

Standards Correlations

Ecology and Environmental Management (8045, 8046)

Task	SOL Correlations
Demonstrating Personal Qualities and Abilities	
Demonstrate creativity and innovation.	English: 6.1, 6.3, 6.4, 6.6, 6.7, 6.9, 7.1, 7.3, 7.4, 7.6, 7.7, 7.9, 8.1, 8.3, 8.4, 8.6, 8.7, 8.9, 9.1, 9.5, 9.6, 9.8, 10.1, 10.5, 10.6, 10.8, 11.1, 11.5, 11.6, 11.8, 12.1, 12.5, 12.6, 12.8 History and Social Science: CE.1, CE.4, GOVT.1, USI.1, USII.1, VUS.1, WG.1, WG.4, WHI.1, WHII.1 Mathematics: 6.1, 6.2, 6.3, 6.4, 6.5, 6.6, 6.7, 6.10, 6.11, 6.12, 7.2, 7.3, 7.8, 7.9, 8.2, 8.4, 8.6, 8.7, 8.11, 8.12, 8.17, 8.18, A.9, AFDA.3, AFDA.4, AFDA.5, AFDA.6, AFDA.7, AFDA.8, AII.9, COM.1, COM.3, COM.4, COM.5, COM.8, DM.7, DM.1*, DM.10, DM.2*, DM.3*, PS.3*, PS.4*, PS.7*, PS.9*, PS.10* Science: 6.1, BIO.1, CH.1, ES.1, LS.1, PS.1
Demonstrate critical thinking and problem solving.	English: 6.1, 6.3, 6.4, 6.5, 6.6, 6.7, 6.9, 7.1, 7.3, 7.4, 7.5, 7.6, 7.7, 7.9, 8.1, 8.3, 8.4, 8.5, 8.6, 8.7, 8.9, 9.1, 9.5, 9.6, 9.8, 10.1, 10.5, 10.6, 10.8, 11.1, 11.5, 11.6, 11.8, 12.1, 12.5, 12.6, 12.8 History and Social Science: CE.1, CE.4, CE.11, GOVT.1, USI.1, USII.1, VUS.1, WG.1, WG.4, WHI.1, WHII.1 Mathematics: 6.1, 6.2, 6.3, 6.4, 6.5, 6.6, 6.10, 6.11, 7.2, 7.3, 7.8, 7.12, 7.13, 8.2, 8.4, 8.8, 8.9, 8.10, 8.11, A.8, A.9, G.1, G.13, G.14, AFDA.3, AFDA.5, AFDA.8, AII.9, AII.10, AII.11, COM.1, COM.3, COM.4, COM.5, COM.8, DM.4, DM.7, DM.1*, DM.2*, DM.3*, DM.9*, PS.9*, PS.10* Science: 6.1, BIO.1, CH.1, ES.1, LS.1, PS.1
Demonstrate initiative and self-direction.	English: 6.1, 6.4, 6.6, 6.7, 6.9, 7.1, 7.4, 7.6, 7.7, 7.9, 8.1, 8.4, 8.6, 8.7, 8.9, 9.1, 9.5, 9.6, 9.8, 10.1, 10.5, 10.6, 10.8, 11.1, 11.5, 11.6, 11.8, 12.1, 12.5, 12.6, 12.8 History and Social Science: CE.1, CE.4, CE.11, GOVT.1, USI.1, USII.1, VUS.1, WG.1, WHI.1, WHII.1

Task	SOL Correlations
Demonstrate integrity.	English: 6.1, 7.1, 8.1, 9.1, 9.5, 10.1, 10.5, 11.1, 11.5, 12.1, 12.5 History and Social Science: CE.1, CE.3, CE.4, GOVT.1, GOVT.16, USI.1, USII.1, VUS.1, WG.1, WHI.1, WHII.1
Demonstrate work ethic.	English: 6.1, 7.1, 8.1, 9.1, 10.1, 11.1, 12.1 History and Social Science: CE.1, CE.4, CE.14, GOVT.1, GOVT.16, USI.1, USII.1, VUS.1, WG.1, WHI.1, WHII.1 Science: CH.1
Demonstrating Interpersonal Skills	
Demonstrate conflict-resolution skills.	English: 6.1, 6.2, 6.4, 6.6, 6.7, 6.9, 7.1, 7.2, 7.4, 7.6, 7.7, 7.9, 8.1, 8.2, 8.4, 8.6, 8.7, 8.9, 9.1, 10.1, 11.1, 12.1 History and Social Science: CE.1, CE.4, GOVT.1, USI.1, VUS.1
Demonstrate listening and speaking skills.	English: 6.1, 6.2, 6.4, 6.6, 7.1, 7.2, 7.4, 7.6, 8.1, 8.2, 8.4, 8.6, 9.1, 10.1, 11.1, 12.1 History and Social Science: CE.1, CE.4, GOVT.1, USI.1, USII.1, VUS.1, WG.1, WHI.1, WHII.1
Demonstrate respect for diversity.	English: 6.1, 7.1, 8.1, 9.1, 10.1, 11.1, 12.1 History and Social Science: CE.1, CE.3, CE.4, GOVT.1, GOVT.16, USI.1, USII.1, USII.9, VUS.1, VUS.13, WG.1, WHI.1, WHII.1
Demonstrate customer service skills.	English: 6.1, 6.4, 6.7, 7.1, 7.4, 7.7, 8.1, 8.4, 8.7, 9.1, 9.5, 9.6, 10.1, 10.5, 10.6, 11.1, 11.5, 11.6, 12.1, 12.5, 12.6 History and Social Science: CE.1, CE.4, GOVT.1, GOVT.16, USI.1, USII.1, VUS.1, WG.1, WHI.1, WHII.1
Collaborate with team members	English: 6.1, 7.1, 8.1, 9.1, 10.1, 11.1, 12.1 History and Social Science: CE.1, CE.3, CE.4, GOVT.1, GOVT.16, USI.1, USII.1, VUS.1, WG.1, WHI.1, WHII.1
Demonstrating Professional Competencies	
Demonstrate big-picture thinking.	English: 6.1, 6.4, 7.1, 7.4, 8.1, 8.4, 9.1, 9.5, 10.1, 10.5, 11.1, 11.5, 12.1, 12.5 History and Social Science: CE.1, CE.4, CE.12, GOVT.1, GOVT.15, USI.1, USII.1, VUS.1, WG.1, WHI.1, WHII.1

Task	SOL Correlations
Demonstrate career- and life-management skills.	English: 6.1, 6.7, 7.1, 7.7, 8.1, 8.7, 9.1, 9.6, 10.1, 10.6, 11.1, 11.6, 12.1, 12.6 History and Social Science: CE.1, CE.4, CE.12, CE.14, GOVT.1, USI.1, USII.1, VUS.1, WG.1, WHI.1, WHII.1 Mathematics: 8.4
Demonstrate continuous learning and adaptability.	English: 6.1, 6.4, 6.7, 6.9, 7.1, 7.4, 7.7, 7.9, 8.1, 8.4, 8.7, 8.9, 9.1, 9.5, 9.6, 9.8, 10.1, 10.5, 10.6, 10.8, 11.1, 11.5, 11.6, 11.8, 12.1, 12.5, 12.6, 12.8 History and Social Science: CE.1, CE.3, CE.4, CE.14, GOVT.1, USI.1, USII.1, VUS.1, WG.1, WHI.1, WHII.1 Science: BIO.1, CH.1, LS.1, PH.1, PH.4, PS.1
Manage time and resources.	English: 6.1, 6.2, 6.4, 6.7, 6.9, 7.1, 7.2, 7.4, 7.7, 7.9, 8.1, 8.2, 8.4, 8.7, 8.9, 9.1, 9.5, 9.6, 9.8, 10.1, 10.5, 10.6, 10.8, 11.2, 11.5, 11.6, 11.8, 12.2, 12.5, 12.6, 12.8 History and Social Science: CE.1, CE.4, CE.11, GOVT.1, USI.1, USII.1, VUS.1, WG.1, WHI.1, WHII.1 Mathematics: 6.10, 6.11, 6.12, 7.2, 7.3, 7.8, 7.9, 7.10, 7.11, 7.12, 7.13, 8.4, 8.11, 8.12, 8.13, 8.14, 8.17, 8.18, A.4, A.5, A.8, A.9, AFDA.3, AFDA.4, AFDA.5, AFDA.6, AFDA.7, AFDA.8, COM.1, COM.3, COM.5, COM.8
Demonstrate information-literacy skills.	English: 6.1, 6.2, 6.4, 6.6, 6.7, 6.9, 7.1, 7.2, 7.3, 7.4, 7.6, 7.7, 7.9, 8.1, 8.2, 8.3, 8.4, 8.6, 8.7, 8.9, 9.2, 9.5, 9.6, 9.8, 10.2, 10.5, 10.6, 10.8, 11.2, 11.5, 11.6, 11.8, 12.2, 12.5, 12.6, 12.8 History and Social Science: CE.1, CE.4, CE.14, GOVT.1, USI.1, USII.1, VUS.1, WG.1, WHI.1, WHII.1 Mathematics: 6.10, 6.11, 7.8, 7.9, 8.11, 8.12, A.8, A.9, AFDA.3, AFDA.4, AFDA.6, AFDA.7, AFDA.8, DM.8, PS.1*, PS.2*, PS.3*, PS.4*, PS.7*, PS.8*, PS.9*, PS.10* Science: 6.1, BIO.1, CH.1, ES.1, LS.1, PH.1, PS.1
Demonstrate an understanding of information security.	English: 6.1, 6.2, 6.3, 6.4, 6.6, 6.7, 6.8, 6.9, 7.1, 7.2, 7.3, 7.4, 7.6, 7.7, 7.8, 7.9, 8.1, 8.2, 8.3, 8.4, 8.6, 8.7, 8.8, 8.9, 9.1, 9.2, 9.5, 9.6, 9.8, 10.1, 10.2, 10.5, 10.6, 10.8, 11.1, 11.2, 11.5, 11.6, 11.8, 12.1, 12.2, 12.5, 12.6, 12.8 History and Social Science: CE.1, CE.4, CE.14, GOVT.1, USI.1, USII.1, VUS.1, WG.1, WHI.1, WHII.1 Mathematics: COM.10

Task	SOL Correlations
Maintain working knowledge of current information-technology (IT) systems.	English: 6.1, 6.3, 6.4, 6.6, 6.9, 7.1, 7.3, 7.4, 7.6, 7.9, 8.1, 8.3, 8.4, 8.6, 8.9 History and Social Science: CE.1, CE.4, CE.14, GOVT.1, USI.1, USII.1, VUS.1, WG.1, WHI.1, WHII.1 Mathematics: 7.8, COM.1, COM.2, COM.7, COM.9, COM.10, COM.11, COM.16, COM.18, PS.17 Science: BIO.1, CH.1, ES.1, PH.1
Demonstrate proficiency with technologies, tools, and machines common to a specific occupation.	History and Social Science: CE.1, CE.4, CE.14, GOVT.1, USI.1, USII.1, VUS.1, WG.1, WHI.1, WHII.1 Mathematics: 6.10, 6.11, 7.9, 8.4, A.7, A.8, A.9, AFDA.1, AFDA.3, AFDA.5, AII.4, AII.7, AII.9, COM.1, COM.7, COM.10, COM.11, COM.12, COM.16 Science: CH.1, ES.1, LS.1, PH.1, PS.1
Apply mathematical skills to job-specific tasks.	English: 6.4, 6.6, 6.7, 7.4, 7.6, 7.7, 8.4, 8.6, 8.7, 9.5, 9.6, 10.5, 10.6, 11.5, 11.6, 12.5, 12.6 History and Social Science: CE.1, CE.4, CE.14, GOVT.1, USI.1, USII.1, VUS.1, WG.1, WHI.1, WHII.1 Mathematics: 6.1, 6.2, 6.5, 6.6, 6.12, 6.13, 6.14, 7.1, 7.2, 7.3, 7.4, 7.5, 7.6, 7.8, 7.9, 7.11, 7.12, 7.13, 8.4, 8.5, 8.6, 8.8, 8.9, 8.10, 8.11, 8.12, 8.13, 8.14, 8.15, 8.16, 8.17, 8.18, A.1, A.3, A.4, A.5, A.7, A.8, A.9, AFDA.1, AFDA.3, AFDA.5, AFDA.8, AII.3, AII.7, AII.9, AII.10, COM.1, COM.7 Science: 6.1, BIO.1, CH.1, ES.1, LS.1, PH.1, PS.1
Demonstrate professionalism.	English: 6.1, 7.1, 8.1, 9.1, 10.1, 11.1, 12.1 History and Social Science: CE.1, CE.4, CE.14, GOVT.1, USI.1, USII.1, VUS.1, WG.1, WHI.1, WHII.1
Demonstrate reading and writing skills.	English: 6.1, 6.6, 6.7, 7.1, 7.6, 7.7, 8.1, 8.6, 8.7, 9.1, 9.5, 9.6, 9.7, 10.1, 10.5, 10.6, 10.7, 11.1, 11.5, 11.6, 11.7, 12.1, 12.5, 12.6, 12.7 History and Social Science: CE.1, CE.4, GOVT.1, USI.1, USII.1, VUS.1, WG.1, WHI.1, WHII.1 Science: 6.1, PH.1, PS.1
Demonstrate workplace safety.	English: 6.4, 7.4, 8.4, 9.5, 10.5, 11.5, 12.5 History and Social Science: CE.1, CE.4, GOVT.1, USI.1, USII.1, VUS.1, WG.1, WHI.1, WHII.1 Science: CH.1
Examining All Aspects of an Industry	

Task	SOL Correlations
Examine aspects of planning within an industry/organization.	History and Social Science: GOVT.16
Examine aspects of management within an industry/organization.	
Examine aspects of financial responsibility within an industry/organization.	
Examine technical and production skills required of workers within an industry/organization.	
Examine principles of technology that underlie an industry/organization.	
Examine labor issues related to an industry/organization.	History and Social Science: GOVT.16
Examine community issues related to an industry/organization.	History and Social Science: GOVT.16
Examine health, safety, and environmental issues related to an industry/organization.	History and Social Science: GOVT.16
Addressing Elements of Student Life	

Task	SOL Correlations
Identify the purposes and goals of the student organization.	
Explain the benefits and responsibilities of membership in the student organization as a student and in professional/civic organizations as an adult.	
Demonstrate leadership skills through participation in student organization activities, such as meetings, programs, and projects.	
Identify Internet safety issues and procedures for complying with acceptable use standards.	
Exploring Work-Based Learning	
Identify the types of work-based learning (WBL) opportunities.	
Reflect on lessons learned during the WBL experience.	
Explore career opportunities related to the WBL experience.	
Participate in a WBL experience, when appropriate.	

Task	SOL Correlations
Exploring Leadership Opportunities through FFA	
Identify the role of supervised agricultural experiences (SAEs) in agricultural education.	English: 9.3, 9.5, 10.3, 10.5
Participate in an SAE.	English: 9.5, 9.8, 10.5, 10.8
Identify the benefits and responsibilities of FFA membership.	English: 9.5, 9.6, 9.7, 9.8, 10.5, 10.6, 10.7, 10.8
Describe leadership characteristics and opportunities as they relate to agriculture and FFA.	English: 9.5, 10.5 History and Social Science: VUS.8, VUS.9, VUS.10, VUS.11, WHII.8, WHII.10, WHII.11
Apply for an FFA degree and/or an agricultural proficiency award.	English: 9.5, 10.5
Identifying Careers in Environmental Management	
Describe occupations in natural resource management and conservation areas including regulatory and non-regulatory services.	English: 9.5, 10.5, 11.5, 12.5 History and Social Science: WG.4, WG.5
Develop a list of local, state, and federal agencies and nonprofit organizations that work with the environment and/or natural resources.	English: 9.5, 9.8, 10.5, 10.8, 11.5, 11.8, 12.5, 12.8 History and Social Science: GOVT.15, GOVT.16

Task	SOL Correlations
Identify environmental and natural resource management and conservation businesses in the community.	English: 9.5, 10.5, 11.5, 12.5 History and Social Science: GOVT.9, GOVT.15, WG.4, WG.16, WG.18
Developing Basic Environmental Science Concepts	
Explain the importance of the environment in sustaining living organisms.	English: 9.5, 10.5, 11.5, 12.5 History and Social Science: GOVT.15, VUS.1, WG.2, WHI.1, WHI.2, WHII.8, WHII.14
Define basic terminology in ecology and other environmental science.	English: 9.3, 10.3, 11.3, 12.3 History and Social Science: WG.1, WG.2 Science: BIO.8
Explain energy transfer.	English: 9.5, 10.5, 11.5, 12.5 Science: BIO.2, BIO.8
Describe the effects of natural events and anthropogenic influences on ecosystems.	English: 9.5, 10.5, 11.5, 12.5 History and Social Science: WG.2, WG.14, WG.15
Explain principles and processes of ecological succession.	English: 9.5, 10.5, 11.5, 12.5 Science: BIO.8
Illustrate geometric vs. arithmetic increases in population growth.	History and Social Science: VUS.1, VUS.2, VUS.8, WG.1, WG.14, WG.15, WHI.1, WHII.1, WHII.8 Mathematics: AFDA.1, AFDA.2, AII.5, AII.6, AII.7, MA.2 Science: BIO.8

Task	SOL Correlations
Describe the logistics of population growth.	English: 9.5, 10.5, 11.5, 12.5 History and Social Science: VUS.1, VUS.2, VUS.8, WG.14, WG.15, WG.16, WHI.1, WHII.1, WHII.8 Mathematics: AFDA.1, AII.7, MA.2 Science: BIO.8
Explain the tragedy of the commons.	English: 9.5, 10.5, 11.5, 12.5 History and Social Science: WG.17, WG.18 Science: BIO.8
Explain the role of biodiversity in ecosystem stability.	English: 9.3, 9.5, 10.3, 10.5, 11.3, 11.5, 12.3, 12.5 Science: BIO.8
Identify the effects of latitude and altitude on species diversity.	English: 9.3, 9.5, 10.3, 10.5, 11.3, 11.5, 12.3, 12.5 History and Social Science: WG.2, WG.4 Science: BIO.8
Explain the process of species differentiation.	English: 9.5, 10.5, 11.5, 12.5 Science: BIO.6, BIO.7, BIO.8
Protecting the Environment – Air and Noise	
Diagram the composition of the atmosphere.	Science: ES.6
Outline effective methods to control various air pollutants.	English: 9.6, 9.7, 10.6, 10.7, 11.6, 11.7, 12.6, 12.7

Task	SOL Correlations
	History and Social Science: GOVT.9, GOVT.15
Explain the effects of greenhouse gases.	English: 9.5, 10.5, 11.5, 12.5 Science: ES.11
Determine the sources and effects of acid rain.	English: 9.5, 10.5, 11.5, 12.5 History and Social Science: WG.2, WG.3, WG.17, WG.18 Science: ES.11
Analyze the conversation surrounding ozone depletion.	English: 9.5, 10.5, 11.5, 12.5 Science: ES.11
Define <i>noise pollution</i> .	English: 9.3, 10.3, 11.3, 12.3 History and Social Science: GOVT.15
Research noise restrictions for a locality.	English: 9.8, 10.8, 11.8, 12.8
Identify different types of noise pollution and the effect on humans, wildlife, and ecological systems.	English: 9.5, 10.5, 11.5, 12.5
Protecting the Environment – Soil	
Describe the soil-formation process.	English: 9.3, 9.5, 10.3, 10.5, 11.3, 11.5, 12.3, 12.5 Science: ES.8
Classify soils using the soil taxonomy system.	English: 9.5, 10.5, 11.5, 12.5 Science: ES.8

Task	SOL Correlations
Identify differences in soil profiles.	English: 9.5, 10.5, 11.5, 12.5 Science: ES.8
Investigate soil types.	English: 9.5, 10.5, 11.5, 12.5 Science: ES.8
Interpret data contained in soil maps.	English: 9.5, 10.5, 11.5, 12.5 Science: ES.8
Explain land capability classes.	English: 9.5, 10.5, 11.5, 12.5
Explain leaching in soils.	English: 9.5, 10.5, 11.5, 12.5 Science: ES.8
Collect soil samples to analyze for composition.	English: 9.5, 10.5, 11.5, 12.5
Interpret soil test results to make nutrient recommendations.	English: 9.5, 10.5, 11.5, 12.5
Explain how wind and water erode soil.	English: 9.5, 10.5, 11.5, 12.5 History and Social Science: WG.2 Science: ES.7
Identify common materials used for riparian buffers and vegetative erosion control methods.	English: 9.5, 10.5, 11.5, 12.5

Task	SOL Correlations
Explain the effects of erosion on plants, animals, and their habitats.	English: 9.5, 10.5, 11.5, 12.5 Science: ES.7
Describe crop rotation and no-till agriculture.	English: 9.3, 9.5, 10.3, 10.5, 11.3, 11.5, 12.3, 12.5
Explain mechanical erosion controls.	English: 9.5, 10.5, 11.5, 12.5
Protecting the Environment – Water	
Define characteristics of water.	English: 9.3, 10.3, 11.3, 12.3 Science: BIO.2, CH.5, ES.12
Define <i>wetlands</i> and uses.	English: 9.3, 10.3, 11.3, 12.3 Science: ES.8
Illustrate the hydrologic cycle.	Science: ES.8
Illustrate components of the riverine system.	
Identify characteristics of an estuarine system.	English: 9.5, 10.5, 11.5, 12.5 Science: ES.8
Describe an aquatic zonation system.	English: 9.5, 10.5, 11.5, 12.5 Science: ES.10
Explain the different ways water moves in the oceans and the factors affecting movement.	English: 9.5, 10.5, 11.5, 12.5 Science: ES.10

Task	SOL Correlations
Explain groundwater and sources of groundwater.	English: 9.5, 10.5, 11.5, 12.5 Science: ES.8
Explain the role of frozen water in Earth's systems.	English: 9.5, 10.5, 11.5, 12.5
Define <i>water table</i> .	English: 9.3, 10.3, 11.3, 12.3 Science: ES.8
Explain the Clean Water Act.	English: 9.5, 10.5, 11.5, 12.5 History and Social Science: GOVT.9, GOVT.15
Examine the water needs for an agricultural enterprise, school, or home.	English: 9.5, 10.5, 11.5, 12.5 Mathematics: A.1
Define <i>point</i> and <i>nonpoint source</i> (NPS) pollution.	English: 9.3, 10.3, 11.3, 12.3
Identify major water pollutants and their effects on the environment.	English: 9.5, 10.5, 11.5, 12.5
Define <i>karst topography</i> .	English: 9.3, 10.3, 11.3, 12.3 Science: ES.8
Analyze water samples for chemical pollutants and biological organisms.	English: 9.5, 10.5, 11.5, 12.5
Analyze water quality using the Izaak Walton League of America (IWLA) method.	English: 9.5, 10.5, 11.5, 12.5

Task	SOL Correlations
Explain the effects of water pollution on agricultural production.	English: 9.5, 10.5, 11.5, 12.5 History and Social Science: WG.2, WG.3
Define <i>eutrophication</i> and its relationship to nutrient-rich waters.	English: 9.3, 10.3, 11.3, 12.3
Report on the effects of polluted water on animals and humans.	English: 9.1, 10.1, 11.1, 12.1
Compare methods used to reduce surface and groundwater contamination.	English: 9.5, 10.5, 11.5, 12.5
Select best management practices designed to improve water quality.	English: 9.5, 10.5, 11.5, 12.5
Identify the characteristics of a watershed.	English: 9.3, 9.5, 10.3, 10.5, 11.3, 11.5, 12.3, 12.5 Science: ES.8
Interpret a flood-hazard analysis.	English: 9.3, 9.5, 10.3, 10.5, 11.3, 11.5, 12.3, 12.5
Explain methods of flood control.	English: 9.3, 9.5, 10.3, 10.5, 11.3, 11.5, 12.3, 12.5
Compare stream bank protection measures.	English: 9.5, 10.5, 11.5, 12.5
Investigating Environmental Issues	
Examine environmental agencies.	English: 9.5, 10.5, 11.5, 12.5 History and Social Science: GOVT.9, GOVT.15

Task	SOL Correlations
Identify local, state, national, and global issues concerning agriculture and the environment.	English: 9.5, 10.5, 11.5, 12.5 History and Social Science: GOVT.7, GOVT.8, GOVT.9, WG.16, WG.17
Summarize how agriculture and the environment are related.	English: 9.5, 10.5, 11.5, 12.5 History and Social Science: WG.1, WG.2, WG.3
Compare sustainability practices and multiple-use management strategies and their uses to protect and maintain Virginia’s forest ecosystems.	English: 9.5, 10.5, 11.5, 12.5
Outline the Virginia Erosion and Sediment Control Law.	English: 9.6, 9.7, 10.6, 10.7, 11.6, 11.7, 12.6, 12.7
Define <i>organic farming</i> .	English: 9.3, 10.3, 11.3, 12.3
Assess how technology has influenced pollution problems.	English: 9.5, 10.5, 11.5, 12.5 History and Social Science: WG.1, WG.2, WG.16, WG.17, WG.18
Planning and Managing Land Use	
Identify major land uses and their effects on the environment and ecosystems.	English: 9.3, 9.5, 10.3, 10.5, 11.3, 11.5, 12.3, 12.5 History and Social Science: WG.2, WG.3, WG.14, WG.18
Explain zoning classifications and their effects.	English: 9.3, 9.5, 10.3, 10.5, 11.3, 11.5, 12.3, 12.5 History and Social Science: GOVT.9, GOVT.15, WG.18
Classify land zoning according to its uses.	English: 9.5, 10.5, 11.5, 12.5

Task	SOL Correlations
Describe green infrastructure.	English: 9.5, 10.5, 11.5, 12.5 History and Social Science: WG.2, WG.16
Managing Fish and Wildlife	
Describe the role of hunting and fishing in the management of wildlife.	English: 9.5, 10.5, 11.5, 12.5 Science: BIO.8
Identify common game species native to Virginia.	English: 9.5, 10.5, 11.5, 12.5
Contrast habitat requirements for various fish and wildlife.	English: 9.5, 10.5, 11.5, 12.5
Describe human conflicts with wildlife populations.	English: 9.5, 10.5, 11.5, 12.5 Science: BIO.8
Describe the environmental effects of overpopulation of wildlife.	English: 9.5, 10.5, 11.5, 12.5 Science: BIO.8
Identify local plants or trees that provide food and/or cover for animals and birds.	English: 9.5, 10.5, 11.5, 12.5
Explain measurement of the wildlife and fish population.	English: 9.5, 10.5, 11.5, 12.5 Mathematics: PS.17, PS.18, PS.19, PS.8*
Explain the difference among extinct, endangered, and threatened species of wildlife.	English: 9.5, 10.5, 11.5, 12.5
Identify Virginia's threatened and endangered species.	English: 9.5, 10.5, 11.5, 12.5

Task	SOL Correlations
	Science: BIO.8
Identify diseases and parasites in wildlife.	English: 9.5, 10.5, 11.5, 12.5 Science: BIO.4
List methods to improve reintroduction of species to a natural habitat.	English: 9.5, 9.6, 9.7, 10.5, 10.6, 10.7, 11.5, 11.6, 11.7, 12.5, 12.6, 12.7
Describe management practices of freshwater fisheries.	English: 9.5, 10.5, 11.5, 12.5
Summarize the aquaculture industry.	English: 9.5, 10.5, 11.5, 12.5
Describe the effects of habitat loss.	English: 9.5, 10.5, 11.5, 12.5 Science: BIO.8
Managing Forests and Forestland	
Explain basic tree structure and growth.	English: 9.3, 9.5, 10.3, 10.5, 11.3, 11.5, 12.3, 12.5
Identify forest trees of Virginia.	English: 9.5, 10.5, 11.5, 12.5 Science: BIO.8
Explain invasive species and their effects on native populations.	English: 9.5, 10.5, 11.5, 12.5 Science: BIO.8
Differentiate between forest types.	English: 9.5, 10.5, 11.5, 12.5 History and Social Science: WG.3, WG.4, WG.6, WG.9

Task	SOL Correlations
Identify tree diseases and insect pests.	English: 9.3, 9.5, 10.3, 10.5, 11.3, 11.5, 12.3, 12.5
Calculate the value of standing timber.	Mathematics: A.1, A.4
Identify forest products and uses of harvested trees.	English: 9.5, 10.5, 11.5, 12.5
Explain why trees are undesirable and selected for removal.	English: 9.5, 10.5, 11.5, 12.5
Compare methods of forest harvest and regeneration.	English: 9.5, 10.5, 11.5, 12.5
Describe factors considered when determining species most appropriate for reforestation.	English: 9.5, 10.5, 11.5, 12.5
Examine the uses of prescribed burning.	English: 9.5, 10.5, 11.5, 12.5
Explain the development and anatomy of a forest wildfire.	English: 9.5, 10.5, 11.5, 12.5
Develop forest wildfire prevention techniques.	English: 9.1, 10.1, 11.1, 12.1
Evaluate forest wildfire fighting techniques.	English: 9.5, 10.5, 11.5, 12.5
Explain the use of herbicides in forest management.	English: 9.3, 9.5, 10.3, 10.5, 11.3, 11.5, 12.3, 12.5
Research the Conservation Stewardship Program (CSP) offered through the Virginia	English: 9.8, 10.8, 11.8, 12.8

Task	SOL Correlations
Department of Forestry (VDOF).	
Explain how urban forests fit into the urban ecosystem.	English: 9.5, 10.5, 11.5, 12.5
Identify the benefits of urban forests.	English: 9.5, 10.5, 11.5, 12.5
Explain the relationship between urban forests and air and water quality.	English: 9.5, 10.5, 11.5, 12.5
Identify plant species appropriate to urban development.	English: 9.5, 10.5, 11.5, 12.5
Identify best management practices for tree care.	English: 9.5, 10.5, 11.5, 12.5
Describe unfavorable conditions that urban trees experience.	English: 9.5, 10.5, 11.5, 12.5
Calculate the benefits of an urban tree.	English: 9.5, 10.5, 11.5, 12.5
Describe techniques for planting and establishing trees.	English: 9.5, 10.5, 11.5, 12.5
Develop a mulching, pruning, fertilization, and pest control plan for urban plantings.	English: 9.5, 10.5, 11.5, 12.5
Understanding Conservation Cartography and Orienteering	

Task	SOL Correlations
Describe a topographic map, a relief map, and satellite imagery.	English: 9.5, 10.5, 11.5, 12.5 History and Social Science: WG.1, WG.2 Science: ES.1
Interpret a topographic land map.	English: 9.5, 10.5, 11.5, 12.5 History and Social Science: WG.1, WG.2 Science: ES.1
Create a topographic land map.	
Determine percentage slope on a topographic map.	English: 9.5, 10.5, 11.5, 12.5 Mathematics: A.6
Interpret maps for correlation to geographic features.	English: 9.5, 10.5, 11.5, 12.5 History and Social Science: WG.1, WG.2
Identify cardinal directions on maps and in the outdoors.	English: 9.5, 10.5, 11.5, 12.5 History and Social Science: WG.1
Use a compass to orient various locations on a map.	English: 9.5, 10.5, 11.5, 12.5 History and Social Science: WG.1, WG.2, WHII.11
Use triangulation to estimate unknown location from one or more known locations.	English: 9.3, 9.5, 10.3, 10.5, 11.3, 11.5, 12.3, 12.5 Mathematics: G.5
Define <i>geographic information system (GIS)</i> .	English: 9.3, 10.3, 11.3, 12.3

Task	SOL Correlations
	History and Social Science: WG.1, WG.2
Explain global positioning system (GPS).	English: 9.3, 9.5, 10.3, 10.5, 11.3, 11.5, 12.3, 12.5 History and Social Science: WG.1, WG.2 Science: ES.1
Investigating Waste Management	
Explain the processes carried out in a sewage plant.	English: 9.5, 10.5, 11.5, 12.5
Explain a sewage disposal system.	English: 9.5, 10.5, 11.5, 12.5
Outline the systems for hazardous waste disposal.	English: 9.6, 9.7, 10.6, 10.7, 11.6, 11.7, 12.6, 12.7
Identify common methods of waste disposal.	English: 9.5, 10.5, 11.5, 12.5
Design a landfill.	
Managing Energy Resources	
Describe forms of energy usable to humans.	English: 9.3, 9.5, 10.3, 10.5, 11.3, 11.5, 12.3, 12.5 Science: ES.6
Outline energy production trends in the United States and worldwide.	English: 9.6, 9.7, 10.6, 10.7, 11.6, 11.7, 12.6, 12.7 History and Social Science: WG.1, WG.17, WG.18
Explain traditional and primary energy sources in use today.	English: 9.3, 9.5, 10.3, 10.5, 11.3, 11.5, 12.3, 12.5 History and Social Science: WG.1, WG.4, WG.17

Task	SOL Correlations
	Science: ES.6
Describe alternative sources of energy.	English: 9.5, 10.5, 11.5, 12.5 Science: ES.6
Evaluate appliances for energy use and conservation.	English: 9.5, 10.5, 11.5, 12.5 History and Social Science: WG.1, WG.2
Describe how various energy sources are obtained, processed, distributed, and used.	English: 9.5, 10.5, 11.5, 12.5 History and Social Science: WG.2, WG.4 Science: ES.6
Explain problems associated with the production, processing, distribution, and use of various energy sources.	English: 9.5, 10.5, 11.5, 12.5 History and Social Science: WG.2, WG.4 Science: ES.6