

Standards Correlations

Agricultural Production Technology (8010)

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,

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	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
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

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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
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

Task	SOL Correlations
	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
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

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	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	
Examine aspects of planning within an	History and Social Science: GOVT.16

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industry/organization.	
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	
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	

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(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.	
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
Demonstrating Safety Skills in Agricultural Production	
Identify risks/hazards in an agricultural operation.	English: 10.5, 11.5 History and Social Science: VUS.6, VUS.8
Demonstrate safety in an agricultural operation.	English: 10.5, 10.8, 11.5, 11.8
Identify public safety issues pertaining to agricultural operations.	English: 10.5, 10.8, 11.5, 11.8 History and Social Science: VUS.8
Perform lockout/tagout (LOTO) procedures in an agricultural production setting.	English: 10.3, 10.5, 10.8, 11.3, 11.5, 11.8
Identify regulations related to labor in the agricultural production operation.	English: 10.5, 10.8, 11.5, 11.8

Task	SOL Correlations
	History and Social Science: VUS.1, VUS.8, WHII.8 Science: CH.1
Applying Safety Practices for Carpentry and Metalworking in Agriculture	
Identify marked safety areas.	English: 10.5, 11.5
Identify the location and use of eye wash stations.	English: 10.5, 11.5 Science: CH.1
Identify the location of posted evacuation routes.	English: 10.5, 11.5
Demonstrate knowledge of SDS.	English: 10.5, 11.5
Demonstrate the safe use of chemicals.	Science: CH.1
Demonstrate the safe use of standard and metric hand tools.	
Demonstrate the safe use of power tools.	
Demonstrate the safe use of precision standard and metric measuring tools.	
Demonstrate the use of protective clothing and equipment.	
Demonstrate the safe use of fire-protection equipment.	
Demonstrate the safe use of equipment.	
Demonstrate safe practices in the agricultural mechanics lab/workshop.	English: 10.5, 10.6, 10.7, 11.5, 11.6, 11.7
Using Mechanics in Agricultural Production	
Demonstrate standard measurement techniques in agricultural mechanics.	English: 10.3, 10.5, 11.3, 11.5 Science: CH.1
Calculate a bill of materials.	

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Demonstrate woodworking skills.	English: 10.5, 11.5
Demonstrate metalworking skills.	English: 10.5, 11.5
Construct a section of farm fence.	English: 10.5, 11.5
Identify major farm machines common to agriculture production.	English: 10.3, 10.5, 10.8, 11.3, 11.5, 11.8
Using Soil Science in Agricultural Production	
Describe the soil-formation process and components of soil.	English: 10.3, 10.5, 10.8, 11.3, 11.5, 11.8 Science: ES.8
Evaluate the physical and chemical properties of soil.	English: 10.5, 11.5 Science: ES.8
Analyze soil characteristics.	English: 10.5, 11.5
Create soil amendment recommendations for a given crop or land use.	English: 10.5, 11.5
Examine best management practices for improving soil health.	English: 10.5, 11.5
Describe erosion, its effects on the environment, and prevention methods.	English: 10.5, 11.5 Science: ES.7
Conduct a water percolation test.	English: 10.3, 10.5, 11.3, 11.5
Demonstrate how to use the USDA Web Soil Survey.	English: 10.5, 10.8, 11.5, 11.8
Devise a soil-management plan to minimize erosion and maximize biodiversity, plant productivity, and the formation of topsoil.	English: 10.1, 11.1
Using Plant Science in Agricultural Crop Production	
Identify grain, oil, and specialty field crops.	English: 10.5, 11.5
Identify vegetable crops.	English: 10.5, 11.5

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Identify fruit and nut crops.	English: 10.5, 11.5
Identify the essential nutrients and their major functions for optimal plant growth and development.	English: 10.5, 11.5
Identify common plant nutrient deficiency and toxicity symptoms.	English: 10.5, 11.5
Analyze the influence of environmental factors on plant growth.	English: 10.5, 11.5
Identify principles and practices of sustainable crop production.	English: 10.5, 10.8, 11.5, 11.8
Differentiate among approved planting practices.	English: 10.5, 11.5
Prepare growing media for use in plant cultivation systems.	English: 10.5, 11.5
Develop a management plan for plant production.	English: 10.5, 11.5
Cultivate plants based on current industry standards.	English: 10.5, 11.5
Evaluate disease-control measures.	English: 10.5, 11.5
Develop a plan for integrated pest management (IPM) for plant production.	English: 10.5, 11.5
Demonstrate crop-sampling techniques.	English: 10.5, 11.5
Analyze crop samples.	English: 10.5, 11.5
Managing Natural Resources	
Describe how agriculture and the environment are interrelated.	English: 10.5, 11.5
Describe best management practices to protect soil and water resources.	English: 10.5, 11.5
Describe best management practices for the forest.	English: 10.1, 10.3, 10.5, 11.1, 11.3, 11.5 Science: BIO.8, ES.8
Describe best management practices for wildlife.	English: 10.5, 11.5
Exploring Livestock and Poultry Production	

Task	SOL Correlations
Determine requirements for establishing and managing an animal enterprise.	English: 10.5, 11.5
Explain criteria for selecting poultry and livestock.	English: 10.5, 11.5
Describe nutritional requirements for poultry and livestock.	English: 10.5, 11.5
Describe poultry and livestock healthcare requirements.	English: 10.5, 11.5
Developing Business Aspects of an Agricultural Enterprise	
Explain the benefits and liabilities of owning an agricultural business.	English: 10.5, 11.5
Identify the components of a business plan for an agricultural enterprise.	English: 10.5, 11.5
Explore government agencies, regulations, and incentives.	English: 10.5, 10.8, 11.5, 11.8
Describe marketing options for an agricultural enterprise.	English: 10.5, 11.5
Explain the importance of establishing and maintaining a financial and production record-keeping system for an agricultural enterprise.	English: 10.5, 11.5 History and Social Science: VUS.13 Mathematics: COM.1, COM.7
Understanding Precision Agriculture Management and Technologies	
Describe technologies used in precision agriculture and their importance.	English: 10.5, 11.5 History and Social Science: VUS.14
Describe the equipment necessary for a GPS to provide applications used in precision agriculture.	English: 10.5, 11.5 History and Social Science: VUS.14
Describe the procedure for operating a GPS receiver.	English: 10.5, 11.5 History and Social Science: VUS.14

Task	SOL Correlations
Research technologies used in precision agriculture management.	English: 10.8, 11.8
Collect and apply data in the development of a map.	Mathematics: G.3, G.14
Exploring Security in Agricultural Industries	
Define <i>biosecurity</i> .	English: 10.3, 11.3
Describe biosecurity procedures in agricultural production.	English: 10.5, 11.5
Identify biosecurity risks in an agricultural production enterprise.	English: 10.5, 11.5 History and Social Science: VUS.8
Define <i>agroterrorism</i> .	English: 10.3, 11.3
Describe internal and external measures to prevent agroterrorism related to an agricultural enterprise.	English: 10.5, 11.5
Identify agroterrorism risks related to an agricultural enterprise.	English: 10.5, 11.5
Define <i>cybersecurity</i> as it relates to agricultural production.	English: 10.3, 11.3
Describe measures to prevent cybersecurity breaches in an agricultural production enterprise.	English: 10.5, 11.5
Identify cybersecurity risks related to an agricultural production enterprise.	English: 10.5, 11.5