



Georgia Standards Correlation: FORESTRY

	Envirothon Materials Topic												
	Dendrochronology	Forest Health	Forest Products	Forest Stewardship	Forests for Wildlife	Georgia Tree ID	How Does a Tree Grow	Important Trees USFS	Measuring Forests	Parts of a Tree	Technology in the Forest	Timber Harvesting	Tree Terms
Characteristics of Science (GENERAL)													
SCSh1. Openness: Evaluate the importance of curiosity, honesty, openness, and skepticism in science			X										
SCSh2. Safety: Use standard safety practices for all classroom laboratory and field investigations													
SCSh3. Investigate: Identify and investigate problems scientifically		X											
SCSh5. Computation: Demonstrate the computation and estimation skills necessary for analyzing data and developing reasonable scientific explanations.	X								X				
SCSh6. Communicate scientific investigations and information clearly.													
SCSh7. Knowledge Development: Analyze how scientific knowledge is developed.	X												
SCSh8. Inquiry: Understand important features of the process of scientific inquiry .	X												
SCSh9. Reading: Enhance reading in all curriculum areas	x	X	X	X	X		X	X	X	X	X	X	X
Astronomy													
Biology													
SB1. Cells: Analyze the nature of the relationships between structures and functions in living cells	X												
SB2. Genetics: Analyze how biological traits are passed on to successive generations. Genetics												X	
SB3. Systems: Derive the relationship between single-celled and multi-celled organisms and the increasing complexity of systems.												X	
SB4. Interdependence: Assess the dependence of all organisms on one another and the flow of energy and matter within their ecosystems.	X				X								
SB5. Evolution: Evaluate the role of natural selection in the development of the theory of evolution.													
Botany													
SBO1. Taxonomy: Use current plant phylogenetic principles and describe the structural changes used to delineate the plant divisions.						X		X		X			X
SBO2. Communities: Identify and describe Georgia's major physiographic provinces and their natural plant communities.		X			X	X							
SBO3. Growth & Survival: Explore the structures and processes necessary for the mutual survival of plants and animals.	X						X			X			
SBO4. Defense & Disease: Explore the defense systems of plants and recognize the impact of plant diseases on the biosphere.				X									
SBO5. Diversity & Adaptations: Analyze the diversity of plant adaptations and responses to environmental extremes.	X												
SBO6. Importance: Analyze the economic and ecological importance of plants in society.	X		X	X	X			X					

AFNR-BAS-12 Environmental Science: Apply principles of environmental science as it relates to agricultural production and sustainability		X		X	X	X							
AFNR-BAS-13 Plant Science: Explain and demonstrate basic plant science principles including plant health, growth and reproduction.	X	X					X			X			X

CTAE Wildlife Management														
AFNR-WM-1 Employability: Demonstrate employability skills required by business and industry.														
AFNR-WM-2 Experience: Orient and apply the comprehensive program of agricultural education, learn to work safely in the agricultural lab and work sites, demonstrate a Supervised Agricultural Experience Program (SAEP).leadership through the FFA and agricultural industry organizations, and develop plans for selected competencies in														
AFNR-WM-3 Wildlife: Define wildlife, explain the importance of wildlife and wildlife management, and identify the role of government and private wildlife organizations in managing wildlife resources.					X	X								
AFNR-WM-4 Ecosystems: Describe basic components of ecosystems and analyze the relationship between living organisms and their environment.					X									
AFNR-WM-5 Habitats: Compare and contrast the habitat needs of selected wildlife species native to Georgia, identify wildlife species of Georgia from physical characteristics and/or evidence, identify the role of selected species in their environment, and explain biological processes related to reproduction and survival of selected species.					X	X								
AFNR-WM-6 Wildlife Management: Identify and explain practices for managing wildlife populations and their habitats for the benefit of the entire biota.					X									
AFNR-WM-7 Population Dynamics: Identify, research, and discuss factors related to birth rate and mortality rate of wildlife and recognize the relationship between the biotic potential of wildlife species and their management. Calculate population size, carrying capacity, annual change in population size, and maximum rate of population increase.														
AFNR-WM-8 Field Evaluation: Using mastered concepts, conduct a field evaluation of wildlife habitats to investigate wildlife management practices to improve the habitat for selected species, and develop a habitat management plan.														
CTAE Environmental Science and Stewardship														
AFNR-ESS-1 Employability: Demonstrate employability skills required by business and industry.														
AFNR-ESS-2 FFA: Relate the role of the FFA in the personal development of students.														
AFNR-ESS-3 Experience: Explore, develop, and implement Supervised Agricultural Experience Program (SAEP) by exploring careers in agriculture and agribusiness.														
AFNR-ESS-4 Importance of Environment: Recognize the importance of how the environment relates to the well-being of humanity, animals, and plants and how they interact.			X	X	X									
AFNR-ESS-5 Ecosystems: Identify different ecosystems and summarize their characteristics			X	X	X	X								
AFNR-ESS-6 Soils: Describe soil formation and management, and assess its relevance to soil conservation.				X										
AFNR-ESS-7 Land Use: Demonstrate knowledge of land use and waste management.				X										
AFNR-ESS-8 Chemicals: Identify chemicals and how they can be used (or abused) in the environment.														
AFNR-ESS-9 Water Quality: Analyze water quality and its importance in aquatic ecosystems.				X										
AFNR-BAS-10 Air Quality: Discuss issues related to air quality and how pollutants can degrade the quality of the air														
General Horticulture and Plant Science														
Plant Science & Biotechnology							X							X
Agricultural Mechanics Technology I												X		
Agricultural Mechanics Technology II												X		
Agribusiness Management & Leadership												X		



Georgia Standards Correlation: WILDLIFE

Concepts & Terms
 Envirothon Wildlife
 Population Dynamics
 Trapping Management
 Specimen Study List
 Wildlife Resources
 Wildlife Terms

	Concepts & Terms	Envirothon Wildlife	Population Dynamics	Trapping Management	Specimen Study List	Wildlife Resources	Wildlife Terms
Characteristics of Science							
SCSh1. Openness: Evaluate the importance of curiosity, honesty, openness, and skepticism in science							
SCSh2. Safety: Use standard safety practices for all classroom laboratory and field investigations							
SCSh3. Investigate: Identify and investigate problems scientifically					X		
SCSh5. Computation: Demonstrate the computation and estimation skills necessary for analyzing data and developing reasonable scientific explanations.							
SCSh6. Communicate scientific investigations and information clearly.							
SCSh7. Knowledge Development: Analyze how scientific knowledge is developed.							
SCSh8. Inquiry: Understand important features of the process of scientific inquiry .							
SCSh9. Reading: Enhance reading in all curriculum areas	X	X	X	X		X	X
Astronomy							
Biology							
SB1. Cells: Analyze the nature of the relationships between structures and functions in living cells							
SB2. Genetics: Analyze how biological traits are passed on to successive generations. Genetics							
SB3. Systems: Derive the relationship between single-celled and multi-celled organisms and the increasing complexity of systems.							
SB4. Interdependence: Assess the dependence of all organisms on one another and the flow of energy and matter within their ecosystems.	X	X	X			X	
SB5. Evolution: Evaluate the role of natural selection in the development of the theory of evolution.							
Botany							
SBO1. Taxonomy: Use current plant phylogenetic principles and describe the structural changes used to delineate the plant divisions.							X
SBO2. Communities: Identify and describe Georgia's major physiographic provinces and their natural plant communities.	X	X				X	
SBO3. Growth & Survival: Explore the structures and processes necessary for the mutual survival of plants and animals.	X						
SBO4. Defense & Disease: Explore the defense systems of plants and recognize the impact of plant diseases on the biosphere.							
SBO5. Diversity & Adaptations: Analyze the diversity of plant adaptations and responses to environmental extremes.		X					
SBO6. Importance: Analyze the economic and ecological importance of plants in society.							

Chemistry				
SC1 Matter: Analyze the nature of matter and its classifications.				
SC2 Stoichiometry: Relate how the Law of Conservation of Matter is used to determine chemical composition in compounds and chemical reactions.				X
SC3 Atoms: Use the modern atomic theory to explain the characteristics of atoms.				
SC4. Periodic Table: Use the organization of the Periodic Table to predict properties of elements.				
SC5. Reaction Rates: Understand that the rate at which a chemical reaction occurs can be affected by changing concentration, temperature, or pressure and the addition of a catalyst.				
SC6. KMT: Understand the effects motion of atoms and molecules in chemical and physical processes.				
SC7. Solutions: Characterize the properties that describe solutions and the nature of acids and bases.				
Earth Systems				
SES1. Solar System: Investigate the composition and formation of Earth systems, including Earth's relationship to the solar system.				
SES2. Tectonics: Understand how plate tectonics creates certain geologic features, materials, and hazards.				
SES3. Land Formation: Explore the actions of water, wind, ice, and gravity that create landforms and systems of landforms (landscapes).				
SES4. Rocks & Fossils: Understand how rock relationships and fossils are used to reconstruct the Earth's past.				
SES5. Weather & Climate: Investigate the interaction of insolation and Earth systems to produce weather and climate				
SES6. Human Impact: Explain how life on Earth responds to and shapes Earth systems				
Ecology				
SEC1. Species Distribution: Analyze how biotic and abiotic factors interact to affect the distribution of species and the diversity of life on Earth.			X	X
SEC2. Population Dynamics: Investigate factors influencing population density, dispersion, and demographics.			X	X X
SEC3. Interactions: Explore and analyze community interactions.			X	X X X
SEC4. Cycles: Analyze biogeochemical cycles and the flow of energy in ecosystems.				X
SEC5. Human Impact: Assess the impact of human activities on the natural world, and research how ecological theory can address current issues facing our society, locally and globally.				X
Entomology				
SEN1. Role of Insects: Identify and analyze the roles of insects in ecosystems.				X
SEN2. Adaptations: Investigate the reasons for insect success.				
SEN3. Impact on Foods: Investigate the impact of insects on the production of food and other products.				
SEN4. Impact on Health: Investigate the impact of insects on human and animal health.				
SEN5. Management: Evaluate methods for the management of insect populations for the benefit of humans.				X
Environmental Science				
SEV1. Cycles: Investigate the flow of energy and cycling of matter within an ecosystem and relate these phenomena to human society.				X
SEV2. Interconnections: Demonstrate an understanding that the Earth is one interconnected system.			X	X X X
SEV3. Equilibrium: Describe stability and change in ecosystems.			X	X X
SEV4. Resources: Understand and describe availability, allocation and conservation of energy and other resources				X
SEV5. Human Impact: Recognize that human beings are part of the global ecosystem and will evaluate the effects of human activities and technology on ecosystems.			X	X

Epidemiology			
Forensic Science			
Geology			
Human Anatomy & Physiology			
Meteorology			
SM1. Weather: Relate the formation, structure and composition of Earth's atmosphere to the processes that cause weather.			
SM2. Energy Transfer: Investigate energy transfer to types of clouds formed, precipitation, and air masses			
SM3. Forecasting: Explore the science of weather forecasting.			
SM4. Weather & Society: Analyze the relationship of weather and society			
SM5. Climates: Differentiate the climates of Earth, how climate changes through time, and the theories regarding current climate change.			
Microbiology			
SMI1. Characteristics: Analyze different types of microorganisms and their defining characteristics.			
SMI2. Structure & Function: Examine structural components of microbes and their functions.			
SMI3. Energy: Examine different ways in which microbial cells generate energy for growth and reproduction			
SMI4. Genetics: Investigate molecular mechanisms involved in gene expression in microbes.			
SMI5. Growth: Compare and contrast parameters affecting microbial growth, ways of controlling growth of microorganisms, and examine the effects that physicochemical factors can have on microbes.			
SMI6. Impact on Society: Analyze the impact of microorganisms in the environment and the use of microbes in biotechnology, agriculture, and industry.			
SMI7. Interactions: Analyze symbiotic and pathogenic relationships in host-microbe interactions.			
Oceanography			
Physical Science			
SPS1. Atoms: Investigate our current understanding of the atom.			
SPS2. Matter: Explore the nature of matter, its classifications, and its system for naming types of matter.			
SPS3. Radioactivity: Distinguish the characteristics and components of radioactivity.			
SPS4. Periodic Table: Investigate the arrangement of the Periodic Table			
SPS5. Phases: Compare and contrast the phases of matter as they relate to atomic and molecular motion.			
SPS6. Solutions: Investigate the properties of solutions.			
SPS7. Energy: Relate transformations and flow of energy within a system.			
SPS8. Mechanics: Determine relationships among force, mass, and motion.			
SPS9. Waves: Investigate the properties of waves.			
SPS10. Electricity & Magnetism: Investigate the properties of electricity and magnetism.			
Physics			
Zoology			
SZ1. Taxonomy: Derive the phylogeny of animal taxa (monophyletic clades in a cladogram) using informative characteristics.			X
SZ2. Evolution: Explain the evolutionary history of animals over the geological history of Earth			
SZ3. Comparative A&P: Compare form and function relationships within animal groups (clades) and across key taxa.			X X
SZ4. Environmental Interactions: Assess how animals interact with their environment including key adaptations found within animal taxa	X	X	X

SZ5. **Relations With Humans:** Students will evaluate the relationships between humans and other animals.

Basic Agricultural Science				
AFNR-BAS-1 Employability: Demonstrate employability skills required by business and industry.				
AFNR-BAS-2 FFA: Relate the role of the FFA in the personal development of students.				
AFNR-BAS-3 Careers: Explore, develop, and implement the Supervised Agricultural Experience (SAE) program by researching careers in agriculture and agribusiness.				
AFNR-BAS-4 Human Needs: Recognize how agriculture meets human needs today, in the past, and for the future.				
AFNR-BAS-5 Safety: Determine and illustrate safety in the agriculture lab and agriculture worksites.				
AFNR-BAS-6 Soils: Describe soil formation and management and assess its relevance to plant/animal production and natural resources management.				
AFNR-BAS-7 Physics: Demonstrate knowledge of physics used in agriculture as it relates to work, power, simple machines, and both past and present machinery used in the agricultural industry.				
AFNR-BAS-8 Agriscience: Identify the different areas of agriscience and relate the scientific classification system to organize and research the agriscience field				
AFNR-BAS-9 Animal Science: Define major components of the animal industry and outline the development of the resulting products, services, and careers.	X	X	X	X
AFNR-BAS-10 Resource Management: Demonstrate basic skills in natural resource management.	X	X	X	
AFNR-BAS-11 Food Science: Apply principles of science to food processing to provide a safe, wholesome and nutritious food supply.				
AFNR-BAS-12 Environmental Science: Apply principles of environmental science as it relates to agricultural production and sustainability	X	X		
AFNR-BAS-13 Plant Science: Explain and demonstrate basic plant science principles including plant health, growth and reproduction.				
CTAE Forest Science				
AFNR-FS-1 Employability: Demonstrate employability skills required by business and industry.				X
AFNR-FS-2 Ag Experience: Orient and apply the comprehensive program of agricultural education, learn to work safely in the agricultural lab and work sites, demonstrate a Supervised Agricultural Experience Program (SAEP).leadership through the FFA and agricultural industry organizations, and develop plans for selected competencies in				
AFNR-FS-3 Importance: Evaluate human needs and demonstrate the role of forestry in meeting the needs of humans historically, currently, and in the future.				
AFNR-FS-4 Safety: Recognize potential hazards in forestry and identify procedures for first-aid and safety.				
AFNR-FS-5 GA Trees: Compare and contrast Georgia trees and explain their environmental and economic value.				X
AFNR-FS-6 Fire: Develop a logical understanding of the role of fire in a forest environment.				X
AFNR-FS-7 Regeneration: Connect concepts to explain an understanding of forest regeneration principles and practices.				
AFNR-FS-8 Evaluation: Summarize to be able to explain the knowledge and skills necessary to evaluate and regulate timber stand growth for various forest objectives.				
AFNR-FS-9 Measurement: Analyze standard industry forest measurement methods used for forest product inventory				
AFNR-FS-10 Invasives: Identify and explain methods of controlling undesirable and invasive forest tree species based upon prescribed forest management objectives				
AFNR-FS-11 Disorders: Identify and classify forest disorders and prescribe methods of control.				

CTAE Forest Science II						
AFNR-FSII-1 Employability: Demonstrate employability skills required by business and industry.						
AFNR-FSII-2 Ag Experience: Orient and apply the comprehensive program of agricultural education, learn to work safely in the agricultural lab and work sites, demonstrate a Supervised Agricultural Experience Program (SAEP).leadership through the FFA and agricultural industry organizations, and develop plans for selected competencies in						
AFNR-FSII-3 Interrelations: Compare interrelationships in the forest environment between plants, soil, animals, water and man.						
AFNR-FSII-4 Urban & Community: Describe the elements of managing an urban and community forest and identify the primary stakeholders important to the implementation of a successful urban and community forestry program.						
AFNR-FSII-5 Private Landowners: Explain how many cultural practices have been practiced by the forest industry and adopted by private landowners in recent years to increase tree growth and reduce the time required to produce income from the forest.						
AFNR-FSII-6 Wildlife: Demonstrate management practices for wildlife and identify the common game species.						
			X	X	X	X
AFNR-FSII-7 Timber Cruises: Conduct a cruise of a tract of timber, conduct a survival check, conduct a herbicide assessment, and map a traverse using a hand-held data collection instrument.						
AFNR-FSII-8 Harvesting & Manufacture: Outline major processes in the harvesting and manufacturing of forest products.						
AFNR-FSII-9 Alternative Crops: Describe alternative crops that can be produced in the forest.						
AFNR-FSII-10 Economics: Demonstrate knowledge of the major factors affecting the economics of forest resources management.						
AFNR-FSII-11 Hardwoods: Identify and explain the major factors of managing and producing hardwoods.						
AFNR-FSII-12 Trends: Describe the latest trends in forestry primarily concerning national planning.						
CTAE Natural Resources Management						
AFNR-NRM-1 Employability: Demonstrate employability skills required by business and industry.						
AFNR-NRM-2 Experience: Explore, develop, and implement the comprehensive program of agricultural education, learn and demonstrate safe working habits in the work agricultural industry organizations, and develop plans for a Supervised sites, demonstrate selected competencies in leadership through the FFA and agriculture lab and Agricultural Experience Program (SAEP).						
AFNR-NRM-3 Importance: Recognize the importance of natural resources, determine demands, and identify the role of government in natural resources management.						
			X	X		
AFNR-NRM-4 Ecosystems: Discuss and identify basic components of ecosystems, describe the relationship of those components to one another, and identify effects of human activities on ecosystems.						
			X	X	X	X
AFNR-NRM-5 Soils: Describe the properties of soil and nutrient analysis, determine the capability of the land and the effects of erosion, and describe soil stewardship in Georgia.						
AFNR-NRM-6 Hydrology: Determine the use of water resources, describe the hydrologic cycle and properties of water, and explain watersheds and their functions, as well as the reasons for monitoring water quality.						
AFNR-NRM-7 Waste Management: Identify sources of waste and describe methods and procedures for managing that minimize environmental impact.						
AFNR-NRM-8 Wildlife: Define wildlife, explain the importance of wildlife and wildlife management, and identify the role of government and private wildlife organizations in managing wildlife resources.						
			X	X	X	X
AFNR-NRM-9 Interrelations: Describe an awareness of interrelationships in the forest environment between plants, soil, animals, water, and man.						
			X	X	X	X
AFNR-NRM-10 Programs: Explain the importance of the government's natural resources and recreational programs						
						X
AFNR-NRM-11 Recreational Safety: Identify safety practices in land-based activities, such as hunting and 4-wheeler riding, and water-based activities, such as fishing and boating.						

CTAE Wildlife Management						
AFNR-WM-1 Employability: Demonstrate employability skills required by business and industry.						
AFNR-WM-2 Experience: Orient and apply the comprehensive program of agricultural education, learn to work safely in the agricultural lab and work sites, demonstrate a Supervised Agricultural Experience Program (SAEP).leadership through the FFA and agricultural industry organizations, and develop plans for selected competencies in						
AFNR-WM-3 Wildlife: Define wildlife, explain the importance of wildlife and wildlife management, and identify the role of government and private wildlife organizations in managing wildlife resources.		X	X	X	X	X
AFNR-WM-4 Ecosystems: Describe basic components of ecosystems and analyze the relationship between living organisms and their environment.	X	X	X			X
AFNR-WM-5 Habitats: Compare and contrast the habitat needs of selected wildlife species native to Georgia, identify wildlife species of Georgia from physical characteristics and/or evidence, identify the role of selected species in their environment, and explain biological processes related to reproduction and survival of selected species.	X	X	X			X
AFNR-WM-6 Wildlife Management: Identify and explain practices for managing wildlife populations and their habitats for the benefit of the entire biota.			X	X		X
AFNR-WM-7 Population Dynamics: Identify, research, and discuss factors related to birth rate and mortality rate of wildlife and recognize the relationship between the biotic potential of wildlife species and their management. Calculate population size, carrying capacity, annual change in population size, and maximum rate of population increase.		X	X			
AFNR-WM-8 Field Evaluation: Using mastered concepts, conduct a field evaluation of wildlife habitats to investigate wildlife management practices to improve the habitat for selected species, and develop a habitat management plan.						
CTAE Environmental Science and Stewardship						
AFNR-ESS-1 Employability: Demonstrate employability skills required by business and industry.						
AFNR-ESS-2 FFA: Relate the role of the FFA in the personal development of students.						
AFNR-ESS-3 Experience: Explore, develop, and implement Supervised Agricultural Experience Program (SAEP) by exploring careers in agriculture and agribusiness.						
AFNR-ESS-4 Importance of Environment: Recognize the importance of how the environment relates to the well-being of humanity, animals, and plants and how they interact.		X	X			
AFNR-ESS-5 Ecosystems: Identify different ecosystems and summarize their characteristics	X	X	X			X
AFNR-ESS-6 Soils: Describe soil formation and management, and assess its relevance to soil conservation.						
AFNR-ESS-7 Land Use: Demonstrate knowledge of land use and waste management.						
AFNR-ESS-8 Chemicals: Identify chemicals and how they can be used (or abused) in the environment.						
AFNR-ESS-9 Water Quality: Analyze water quality and its importance in aquatic ecosystems.						
AFNR-BAS-10 Air Quality: Discuss issues related to air quality and how pollutants can degrade the quality of the air						
General Horticulture and Plant Science						
Plant Science & Biotechnology						X
Agricultural Mechanics Technology I						
Agricultural Mechanics Technology II						
Agribusiness Management & Leadership						



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Georgia Standards Correlation: AQUATICS

AAS Biol & Chem
AAS Macroinvertebrates
Water Study Materials
Watershed Delineation

Characteristics of Science				
SCSh1. Openness: Evaluate the importance of curiosity, honesty, openness, and skepticism in science				
SCSh2. Safety: Use standard safety practices for all classroom laboratory and field investigations				
SCSh3. Investigate: Identify and investigate problems scientifically		X	X	X
SCSh5. Computation: Demonstrate the computation and estimation skills necessary for analyzing data and developing reasonable scientific explanations.				
SCSh6. Communicate scientific investigations and information clearly.				
SCSh7. Knowledge Development: Analyze how scientific knowledge is developed.		X		
SCSh8. Inquiry: Understand important features of the process of scientific inquiry .		X		
SCSh9. Reading: Enhance reading in all curriculum areas		X		X
Astronomy				
Biology				
SB1. Cells: Analyze the nature of the relationships between structures and functions in living cells				
SB2. Genetics: Analyze how biological traits are passed on to successive generations. Genetics				
SB3. Systems: Derive the relationship between single-celled and multi-celled organisms and the increasing complexity of systems.			X	
SB4. Interdependence: Assess the dependence of all organisms on one another and the flow of energy and matter within their ecosystems.			X	
SB5. Evolution: Evaluate the role of natural selection in the development of the theory of evolution.				
Botany				
SBO1. Taxonomy: Use current plant phylogenetic principles and describe the structural changes used to delineate the plant divisions.				
SBO2. Communities: Identify and describe Georgia’s major physiographic provinces and their natural plant communities.				
SBO3. Growth & Survival: Explore the structures and processes necessary for the mutual survival of plants and animals.				
SBO4. Defense & Disease: Explore the defense systems of plants and recognize the impact of plant diseases on the biosphere.				
SBO5. Diversity & Adaptations: Analyze the diversity of plant adaptations and responses to environmental extremes.				
SBO6. Importance: Analyze the economic and ecological importance of plants in society.				

Chemistry			
SC1 Matter: Analyze the nature of matter and its classifications.			X
SC2 Stoichiometry: Relate how the Law of Conservation of Matter is used to determine chemical composition in compounds and chemical reactions.			
SC3 Atoms: Use the modern atomic theory to explain the characteristics of atoms.			
SC4. Periodic Table: Use the organization of the Periodic Table to predict properties of elements.			
SC5. Reaction Rates: Understand that the rate at which a chemical reaction occurs can be affected by changing concentration, temperature, or pressure ar			
SC6. KMT: Understand the effects motion of atoms and molecules in chemical and physical processes.			
SC7. Solutions: Characterize the properties that describe solutions and the nature of acids and bases.			X
Earth Systems			
SES1. Solar System: Investigate the composition and formation of Earth systems, including the Earth's relationship to the solar system.			
SES2. Tectonics: Understand how plate tectonics creates certain geologic features, materials, and hazards.			
SES3. Land Formation: Explore the actions of water, wind, ice, and gravity that create landforms and systems of landforms (landscapes).	X	X	X
SES4. Rocks & Fossils: Understand how rock relationships and fossils are used to reconstruct the Earth's past.			
SES5. Weather & Climate: Investigate the interaction of insolation and Earth systems to produce weather and climate			
SES6. Human Impact: Explain how life on Earth responds to and shapes Earth systems	X	X	
Ecology			
SEC1. Species Distribution: Analyze how biotic and abiotic factors interact to affect the distribution of species and the diversity of life on Earth.	X	X	
SEC2. Population Dynamics: Investigate factors influencing population density, dispersion, and demographics.			
SEC3. Interactions: Explore and analyze community interactions.	X		
SEC4. Cycles: Analyze biogeochemical cycles and the flow of energy in ecosystems.			X
SEC5. Human Impact: Assess the impact of human activities on the natural world, and research how ecological theory can address current issues facing ou	X	X	X
Entomology			
SEN1. Role of Insects: Identify and analyze the roles of insects in ecosystems.	X	X	
SEN2. Adaptations: Investigate the reasons for insect success.			X
SEN3. Impact on Foods: Investigate the impact of insects on the production of food and other products.			
SEN4. Impact on Health: Investigate the impact of insects on human and animal health.			
SEN5. Management: Evaluate methods for the management of insect populations for the benefit of humans.			
Environmental Science			
SEV1. Cycles: Investigate the flow of energy and cycling of matter within an ecosystem and relate these phenomena to human society.			X
SEV2. Interconnections: Demonstrate an understanding that the Earth is one interconnected system.	X	X	X
SEV3. Equilibrium: Describe stability and change in ecosystems.	X	X	
SEV4. Resources: Understand and describe availability, allocation and conservation of energy and other resources			
SEV5. Human Impact: Recognize that human beings are part of the global ecosystem and will evaluate the effects of human activities and technology on ec	X	X	X

Epidemiology	
Forensic Science	
Geology	
Human Anatomy & Physiology	
Meteorology	
SM1. Weather: Relate the formation, structure and composition of Earth's atmosphere to the processes that cause weather.	
SM2. Energy Transfer: Investigate energy transfer to types of clouds formed, precipitation, and air masses	
SM3. Forecasting: Explore the science of weather forecasting.	
SM4. Weather & Society: Analyze the relationship of weather and society	
SM5. Climates: Differentiate the climates of Earth, how climate changes through time, and the theories regarding current climate change.	
Microbiology	
SMI1. Characteristics: Analyze different types of microorganisms and their defining characteristics.	
SMI2. Structure & Function: Examine structural components of microbes and their functions.	
SMI3. Energy: Examine different ways in which microbial cells generate energy for growth and reproduction	
SMI4. Genetics: Investigate molecular mechanisms involved in gene expression in microbes.	
SMI5. Growth: Compare and contrast parameters affecting microbial growth, ways of controlling growth of microorganisms, and examine the effects that physicochemical factors can have on microbes.	
SMI6. Impact on Society: Analyze the impact of microorganisms in the environment and the use of microbes in biotechnology, agriculture, and industry.	
SMI7. Interactions: Analyze symbiotic and pathogenic relationships in host-microbe interactions.	
Oceanography	
Physical Science	
SPS1. Atoms: Investigate our current understanding of the atom.	X
SPS2. Matter: Explore the nature of matter, its classifications, and its system for naming types of matter.	
SPS3. Radioactivity: Distinguish the characteristics and components of radioactivity.	
SPS4. Periodic Table: Investigate the arrangement of the Periodic Table	
SPS5. Phases: Compare and contrast the phases of matter as they relate to atomic and molecular motion.	
SPS6. Solutions: Investigate the properties of solutions.	X
SPS7. Energy: Relate transformations and flow of energy within a system.	
SPS8. Mechanics: Determine relationships among force, mass, and motion.	
SPS9. Waves: Investigate the properties of waves.	
SPS10. Electricity & Magnetism: Investigate the properties of electricity and magnetism.	
Physics	
Zoology	

SZ1. Taxonomy: Derive the phylogeny of animal taxa (monophyletic clades in a cladogram) using informative characteristics.	X	X
SZ2. Evolution: Explain the evolutionary history of animals over the geological history of Earth		
SZ3. Comparative A&P: Compare form and function relationships within animal groups (clades) and across key taxa.		
SZ4. Environmental Interactions: Assess how animals interact with their environment including key adaptations found within animal taxa	X	X
SZ5. Relations With Humans: Students will evaluate the relationships between humans and other animals.		
Basic Agricultural Science		
AFNR-BAS-1 Employability: Demonstrate employability skills required by business and industry.		
AFNR-BAS-2 FFA: Relate the role of the FFA in the personal development of students.		
AFNR-BAS-3 Careers: Explore, develop, and implement the Supervised Agricultural Experience (SAE) program by researching careers in agriculture and agri		
AFNR-BAS-4 Human Needs: Recognize how agriculture meets human needs today, in the past, and for the future.		
AFNR-BAS-5 Safety: Determine and illustrate safety in the agriculture lab and agriculture worksites.		
AFNR-BAS-6 Soils: Describe soil formation and management and assess its relevance to plant/animal production and natural resources management.	X	
AFNR-BAS-7 Physics: Demonstrate knowledge of physics used in agriculture as it relates to work, power, simple machines, and both past and present machinery used in the agricultural industry.		
AFNR-BAS-8 Agriscience: Identify the different areas of agriscience and relate the scientific classification system to organize and research the agriscience fi		
AFNR-BAS-9 Animal Science: Define major components of the animal industry and outline the development of the resulting products, services, and careers		
AFNR-BAS-10 Resource Management: Demonstrate basic skills in natural resource management.		X X
AFNR-BAS-11 Food Science: Apply principles of science to food processing to provide a safe, wholesome and nutritious food supply.		
AFNR-BAS-12 Environmental Science: Apply principles of environmental science as it relates to agricultural production and sustainability	X	X X
AFNR-BAS-13 Plant Science: Explain and demonstrate basic plant science principles including plant health, growth and reproduction.		
CTAE Forest Science		
AFNR-FS-1 Employability: Demonstrate employability skills required by business and industry.		
AFNR-FS-2 Ag Experience: Orient and apply the comprehensive program of agricultural education, learn to work safely in the agricultural lab and work sites, demonstrate a Supervised Agricultural Experience Program (SAEP).leadership through the FFA and agricultural industry organizations, and develop plans forselected competencies in		
AFNR-FS-3 Importance: Evaluate human needs and demonstrate the role of forestry in meeting the needs of humans historically, currently, and in the futu		
AFNR-FS-4 Safety: Recognize potential hazards in forestry and identify procedures for first-aid and safety.		
AFNR-FS-5 GA Trees: Compare and contrast Georgia trees and explain their environmental and economic value.		
AFNR-FS-6 Fire: Develop a logical understanding of the role of fire in a forest environment.		
AFNR-FS-7 Regeneration: Connect concepts to explain an understanding of forest regeneration principles and practices.		
AFNR-FS-8 Evaluation: Summarize to be able to explain the knowledge and skills necessary to evaluate and regulate timber stand growth for various forest		
AFNR-FS-9 Measurement: Analyze standard industry forest measurement methods used for forest product inventory		
AFNR-BFS-10 Invasives: Identify and explain methods of controlling undesirable and invasive forest tree species based upon prescribed forest managemen		
AFNR-FS-11 Disorders: Identify and classify forest disorders and prescribe methods of control.		

CTAE Forest Science II				
AFNR-FSII-1 Employability: Demonstrate employability skills required by business and industry.				
AFNR-FSII-2 Ag Experience: Orient and apply the comprehensive program of agricultural education, learn to work safely in the agricultural lab and work sites, demonstrate a Supervised Agricultural Experience Program (SAEP). leadership through the FFA and agricultural industry organizations, and develop plans for selected competencies in				
AFNR-FSII-3 Interrelations: Compare interrelationships in the forest environment between plants, soil, animals, water and man.				
AFNR-FSII-4 Urban & Community: Describe the elements of managing an urban and community forest and identify the primary stakeholders important to the implementation of a successful urban and community forestry program.				
AFNR-FSII-5 Private Landowners: Explain how many cultural practices have been practiced by the forest industry and adopted by private landowners in recent years to increase tree growth and reduce the time required to produce income from the forest.				
AFNR-FSII-6 Wildlife: Demonstrate management practices for wildlife and identify the common game species.				
AFNR-FSII-7 Timber Cruises: Conduct a cruise of a tract of timber, conduct a survival check, conduct a herbicide assessment, and map a traverse using a hand-held data collection instrument.				
AFNR-FSII-8 Harvesting & Manufacture: Outline major processes in the harvesting and manufacturing of forest products.				
AFNR-FSII-9 Alternative Crops: Describe alternative crops that can be produced in the forest.				
AFNR-FSII-10 Economics: Demonstrate knowledge of the major factors affecting the economics of forest resources management.				
AFNR-FSII-11 Hardwoods: Identify and explain the major factors of managing and producing hardwoods.				
AFNR-FSII-12 Trends: Describe the latest trends in forestry primarily concerning national planning.				
CTAE Natural Resources Management				
AFNR-NRM-1 Employability: Demonstrate employability skills required by business and industry.				
AFNR-NRM-2 Experience: Explore, develop, and implement the comprehensive program of agricultural education, learn and demonstrate safe working habits in the work agricultural industry organizations, and develop plans for a Supervised sites, demonstrate selected competencies in leadership through the FFA and agriculture lab and Agricultural Experience Program (SAEP).				
AFNR-NRM-3 Importance: Recognize the importance of natural resources, determine demands, and identify the role of government in natural resources management.	X	X	X	
AFNR-NRM-4 Ecosystems: Discuss and identify basic components of ecosystems, describe the relationship of those components to one another, and identify effects of human activities on ecosystems.		X	X	X
AFNR-NRM-5 Soils: Describe the properties of soil and nutrient analysis, determine the capability of the land and the effects of erosion, and describe soil science.				X
AFNR-NRM-6 Hydrology: Determine the use of water resources, describe the hydrologic cycle and properties of water, and explain watersheds and their functions, as well as the reasons for monitoring water quality.		X	X	X
AFNR-NRM-7 Waste Management: Identify sources of waste and describe methods and procedures for managing that minimize environmental impact.	X		X	
AFNR-NRM-8 Wildlife: Define wildlife, explain the importance of wildlife and wildlife management, and identify the role of government and private wildlife organizations in managing wildlife resources.				
AFNR-NRM-9 Interrelations: Describe an awareness of interrelationships in the forest environment between plants, soil, animals, water, and man.	X	X	X	
AFNR-NRM-10 Programs: Explain the importance of the government's natural resources and recreational programs				
AFNR-NRM-11 Recreational Safety: Identify safety practices in land-based activities, such as hunting and 4-wheeler riding, and water-based activities, such				

CTAE Wildlife Management					
AFNR-WM-1	Employability: Demonstrate employability skills required by business and industry.				
AFNR-WM-2	Experience: Orient and apply the comprehensive program of agricultural education, learn to work safely in the agricultural lab and work sites, demonstrate a Supervised Agricultural Experience Program (SAEP).leadership through the FFA and agricultural industry organizations, and develop plans for selected competencies in				
AFNR-WM-3	Wildlife: Define wildlife, explain the importance of wildlife and wildlife management, and identify the role of government and private wildlife organizations in managing wildlife resources.				
AFNR-WM-4	Ecosystems: Describe basic components of ecosystems and analyze the relationship between living organisms and their environment.	X	X		
AFNR-WM-5	Habitats: Compare and contrast the habitat needs of selected wildlife species native to Georgia, identify wildlife species of Georgia from physical characteristics and/or evidence, identify the role of selected species in their environment, and explain biological processes related to reproduction and survival of selected species.		X	X	
AFNR-WM-6	Wildlife Management: Identify and explain practices for managing wildlife populations and their habitats for the benefit of the entire biota.				
AFNR-WM-7	Population Dynamics: Identify, research, and discuss factors related to birth rate and mortality rate of wildlife and recognize the relationship between the biotic potential of wildlife species and their management. Calculate population size, carrying capacity, annual change in population size, and maximum rate of population increase.				
AFNR-WM-8	Field Evaluation: Using mastered concepts, conduct a field evaluation of wildlife habitats to investigate wildlife management practices to improve the habitat for selected species, and develop a habitat management plan.		X	X	X X
CTAE Environmental Science and Stewardship					
AFNR-ESS-1	Employability: Demonstrate employability skills required by business and industry.				
AFNR-ESS-2	FFA: Relate the role of the FFA in the personal development of students.				
AFNR-ESS-3	Experience: Explore, develop, and implement Supervised Agricultural Experience Program (SAEP) by exploring careers in agriculture and agribusiness.				
AFNR-ESS-4	Importance of Environment: Recognize the importance of how the environment relates to the well-being of humanity, animals, and plants and	X	X	X	
AFNR-ESS-5	Ecosystems: Identify different ecosystems and summarize their characteristics	X	X	X	
AFNR-ESS-6	Soils: Describe soil formation and management, and assess its relevance to soil conservation.	X		X	
AFNR-ESS-7	Land Use: Demonstrate knowledge of land use and waste management.	X		X X	
AFNR-ESS-8	Chemicals: Identify chemicals and how they can be used (or abused) in the environment.	X		X	
AFNR-ESS-9	Water Quality: Analyze water quality and its importance in aquatic ecosystems.	X	X	X X	
AFNR-BAS-10	Air Quality: Discuss issues related to air quality and how pollutants can degrade the quality of the air				

Aquaculture				
AFNR-AQU-1 Employability: Demonstrate employability skills required by business and industry.				
AFNR-AQU-2 Experience: Orient and apply the comprehensive program of agricultural education, learn to work safely in the agricultural lab and work sites, demonstrate a Supervised Agricultural Experience Program (SAEP).leadership through the FFA and agricultural industry organizations, and develop plans for selected competencies in				
AFNR-AQU-3 Trends: Identify and describe trends in the aquaculture industry.				
AFNR-AQU-4 Aquatic Production: Classify the scientific principles involved in the production of aquatic animals and plants.				
AFNR-AQU-5 Water Quality: Assess water quality characteristics for aquaculture.		X	X	X
NR-AQU-6 Fish Reproduction: Examine the scientific principles in fish reproduction.				
AFNR-AQU-8 Nutrition: Analyze the scientific principles in aquaculture nutrition.				
AFNR-AQU-9 Fish Health: Investigate the scientific principles of health management of fish.				
AFNR-AQU-10 Crustaceans & Molluscs: Categorize the management practices for crustaceans and mollusks.				
AFNR-AQU-11 Alligators: Distinguish the management practices for alligator production.				
AFNR-AQU-12 Frogs: Justify the management practices for frog production.				
AFNR-AQU-13 Aquatic Plants: Describe the management practices for alternative aquaculture plant production.				
AFNR-AQU-14 Equipment: Compare the structures and equipment used in aquaculture production				
AFNR-AQU-15 Marketing: Interpret the marketing practices used in aquaculture production.				
General Horticulture and Plant Science				
Plant Science & Biotechnology				
Agricultural Mechanics Technology I				
Agricultural Mechanics Technology II				
Agribusiness Management & Leadership				



Georgia Standards Correlation: SOILS & LAND USE

Envirothon Soils
 From Surface Down
 Urban Soil Primer

Characteristics of Science		
SCSh1. Openness: Evaluate the importance of curiosity, honesty, openness, and skepticism in science		
SCSh2. Safety: Use standard safety practices for all classroom laboratory and field investigations		
SCSh3. Investigate: Identify and investigate problems scientifically	X	
SCSh5. Computation: Demonstrate the computation and estimation skills necessary for analyzing data and developing reasonable scientific explanations.		
SCSh6. Communicate scientific investigations and information clearly.		
SCSh7. Knowledge Development: Analyze how scientific knowledge is developed.		
SCSh8. Inquiry: Understand important features of the process of scientific inquiry .		
SCSh9. Reading: Enhance reading in all curriculum areas	X	X
Astronomy		
Biology		
SB1. Cells: Analyze the nature of the relationships between structures and functions in living cells		
SB2. Genetics: Analyze how biological traits are passed on to successive generations. Genetics		
SB3. Systems: Derive the relationship between single-celled and multi-celled organisms and the increasing complexity of systems.		
SB4. Interdependence: Assess the dependence of all organisms on one another and the flow of energy and matter within their ecosystems.		
SB5. Evolution: Evaluate the role of natural selection in the development of the theory of evolution.		
Botany		
SBO1. Taxonomy: Use current plant phylogenetic principles and describe the structural changes used to delineate the plant divisions.		
SBO2. Communities: Identify and describe Georgia's major physiographic provinces and their natural plant communities.		
SBO3. Growth & Survival: Explore the structures and processes necessary for the mutual survival of plants and animals.		
SBO4. Defense & Disease: Explore the defense systems of plants and recognize the impact of plant diseases on the biosphere.		
SBO5. Diversity & Adaptations: Analyze the diversity of plant adaptations and responses to environmental extremes.		
SBO6. Importance: Analyze the economic and ecological importance of plants in society.		

Chemistry			
SC1 Matter: Analyze the nature of matter and its classifications.		X	
SC2 Stoichiometry: Relate how the Law of Conservation of Matter is used to determine chemical composition in compounds and chemical reactions.			
SC3 Atoms: Use the modern atomic theory to explain the characteristics of atoms.			
SC4. Periodic Table: Use the organization of the Periodic Table to predict properties of elements.			
SC5. Reaction Rates: Understand that the rate at which a chemical reaction occurs can be affected by changing concentration, temperature, or pressure and the addition of a catalyst.			
SC6. KMT: Understand the effects motion of atoms and molecules in chemical and physical processes.			
SC7. Solutions: Characterize the properties that describe solutions and the nature of acids and bases.		X	
Earth Systems			
SES1. Solar System: Investigate the composition and formation of Earth systems, including the Earth’s relationship to the solar system.			
SES2. Tectonics: Understand how plate tectonics creates certain geologic features, materials, and hazards.			
SES3. Land Formation: Explore the actions of water, wind, ice, and gravity that create landforms and systems of landforms (landscapes).		X	X
SES4. Rocks & Fossils: Understand how rock relationships and fossils are used to reconstruct the Earth’s past.			
SES5. Weather & Climate: Investigate the interaction of insolation and Earth systems to produce weather and climate		X	X
SES6. Human Impact: Explain how life on Earth responds to and shapes Earth systems		X	X
Ecology			
SEC1. Species Distribution: Analyze how biotic and abiotic factors interact to affect the distribution of species and the diversity of life on Earth.			
SEC2. Population Dynamics: Investigate factors influencing population density, dispersion, and demographics.			
SEC3. Interactions: Explore and analyze community interactions.			
SEC4. Cycles: Analyze biogeochemical cycles and the flow of energy in ecosystems.			
SEC5. Human Impact: Assess the impact of human activities on the natural world, and research how ecological theory can address current issues facing our society, locally and globally.			
Entomology			
SEN1. Role of Insects: Identify and analyze the roles of insects in ecosystems.			
SEN2. Adaptations: Investigate the reasons for insect success.			
SEN3. Impact on Foods: Investigate the impact of insects on the production of food and other products.			
SEN4. Impact on Health: Investigate the impact of insects on human and animal health.			
SEN5. Management: Evaluate methods for the management of insect populations for the benefit of humans.			
Environmental Science			
SEV1. Cycles: Investigate the flow of energy and cycling of matter within an ecosystem and relate these phenomena to human society.			
SEV2. Interconnections: Demonstrate an understanding that the Earth is one interconnected system.			
SEV3. Equilibrium: Describe stability and change in ecosystems.			
SEV4. Resources: Understand and describe availability, allocation and conservation of energy and other resources		X	X
SEV5. Human Impact: Recognize that human beings are part of the global ecosystem and will evaluate the effects of human activities and technology on ecosystems.		X	X

Epidemiology			
Forensic Science			
Geology			
Human Anatomy & Physiology			
Meteorology			
SM1. Weather: Relate the formation, structure and composition of Earth's atmosphere to the processes that cause weather.			
SM2. Energy Transfer: Investigate energy transfer to types of clouds formed, precipitation, and air masses			
SM3. Forecasting: Explore the science of weather forecasting.			
SM4. Weather & Society: Analyze the relationship of weather and society		X	X
SM5. Climates: Differentiate the climates of Earth, how climate changes through time, and the theories regarding current climate change.			
Microbiology			
SMI1. Characteristics: Analyze different types of microorganisms and their defining characteristics.			
SMI2. Structure & Function: Examine structural components of microbes and their functions.			
SMI3. Energy: Examine different ways in which microbial cells generate energy for growth and reproduction			
SMI4. Genetics: Investigate molecular mechanisms involved in gene expression in microbes.			
SMI5. Growth: Compare and contrast parameters affecting microbial growth, ways of controlling growth of microorganisms, and examine the effects that physicochemical factors can have on microbes.			
SMI6. Impact on Society: Analyze the impact of microorganisms in the environment and the use of microbes in biotechnology, agriculture, and industry.			
SMI7. Interactions: Analyze symbiotic and pathogenic relationships in host-microbe interactions.			
Oceanography			
Physical Science			
SPS1. Atoms: Investigate our current understanding of the atom.			
SPS2. Matter: Explore the nature of matter, its classifications, and its system for naming types of matter.		X	
SPS3. Radioactivity: Distinguish the characteristics and components of radioactivity.			
SPS4. Periodic Table: Investigate the arrangement of the Periodic Table			
SPS5. Phases: Compare and contrast the phases of matter as they relate to atomic and molecular motion.			
SPS6. Solutions: Investigate the properties of solutions.		X	
SPS7. Energy: Relate transformations and flow of energy within a system.			
SPS8. Mechanics: Determine relationships among force, mass, and motion.			
SPS9. Waves: Investigate the properties of waves.			
SPS10. Electricity & Magnetism: Investigate the properties of electricity and magnetism.			
Physics			

Zoology			
SZ1. Taxonomy: Derive the phylogeny of animal taxa (monophyletic clades in a cladogram) using informative characteristics.			
SZ2. Evolution: Explain the evolutionary history of animals over the geological history of Earth			
SZ3. Comparative A&P: Compare form and function relationships within animal groups (clades) and across key taxa.			
SZ4. Environmental Interactions: Assess how animals interact with their environment including key adaptations found within animal taxa			
SZ5. Relations With Humans: Students will evaluate the relationships between humans and other animals.			
Basic Agricultural Science			
AFNR-BAS-1 Employability: Demonstrate employability skills required by business and industry.			
AFNR-BAS-2 FFA: Relate the role of the FFA in the personal development of students.			
AFNR-BAS-3 Careers: Explore, develop, and implement the Supervised Agricultural Experience (SAE) program by researching careers in agriculture and agribusiness.			
AFNR-BAS-4 Human Needs: Recognize how agriculture meets human needs today, in the past, and for the future.		X	X
AFNR-BAS-5 Safety: Determine and illustrate safety in the agriculture lab and agriculture worksites.			
AFNR-BAS-6 Soils: Describe soil formation and management and assess its relevance to plant/animal production and natural resources management.	X	X	X
AFNR-BAS-7 Physics: Demonstrate knowledge of physics used in agriculture as it relates to work, power, simple machines, and both past and present machinery used in the agricultural industry.			
AFNR-BAS-8 Agriscience: Identify the different areas of agriscience and relate the scientific classification system to organize and research the agriscience field		X	
AFNR-BAS-9 Animal Science: Define major components of the animal industry and outline the development of the resulting products, services, and careers.			
AFNR-BAS-10 Resource Management: Demonstrate basic skills in natural resource management.		X	X
AFNR-BAS-11 Food Science: Apply principles of science to food processing to provide a safe, wholesome and nutritious food supply.			
AFNR-BAS-12 Environmental Science: Apply principles of environmental science as it relates to agricultural production and sustainability		X	X
AFNR-BAS-13 Plant Science: Explain and demonstrate basic plant science principles including plant health, growth and reproduction.			

CTAE Forest Science			
AFNR-FS-1 Employability: Demonstrate employability skills required by business and industry.			
AFNR-FS-2 Ag Experience: Orient and apply the comprehensive program of agricultural education, learn to work safely in the agricultural lab and work sites, demonstrate a Supervised Agricultural Experience Program (SAEP).leadership through the FFA and agricultural industry organizations, and develop plans for selected competencies in			
AFNR-FS-3 Importance: Evaluate human needs and demonstrate the role of forestry in meeting the needs of humans historically, currently, and in the future.			
AFNR-FS-4 Safety: Recognize potential hazards in forestry and identify procedures for first-aid and safety.			
AFNR-FS-5 GA Trees: Compare and contrast Georgia trees and explain their environmental and economic value.			
AFNR-FS-6 Fire: Develop a logical understanding of the role of fire in a forest environment.			
AFNR-FS-7 Regeneration: Connect concepts to explain an understanding of forest regeneration principles and practices.			
AFNR-FS-8 Evaluation: Summarize to be able to explain the knowledge and skills necessary to evaluate and regulate timber stand growth for various forest objectives.			
AFNR-FS-9 Measurement: Analyze standard industry forest measurement methods used for forest product inventory			
AFNR-BFS-10 Invasives: Identify and explain methods of controlling undesirable and invasive forest tree species based upon prescribed forest management objectives			
AFNR-FS-11 Disorders: Identify and classify forest disorders and prescribe methods of control.			
CTAE Forest Science II			
AFNR-FSII-1 Employability: Demonstrate employability skills required by business and industry.			
AFNR-FSII-2 Ag Experience: Orient and apply the comprehensive program of agricultural education, learn to work safely in the agricultural lab and work sites, demonstrate a Supervised Agricultural Experience Program (SAEP).leadership through the FFA and agricultural industry organizations, and develop plans for selected competencies in			
AFNR-FSII-3 Interrelations: Compare interrelationships in the forest environment between plants, soil, animals, water and man.			
AFNR-FSII-4 Urban & Community: Describe the elements of managing an urban and community forest and identify the primary stakeholders important to the implementation of a successful urban and community forestry program.			X
AFNR-FSII-5 Private Landowners: Explain how many cultural practices have been practiced by the forest industry and adopted by private landowners in recent years to increase tree growth and reduce the time required to produce income from the forest.			
AFNR-FSII-6 Wildlife: Demonstrate management practices for wildlife and identify the common game species.			
AFNR-FSII-7 Timber Cruises: Conduct a cruise of a tract of timber, conduct a survival check, conduct a herbicide assessment, and map a traverse using a hand-held data collection instrument.			
AFNR-FSII-8 Harvesting & Manufacture: Outline major processes in the harvesting and manufacturing of forest products.			
AFNR-FSII-9 Alternative Crops: Describe alternative crops that can be produced in the forest.			
AFNR-FSII-10 Economics: Demonstrate knowledge of the major factors affecting the economics of forest resources management.			
AFNR-FSII-11 Hardwoods: Identify and explain the major factors of managing and producing hardwoods.			
AFNR-FSII-12 Trends: Describe the latest trends in forestry primarily concerning national planning.			

CTAE Natural Resources Management			
AFNR-NRM-1 Employability: Demonstrate employability skills required by business and industry.			
AFNR-NRM-2 Experience: Explore, develop, and implement the comprehensive program of agricultural education, learn and demonstrate safe working habits in the work agricultural industry organizations, and develop plans for a Supervised sites, demonstrate selected competencies in leadership through the FFA and agriculture lab and Agricultural Experience Program (SAEP).			
AFNR-NRM-3 Importance: Recognize the importance of natural resources, determine demands, and identify the role of government in natural resources management.			
AFNR-NRM-4 Ecosystems: Discuss and identify basic components of ecosystems, describe the relationship of those components to one another, and identify effects of human activities on ecosystems.			
AFNR-NRM-5 Soils: Describe the properties of soil and nutrient analysis, determine the capability of the land and the effects of erosion, and describe soil stewardship in Georgia.	X	X	
AFNR-NRM-6 Hydrology: Determine the use of water resources, describe the hydrologic cycle and properties of water, and explain watersheds and their functions, as well as the reasons for monitoring water quality.		X	
AFNR-NRM-7 Waste Management: Identify sources of waste and describe methods and procedures for managing that minimize environmental impact.			
AFNR-NRM-8 Wildlife: Define wildlife, explain the importance of wildlife and wildlife management, and identify the role of government and private wildlife organizations in managing wildlife resources.			
AFNR-NRM-9 Interrelations: Describe an awareness of interrelationships in the forest environment between plants, soil, animals, water, and man.		X	
AFNR-NRM-10 Programs: Explain the importance of the government's natural resources and recreational programs			
AFNR-NRM-11 Recreational Safety: Identify safety practices in land-based activities, such as hunting and 4-wheeler riding, and water-based activities, such as fishing and boating.			
CTAE Wildlife Management			
AFNR-WM-1 Employability: Demonstrate employability skills required by business and industry.			
AFNR-WM-2 Experience: Orient and apply the comprehensive program of agricultural education, learn to work safely in the agricultural lab and work sites, demonstrate a Supervised Agricultural Experience Program (SAEP).leadership through the FFA and agricultural industry organizations, and develop plans forselected competencies in			
AFNR-WM-3 Wildlife: Define wildlife, explain the importance of wildlife and wildlife management, and identify the role of government and private wildlife organizations in managing wildlife resources.			
AFNR-WM-4 Ecosystems: Describe basic components of ecosystems and analyze the relationship between living organisms and their environment.		X	
AFNR-WM-5 Habitats: Compare and contrast the habitat needs of selected wildlife species native to Georgia, identify wildlife species of Georgia from physical characteristics and/or evidence, identify the role of selected species in their environment, and explain biological processes related to reproduction and survival of selected species.		X	X
AFNR-WM-6 Wildlife Management: Identify and explain practices for managing wildlife populations and their habitats for the benefit of the entire biota.			
AFNR-WM-7 Population Dynamics: Identify, research, and discuss factors related to birth rate and mortality rate of wildlife and recognize the relationship between the biotic potential of wildlife species and their management. Calculate population size, carrying capacity, annual change in population size, and maximum rate of population increase.			
AFNR-WM-8 Field Evaluation: Using mastered concepts, conduct a field evaluation of wildlife habitats to investigate wildlife management practices to improve the habitat for selected species, and develop a habitat management plan.			

CTAE Environmental Science and Stewardship			
AFNR-ESS-1 Employability: Demonstrate employability skills required by business and industry.			
AFNR-ESS-2 FFA: Relate the role of the FFA in the personal development of students.			
AFNR-ESS-3 Experience: Explore, develop, and implement Supervised Agricultural Experience Program (SAEP) by exploring careers in agriculture and agribusiness.			
AFNR-ESS-4 Importance of Environment: Recognize the importance of how the environment relates to the well-being of humanity, animals, and plants and how they interact.			X
AFNR-ESS-5 Ecosystems: Identify different ecosystems and summarize their characteristics		X	X
AFNR-ESS-6 Soils: Describe soil formation and management, and assess its relevance to soil conservation.	X	X	X
AFNR-ESS-7 Land Use: Demonstrate knowledge of land use and waste management.	X	X	X
AFNR-ESS-8 Chemicals: Identify chemicals and how they can be used (or abused) in the environment.			
AFNR-ESS-9 Water Quality: Analyze water quality and its importance in aquatic ecosystems.		X	X
AFNR-BAS-10 Air Quality: Discuss issues related to air quality and how pollutants can degrade the quality of the air			
General Horticulture and Plant Science			
Plant Science & Biotechnology			
Agricultural Mechanics Technology I			
Agricultural Mechanics Technology II			
Agribusiness Management & Leadership			



Georgia Standards Correlation: URBAN FORESTRY (Current Issue)

	Envirothon Materials Topic							
	Urban Forestry Manual	Urban & Comm Forestry	Sustaining Urban Trees	Urban Tree Inventory	Assessing Urban Forests	stormwater	Costs of Management	Urban Forestry BMPs
Characteristics of Science								
SCSh1. Openness: Evaluate the importance of curiosity, honesty, openness, and skepticism in science								
SCSh2. Safety: Use standard safety practices for all classroom laboratory and field investigations								
SCSh3. Investigate: Identify and investigate problems scientifically				X	X			
SCSh5. Computation: Demonstrate the computation and estimation skills necessary for analyzing data and developing reasonable scientific explanations.								
SCSh6. Communicate scientific investigations and information clearly.								
SCSh7. Knowledge Development: Analyze how scientific knowledge is developed.								
SCSh8. Inquiry: Understand important features of the process of scientific inquiry .								
SCSh9. Reading: Enhance reading in all curriculum areas	X	X	X	X	X	X	X	X
Astronomy								
Biology								
SB1. Cells: Analyze the nature of the relationships between structures and functions in living cells								
SB2. Genetics: Analyze how biological traits are passed on to successive generations. Genetics								
SB3. Systems: Derive the relationship between single-celled and multi-celled organisms and the increasing complexity of systems.								
SB4. Interdependence: Assess the dependence of all organisms on one another and the flow of energy and matter within their ecosystems.				X				
SB5. Evolution: Evaluate the role of natural selection in the development of the theory of evolution.								
Botany								
SBO1. Taxonomy: Use current plant phylogenetic principles and describe the structural changes used to delineate the plant divisions.								
SBO2. Communities: Identify and describe Georgia's major physiographic provinces and their natural plant communities.								
SBO3. Growth & Survival: Explore the structures and processes necessary for the mutual survival of plants and animals.	X							
SBO4. Defense & Disease: Explore the defense systems of plants and recognize the impact of plant diseases on the biosphere.	X							
SBO5. Diversity & Adaptations: Analyze the diversity of plant adaptations and responses to environmental extremes.								
SBO6. Importance: Analyze the economic and ecological importance of plants in society.	X							

Chemistry								
SC1 Matter: Analyze the nature of matter and its classifications.								
SC2 Stoichiometry: Relate how the Law of Conservation of Matter is used to determine chemical composition in compounds and chemical reactions.								
SC3 Atoms: Use the modern atomic theory to explain the characteristics of atoms.								
SC4. Periodic Table: Use the organization of the Periodic Table to predict properties of elements.								
SC5. Reaction Rates: Understand that the rate at which a chemical reaction occurs can be affected by changing concentration, temperature, or pressure and the addition of a catalyst.								
SC6. KMT: Understand the effects motion of atoms and molecules in chemical and physical processes.								
SC7. Solutions: Characterize the properties that describe solutions and the nature of acids and bases.								
Earth Systems								
SES1. Solar System: Investigate the composition and formation of Earth systems, including the Earth’s relationship to the solar system.								
SES2. Tectonics: Understand how plate tectonics creates certain geologic features, materials, and hazards.								
SES3. Land Formation: Explore the actions of water, wind, ice, and gravity that create landforms and systems of landforms (landscapes).								
SES4. Rocks & Fossils: Understand how rock relationships and fossils are used to reconstruct the Earth’s past.								
SES5. Weather & Climate: Investigate the interaction of insolation and Earth systems to produce weather and climate								
SES6. Human Impact: Explain how life on Earth responds to and shapes Earth systems						X		X
Ecology								
SEC1. Species Distribution: Analyze how biotic and abiotic factors interact to affect the distribution of species and the diversity of life on Earth.								
SEC2. Population Dynamics: Investigate factors influencing population density, dispersion, and demographics.								
SEC3. Interactions: Explore and analyze community interactions.			X					
SEC4. Cycles: Analyze biogeochemical cycles and the flow of energy in ecosystems.								
SEC5. Human Impact: Assess the impact of human activities on the natural world, and research how ecological theory can address current issues facing our society, locally and globally.	X		X			X	X	X

