

# Standards Correlations

## Geospatial Technology I (8423)

Task	SOL Correlations
<b>Demonstrating Personal Qualities and Abilities</b>	
Demonstrate creativity and innovation.	<p>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</p> <p>History and Social Science: CE.1, CE.4, GOVT.1, USI.1, USII.1, VUS.1, WG.1, WG.4, WHI.1, WHII.1</p> <p>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*</p> <p>Science: 6.1, BIO.1, CH.1, ES.1, LS.1, PS.1</p>
Demonstrate critical thinking and problem solving.	<p>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</p> <p>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</p> <p>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*</p> <p>Science: 6.1, BIO.1, CH.1, ES.1, LS.1, PS.1</p>
Demonstrate initiative and self-direction.	<p>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</p> <p>History and Social Science: CE.1, CE.4, CE.11, GOVT.1, USI.1, USII.1, VUS.1,</p>

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	WG.1, WHI.1, WHIL.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, USIL.1, VUS.1, WG.1, WHI.1, WHIL.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, USIL.1, VUS.1, WG.1, WHI.1, WHIL.1 Science: CH.1
<b>Demonstrating Interpersonal Skills</b>	
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, USIL.1, VUS.1, WG.1, WHI.1, WHIL.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, USIL.1, USIL.9, VUS.1, VUS.13, WG.1, WHI.1, WHIL.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, USIL.1, VUS.1, WG.1, WHI.1, WHIL.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, USIL.1, VUS.1, WG.1, WHI.1, WHIL.1
<b>Demonstrating Professional Competencies</b>	
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, USIL.1,

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	VUS.1, WG.1, WHI.1, WHIL.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, WHIL.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, WHIL.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, WHIL.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, WHIL.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, WHIL.1

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	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 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

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	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
<b>Examining All Aspects of an Industry</b>	
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
<b>Addressing Elements of Student Life</b>	
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	

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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.	
<b>Exploring Work-Based Learning</b>	
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.	
<b>Examining Past, Present, and Future Geospatial Technologies (GT)</b>	
Describe the evolution of GT.	<p>English: 9.5, 10.5, 11.5, 12.5</p> <p>History and Social Science: VUS.14, WG.1, WG.2, WG.3, WG.4, WG.5, WHIL.14</p> <p>Science: ES.1</p> <p>ITEEA National Standards:</p> <ul style="list-style-type: none"> <li>1. The Characteristics and Scope of Technology</li> <li>17. Information and Communication Technologies</li> <li>18. Transportation Technologies</li> <li>3. The Relationships Among Technologies and the Connections Between Technology and Other Fields</li> </ul>

Task	SOL Correlations
	<p>4. The Cultural, Social, Economic, and Political Effects of Technology  5. The Effects of Technology on the Environment  6. The Role of Society in the Development and Use of Technology  7. The Influence of Technology on History</p> <p>TSA Competitive Events:  Technology Bowl</p>
Identify geospatial applications in jobs/careers.	<p>English: 9.5, 9.8, 10.5, 10.8, 11.5, 11.8, 12.5, 12.8</p> <p>ITEEA National Standards:  1. The Characteristics and Scope of Technology  17. Information and Communication Technologies  18. Transportation Technologies  20. Construction Technologies  3. The Relationships Among Technologies and the Connections Between Technology and Other Fields  4. The Cultural, Social, Economic, and Political Effects of Technology  6. The Role of Society in the Development and Use of Technology  7. The Influence of Technology on History</p>
Identify geospatial opportunities at the postsecondary level.	<p>English: 9.5, 9.8, 10.5, 10.8, 11.5, 11.8, 12.5, 12.8</p>
Describe ethical, security, legal, policy, and privacy issues in GT applications.	<p>English: 9.5, 10.5, 11.5, 12.5</p> <p>History and Social Science: GOVT.1, GOVT.9, GOVT.10, VUS.14, WG.1, WG.17, WG.18, WHIL.14</p> <p>ITEEA National Standards:  1. The Characteristics and Scope of Technology  13. Assess the Impact of Products and Systems  3. The Relationships Among Technologies and the Connections Between Technology</p>

Task	SOL Correlations
	<p>and Other Fields</p> <p>4. The Cultural, Social, Economic, and Political Effects of Technology</p> <p>5. The Effects of Technology on the Environment</p> <p>6. The Role of Society in the Development and Use of Technology</p> <p>7. The Influence of Technology on History</p> <p>TSA Competitive Events: Essays on Technology Extemporaneous Speech</p>
Describe platforms of mobile technology implementation.	<p>English: 9.5, 10.5, 11.5, 12.5</p> <p>History and Social Science: VUS.14, WHII.14</p> <p>ITEEA National Standards: 1. The Characteristics and Scope of Technology 4. The Cultural, Social, Economic, and Political Effects of Technology</p>
Examine the applications of mobile technologies.	<p>ITEEA National Standards: 4. The Cultural, Social, Economic, and Political Effects of Technology</p>
<b>Creating and Using Maps</b>	
Identify map components for a layout.	<p>History and Social Science: WG.1, WG.2, WG.3, WG.4, WHI.1</p> <p>Science: ES.1</p> <p>ITEEA National Standards: 13. Assess the Impact of Products and Systems 5. The Effects of Technology on the Environment 6. The Role of Society in the Development and Use of Technology</p> <p>TSA Competitive Events: Geospatial Technology (Virginia only)</p>



Task	SOL Correlations
Identify types of maps.	<p>History and Social Science: WG.1, WG.3, WHI.1</p> <p>Science: ES.1</p> <p>TSA Competitive Events: Geospatial Technology (Virginia only)</p>
Create maps to solve problems.	<p>English: 9.5, 9.6, 10.5, 10.6, 11.5, 11.6, 12.5, 12.6</p> <p>History and Social Science: WG.1, WG.3, WHI.1</p> <p>Mathematics: G.3, G.14</p> <p>Science: ES.1</p> <p>ITEEA National Standards: 10. The Role of Troubleshooting, Research and Development, Invention and Innovation, and Experimentation in Problem Solving 11. Apply the Design Process</p> <p>TSA Competitive Events: Geospatial Technology (Virginia only) Technology Problem Solving</p>
Explain the concept of projections.	<p>English: 9.5, 10.5, 11.5, 12.5</p> <p>History and Social Science: WHI.1</p> <p>Mathematics: G.14</p> <p>Science: ES.1</p>

Task	SOL Correlations
Explain ways maps can distort reality.	<p>English: 9.5, 10.5, 11.5, 12.5</p> <p>History and Social Science: WHI.1</p> <p>Mathematics: G.14</p> <p>Science: ES.1</p>
Research sources of map data.	<p>English: 9.8, 10.8, 11.8, 12.8</p> <p>History and Social Science: GOVT.1, GOVT.8, GOVT.9, GOVT.15, VUS.14</p> <p>Science: ES.1</p> <p>ITEEA National Standards:  13. Assess the Impact of Products and Systems  17. Information and Communication Technologies</p> <p>TSA Competitive Events:  Geospatial Technology (Virginia only)</p>
Acquire geospatial data.	<p>History and Social Science: VUS.14, WG.1, WG.2, WG.3, WG.17, WG.18, WHII.14</p> <p>ITEEA National Standards:  10. The Role of Troubleshooting, Research and Development, Invention and Innovation, and Experimentation in Problem Solving  12. Use and Maintain Technological Products and Systems  13. Assess the Impact of Products and Systems</p> <p>TSA Competitive Events:  Geospatial Technology (Virginia only)</p>

Task	SOL Correlations
Evaluate metadata.	TSA Competitive Events: Geospatial Technology (Virginia only)
Use mobile technology.	History and Social Science: VUS.14, WHII.14  ITEEA National Standards: 12. Use and Maintain Technological Products and Systems
Design a mobile application.	English: 9.5, 10.5, 11.5, 12.5  ITEEA National Standards: 3. The Relationships Among Technologies and the Connections Between Technology and Other Fields
<b>Using GPS</b>	
Explain how a GPS functions.	History and Social Science: VUS.14, WHII.14  Mathematics: G.5, G.8, T.8, MA.8  ITEEA National Standards: 3. The Relationships Among Technologies and the Connections Between Technology and Other Fields
Explain the scientific and mathematical components of a GPS.	Mathematics: A.4, G.3, G.14, T.3, MA.14  ITEEA National Standards: 1. The Characteristics and Scope of Technology 13. Assess the Impact of Products and Systems 15. Agricultural and Related Biotechnologies 17. Information and Communication Technologies 18. Transportation Technologies 3. The Relationships Among Technologies and the Connections Between Technology and Other Fields 6. The Role of Society in the Development and Use of Technology

Task	SOL Correlations
<p>Mark a data point using a handheld GPS receiver or GPS-enabled device.</p>	<p>7. The Influence of Technology on History</p> <p>History and Social Science: WG.1</p> <p>ITEEA National Standards:</p> <ul style="list-style-type: none"> <li>1. The Characteristics and Scope of Technology</li> <li>13. Assess the Impact of Products and Systems</li> <li>15. Agricultural and Related Biotechnologies</li> <li>17. Information and Communication Technologies</li> <li>18. Transportation Technologies</li> </ul> <p>3. The Relationships Among Technologies and the Connections Between Technology and Other Fields</p> <p>6. The Role of Society in the Development and Use of Technology</p> <p>7. The Influence of Technology on History</p> <p>TSA Competitive Events:</p> <p>Geospatial Technology (Virginia only)</p>
<p>Upload GPS points into a mapping system.</p>	<p>History and Social Science: WG.1</p> <p>ITEEA National Standards:</p> <ul style="list-style-type: none"> <li>1. The Characteristics and Scope of Technology</li> <li>13. Assess the Impact of Products and Systems</li> <li>15. Agricultural and Related Biotechnologies</li> <li>17. Information and Communication Technologies</li> <li>18. Transportation Technologies</li> </ul> <p>3. The Relationships Among Technologies and the Connections Between Technology and Other Fields</p> <p>6. The Role of Society in the Development and Use of Technology</p> <p>7. The Influence of Technology on History</p> <p>TSA Competitive Events:</p> <p>Geospatial Technology (Virginia only)</p>

Task	SOL Correlations
<p>Navigate to an object in a given location using a handheld GPS receiver or GPS-enabled device.</p>	<p>English: 9.5, 10.5, 11.5, 12.5</p> <p>History and Social Science: WG.1</p> <p>Mathematics: A.7, G.3, G.14</p> <p>ITEEA National Standards:</p> <ul style="list-style-type: none"> <li>1. The Characteristics and Scope of Technology</li> <li>13. Assess the Impact of Products and Systems</li> <li>15. Agricultural and Related Biotechnologies</li> <li>17. Information and Communication Technologies</li> <li>18. Transportation Technologies</li> <li>3. The Relationships Among Technologies and the Connections Between Technology and Other Fields</li> <li>6. The Role of Society in the Development and Use of Technology</li> </ul>
<p>Record attributes of a data point or event.</p>	<p>English: 9.5, 10.5, 11.5, 12.5</p> <p>History and Social Science: WG.1</p> <p>Mathematics: COM.1</p> <p>ITEEA National Standards:</p> <ul style="list-style-type: none"> <li>1. The Characteristics and Scope of Technology</li> <li>13. Assess the Impact of Products and Systems</li> <li>15. Agricultural and Related Biotechnologies</li> <li>17. Information and Communication Technologies</li> <li>18. Transportation Technologies</li> <li>3. The Relationships Among Technologies and the Connections Between Technology and Other Fields</li> <li>6. The Role of Society in the Development and Use of Technology</li> </ul>

Task	SOL Correlations
<p>Explain geodetic markers.</p>	<p>TSA Competitive Events: Geospatial Technology (Virginia only)</p> <p>English: 9.5, 10.5, 11.5, 12.5</p> <p>History and Social Science: WG.1</p> <p>ITEEA National Standards: 1. The Characteristics and Scope of Technology 3. The Relationships Among Technologies and the Connections Between Technology and Other Fields 7. The Influence of Technology on History</p>
<p>Describe geodetic concepts.</p>	<p>English: 9.3, 9.5, 10.3, 10.5, 11.3, 11.5, 12.3, 12.5</p> <p>History and Social Science: WG.1, WHL.1</p> <p>Mathematics: G.3, G.14, MA.14</p> <p>Science: ES.1</p> <p>ITEEA National Standards: 1. The Characteristics and Scope of Technology 13. Assess the Impact of Products and Systems 15. Agricultural and Related Biotechnologies 17. Information and Communication Technologies 18. Transportation Technologies 3. The Relationships Among Technologies and the Connections Between Technology and Other Fields 6. The Role of Society in the Development and Use of Technology 7. The Influence of Technology on History</p>
<b>Manipulating GIS Data</b>	

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Use standard conventions for naming files.	English: 9.5, 10.5, 11.5, 12.5  ITEEA National Standards: 17. Information and Communication Technologies
Apply standard conventions for managing files and file structures.	ITEEA National Standards: 17. Information and Communication Technologies
Manage data in a GIS.	History and Social Science: WG.1, WG.2, WG.4  Mathematics: COM.14, COM.16
Add geographic data to a GIS.	History and Social Science: WG.1, WG.2, WG.4  Mathematics: COM.10  ITEEA National Standards: 17. Information and Communication Technologies
Create a GIS map using raster and vector data sets.	English: 9.3, 9.5, 10.3, 10.5, 11.3, 11.5, 12.3, 12.5  History and Social Science: WG.1  Mathematics: G.3, G.4, G.9, G.13, G.14, COM.1, MA.7  ITEEA National Standards: 3. The Relationships Among Technologies and the Connections Between Technology and Other Fields
Analyze the relationship of spatial components.	English: 9.5, 10.5, 11.5, 12.5  History and Social Science: WG.1, WG.2, WG.4  Mathematics: G.2, G.3, G.4, G.13, G.14, COM.1, COM.3, PS.1*, PS.3*

Task	SOL Correlations
	ITEEA National Standards: 1. The Characteristics and Scope of Technology 10. The Role of Troubleshooting, Research and Development, Invention and Innovation, and Experimentation in Problem Solving 15. Agricultural and Related Biotechnologies 17. Information and Communication Technologies 18. Transportation Technologies 20. Construction Technologies 3. The Relationships Among Technologies and the Connections Between Technology and Other Fields 4. The Cultural, Social, Economic, and Political Effects of Technology 5. The Effects of Technology on the Environment 6. The Role of Society in the Development and Use of Technology 7. The Influence of Technology on History
Calculate lengths, distances, and areas in a GIS.	Mathematics: A.7, G.3, G.8, MA.8  ITEEA National Standards: 3. The Relationships Among Technologies and the Connections Between Technology and Other Fields
Use classification schemes to display numerical attributes.	Mathematics: PS.1*, PS.2*
Explain a definition query.	English: 9.3, 9.5, 10.3, 10.5, 11.3, 11.5, 12.3, 12.5  Mathematics: COM.7
Use a query to select data.	History and Social Science: WG.1, WG.4  ITEEA National Standards: 1. The Characteristics and Scope of Technology 17. Information and Communication Technologies



Task	SOL Correlations
	18. Transportation Technologies 20. Construction Technologies 3. The Relationships Among Technologies and the Connections Between Technology and Other Fields 4. The Cultural, Social, Economic, and Political Effects of Technology 5. The Effects of Technology on the Environment 6. The Role of Society in the Development and Use of Technology
Use a query to select data by location.	History and Social Science: WG.1, WG.4  Mathematics: G.1  ITEEA National Standards: 1. The Characteristics and Scope of Technology 17. Information and Communication Technologies 18. Transportation Technologies 20. Construction Technologies 3. The Relationships Among Technologies and the Connections Between Technology and Other Fields 5. The Effects of Technology on the Environment 6. The Role of Society in the Development and Use of Technology 7. The Influence of Technology on History
Analyze statistics of a dataset.	English: 9.5, 10.5, 11.5, 12.5  History and Social Science: WG.1, WG.4  Mathematics: COM.1, COM.3  ITEEA National Standards: 1. The Characteristics and Scope of Technology 17. Information and Communication Technologies 18. Transportation Technologies

Task	SOL Correlations
	20. Construction Technologies 3. The Relationships Among Technologies and the Connections Between Technology and Other Fields 4. The Cultural, Social, Economic, and Political Effects of Technology 5. The Effects of Technology on the Environment 6. The Role of Society in the Development and Use of Technology 7. The Influence of Technology on History  TSA Competitive Events: Geospatial Technology (Virginia only)
Create GIS data sets using geoprocessing tools.	ITEEA National Standards: 12. Use and Maintain Technological Products and Systems
Define <i>georeferencing</i> .	English: 9.3, 9.5, 10.3, 10.5, 11.3, 11.5, 12.3, 12.5
Define <i>geocoding</i> .	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, WG.4
Edit vector shapefiles spatially to create, modify, and delete point, line, and polygon features.	English: 9.6, 9.7, 10.6, 10.7, 11.6, 11.7, 12.6, 12.7  Mathematics: G.3, G.9
Edit attribute tables to create, modify, delete, and append attribute values.	English: 9.6, 9.7, 10.6, 10.7, 11.6, 11.7, 12.6, 12.7
Develop spatial data using a 3D viewer.	English: 9.6, 9.7, 10.6, 10.7, 11.6, 11.7, 12.6, 12.7  History and Social Science: WG.1, WG.2, WG.4  Mathematics: G.3, COM.1, COM.3  ITEEA National Standards: 1. The Characteristics and Scope of Technology

Task	SOL Correlations
	17. Information and Communication Technologies 18. Transportation Technologies 20. Construction Technologies 3. The Relationships Among Technologies and the Connections Between Technology and Other Fields 4. The Cultural, Social, Economic, and Political Effects of Technology 5. The Effects of Technology on the Environment 6. The Role of Society in the Development and Use of Technology 7. The Influence of Technology on History
<b>Managing Geospatial Projects</b>	
Define a design problem.	English: 9.5, 10.5, 11.5, 12.5  History and Social Science: WG.1, WG.2, WG.4  Mathematics: COM.1, COM.4, COM.5, COM.10  Science: ES.1, ES.2  ITEEA National Standards: 1. The Characteristics and Scope of Technology 12. Use and Maintain Technological Products and Systems 13. Assess the Impact of Products and Systems 2. The Core Concepts of Technology 3. The Relationships Among Technologies and the Connections Between Technology and Other Fields 9. Engineering Design  TSA Competitive Events: Engineering Design Geospatial Technology (Virginia only) Technology Problem Solving

Task	SOL Correlations
Identify design problem constraints.	<p>History and Social Science: WG.1, WG.2, WG.4</p> <p>Mathematics: COM.3, COM.10</p> <p>ITEEA National Standards:</p> <ul style="list-style-type: none"> <li>1. The Characteristics and Scope of Technology</li> <li>12. Use and Maintain Technological Products and Systems</li> <li>13. Assess the Impact of Products and Systems</li> <li>2. The Core Concepts of Technology</li> <li>3. The Relationships Among Technologies and the Connections Between Technology and Other Fields</li> <li>9. Engineering Design</li> </ul> <p>TSA Competitive Events:</p> <p>Geospatial Technology (Virginia only)</p> <p>System Control Technology</p> <p>Technology Problem Solving</p>
Identify data requirements.	<p>Mathematics: COM.15, PS.7*, PS.8*</p> <p>Science: ES.1</p> <p>ITEEA National Standards:</p> <ul style="list-style-type: none"> <li>1. The Characteristics and Scope of Technology</li> <li>12. Use and Maintain Technological Products and Systems</li> <li>13. Assess the Impact of Products and Systems</li> <li>3. The Relationships Among Technologies and the Connections Between Technology and Other Fields</li> <li>9. Engineering Design</li> </ul> <p>TSA Competitive Events:</p> <p>Geospatial Technology (Virginia only)</p>

Task	SOL Correlations
Collect geospatial data.	<p>English: 9.8, 10.8, 11.8, 12.8</p> <p>History and Social Science: WG.1, WG.2, WG.4</p> <p>Mathematics: COM.15, PS.8*</p> <p>ITEEA National Standards:</p> <ul style="list-style-type: none"> <li>1. The Characteristics and Scope of Technology</li> <li>12. Use and Maintain Technological Products and Systems</li> <li>13. Assess the Impact of Products and Systems</li> <li>3. The Relationships Among Technologies and the Connections Between Technology and Other Fields</li> <li>9. Engineering Design</li> </ul> <p>TSA Competitive Events:</p> <p>Geospatial Technology (Virginia only)</p>
Compose a technical document that includes a presentation analysis map.	<p>English: 9.1, 9.6, 9.7, 10.1, 10.6, 10.7, 11.1, 11.6, 11.7, 12.1, 12.6, 12.7</p> <p>ITEEA National Standards:</p> <ul style="list-style-type: none"> <li>10. The Role of Troubleshooting, Research and Development, Invention and Innovation, and Experimentation in Problem Solving</li> <li>4. The Cultural, Social, Economic, and Political Effects of Technology</li> <li>8. The Attributes of Design</li> <li>9. Engineering Design</li> </ul> <p>TSA Competitive Events:</p> <p>Essays on Technology</p>
Develop a product that shows spatial reasoning.	<p>Mathematics: G.3, G.14, MA.14</p> <p>ITEEA National Standards:</p> <ul style="list-style-type: none"> <li>13. Assess the Impact of Products and Systems</li> </ul>

Task	SOL Correlations
	<p>9. Engineering Design</p> <p>TSA Competitive Events: Engineering Design Geospatial Technology (Virginia only)</p>
Evaluate final solutions.	<p>English: 9.6, 9.7, 10.6, 10.7, 11.6, 11.7, 12.6, 12.7</p> <p>ITEEA National Standards: 1. The Characteristics and Scope of Technology 12. Use and Maintain Technological Products and Systems 13. Assess the Impact of Products and Systems</p> <p>TSA Competitive Events: Engineering Design Geospatial Technology (Virginia only)</p>
Present final project results.	<p>English: 9.1, 9.6, 9.7, 10.1, 10.6, 10.7, 11.1, 11.6, 11.7, 12.1, 12.6, 12.7</p> <p>ITEEA National Standards: 17. Information and Communication Technologies</p> <p>TSA Competitive Events: Engineering Design Geospatial Technology (Virginia only)</p>