

Standards Correlations

Forensic Technology (8409)

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,

Task	SOL Correlations
	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
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

Task	SOL Correlations
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 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

Task	SOL Correlations
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 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

Task	SOL Correlations
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 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.	
Introducing Forensic Science	
Define the term <i>forensic science</i> .	<p>English: 11.3, 11.5, 12.3</p> <p>History and Social Science: VUS.1</p> <p>ITEEA National Standards: 1. The Characteristics and Scope of Technology</p> <p>TSA Competitive Events: Extemporaneous Speech</p>

Task	SOL Correlations
	Technology Bowl
Identify careers that use forensic technology.	<p>English: 12.5</p> <p>ITEEA National Standards: 4. The Cultural, Social, Economic, and Political Effects of Technology 6. The Role of Society in the Development and Use of Technology</p> <p>TSA Competitive Events: STEM Careers</p>
Describe the applied skill of deductive reasoning in forensic analysis.	<p>History and Social Science: VUS.1 Mathematics: G.1, DM.9*, PS.1*, PS.18, PS.2*, PS.3*, PS.4*, PS.7* Science: BIO.1, CH.1, PH.1</p> <p>ITEEA National Standards: 2. The Core Concepts of Technology</p> <p>TSA Competitive Events: Biotechnology Design Principles of Technology (Virginia only) Technology Problem Solving</p>
Defend a scientific argument.	<p>English: 11.5, 11.6, 12.5, 12.6</p> <p>History and Social Science: VUS.1</p> <p>Mathematics: PS.1*, PS.17, PS.18, PS.2*, PS.3*, PS.4*, PS.7*, PS.10*</p> <p>Science: BIO.1, CH.1, PH.1, PH.2</p> <p>ITEEA National Standards: 13. Assess the Impact of Products and Systems</p>

Task	SOL Correlations
	TSA Competitive Events: Debating Technological Issues
Establishing Lab Skills and Maintaining Safety	
Demonstrate general lab skills necessary to the field of forensic science.	Science: BIO.1, CH.1, PH.1, PH.2 ITEEA National Standards: 2. The Core Concepts of Technology
Describe lab safety skills related to the forensic sciences.	Science: BIO.1, CH.1, PH.1 ITEEA National Standards: 2. The Core Concepts of Technology
Exploring the Scientific Method	
Demonstrate the key steps of the scientific method in forensic analysis by collecting and preserving evidence from a crime scene.	Mathematics: PS.1*, PS.17, PS.18, PS.2*, PS.3*, PS.4*, PS.7*, PS.8*, PS.10* Science: BIO.1, CH.1, PH.1, PH.2 ITEEA National Standards: 2. The Core Concepts of Technology TSA Competitive Events: Biotechnology Design Technology Bowl Technology Problem Solving
Describe the difference between presumptive testing and confirmatory testing.	English: 11.8, 12.8 Science: BIO.1, CH.1, PH.1 ITEEA National Standards:

Task	SOL Correlations
	1. The Characteristics and Scope of Technology 13. Assess the Impact of Products and Systems TSA Competitive Events: Biotechnology Design Technology Problem Solving
Identify questions and concepts that guide scientific investigations.	English: 11.5, 12.5 Science: BIO.1, CH.1, PH.1, PH.2 ITEEA National Standards: 10. The Role of Troubleshooting, Research and Development, Invention and Innovation, and Experimentation in Problem Solving
Applying Crime Scene Procedures	
Describe the historical precedents for gathering and admitting evidence.	English: 11.8, 12.8 History and Social Science: GOVT.10 ITEEA National Standards: 7. The Influence of Technology on History TSA Competitive Events: Extemporaneous Speech
Describe the role of the crime scene/forensic investigator.	
Describe how a crime scene is investigated.	ITEEA National Standards: 10. The Role of Troubleshooting, Research and Development, Invention and Innovation, and Experimentation in Problem Solving 13. Assess the Impact of Products and Systems

Task	SOL Correlations
Describe the legal considerations for working in a crime scene.	<p>English: 11.8, 12.8</p> <p>History and Social Science: GOVT.11, VUS.5</p> <p>ITEEA National Standards: 4. The Cultural, Social, Economic, and Political Effects of Technology</p>
Describe the services of the crime laboratory.	<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 3. The Relationships Among Technologies and the Connections Between Technology and Other Fields</p>
Document a crime scene, using a sketch or scene documentation software.	<p>Mathematics: COM.1, COM.7, COM.10, COM.15</p> <p>ITEEA National Standards: 2. The Core Concepts of Technology</p>
Document a crime scene, using photography.	<p>ITEEA National Standards: 2. The Core Concepts of Technology 3. The Relationships Among Technologies and the Connections Between Technology and Other Fields</p> <p>TSA Competitive Events: Photographic Technology</p>
Describe witness-interview techniques.	<p>English: 11.6, 12.6</p> <p>History and Social Science: VUS.1</p> <p>ITEEA National Standards: 2. The Core Concepts of Technology</p>

Task	SOL Correlations
	TSA Competitive Events: Prepared Presentation Technology Bowl
Describe evidence-collection techniques.	ITEEA National Standards: 2. The Core Concepts of Technology
Define the terms <i>class characteristic</i> and <i>individual characteristic</i> .	English: 11.3, 11.8, 12.3, 12.8 History and Social Science: VUS.14
Examining Trace Evidence	
Identify the two types of trace evidence.	English: 11.3, 12.3 History and Social Science: VUS.14
Analyze trace evidence, using light microscopy.	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
Describe the testing procedure for any piece of trace evidence.	History and Social Science: VUS.1 ITEEA National Standards: 10. The Role of Troubleshooting, Research and Development, Invention and Innovation, and Experimentation in Problem Solving
Describe sources of contamination for trace evidence and the ways to minimize that contamination.	
Define <i>positive control</i> and <i>negative control</i> .	English: 11.3, 11.8, 12.3, 12.8 ITEEA National Standards: 2. The Core Concepts of Technology TSA Competitive Events:

Task	SOL Correlations
	Biotechnology Design Technology Problem Solving
Interpret the results of a false-positive test and a false-negative test.	English: 11.5, 12.5 Mathematics: PS.5, PS.18, PS.10* ITEEA National Standards: 10. The Role of Troubleshooting, Research and Development, Invention and Innovation, and Experimentation in Problem Solving 4. The Cultural, Social, Economic, and Political Effects of Technology
Generate a comparison of two pieces of physical evidence.	ITEEA National Standards: 10. The Role of Troubleshooting, Research and Development, Invention and Innovation, and Experimentation in Problem Solving
Describe bodily fluids.	English: 11.3, 11.5, 12.3, 12.5
Exploring Deoxyribonucleic Acid (DNA) Testing	
Describe how DNA technology has affected criminal justice.	English: 11.3, 11.8, 12.3, 12.8 History and Social Science: VUS.14 Science: BIO.1, BIO.5 ITEEA National Standards: 1. The Characteristics and Scope of Technology 13. Assess the Impact of Products and Systems 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 TSA Competitive Events:

Task	SOL Correlations
Describe the extraction and isolation of DNA from living cells.	Biotechnology Design Debating Technological Issues Science: BIO.1, BIO.2, BIO.5 ITEEA National Standards: 14. Medical Technologies TSA Competitive Events: Biotechnology Design Scientific Visualization (SciVis)
Describe the technologies used in identifying and analyzing DNA from a crime scene.	English: 11.8, 12.8 History and Social Science: VUS.14 Science: BIO.1, BIO.5 ITEEA National Standards: 1. The Characteristics and Scope of Technology 12. Use and Maintain Technological Products and Systems 14. Medical Technologies TSA Competitive Events: Biotechnology Design Scientific Visualization (SciVis)
Interpret the results of DNA analysis.	English: 11.5, 12.5 Science: BIO.1, BIO.2, BIO.5 ITEEA National Standards: 10. The Role of Troubleshooting, Research and Development, Invention

Task	SOL Correlations
	<p>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: Biotechnology Design Scientific Visualization (SciVis)</p>
<p>Demonstrate the storage procedures for DNA testing evidence.</p>	<p>Science: BIO.1, BIO.5</p> <p>ITEEA National Standards: 12. Use and Maintain Technological Products and Systems</p> <p>TSA Competitive Events: Biotechnology Design</p>
Analyzing Questioned Documents	
<p>Describe the methods used to authenticate original documents.</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</p>
<p>Demonstrate techniques in ink analysis.</p>	<p>English: 11.5, 12.5</p> <p>Science: BIO.1, BIO.2, BIO.5</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</p>
<p>Describe the methods used in comparing handwriting samples.</p>	<p>Science: BIO.1, BIO.5</p> <p>ITEEA National Standards:</p>

Task	SOL Correlations
	10. The Role of Troubleshooting, Research and Development, Invention and Innovation, and Experimentation in Problem Solving 12. Use and Maintain Technological Products and Systems
Analyze alterations made to documents.	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 TSA Competitive Events: Technology Problem Solving
Collecting and Analyzing Latent Fingerprints	
Identify the anatomy of a fingerprint and the fingerprint's value in forensics.	English: 11.3, 11.5, 12.3, 12.5 ITEEA National Standards: 4. The Cultural, Social, Economic, and Political Effects of Technology TSA Competitive Events: Scientific Visualization (SciVis)
Describe the systems of analysis for fingerprints.	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 TSA Competitive Events: Scientific Visualization (SciVis)
Describe how to fingerprint subjects.	ITEEA National Standards: 12. Use and Maintain Technological Products and Systems
Describe the materials used to take fingerprints from various surfaces.	ITEEA National Standards: 12. Use and Maintain Technological Products and Systems

Task	SOL Correlations
	14. Medical Technologies TSA Competitive Events: Biotechnology Design Scientific Visualization (SciVis)
Identify fingerprint characteristics.	TSA Competitive Events: Scientific Visualization (SciVis)
Explain the procedures for analyzing latent prints.	English: 11.2, 12.2 ITEEA National Standards: 14. Medical Technologies TSA Competitive Events: Biotechnology Design
Describe the procedure to make casts and molds of shoe impressions.	ITEEA National Standards: 12. Use and Maintain Technological Products and Systems
Describe the components of a tire impression analysis.	English: 11.2, 12.2 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 TSA Competitive Events: Scientific Visualization (SciVis)
Exploring Toxicology and Controlled Substances	
Describe the role of the toxicologist in the forensic laboratory.	English: 11.2, 12.2 Science: CH.1

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	ITEEA National Standards: 14. Medical Technologies 3. The Relationships Among Technologies and the Connections Between Technology and Other Fields TSA Competitive Events: STEM Careers
Compare psychological and physical dependence.	TSA Competitive Events: Debating Technological Issues
Classify the most commonly abused drugs, including toxicity and the effects on the body.	English: 11.3, 12.3 Science: CH.1 ITEEA National Standards: 4. The Cultural, Social, Economic, and Political Effects of Technology
Perform preliminary tests in drug identification analysis.	Science: BIO.1, CH.1 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 14. Medical Technologies TSA Competitive Events: Biotechnology Design
Demonstrate the procedure to run thin layer chromatography (TLC) tests.	Science: BIO.1, CH.1 ITEEA National Standards: 12. Use and Maintain Technological Products and Systems

Task	SOL Correlations
	14. Medical Technologies TSA Competitive Events: Biotechnology Design
Describe the utility of mass spectrometry for identification analysis.	English: 11.3, 11.5, 12.3, 12.5 Science: CH.1 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 14. Medical Technologies TSA Competitive Events: Biotechnology Design
Describe how alcohol is processed through the body.	Science: BIO.4 TSA Competitive Events: Biotechnology Design
Describe the procedure used to conduct the primary field sobriety tests.	TSA Competitive Events: Extemporaneous Speech Prepared Presentation
Analyze blood-alcohol concentration levels.	English: 11.5, 12.5 ITEEA National Standards: 10. The Role of Troubleshooting, Research and Development, Invention and Innovation, and Experimentation in Problem Solving 14. Medical Technologies

Task	SOL Correlations
	TSA Competitive Events: Biotechnology Design
Exploring Forensic Serology	
Calculate blood type probabilities, using Punnett squares.	Mathematics: AFDA.6, PS.14, PS.3*, PS.11*, PS.12* Science: BIO.4 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 14. Medical Technologies
Identify the A-B-O antigens and antibodies for each of the four blood types.	English: 11.5, 12.5 Science: BIO.4, CH.3 TSA Competitive Events: Biotechnology Design
Apply test procedures to validate the presence of bodily fluid evidence.	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 14. Medical Technologies TSA Competitive Events: Biotechnology Design
Explain storage/preservation procedures for bodily fluid testing evidence.	English: 11.1, 12.1 History and Social Science: VUS.14

Task	SOL Correlations
	ITEEA National Standards: 12. Use and Maintain Technological Products and Systems 14. Medical Technologies TSA Competitive Events: Biotechnology Design
Describe the types of blood-spatter patterns.	Science: BIO.1, PH.5 TSA Competitive Events: Biotechnology Design
Conduct a blood spatter analysis to re-create a violent event.	Science: BIO.1, CH.1, PH.5 ITEEA National Standards: 10. The Role of Troubleshooting, Research and Development, Invention and Innovation, and Experimentation in Problem Solving 13. Assess the Impact of Products and Systems 14. Medical Technologies TSA Competitive Events: Biotechnology Design
Analyzing Forensic Aspects of Arson and Explosion Investigations	
Describe the chemistry of fire.	Science: CH.5, ES.12, PH.7 ITEEA National Standards: 3. The Relationships Among Technologies and the Connections Between Technology and Other Fields
List the conditions necessary to initiate and sustain combustion.	Science: CH.3, PH.7 ITEEA National Standards: 2. The Core Concepts of Technology

Task	SOL Correlations
Identify the signs of an accelerant-initiated fire.	Science: CH.3, PH.1 ITEEA National Standards: 10. The Role of Troubleshooting, Research and Development, Invention and Innovation, and Experimentation in Problem Solving 20. Construction Technologies
Identify the methods used in searching a fire scene.	Science: CH.1, PH.1 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
Describe how to collect and preserve arson evidence.	Science: CH.1, PH.1 ITEEA National Standards: 10. The Role of Troubleshooting, Research and Development, Invention and Innovation, and Experimentation in Problem Solving
Analyze flammable residues.	English: 11.3, 12.3 Science: CH.1, CH.3 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
Describe the types of explosives and their evidence, post-detonation.	English: 11.5, 12.5 Science: CH.5 ITEEA National Standards:

Task	SOL Correlations
	20. Construction Technologies
Analyzing Tool Marks, Firearms, and Other Impressions	
Describe the significance of tool mark impressions in criminal investigations.	<p>English: 11.5, 12.5</p> <p>Science: PH.4</p> <p>ITEEA National Standards: 4. The Cultural, Social, Economic, and Political Effects of Technology 8. The Attributes of Design</p> <p>TSA Competitive Events: Debating Technological Issues Principles of Technology (Virginia only)</p>
Analyze tool marks by matching marks to the tool that produced them.	<p>English: 11.5, 12.5</p> <p>Science: PH.4</p> <p>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 8. The Attributes of Design</p> <p>TSA Competitive Events: Principles of Technology (Virginia only) Technology Problem Solving</p>
Distinguish among firearm characteristics.	<p>English: 11.8, 12.8</p> <p>ITEEA National Standards: 1. The Characteristics and Scope of Technology</p>

Task	SOL Correlations
	8. The Attributes of Design
Distinguish between a bullet and a cartridge.	English: 11.8, 12.8 ITEEA National Standards: 1. The Characteristics and Scope of Technology
Describe the testing procedures used for gunshot residue.	Science: CH.1, CH.3 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
Describe how a gun barrel affects the flight of a projectile.	Science: PH.5 ITEEA National Standards: 2. The Core Concepts of Technology 8. The Attributes of Design TSA Competitive Events: Flight Endurance
Describe the relationship between barrel size and caliber.	Science: PH.5 ITEEA National Standards: 1. The Characteristics and Scope of Technology 8. The Attributes of Design
Demonstrate ballistics recovery and examination at a crime scene.	Science: PH.1 ITEEA National Standards: 12. Use and Maintain Technological Products and Systems
Determine the position of the shooter, based on bullet trajectory.	Mathematics: T.6, T.8, AII.3

Task	SOL Correlations
	Science: PH.5 ITEEA National Standards: 10. The Role of Troubleshooting, Research and Development, Invention and Innovation, and Experimentation in Problem Solving 2. The Core Concepts of Technology TSA Competitive Events: Principles of Technology (Virginia only)
Compare firing pin impressions from different sources.	Science: PH.4 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 8. The Attributes of Design
Distinguish among internal ballistics, external ballistics, and terminal ballistics.	Science: PH.5 ITEEA National Standards: 14. Medical Technologies
Investigating Medicolegal Death	
Describe the stages of postmortem tissue degeneration, including autolysis and putrefaction.	Science: BIO.2, BIO.3, BIO.4, CH.5 ITEEA National Standards: 14. Medical Technologies TSA Competitive Events: Biotechnology Design
Define <i>cause</i> , <i>manner</i> , and <i>mechanism of death</i> .	English: 11.3, 11.5, 12.3, 12.5

Task	SOL Correlations
Compare the coroner and medical examiner systems and responsibilities.	History and Social Science: GOVT.8 ITEEA National Standards: 13. Assess the Impact of Products and Systems
Describe causes of death and their associated injury patterns and characteristics.	English: 11.3, 12.3 ITEEA National Standards: 10. The Role of Troubleshooting, Research and Development, Invention and Innovation, and Experimentation in Problem Solving
Describe the legal necessity of establishing postmortem interval (PMI).	English: 11.3, 12.3 History and Social Science: GOVT.8, GOVT.9, GOVT.15 ITEEA National Standards: 10. The Role of Troubleshooting, Research and Development, Invention and Innovation, and Experimentation in Problem Solving
Exploring Forensic Anthropology and Forensic Entomology	
Define the terms <i>forensic anthropology</i> and <i>forensic entomology</i> .	English: 11.3, 12.3 ITEEA National Standards: 1. The Characteristics and Scope of Technology
Differentiate between a male skeleton and a female skeleton.	Science: BIO.4 ITEEA National Standards: 14. Medical Technologies TSA Competitive Events: Biotechnology Design
Determine an age range of a subject, based on the	ITEEA National Standards:

Task	SOL Correlations
remains.	10. The Role of Troubleshooting, Research and Development, Invention and Innovation, and Experimentation in Problem Solving 14. Medical Technologies TSA Competitive Events: Biotechnology Design
Describe the differences in skull features used to determine the race of a subject's remains.	ITEEA National Standards: 14. Medical Technologies 4. The Cultural, Social, Economic, and Political Effects of Technology
Determine a subject's height by analyzing the long bones of the body.	Mathematics: A.4 ITEEA National Standards: 10. The Role of Troubleshooting, Research and Development, Invention and Innovation, and Experimentation in Problem Solving 14. Medical Technologies
Describe the stages of insect metamorphosis in estimating time of death.	Science: BIO.4 ITEEA National Standards: 10. The Role of Troubleshooting, Research and Development, Invention and Innovation, and Experimentation in Problem Solving 14. Medical Technologies 5. The Effects of Technology on the Environment TSA Competitive Events: Biotechnology Design