance evaluations and observations. Students must have at least one employability profile completed within one year prior to school exit. If a student is involved in a number of work-based learning experiences and/or is employed part time, he/she may also have additional employability profiles as completed by others knowledgeable about his or her skills (e.g.,

	employer and/or job coach).
☐ **College Research**	A written research assignment focusing on three colleges offering programs in the student's chosen career pathway.
☐ **Career Plan**	Per NYSED: "Career Plans are an important mechanism to add relevance and meaning to learning experiences across subject areas. The career development model used to create the Career Plan aligns with the CDOS standards." A Career Plan document can be found here: http://www.p12.nysed.gov/cte/careerplan/docs/SecondaryCommencLvl.pdf
☐ **Student Awards**	This section is completely open ended. Students should use this section to illustrate any awards, projects, exemplars, service learning, or scholarships, they participated or earned during their high school years. They can show evidence through pictures, project documentation, news articles, program agendas, meeting minutes, videos, etc.
☐ **Work Samples**	Examples highlighting ***only the student's best work***, demonstrating the skills and competencies he or she has mastered. These should be presented professionally and be clearly captioned. ***Should not be thought as a scrapbook.*** Potential employers are only interested in the very best examples.

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Return to TOC

D. Postsecondary Articulation

> *The self-study team reviews the postsecondary articulation agreement for the program seeking approval. Postsecondary articulation agreements help students prepare for the transition from high school to advanced study in a particular career area. Articulation agreements provide direct benefits to students such as dual credits, college credits, advanced standing, or reduced tuition at a postsecondary institution. Articulation agreements may include several school districts and/or BOCES and multiple postsecondary institutions. The school district or BOCES may enter into multiple articulation agreements for a program seeking approval.*

Process

- Reviewers confirm that the postsecondary articulation agreement is designed to prepare students for the transition from high school study to postsecondary study in the career area of the program seeking approval.
- Reviewers confirm that a postsecondary articulation agreement has been obtained that offers direct benefits to students in the program seeking approval.
- Reviewers confirm that the postsecondary articulation agreement includes the
    - prerequisite skills, knowledge, or coursework required of students to participate in the agreement
    - roles and responsibilities of each institution
    - duration of the agreement
    - endorsement by officials of each institution
- Signed articulation agreements must be on file within the school district or BOCES.

Documentation

Documentation of the postsecondary articulation agreement is maintained by the school district or BOCES and updated whenever modifications are made. Recommendations on the technical assessment selection should be included in the self-study report and reviewed by the external committee. A copy of the signed postsecondary articulation agreement must be attached to the Application for Career and Technical Education Program Approval.

Source: http://www.p12.nysed.gov/cte/ctepolicy/guide.html

Articulation Agreement
between
Syracuse City School District (SCSD)
725 Harrison St, Syracuse, NY
and
Onondaga Community College
4585 West Seneca Turnpike, Syracuse, NY

The signatories of this articulation agreement, Syracuse City School District (SCSD) and Onondaga Community College (OCC), declare their intention to participate in a partnership for the purpose of delivering educational instruction to eligible students. The parties to this agreement have reached the following understanding:

1. **Term**
   The term of this agreement shall be for four years from July 1, 2017-June 30, 2021 and subject to the following conditions:

   - Both parties have the option to extend this Agreement for one (1) additional four year period giving written notice to the College no later than ninety (90) days prior to the expiration date.

2. **Modification and Waiver**
   No waiver or modifications shall be valid unless it is in writing and signed by OCC and SCSD.

3. **Curriculum and Courses**
   - Students who have enrolled in the Natural Resources program at Syracuse City School District will be eligible to enroll in and earn credit for:
     - MAT 143, Pre-Calculus with Trigonometry, through the Onondaga Community College, College Credit Now Program.
   - The above course offered through the OCC College Credit Now Program is required for the Environmental Technology, A.A.S. degree at OCC.
   - Tuition for concurrent enrollment courses will be incurred according to all applicable requirements in place by the State University of New York. For courses taught by Onondaga Community College faculty, the Syracuse City School District will additionally incur the cost set by annual Memorandum of Understanding between SCSD and OCC.
   - Students will be assisted in the course registration process by OCC. Students will also be supported in the admission process to Onondaga Community College through a specialized workshop and the Office of Student Recruitment.

4. **Students**
   Each student must enroll and remit payment as required by SUNY for the course(s) with OCC through the College Credit Now registration process as directed by the Director of Concurrent Enrollment and Secondary School Programs.
5. **Entire Agreement**
   This Agreement Constitutes the entire Agreement between the College and SCSD with respect to the subject matter hereof. This Agreement supersedes

any and all other agreements, whether oral or in writing, between parties with respect to the subject matter hereof.

Casey Crabill, Ed.D. President Onondaga Community College	Jaime Alicea Superintendent Syracuse City School District
3/27/17 Date	4/3/17 Date

E. Work-based Learning

> *Work-based learning (WBL) is the "umbrella" term used to identify activities which collaboratively engage employers and schools in providing structured learning experiences for students. These experiences focus on assisting students to develop broad, transferable skills for postsecondary education and the workplace. A quality WBL experience can make school-based learning more relevant by providing students with the opportunity to apply knowledge and skills learned in the classroom to real world situations.*
>
> *Time requirements that students in an approved program may devote to work-based learning experiences are set by administrators of the approved program. This time should be an outcome of the self-study report and external review phases of the approval process. Work-based learning experiences must be sufficient in length and rigor to contribute to student achievement of the State learning standards as well as specific technical competencies.*

Process

- The school district/BOCES and the employer cooperatively plan all work experiences.
- The school district/BOCES set up a formal procedure for the supervision/coordination of all work-based learning experiences and must ensure that work-based learning coordinators are appropriately certified.
- The school district/BOCES provide work-based learning experiences for students with disabilities
- The school district/BOCES and employer must ensure compliance with federal and state labor laws, and the State Department of Labor regulations and guidelines.
- The school district/BOCES must explore and develop work-based learning experiences in settings that are relevant to the program.
- The school district/BOCES must comply with Commissioner's Regulations and Department policy where credit towards graduation is being awarded.

Documentation

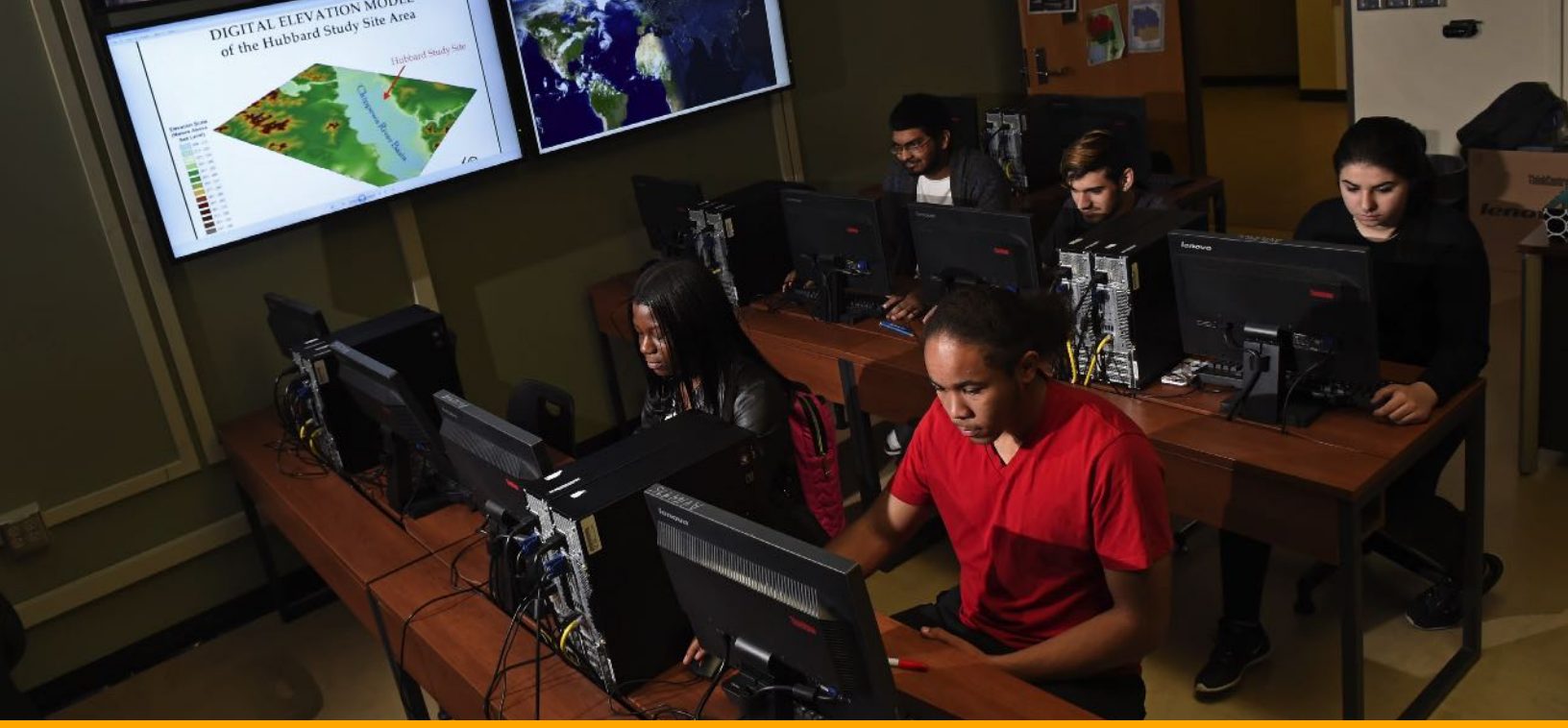
Recommendations for work-based learning should be included in the self-study report and reviewed by the external committee.

Resources

New York State Education Department Work Experience Manual **http://www.emsc.nysed.gov/cte/wbl/**

Source: http://www.p12.nysed.gov/cte/ctepolicy/guide.html

Return to TOC



SYRACUSE CITY SCHOOL DISTRICT

Career and Technical Education

CTE

Internship Handbook

Preparing today's students for tomorrow's careers.

Table of Contents

Syracuse City School District

Career and Technical Education Internship

Forms are available on SCSD CTE website www.syracusecityschools.com/cte

Introduction

Syracuse City School District Career and Technical Education Work Based Learning

Learning in the workplace is not a new concept. Informal, on-the-job training is an integral part of all workforce development. Work based learning (WBL) provides structured learning experiences for students through exposure to a range of occupations. The Harvard University report, Pathways to Prosperity (February, 2011) suggested that "Work-linked learning should play an especially important role in the new American system of pathways to prosperity. There is mounting evidence that this would be an effective strategy for encouraging young adults to complete both high school and post-secondary degrees. Co-operative education is a tested model that provides students with extensive work experience that is monitored by the school."

Learning in the workplace is connected to and supports learning in the classroom. Work based learning also helps students achieve established academic standards. Properly developed and supported, work based learning provides a practical context for school subject matter and enhances the traditional classroom learning. Work based learning activities promote the development of broad, transferable skills and are a key element of a rigorous and relevant education for students. It enables students to acquire the attitudes, skills and knowledge needed to succeed in today's workplace.

Employer partners can develop and support work based learning experiences that promote the attainment of workplace knowledge and skills. In doing so, they can support academic achievement and personal growth by designing, structuring, supporting and connecting work based learning experiences. Work based learning also supports professional, technical, and work-readiness skills development. Quality work based learning should:

- Be designed to enhance the learning of skills and workplace knowledge in all aspects of the industry
- Be structured to be safe, legal and measurable
- Be developmentally appropriate
- Have identified learning objectives and assess student performance
- Develop career ready practices and provide opportunities for reflection
- Be supported and documented by appropriate planning and training; and
- Comply with State and Federal labor laws

Syracuse City School District Career and Technical Education Internship

A Career and Technical Education Internship provides an important link between the classroom and the workplace for students age 16 and older. It is a structured, time-limited, career preparation activity in which students are assigned to a workplace for a defined period of time to participate in and observe firsthand within a given industry. The internship enhances and adds relevance to classroom learning. The internship may provide the opportunity to work in teams, rotate through a number of departments and job functions, or work on a project of interest to the student. It is essentially a partnership that links school, community, and business/industry to provide a real-world environment in which students are given the opportunity to apply, and thereby enhance, the knowledge and skills obtained in the classroom. The internship is related to the student's CTE program of study, with the primary goals of promoting:

- The exploration of and experience in a field of interest
- Exposure to a wide range of careers and jobs within an industry
- Opportunities to develop, practice and demonstrate new skills
- The acquisition of occupational knowledge and awareness of the skills and education needed to be successful in the industry

Career & Technical Program/ Teacher Guidelines

Legal Requirements of SCSD CTE Internship Program

All Career and Technical Education Internship Programs have the common objective of providing opportunities for students to develop and demonstrate job skills at a supervised worksite. They are supported by training plans developed cooperatively by the employer, instructor, and student. There should be ongoing communication between the job mentors and the CTE teacher or work based learning coordinator concerning students' performance and needs.

Each internship program needs to have the following:

- New York State Education Department (NYSED) approval of the CTE program
- The employer understands that the student placement is governed by NYSED, New York State Workers' Compensation Board (NYSWCB), New York State Department of Labor (NYSDOL), and United States Department of Labor (USDOL) labor laws and regulations
- Employer is provided a Certificate of Insurance from school where school liability insurance protects the employer from any damage student may do in the workplace
- Students are given written notification that this program is unpaid and they are not due any wages per NYSDOL regulations
- Per NYS, students are required to receive coverage under the employer's Workers' Compensation Insurance if student is interning for a for-profit company. If student is interning at a non-profit entity, the student is required to be covered by the employer's visitors or volunteer insurance.
- Worksite must be in compliance with Occupational Safety and Health Administration (OSHA) regulations. Health and safety instruction/training appropriate for the job is provided by the SCSD and employer specific training is provided by the employer on the worksite.
- Memorandum of Agreement is in effect between the cooperating business and the education agency and outlines the responsibilities of the student, employer, parent/guardian, and school/coordinator, all of whom must sign to confirm their support of the agreement.
- Students complete an Internship Application indicating their understanding of, and agreement to, all rules and regulations of the program.
- Students receive instruction embedded within their CTE curriculum relating to the technical and career ready practices.
- An Internship Training Plan (ITP) is developed and used for each participating student. The plan identifies the general and specific job tasks the student will perform on the job, the desired learning outcomes of the experience, and the time frame the student will spend at each task. The training plan should be designed to ensure that the student will have a progressive learning experience.
- All participating students are meeting, or have met, academic requirements of their CTE programs and academic subjects. No students on academic probation will participate in the internship.
- Employment Certificate (Working Papers) for students provide verification that a student under age 18 is eligible for employment. The student, employer, and school must complete the form. Employment certificates are obtained at the high school – typically the main office, health office, or guidance office.
- Time Log/Record of Attendance provides an official record of the weekly and cumulative hours the student has worked during the experience. It must be maintained for each student.
- An intern evaluation will be done by the CTE teacher before the internship, at the midpoint of the internship and at the end of the internship. This same form will be completed by the on-site supervisor in the midpoint and at the end of the internship.

SCSD CTE Internship Program Checklist (To be completed by CTE teacher or WBL coordinator)

- ☐ NYSED has approved the CTE program
- ☐ The employer understands that the student placement is governed by NYSED, NYSWCB, NYSDOL, and USDOL labor laws and regulations
- ☐ NYSED Application for Employment certificate (working papers, usually available in school counseling office) has been verified (NYSED form attached)
- ☐ Employer is provided with a Certificate of Insurance from school to cover liability (sample attached)
- ☐ A written Memorandum of Agreement is in effect between the cooperating business and the education agency (**Form #1**)
- ☐ Students complete an Internship Application indicating their understanding of, and adherence to all rules and regulations set forth by the program. (**Form #2**)
- ☐ Students receive instruction embedded within their CTE curriculum relating to the technical and Career Ready Practices. The CTE teacher and the student have completed the SCSD CTE Internship Ready to Work Assessment (**Form #3**)
- ☐ An Internship Training Plan (ITP) is developed and used for each participating student (**Form #4**)
- ☐ Students are given written notification that this program will be unpaid and they are not due any wages per NYS DOL regulations (**Form #5**)
- ☐ All SCSD internship candidates have received appropriate safety certification for the industry provided by the school before internship and employer specific training and orientation is provided by the employer on the worksite (**Form #6 & Form #7**)
- ☐ All participating students are meeting, or have met, academic requirements of their CTE programs and academic subjects
- ☐ Review Time Log/Record of Attendance which serves as an official record of the hours the student has worked during the experience (**Form #8**)

REQUIRED FORMS

NYSED Application for Employment Certificate

Certificate of Insurance

SCSD Memorandum of Agreement
(Form #1)

SCSD Internship Program Application
(Form #2)

SCSD Internship Ready to Work Assessment
(Form #3)

SCSD Internship Training Plan
(Form #4)

SCSD Notification of unpaid internship
(Form #5)

SCSD Internship Safety Certification
(Form #6)

SCSD Worksite Orientation
(Form #7)

SCSD Weekly Time Log/Record of Attendance
(Form #8)

Forms are available online at the SCSD CTE website : www.syracusecityschools.com/cte

CTE Teacher/WBL Coordinator

Date

Employer Internship Partner Guidelines

SCSD CTE Internship Employer Requirements

Safety

At all times, both school personnel and the employment site personnel must take appropriate steps to ensure that safe practices are stressed and followed. However, it is impossible to guarantee that no injuries resulting in medical expenses and liability will occur. The following prudent steps are encouraged:

1. In-school course content must include training related to safety at the worksite. Appropriate safety certification should be offered if possible. SCSD internship candidates will have received appropriate safety training before beginning their internship.
2. Any sites used for SCSD CTE internships will be reviewed by school personnel prior to placing a student at the worksite.
3. Employers must provide safety training information to interns as they would a new employee. Safety training must be provided if the employer engaged in a particularly hazardous occupation for minors as defined by the USDOL.
4. Provisions for student safety must be included as part of the training agreement signed by the employer, student, parent, and school representative.

Types of Liability Insurance and Risk Management

Workers' Compensation and Employer Liability Insurance

All employers will have a policy that provides coverage for the Workers' Compensation statutory benefits as well as liability coverage for certain employment-related situations. Verification of employer's Workers Compensation insurance will be included in the Memorandum of Agreement. The SCSD will also have insurance that covers the student participating in a school-related internship experience.

SCSD CTE Internship Expectations & Responsibilities of Employer

Before

- Determine projects or activities that would be appropriate for your student intern
- Communicate with staff that an intern will be at the workplace and identify mentors
- Designate one employee, the on-site supervisor, to work with coordinator/teacher to develop and define successful student objectives and experiences and record on the student Internship Training Plan

During

- Provide student with a Work Site Orientation to organization and any required training
- Train student intern for your work site, including all work site safety training
- Maintain a quality, safe and legal learning experience; provide effective supervision
- Use the Internship Training Plan as a guide for the internship; hold intern to employee standards/ expectations; oversee, direct, and provide adequate tasking to maximize learning
- Meet with coordinator/teacher and student to decide on an ongoing communications strategy
- Evaluate intern work and provide constructive criticism
- Assist student in working toward learning outcomes
- Coordinate student schedule, approve weekly timesheets
- Communicate successes and opportunities at the workplace that the teacher can use to enhance the value of classroom connections
- Complete a student evaluation midway through internship and discuss with student

After

- Complete a final evaluation of the student
- Hold debriefing session and review performance with the student and teacher
- Complete a Program Evaluation

SCSD CTE Internship Employer Internship Partner Checklist (To be completed by On-Site Supervisor/Mentor)

- ☐ Meet with coordinator/teacher and student to agree on ongoing communication strategy (e-mail, text, telephone, etc.)
- ☐ A written Memorandum of Agreement is in effect between the cooperating business and the education agency (**Form #1**)
- ☐ Work with coordinator/teacher to develop and define successful student objectives and experiences and record on the student Internship Training Plan (**Form #4**)
- ☐ Coordinate student schedule, approve weekly time log/record of attendance (**Form #8**)
- ☐ Communicate with staff that an intern will be at the workplace and identify on-site supervisor and/or mentor

On-Site Supervisor _____

Mentor Name _____

- ☐ Provide student with Work Site Orientation to organization and any required training (Form #7)
- ☐ Create and maintain a quality, safe and legal learning experience
- ☐ Hold intern to employee standards/expectation; provide student support and candid feedback
- ☐ Communicate successes and opportunities at the workplace that the teacher can use to enhance the value of classroom connections
- ☐ Complete an interim SCSD CTE Internship Ready to Work Assessment of student performance and discuss with student (**Form #3**)
- ☐ Provide effective supervision
- ☐ Complete a final assessment of the student (**Ready to Work Assessment, Form #3 and Student Training Plan, Form #4**)
- ☐ Complete a program evaluation (**Form #10**)

REQUIRED FORMS

SCSD Memorandum of Agreement
(Form #1)

SCSD Internship Ready to Work Assessment
(Form #3)

SCSD Internship Training Plan
(Form #4)

SCSD Worksite Orientation
(Form #7)

SCSD Weekly Time Log/Record of Attendance
(Form #8)

SCSD Mentor Program Evaluation
(Form #10)

Forms are available online at the SCSD CTE website : www.syracusecityschools.com/cte

_____ _____

Employer/ Mentor Date

Student Intern Guidelines

Expectations and Responsibilities of Students

Before

- Obtain working papers (if under 18)
- Return Internship Application and all permission slips with appropriate signatures
- Meet with your teacher/coordinator and worksite supervisor to finalize an Internship Training Plan

During

- Attend Orientation at the worksite
- Observe all workplace rules and regulations particularly those applicable to safety and security concerns
- Perform all duties, jobs and assigned tasks; treat internship like a real job
- Maintain regular work schedule and notify supervisor in advance of any vacation/appointments
- Track you hours as instructed on Weekly Timesheet
- Develop skill specific learning outcomes with your worksite supervisor
- Participate in ongoing reflection journal activities and skill building classroom assignments
- Communicate with your teacher/coordinator and worksite supervisor if issues arise
- Keep copies of all necessary paperwork (work journal, training plan, Weekly Time Log/Record of Attendance, and evaluations)

After

- Participate in self-evaluation and reflection activities
- Update your resume based upon new skills and experiences gained
- Send thank you note to employer

SCSD CTE Internship Student Checklist (To be completed by student)

- ☐ Obtain NYSED Application for Employment Certificate (usually available in school counseling office, application attached)
- ☐ A written Memorandum of Agreement is in effect between the cooperating business, the education agency, and signed by student and parents (**Form #1**)
- ☐ Return Internship Application (**Form #2**) and all permission slips with appropriate signatures
- ☐ Develop skill specific learning outcomes with your worksite supervisor
- ☐ Meet with your teacher/coordinator and worksite supervisor to finalize an Internship Training Plan for the internship (**Form #4**)
- ☐ Attend orientation at the worksite (**Form #7**)
- ☐ Observe all workplace rules and regulations particularly those applicable to safety and security concerns
- ☐ Perform all duties, jobs and assigned tasks; treat internship like a real job
- ☐ Maintain regular work schedule and notify supervisor in advance of any vacation/appointments
- ☐ Track you hours as instructed on time log/record of attendance (**Form #8**)
- ☐ Participate in ongoing reflection activities and skill building classroom assignments
- ☐ Communicate with your teacher/coordinator and worksite supervisor, if issues arise and keep copies of all necessary paperwork (work journal, training plan, Weekly Time Log/Record of Attendance, and evaluations)
- ☐ Participate in self-evaluation and reflection activities (**Forms #3 & #9**)
- ☐ Update your resume based on new skills and experiences gained
- ☐ Send thank you note to employer

REQUIRED FORMS

SCSD Memorandum of Agreement
(Form #1)

SCSD Internship Program Application
(Form #2)

SCSD Internship Ready to Work Assessment
(Form #3)

SCSD Internship Training Plan
(Form #4)

SCSD Worksite Orientation
(Form #7)

SCSD Weekly Time Log/Record of Attendance
(Form #8)

SCSD Student Evaluation
(Form #9)

Forms are available online at the SCSD CTE website : www.syracusecityschools.com/cte

Student _____ Date _____

SCSD CTE Internship Forms

NYSED Application for Employment Certificate

SCSD Certificate of Insurance to Cover Student Liability (Sample)

Form #1	SCSD Memorandum of Agreement
Form #2	SCSD Internship Program Application
Form #3	SCSD Internship Ready to Work Assessment
Form #4	SCSD Internship Training Plan
Form #5	SCSD Notification of unpaid internship
Form #6	SCSD Internship Safety Certification
Form #7	SCSD Worksite Orientation
Form #8	SCSD Weekly Time Log/Record of Attendance
Form #9	SCSD Student Evaluation
Form #10	SCSD Mentor Program Evaluation

Forms are available on SCSD CTE website at www.syracusecityschools.com/cte

AT-17
Rev. 5/10

THE UNIVERSITY OF THE STATE OF NEW YORK
THE STATE EDUCATION DEPARTMENT
ALBANY, NY 12234

APPLICATION FOR EMPLOYMENT CERTIFICATE

See reverse side of this form for information concerning employment of minors.

All signatures must be handwritten in ink, and applicant must appear in person before the certifying official.

THIS APPLICATION DOES NOT AUTHORIZE EMPLOYMENT

PART I – Parental Consent – (To be completed by applicant and parent or guardian)

Parent or guardian must appear at the school or issuing center to sign the application for the first certificate for full-time employment, unless the minor is a graduate of a four-year high school and presents evidence thereof. For all other certificates, the parent or guardian must sign the application, but need not appear in person to do so.

Date……

I, …… Age ……..…
[Applicant]

Home Address ……....., apply for a certificate as checked below
[Full Home Address including Zip Code]

- ☐ Nonfactory Employment Certificate – Valid for lawful employment of a minor 14 or 15 years of age enrolled in day school when attendance is not required.
- ☐ Student General Employment Certificate – Valid for lawful employment of a minor 16 or 17 years of age enrolled in day school when attendance is not required.
- ☐ Full-Time Employment Certificate – Valid for lawful employment of a minor 16 or 17 years of age who is not attending day school.

I hereby consent to the required examination and employment certification as indicated above.

……
[Signature of Parent or Guardian]

PART II – Evidence of Age – (To be completed by issuing official only)

……. – Check evidence of age accepted – Document # (if any) ……..
[Date of Birth]

Birth Certificate State Issued Photo I.D Driver's License Schooling Record Other……
[Specify]

PART III – Certificate of Physical Fitness

Applicant shall present documentation of physical exam from a school or private physician, physician's assistant or nurse practitioner licensed to practice within New York State. Said examination must have been given within 12 months prior to issuance of the employment certificate. Date of physical exam on file with school …… If physical exam is over 12 months, provide student with certificate of physical fitness to be completed by school medical director or private health care provider.

If the physical exam or Certificate of Physical Fitness is limited with regards to allowed work/activity, the issuing official shall issue a Limited Employment Certificate (valid for a period not to exceed 6 months unless the limitation noted by the physician is permanent, then the certificate will remain valid until the minor changes jobs. Enter the limitation on the employment certificate. THE PHYSICIAN'S CERTIFICATION SHOULD BE RETURNED TO THE APPLICANT.

PART IV – Pledge of Employment – (To be completed by prospective employer)

Part IV must be completed only for: (a) a minor with a medical limitation; and (b) for a minor 16 years of age or legally able to withdraw from school, according to Section 3205 of the Education Law, and must show proof of having a job.

The undersigned will employ …… residing at ……
[Applicant]

as …… at ……
[Description of Applicant's Work] [Job Location]

for …… days per week …….. hours per day, beginning …… a.m. ……..…… p.m.

…… Factory ending…….. a.m. ……p.m.
[Name of Firm]

Nonfactory ……..
[Address of Firm]

…… Starting date …….. ……..
[Telephone Number] [Signature of Employer]

PART V – Schooling Record – (To be completed by school official)

Part V must be completed only for a minor 16 years of age who is leaving school and resides in a district (New York City and Buffalo) which require a minor 16 years of age to attend school, according to Section 3205 of the Education Law.

I certify that the records of …… ……
[Name of School] [Address]

Show that …….. whose date of birth is ……
[Name of Applicant]

Is in grade…… ……
[Signature of Principal or Designee]

PART VI – Employment Certification – (To be completed by issuing official only)

Certificate Number ……..... Date Issued ……

……. …….. …….
[School or Issuing Center] [Address] [Signature of Issuing Officer]

GENERAL INFORMATION

An employment Certificate (Student Nonfactory, Student General, or Full Time) may be used for an unlimited number of successive job placements in lawful employment permitted by the particular type of certificate.

A Nonfactory Employment Certificate is valid for 2 years from the date of issuance or until the student turns 16 years old, with the exception of a Limited Employment Certificate. A Limited Employment Certificate is valid for a maximum of 6 months unless the limitation noted by the physician is permanent, then the certificate will remain valid until the minor changes job. It may be accepted only by the employer indicated on the certificate.

A new Certificate of Physical Fitness is required when applying for a different type of employment certificate, if more than 12 months have elapsed since the previous physical for employment.

An employer shall retain the certificate on file for the duration of the minor's employment. Upon termination of employment, or expiration of the employment certificate's period of validity, the certificate shall be returned to the minor. A certificate may be revoked by school district authorities for cause.

A minor employed as a Newspaper Carrier, Street Trades Worker, Farmworker, or Child Model, must obtain the Special Occupational Permit required.

A minor 14 years of age and over may be employed as a caddy, babysitter, or in casual employment consisting of yard work and household chores when not required to attend school. Employment certification for such employment is not mandatory.

An employer of a minor in an occupation which does not require employment certification should request a Certificate of Age.

PROHIBITED EMPLOYMENT

Minors 14 and 15 years may not be employed in, or in connection with a factory (except in delivery and clerical employment in an enclosed office thereof), or in certain hazardous occupations such as: construction work; helper on a motor vehicle; operation of washing, grinding, cutting, slicing, pressing or mixing machinery in any establishment; painting or exterior cleaning in connection with the maintenance of a building or structure; and others listed in Section 133 of the New York State Labor Law.

Minors 16 and 17 years of age may not be employed in certain hazardous occupations such as: construction worker; helper on a motor vehicle, the operation of various kinds of power-driver machinery; and others listed in Section 133 of the New York State Labor Law.

HOURS OF EMPLOYMENT

Minors may not be employed during the hours they are required to attend school.

Minors 14 and 15 years of age may not be employed in any occupation (except farmwork and delivering, or selling and delivering newspapers):

When school is in session:

- more than 3 hours on any school day, more than 8 hours on a nonschool day, more than 6 days in any week, for a maximum of 18 hours per week, or a maximum of 23 hours per week if enrolled in a supervised work study program approved by the Commissioner.
- after 7 p.m. or before 7 a.m.

When school is not in session:

- more than 8 hours on any day, 6 days in any week, for a maximum of 40 hours per week.
- after 9 p.m. or before 7 a.m.

This certificate is not valid for work associated with newspaper carrier, agriculture or modeling.

Minors 16 and 17 years of age may not be employed: --

When school is in session:

- more than 4 hours on days preceding school days; more than 8 hours on days not preceding school days (Friday, Saturday, Sunday and holidays), 6 days in any week, for a maximum of 28 hours per week.
- between 10 p.m. and 12 midnight <u>on days followed by a school day</u> without written consent of parent of guardian <u>and</u> a certificate of satisfactory academic standing from the minor's school (to be validated at the end of each marking period).
- between 10 p.m. and 12 midnight <u>on days not followed by a school day</u> without written consent of parent or guardian.

When school is not in session:

- more than 8 hours on any day, 6 days in any week, for a maximum of 48 hours per week.

EDUCATION LAW, SECTION 3233

"Any person who knowingly makes a false statement in or in relation to any application made for an employment certificate or permit as to any matter by this chapter to appear in any affidavit, record, transcript, certificate or permit therein provided for, is guilty of a misdemeanor."

ACORD® CERTIFICATE OF LIABILITY INSURANCE

DATE (MM/DD/YYYY)

THIS CERTIFICATE IS ISSUED AS A MATTER OF INFORMATION ONLY AND CONFERS NO RIGHTS UPON THE CERTIFICATE HOLDER. THIS CERTIFICATE DOES NOT AFFIRMATIVELY OR NEGATIVELY AMEND, EXTEND OR ALTER THE COVERAGE AFFORDED BY THE POLICIES BELOW. THIS CERTIFICATE OF INSURANCE DOES NOT CONSTITUTE A CONTRACT BETWEEN THE ISSUING INSURER(S), AUTHORIZED REPRESENTATIVE OR PRODUCER, AND THE CERTIFICATE HOLDER.

IMPORTANT: If the certificate holder is an ADDITIONAL INSURED, the policy(ies) must be endorsed. If SUBROGATION IS WAIVED, subject to the terms and conditions of the policy, certain policies may require an endorsement. A statement on this certificate does not confer rights to the certificate holder in lieu of such endorsement(s).

PRODUCER	CONTACT NAME:	
	PHONE (A/C, No, Ext):	FAX (A/C, No):
	E-MAIL ADDRESS:	

INSURER(S) AFFORDING COVERAGE	NAIC #
INSURER A :	
INSURER B :	
INSURER C :	
INSURER D :	
INSURER E :	
INSURER F :	

INSURED

COVERAGES **CERTIFICATE NUMBER:** **REVISION NUMBER:**

THIS IS TO CERTIFY THAT THE POLICIES OF INSURANCE LISTED BELOW HAVE BEEN ISSUED TO THE INSURED NAMED ABOVE FOR THE POLICY PERIOD INDICATED. NOTWITHSTANDING ANY REQUIREMENT, TERM OR CONDITION OF ANY CONTRACT OR OTHER DOCUMENT WITH RESPECT TO WHICH THIS CERTIFICATE MAY BE ISSUED OR MAY PERTAIN, THE INSURANCE AFFORDED BY THE POLICIES DESCRIBED HEREIN IS SUBJECT TO ALL THE TERMS, EXCLUSIONS AND CONDITIONS OF SUCH POLICIES. LIMITS SHOWN MAY HAVE BEEN REDUCED BY PAID CLAIMS.

INSR LTR	TYPE OF INSURANCE	ADDL INSR	SUBR WVD	POLICY NUMBER	POLICY EFF (MM/DD/YYYY)	POLICY EXP (MM/DD/YYYY)	LIMITS	
A	**GENERAL LIABILITY**						EACH OCCURRENCE	$
	☐ COMMERCIAL GENERAL LIABILITY						DAMAGE TO RENTED PREMISES (Ea occurrence)	$
	☐ CLAIMS-MADE ☐ OCCUR						MED EXP (Any one person)	$
	☐ 500,000 Retained						PERSONAL & ADV INJURY	$
	☐						GENERAL AGGREGATE	$
	GEN'L AGGREGATE LIMIT APPLIES PER:						PRODUCTS - COMP/OP AGG	$
	☐ POLICY ☐ PRO-JECT ☐ LOC							$
	AUTOMOBILE LIABILITY						COMBINED SINGLE LIMIT (Ea accident)	$
	☐ ANY AUTO						BODILY INJURY (Per person)	$
	☐ ALL OWNED AUTOS ☐ SCHEDULED AUTOS						BODILY INJURY (Per accident)	$
	☐ HIRED AUTOS ☐ NON-OWNED AUTOS						PROPERTY DAMAGE (Per accident)	$
	☐ ☐							$
	☐ **UMBRELLA LIAB** ☐ OCCUR						EACH OCCURRENCE	$
	☐ **EXCESS LIAB** ☐ CLAIMS-MADE						AGGREGATE	$
	☐ DED ☐ RETENTION $							$
	WORKERS COMPENSATION AND EMPLOYERS' LIABILITY Y / N						☐ WC STATU-TORY LIMITS ☐ OTH-ER	
	ANY PROPRIETOR/PARTNER/EXECUTIVE OFFICER/MEMBER EXCLUDED? ☐ **(Mandatory in NH)**	N / A					E.L. EACH ACCIDENT	$
	If yes, describe under DESCRIPTION OF OPERATIONS below						E.L. DISEASE - EA EMPLOYEE	$
							E.L. DISEASE - POLICY LIMIT	$

DESCRIPTION OF OPERATIONS / LOCATIONS / VEHICLES (Attach ACORD 101, Additional Remarks Schedule, if more space is required)

CERTIFICATE HOLDER

CANCELLATION

SHOULD ANY OF THE ABOVE DESCRIBED POLICIES BE CANCELLED BEFORE THE EXPIRATION DATE THEREOF, NOTICE WILL BE DELIVERED IN ACCORDANCE WITH THE POLICY PROVISIONS.

AUTHORIZED REPRESENTATIVE

Teacher

Employer

Student

Syracuse City School District

Syracuse City School District
725 Harrison Street, Syracuse, NY 13210

Memorandum of Agreement

(Form #1)

Type of Work Based Learning Experience: Non-Paid Internship

This Work Based Learning Experience Agreement is entered into by and between the Syracuse City School District (SCSD) _____ (Student), his/her Parents/Guardian, _____ (Parent/Guardian), and his/her Work Experience Employer, _____ (Employer), on the date indicated below, whereby the Student will participate in a CTE Internship (Program at the Employer's place of business located at _____ , on _____ , during the hours of _____ .

THE STUDENT UNDERSTANDS THAT HIS/HER CONDUCT IS A REFLECTION UPON THE SCHOOL NAME AND AGREES THAT HE/SHE WILL:

1. Provide his/her own transportation to and from the Employer's place of business (the SCHOOL, the Student's home school, the SCHOOL and the Employer are in no way responsible for providing the Student with transportation to and/or from the Employer's place of business at any time or for any incidents or accidents which may occur while the Student is on route to or from the Employer's place of business)
2. Demonstrate a conscientious attitude and be honest, punctual, cooperative, courteous and willing to learn while at the Employer's place of business.
3. Keep regular attendance as agreed upon with the Employer, excluding Employer-observed holidays, days on which the Employer's place of business is closed or other legal absences and understands that his/her attendance will be taken from his/her weekly attendance reports.
4. Keep regular attendance at his/her home school.
5. Give the Employer as much advance notice as possible if unable to report for work or to do so in a timely manner and contact the CTE teacher at (315) _____.
6. Report to SCHOOL if the Internship location is closed for any reason during at time in which the student is scheduled to be at the Internship location and SCHOOL is in session.
7. Complete weekly time log/record of attendance (Form # 8) reports as required by SCHOOL.
8. Engage in only those work based learning experiences approved by the supervisor at the work-site.

THE EMPLOYER AGREES THAT IT WILL:

1. Not permit the Student to replace any paid employee (in the case of an Internship).
2. Advise the Student of all company rules, regulations and policies which relate to the Student.
3. Explain to the Student the responsibilities and duties of his/her internship and shall correlate on-the-job training with safety instructions given by the SCHOOL.
4. The work of the Student in occupations declared particularly hazardous by the U.S. Department of Labor shall be (i) incidental to the Student's training; (ii) intermittent and for short periods of time; and (iii) under the direct and close supervision of a qualified and experienced person.
5. Provide direct supervision by an authorized employee to the Student as needed.
6. Complete an accident report form and return to SCHOOL in the event of an accident.
7. Review the Student's performance with him/her on a weekly basis and sign a weekly time sheet, complete an evaluation of the Student on forms provided by the SCHOOL.
8. Inform the SCHOOL Instructor/Coordinator when the Student is absent or not performing adequately by calling (315)_____ .

9. Observe any and all laws that may relate to the Student's work experience.

THE SCHOOL AGREES THAT IT WILL:

1. Carry the insurance listed for students during class activities including internships, job experiences and work placement.
2. Accident Insurance: SCHOOL carries tertiary accident insurance to cover medical expenses as a result of an accident. The parent's health insurance is primary and the home school district would be secondary. General Liability Insurance: SCHOOL carries general liability insurance to cover up to one million dollars for a single event. As added protection, a ten million dollar umbrella policy is also in effect.
3. Assist the Student in securing internship placement regardless of his/her sex, race, color, national origin or disability (all inquiries and/or complaints regarding discrimination should be directed to the compliance officer, Patty Clark, SCSD Central Office, 725 Harrison Street, Syracuse, New York 13210. Telephone: (315) 435-4131.
4. Provide the STUDENT with safety instructions correlated by the EMPLOYER with on-the-job training.
5. Review with the Student and the Employer their respective responsibilities and obligations while participating in the Program.

The parties/signatories hereby agree that good communication and understanding between them is vital if the objectives of this Program are to be met and that joint conferences between the Student, Employer, Parent/Guardian, Instructor, and others may be scheduled from time to time in order to discuss:

1. the student's progress
2. any misunderstandings
3. the reason for termination of the Agreement

This Agreement is not in effect until signed by all parties. This Agreement may be terminated at any time by any party upon written notice to the other parties.

We the undersigned, have reviewed and agreed to the terms and conditions set forth herein.

Date __/__/____ _____ Student

Date __/__/____ _____ Parent/ Guardian

Date __/__/____ _____ Daytime Phone

_____ Evening Phone

Date __/__/____ _____ Employer/ Supervisor

Date __/__/____ _____ CTE Teacher

Date __/__/____ _____ Home School Principal

The Syracuse City School District hereby advises students, parents, employees and the general public that it is committed to providing equal access to all categories of employment, programs and educational opportunities, including career and technical education opportunities, regardless of actual or perceived race, color, national origin, Native American ancestry/ethnicity, creed or religion, marital status, sex, sexual orientation, age, gender identity or expression, disability or any other legally protected category under federal, state or local law.
Inquiries regarding the District's non-discrimination policies should be directed to:
Executive Director of Student Support Services, Civil Rights Compliance Officer, Syracuse City School District, 725 Harrison Street • Syracuse, NY 13210
(315) 435-4131, Email: CivilRightsCompliance@scsd.us

Teacher

Student

Syracuse City School District

Syracuse City School District
725 Harrison Street, Syracuse, NY 13210

CTE Internship Program Application Form

(Form #2)

Personal Information

Last Name	First Name	Age	Date of Birth
Street		Home Telephone Number	Cell Phone Number
City, State, Zip		Emergency Contact Name	Telephone Number
Email Address		Relationship to Emergency Contact	
Primary Parent/ Guardian Name		Parent/ Guardian's Telephone Number Home Cell	
Primary Parent/ Guardian Email			
Secondary Parent/ Guardian Name		Secondary Parent/ Guardian's Telephone Number Home Cell	
Secondary Parent/ Guardian Email			
Working Papers Certificate Number		SCSD Student schedule should be attached to this form School Counselor	

School Year Training/ Work Schedule Availability

Please list the hours you can work during a typical weekly schedule

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday

Please check applicable box: ☐ Fixed Schedule ☐ Schedule will vary

Sports, Clubs, and Other Activities

Transportation

Please check the appropriate response

Do you have a license? ☐ Yes ☐ No	If YES, which license do you have? ☐ Full License ☐ Junior License
Do you drive to school? ☐ Yes ☐ No	License Number:

If you do not have a license, how do you plan on getting to and from your internship?

☐ Public Transportation ☐ Other

Teacher

Student

INSURANCE COVERAGE IN CASE OF INJURIES TO STUDENT AT INTERNSHIP:

EMPLOYER'S WORKER'S COMPENSATION MUST COVER THE STUDENT IN CASE OF INJURIES AT TRAINING SITE.

PROGRAM AWARENESS STATEMENT TO BE CHECKED BY STUDENTS:

☐ In order to receive credit for my work-based learning experience, I must be training at a legal site approved by the school's CTE Teacher or work-based learning coordinator.

☐ I must notify my CTE teacher or work-based learning coordinator immediately if there is a change of work schedule or duties at the training site.

☐ Failure to report any disciplinary action, termination, or proper documentation of hours may result in the student not earning school credit.

☐ Students must present all daily attendance records to CTE teacher or work-based learning coordinator weekly and complete all assignments related to the program.

☐ I must immediately notify my work-based learning coordinator if I have or develop any medical condition(s) which affects my ability to participate in training, such as allergies, lifting heavy items, movement, standing, sitting, migraine headaches, etc. If there are any current conditions, please state them below. The presence of such a condition will not necessarily preclude me from participating in the internship and accommodations may be provided.

PARENTAL/GUARDIAN PERMISSION AND PICTURE/NEWS STORY RELEASE:

I give my child,_____ permission to participate in the work-based learning internship at the Syracuse City School District. By signing the parental permission form, it is understood that:

- All the information is accurate.
- In order to receive credit, students must work a minimum of 150 hours during the school year.
- All students must report to CTE teacher or work-based learning coordinator in the case of any change in employment.
- Failure to report any disciplinary action, termination, or proper documentation may result in the student not earning school credit.
- Students must present all daily attendance records to CTE teacher or work-based learning coordinator weekly and complete all assignments related to the program.
- A student with a junior license must only drive to school if they go directly to work following the school day and they must carry with them the proper paperwork as directed by the work-based learning coordinator.

In addition to agreeing with the above statements, please check off one:

☐ I give permission for my child's photograph or name to be used to promote the Work Experience Program.

☐ I do not want my child's photograph or name to be used to promote the Work Experience Program.

_____	_____	___/___/___
Parent/ Guardian's Name	Parent/ Guardian's Signature	Date

_____
Relationship to Student

_____	_____	___/___/___
Student's Name	Student's Signature	Date

The Syracuse City School District hereby advises students, parents, employees and the general public that it is committed to providing equal access to all categories of employment, programs and educational opportunities, including career and technical education opportunities, regardless of actual or perceived race, color, national origin, Native American ancestry/ethnicity, creed or religion, marital status, sex, sexual orientation, age, gender identity or expression, disability or any other legally protected category under federal, state or local law. Inquiries regarding the District's non-discrimination policies should be directed to: Executive Director of Student Support Services, Civil Rights Compliance Officer, Syracuse City School District, 725 Harrison Street • Syracuse, NY 13210/ (315) 435-4131, Email: CivilRightsCompliance@scsd.us

Teacher

Employer

Student

Syracuse City School District

Syracuse City School District
725 Harrison Street, Syracuse, NY 13210

CTE Internship Ready to Work Assessment

(Form #3)

Name _____ Program _____ Date ___/___/___

Scale

1 = Seldom. 2 = Occasionally. 3 = Usually. 4 = Always.

		Student	Teacher	Onsite Supervisor
ZEST				
1	Actively participates			
2	Shows enthusiasm			
3	Invigorates others			
GRIT				
4	Finishes whatever he or she begins			
5	Tries very hard even after experiencing failure			
6	Works independently with focus			
SELF CONTROL SCHOOL WORK				
7	Comes to class prepared			
8	Pays attention and resists distractions			
9	Remembers and follows directions			
10	Gets to work right away rather than procrastinating			
SELF-CONTROL INTERPERSONAL				
11	Remains calm even when criticized or otherwise provoked			
12	Allows others to speak without interruption			
13	Is polite to adults and peers			
14	Keeps his/her temper in check			

		Student	Teacher	Onsite Supervisor
OPTIMISM				
15	Gets over frustrations and setbacks quickly			
16	Believes that effort will improve his or her future			
GRATITUDE				
17	Recognizes and shows appreciation for others			
18	Recognizes and shows appreciation for his/her opportunities			
SOCIAL INTELLIGENCE				
19	Is able to find solutions during conflicts with others			
20	Demonstrates respect for feelings of others			
21	Knows when and how to include others			
CURIOSITY				
22	Is eager to explore new things			
23	Asks and answers questions to deepen understanding			
24	Actively listens to others.			
ACADEMIC PERFORMANCE				
25	Completes all assignments with quality and timeliness			
26	Uses tools appropriately and safely			
COMMITMENT				
27	Attends class with one or less absences per quarter			
28	Demonstrates loyalty and appreciation to the program and instructors			

Teacher

Employer

Student

Syracuse City School District

Syracuse City School District
725 Harrison Street, Syracuse, NY 13210

CTE Internship Training Plan
(Form #4)

Student's Name	Email	
Student's Address	Telephone	Date of Birth
CTE Program Career Cluster	Working Papers Certificate #	
School Coordinator		
Phone Number		
Fax Number		
Email		
Employer		
Phone Number		
Fax Number		
Email		
Immediate Job Supervisor		
Phone Number		
Email		
Corporate Address		

Training Schedule

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday

Insurance Coverage

- ☐ Student is a non-paid intern – Worker's Compensation
- ☐ Student is a non-paid observer – Worker's Compensation

Transportation Provided by

- ☐ Student/parent will provide own transportation
- ☐ School district will provide transportation during school hours

Goals for this Work-Based Learning Student:

1. To explore, learn and develop the skills necessary for this career.
2. To develop the Career Ready Practices necessary for success in the global, competitive world.
3. To be trained in the safe operations of this job title.
4. To be able to demonstrate positive behavior and appropriate dress.

(Form #4 Continued)

JOB TASKS AND LEARNING OUTCOMES (Determined by the Employer and Coordinator)	ACHIEVEMENT LEVEL AND COMMENTS 1. Mastered skill 2. Needs more training at the work site. 3. Needs more training at school. 4. Has not reached this training area.
1.	
2.	
3.	
4.	
5.	
6.	
7.	
8.	
9.	
10.	

CAREER READY PRACTICES	Always	Frequently	Occasionally	Rarely
1. Student works cooperatively as a team member?	☐	☐	☐	☐
2. Student is able to read instructions for information and application.	☐	☐	☐	☐
3. Student can calculate and measure for information and application.	☐	☐	☐	☐
4. Student can behave in a responsible manner without supervision.	☐	☐	☐	☐
5. Student can communicate verbally and in writing to evoke clear understanding.	☐	☐	☐	☐
6. Student demonstrates good listening and follow through skills.	☐	☐	☐	☐
7. Student demonstrates critical thinking and problem solving skills.	☐	☐	☐	☐
8. Student can locate and manage resources for problem solving.	☐	☐	☐	☐
9. Student demonstrates a positive work ethic.	☐	☐	☐	☐
10. Student demonstrates computer literacy.	☐	☐	☐	☐

(Form #4 Continued)

SAFETY TRAINING	DATE OF SAFETY TRAINING	ACHIEVEMENT LEVEL AND COMMENTS 1. Mastered safety training instruction. 2. Needs more safety training at work site. 3. Needs more safety training at school. 4. Has not reached this training area.
1. Safety precautions related to stairs, floors, office equipment and furniture.		
2. Safety precaution related to proper dress apparel, shoes, gloves, head, eye and ear protection.		
3. Safety precaution related to use of tools, machines, and chemicals.		
4. Safety precautions related to fire, weather and other natural disasters.		
5. Safety precautions related to sexual harassment and workplace violence.		

DRESS AND BEHAVIOR CODE FOR POSITION	ACHIEVEMENT LEVEL AND COMMENTS 1. Dresses/behaves appropriately 2. Needs to modify dress/behavior. 3. Needs personal consultation.

Employer Name	Employer Signature	Date / /
Work-based Learning Coordinator Name	Work Based Learning Coordinator Signature	Date / /
Parent/ Guardian Name	Parent/Guardian Signature	Date / /
Student Name	Student Signature	Date / /

If you have any questions please do not hesitate to contact me at (315) 435-_____.

Thank you for your cooperation! _____ , CTE Teacher

Syracuse City School District
725 Harrison Street, Syracuse, NY 13210

SCSD CTE Internship
Notification of Unpaid Internship
(Form #5)

This form serves as notification that the Syracuse City School District CTE Internship is an unpaid internship and students are not due any wages per New York State Department of Labor.

_____	____/____/____
Student	Date
_____	____/____/____
CTE Teacher/ WBL Coordinator	Date
_____	____/____/____
Worksite Representative/ Mentor	Date

Teacher

Syracuse City School District

Syracuse City School District
725 Harrison Street, Syracuse, NY 13210

SCSD Internship Safety Certification
(Form #6)

_____ _____ / / _____

Student Date

_____ _____

Mentor or Supervisor CTE/ WBL Teacher

Student CTE Program SCSD Career and Technical Program:

_____

SAFETY CERTIFICATIONS		Date
OSHA 10	☐	/ /
Safe Serv	☐	/ /
First Aid	☐	/ /
CPR	☐	/ /
Other	☐	/ /

Teacher

Employer

Student

Syracuse City School District

Syracuse City School District
725 Harrison Street, Syracuse, NY 13210

SCSD Internship Worksite Orientation
(Form #7)

Student _____ Date ___/___/___

Mentor or Supervisor _____ CTE/ WBL Teacher _____

Company Orientation

Directions: Be sure that your student employee obtains information about the factors listed below. Check the information on each item as it is completed. Return the completed form to the CTE Teacher or Work Based Learning Coordinator.

Tour of Workplace

- ☐ A tour of the workplace
- ☐ An overview of the company safety plan
- ☐ Introductions to co-workers

Tour of Employee Facilities

- ☐ Rest rooms
- ☐ Lunch room
- ☐ Where to store personal belongings

Other _____

Safety Plan

- ☐ Safety plan
- ☐ Stairwell/fire exits
- ☐ Fire Extinguishers
- ☐ Special hazards
- ☐ Accident prevention
- ☐ Safety Training Log, updated as needed

About the Company

- ☐ Discuss company organizational structure
- ☐ Review type of business, products, services
- ☐ Overview of who the customers are

Other _____

Department/Position Specifics

- ☐ Explanation of work schedule
- ☐ Review of dress and conduct code
- ☐ Review of hours, breaks and lunch policies
- ☐ Location of time clock or sign-in
- ☐ Attendance requirements, including procedures for calling in when absent
- ☐ Relationship to working with other departments or co-workers

Job Specific

- ☐ How to use the phones and office equipment
- ☐ Supplies, paper, pens, etc.
- ☐ Job description, Work-Based Learning Plan and evaluation process

Supervisors Expectations

- ☐ Dress code including clothing, hair and jewelry
- ☐ Work performance including productivity and work habits
- ☐ Company culture

Materials provided to intern

- ☐ Copy of personnel handbook
- ☐ Organizational charts
- ☐ Telephone directory
- ☐ Security procedures

Employer/training sponsor _____ Date ___/___/___

Student _____ Date ___/___/___

CTE Teacher/WBL Coordinator _____ Date ___/___/___

Teacher

Employer

Student

Syracuse City School District

Syracuse City School District
725 Harrison Street, Syracuse, NY 13210

Weekly Time Log/Record of Attendance
(Form #8)

Student _____ Training Title _____

Worksite Supervisor _____

Time Log for the Week of: ____/____/____

	Date	Start Time	End Time	Hours Worked
Sunday				
Monday				
Tuesday				
Wednesday				
Thursday				
Friday				
Saturday				

Total Weekly Hours: _____

Student please list any new tasks performed this week: _____

By signing this timesheet, you are certifying that it is correct and truthful.

Student's Signature _____ Date ____/____/____

Supervisor Name _____ Phone _____ Date ____/____/____

Supervisor's Signature _____

Attention Worksite Supervisor:
If you have any questions or concerns, please contact: _____ CTE Teacher _____ Phone

Syracuse City School District

Syracuse City School District
725 Harrison Street, Syracuse, NY 13210

SCSD CTE Internship Student Evaluation

(Form #9)

Name _____ CTE Program _____

Dates of Internship __/__/__ — __/__/__ Year to Graduate _____

Please complete this form upon completion of your internship.

	Strongly Agree	Agree	Indifferent	Disagree	Strongly Disagree
Overall, I had a great experience	☐	☐	☐	☐	☐
I was actively involved in the team meetings and felt free to express my thoughts and opinions	☐	☐	☐	☐	☐
My mentors encouraged and responded to my questions	☐	☐	☐	☐	☐
I have an increased appreciation for teamwork	☐	☐	☐	☐	☐
I have a greater ability to ask good questions and synthesize information	☐	☐	☐	☐	☐
I was presented with opportunities to learn by doing	☐	☐	☐	☐	☐
I gained factual knowledge about careers throughout the internship	☐	☐	☐	☐	☐
I would recommend this opportunity to others	☐	☐	☐	☐	☐
My time was well spent	☐	☐	☐	☐	☐
I would consider this employer as a future employer	☐	☐	☐	☐	☐
My co-workers are generally positive about work	☐	☐	☐	☐	☐

The best thing about my experience was… _____

The worst thing about my experience was… _____

Any suggestions on how we could improve the intern experience? _____

Other comments… _____

Syracuse City School District

Syracuse City School District
725 Harrison Street, Syracuse, NY 13210

SCSD CTE Internship Mentor Program Evaluation

(Form #10)

Student Name _____ SCSD School _____

Interning Location _____

Supervisor/ Mentor Name _____ Date ____/____/____

Internship Preparation

- ☐ Exceptional
- ☐ Adequate
- ☐ Inadequate

Modes of Communication with SCSD Personnel

- ☐ In-Person
- ☐ Email
- ☐ Phone

Amount of Communication with SCSD Personnel

- ☐ Exceptionally good
- ☐ Appropriate
- ☐ Too much
- ☐ Too little

Suggestions for improvement: _____

Additional comments: _____

Return to CTE teacher: _____
CTE Teacher Email

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NOTICE OF NON-DISCRIMINATION

The Syracuse City School District hereby advises students, parents, employees and the general public that it is committed to providing equal access to all categories of employment, programs and educational opportunities, including career and technical education opportunities, regardless of actual or perceived race, color, national origin, Native American ancestry/ethnicity, creed or religion, marital status, sex, sexual orientation, age, gender identity or expression, disability or any other legally protected category under federal, state or local law.

Inquiries regarding the District's non-discrimination policies should be directed to:

Assistant Superintendent for Student Support Services, Civil Rights Compliance Officer
Syracuse City School District
725 Harrison Street • Syracuse, NY 13210
(315) 435-4131

Email: CivilRightsCompliance@scsd.us

Return to TOC

F. Employability Profile

> *The employability profile is a record of student achievement. That may include documentation of the student's attainment of technical knowledge and work-related skills, endorsements, licenses, clinical experience, work experience, performance on core academic Regent's examinations, performance on industry based assessments, attendance, student leadership honors and achievements and other honors or accolades of student success.*

Process

- An employability profile model is developed for the program
- A profile of student achievement is developed for each student in the program and is maintained in accordance with records and retention policies of the school district/BOCES.
- The profile of student achievement is reviewed and updated on a continuous basis by the student and the appropriate program/guidance personnel.
- The work skills to be mastered by students with disabilities should be aligned with the student's Individualized Education Program (IEP).

Documentation

Recommendations for the employability profile model should be included in the self-study report and reviewed by the external committee.

Source: http://www.p12.nysed.gov/cte/ctepolicy/guide.html

EMPLOYABILITY PROFILE

Natural Resources

Industry Based Skill Standards

Proficiency Definitions

NA = Not Applicable **1 = Developing** **2 = Basic** **3 = Proficient** **4 = Mastery**

	9th	10th	11th	12th
History of Environmental Science and Natural Resource Use.				
Understand the origin of environmental studies and the current need for Environmental Science. Describe the changes that have occurred throughout history that have lead to changes that require conservation of our natural resources.				
Lab Safety Skills and Personal Safety				
Understand basic lab safety procedures and skills. Identify and locate proper lab safety equipment and understand when and how to use lab safety equipment. Determine how to stay safe in a lab and field setting and follow all safety rules. Become first aid certified				
Interactions Within an Ecosystem				
Understand energy relationships within an ecosystem. Describe the factors that effect an ecosystem and how ecosystems change over time. Determine how changes in an ecosystem effect all other parts of that ecosystem.				
Populations and Sampling Methods				
Understand types of population growth. Determine which type of growth is shown from data and graphs. Estimate population size using various methods. Determine the factors that effect population size.				
Use of Water, Land, Air				
Determine the uses for land, water and air resources. Describe the factors that threaten the availability of these natural resouces. Describe sustainable use of each of these natural resouces and how and why sustainable use is necessary. Determine what sustainable use of these resources is for the future.				
Mineral Use and Extraction Methods				
Identify minerals using their physical and chemical characteristics. Determine sustainable extraction methods with limited effect on the natrual environment. Explain why and how excess mineral use and extraction can be detrimental to environmental health and well being. Explain they positive and negative effects of mineral extraction and weigh those effects to determine future mineral extraction plans				
Types of Energy				
Identify different types of energy and determine positive and negative aspects of each type of energy. Evaluate each energy source for its sustainablity potential.				
Current Issues within Environmental Science				
Idnetify and explain current issues in environmenatl science. Determine the cause and effect of each current issue and how each issue effects the natural resources available.				
Stream/Water Quality Testing and Monitoring				
Determine the factors that effect water quality and test for each factor. Use data collected to determine overall stream/water quality and health. Use data collecting techniques to measure water quality.				
Environmental Ethics				
Employ proper moral character				

	9th	10th	11th	12th
Plants				
Understand, identify, and explain the function of all main parts of a plant. Determine necessary factors for plant growth and what variables effect plant growth. Identify major tree species by sight and using key. Determine and identify cause and effect of plant diseases and explain ways to prevent and limit the spread.				
Soil				
Explain the formation of soil and major characteristics used to characterize soil. Explain features of different types of soil and determine the appropriate plants to grow in each type of soil.				
Animals				
Understand the main habitat requirements of animals and adaptations to survive different habitats. Identify animals by various types physical evidence. Explain reproduction methods of various animals.				
Wildlife Management				
Understand and explain various wildlife managements techniques. Explain the conservation efforts for various species. Determine the success rate of a wildlife management plan by using data and population information. Describe conservation efforts being used in NYS to help various populations.				
Pests and Invasive Species ID				
Identify various pests and invasive species in NYS. Determine how pests and invasive species are spread and develop a plan to stop the spread. Explain the effects of pests and invasive species on native species. Explain ways to control the spread of pests and invasive species and explain the negative and positive aspects of each type of control method.				
Agriculture and Food Science				
Describe the resources required for agriculture success. Explain the limitations of agricultural practices and explain various ways to overcome these limitations. Identify and explain the importance of NYS crops and products.				
Agriculture Biotechnology				
Understand the history and goals of agritech. Determine the positive and negative aspects of using agritech. Identify the major concerns with agritech.				
Foresty and Landscape Management				
Evaluate a forest for stability, sustainability, and determine timber resources available. Determine which plants to use to meet the needs of a landscaping job. Explain the importance of using native plants.				
Economics and Resource Allocation				
Determine how the allocation of resources effects an economy. Explain how local, state, and federal goverments make decisions regarding resource allocation. Explain the term tradeoff in terms of resources and economics.				
Sustainablity				
Explain what sustainability means, why it is important, and how it can be achieved. Determine which government agencies are involved with making decisions regarding				

Natural Resources
EMPLOYABILITY PROFILE

Student Name: _____ School Year: _____ Absences: _____

ID Number: _____ Teacher: _____ Final Grade: _____

Career Ready Practices / Career Development Standards

STANDARDS DEFINITIONS

NA = Not Applicable 1 = Developing 2 = Basic 3 = Proficient 4 = Mastery

	9th	10th	11th	12th
Acts as a responsible citizen/employee	2	3	3	4
Is on time and prepared, follows workplace policies, demonstrates reliability and dependability, is polite and courteous to adults and peers, demonstrates appreciation, and is reliable and consistent in their actions				
Applies appropriate academic and technical skills	1	2	3	4
Demonstrates an understanding of the academic knowledge and skills associated with their trade. Technical skills are developed with academic competencies including English language arts and science that are integrated within the CTE program.				
Attends to personal health and financial well-being	1	2	3	4
Recognizes the benefits of physical, mental, social, and financial well-being to the importance of that success in their career. Accepts criticism and works towards self-improvement targets on a consistent basis.				
Communicates clearly, effectively, and with reason.	1	2	3	4
Is able to communicate both verbally and in writing to express ideas and obtain information. Uses appropriate vocabulary to share information both verbally and in writing as well. Demonstrates active listening skills and verbal communication.				
Makes appropriate decisions	1	2	3	4
Considers the environmental, social, and economic impacts of their decisions. Understands that their actions and decisions will impact other people directly. Works independently and responds positively to new ideas and suggestions.				
Demonstrates creativity and innovative thought	1	2	3	4
Demonstrates creativity and new thinking to solve workplace problems as encountered. Is creative, innovative, and is eager to explore new ways of addressing issues and challenges that are encountered.				
Employs valid and reliable research strategies	1	2	3	4
Seeks information to develop a deeper understanding of issues encountered. Uses technology as a tool to research, organize, and evaluate information critically incompetently. Interprets information and draws conclusions based on best analysis.				
Uses critical thinking skills and demonstrates perseveran	2	2	3	4
Demonstrates problem-solving skills through the use of creative thinking, decision-making, and adaptability. Effectively reasons through difficult situations, and makes decisions even when faced with complex or challenging problems.				

	9th	10th	11th	12th
Models integrity, ethical behavior, and leadership	1	2	3	4
Is accountable and transparent in all of their work and assignments. Consistently exhibits ethical behavior, and commitment to completing tasks as assigned. Develops and demonstrates leadership skills, assuming responsibility readily.				
Develops and implements a Career Plan	1	2	3	4
Develops a career plan based on understanding of their personal goals and the career pathways that aligns to them. Develops resumes, cover letters, and examples of best work to aid in the job seeking process and/or entrepreneurial goals.				
Uses technology to enhance productivity	2	3	3	4
Demonstrates an understanding of the use of technology related to their career pathway. Continually develops their ability to adapt to changing work environments using technology, including new tools and their associated applications.				
Works as a productive and respectful team member	2	3	3	4
Actively participates as a member of a team recognizing and appreciating others skills and abilities. Adds to the collective value of the team, and invigorates others to add to the collective efforts and goals.				
Demonstrates reliability and dependability	2	2	3	4
Regardless of tasks given, demonstrates reliable and dependable behaviors to meet the expectations as defined. Attendance and levels of participation meet expectations consistently. Take on additional responsibilities without prompting.				
Arrives on time and is prepared to work	2	3	3	4
Consistently demonstrates promptness, reliability, and commitment to reporting for classes, work site experiences, and other assignments as defined. Reports prepared for work or education as requirements dictate, meets attendance requirements.				
Demonstrates safe working habits	2	3	3	4
When engaging in worksite situations or learning labs, uses tools and equipment safely, observes general safety guidelines for material handling, and meets the expectations of maintaining a safe work environment for others.				
Demonstrates problem solving skills	1	2	3	4
Addresses problems encountered using effective problem-solving strategies. Works to define potential solutions to problems, identifies and implements the best solution based on the information gathered and their skill and knowledge.				

Earned Technical Endorsement on Diploma **YES** ☐ NO ☐

Industry Credential(s) Awarded _____

Special Recognitions or Scholarships _____

Student Leadership Organization _____

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