



Career Technical Education Skills in the Common Core State Standards

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#CareerClusters

Career Technical Education Skills in the Common Core State Standards

- *Understanding Skills in the Common Core State Standards*
- *Discussion of specific CCSS in regards to CTE instruction*
- *Resources and tools*

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Achieve

Understanding the Skills in the Common Core State Standards



Achieve's Common Core State Standards Skills Analysis

- The Common Core State Standards described as academic **KNOWLEDGE** and **SKILLS** all students need to be college and career ready
- “Knowledge” is straightforward, but what about the “skills?”
- Achieve commissioned research to identify skills in the CCSS, using the Deeper Learning Standards and Career Cluster Essential Skills Statements as benchmarks

www.achieve.org/Skills-CCSS



Deeper Learning Standards

“Harness the deeper learning skills of critical thinking, problem solving, effective *communication*, collaboration, and learning how to learn to help students develop a strong foundation in traditional academic subjects.”

- **Master Core Academic Content**
- **Engage in Expanding the Structure of Knowledge**
- **Think Critically and Solve Complex Problems**
- **Communicate Effectively**
- **Work Collaboratively**
- **Learn How to Learn**



Career Cluster Essential Skill Statements

“The knowledge and skills that are essential in any employment situation...They are the starting point and should be contextualized within any pathway and plan of study.”

- 1. ACADEMIC FOUNDATIONS:** Achieve additional academic knowledge and skills required to pursue the full range of career and postsecondary education opportunities within a career cluster.
- 2. COMMUNICATIONS:** Use oral and written communication skills in creating, expressing and interpreting information and ideas including technical terminology and information.
- 3. PROBLEM-SOLVING AND CRITICAL THINKING:** Solve problems using critical thinking skills (analyze, synthesize, and evaluate) independently and in teams. Solve problems using creativity and innovation.
- 4. INFORMATION TECHNOLOGY APPLICATIONS:** Use information technology tools specific to the career cluster to access, manage, integrate, and create information. Work Collaboratively
- 5. SYSTEMS:** Understand roles within teams, work units, departments, organizations, inter-organizational systems, and the larger environment. Identify how key organizational systems affect organizational performance and the quality of products and services. Understand global context of industries and careers.



Career Cluster Essential Skill Statements Cont.

- 6. SAFETY, HEALTH AND ENVIRONMENTAL:** Understand the importance of health, safety, and environmental management systems in organizations and their importance to organizational performance and regulatory compliance. Follow organizational policies and procedures and contribute to continuous improvement in performance and compliance.
- 7. LEADERSHIP AND TEAMWORK:** Use leadership and teamwork skills in collaborating with others to accomplish organizational goals and objectives.
- 8. ETHICS AND LEGAL RESPONSIBILITIES:** Know and understand the importance of professional ethics and legal responsibilities
- 9. EMPLOYABILITY AND CAREER DEVELOPMENT:** Know and understand the importance of employability skills. Explore, plan, and effectively manage careers. Know and understand the importance of entrepreneurship skills.
- 10. TECHNICAL SKILLS:** Use of technical knowledge and skills required to pursue careers in all career cluster, including knowledge of design, operation, and maintenance of technological systems critical to the career cluster.



The Process

- **Two-step process**
- **Content experts in mathematics and ELA/literacy began with the DLS and Career Cluster ESS and identified those individual Common Core content standards that applied or were relevant to each individual skills statement**
- **Second set of reviewers read behind**
- **Reconciled their analyses**
- **Reviewers assigned a qualitative judgment to each individual skill statement based on the selected CCSS**



KEY FINDING 1:

Skills Strongly/Largely Reflected in the CCSS

- **Communications skills (e.g., speaking, listening, messaging)**
- **Teamwork/group work skills (e.g., collaboration, goal setting)**
- **Problem solving skills (e.g., analyzing information, evaluating solutions)**
- **Reasoning skills (e.g., critical thinking, forming arguments, using logic)**
- **The application/extension of core content in various situations (e.g., modeling)**
- **Use of data (e.g., evaluation, understanding structure, interpretation)**
- **Research skills (e.g., gathering and analyzing information and sources)**
- **Time management skills (developing goals, prioritizing tasks)**
- **Use of technology (e.g., email, internet)**



Examples of Skills Strongly/Largely Reflected in CCSS:

SKILLS STATEMENTS	COMMON CORE STANDARDS
<p>ESS02.06 Develop and deliver formal and informal presentations using appropriate media to engage and inform audiences: <i>Align presentation strategies to the intended audience.</i></p>	<p>SL.11-12.5 Make strategic use of digital media (e.g., textual, graphical, audio, visual, and interactive elements) in presentations to enhance understanding of findings, reasoning, and evidence and to add interest.</p>
<p>ESS02.09 Develop and interpret tables, charts, and figures to support written and oral communications: <i>Create tables, charts, and figures to support written and oral communications.</i></p>	<p>S-ID Summarize, represent, and interpret data on a single count or measurement variable</p> <p>Summarize, represent, and interpret data on two categorical and quantitative variables</p> <p>Interpret linear models.</p>

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KEY FINDING 2:

Skills Requiring an Academic Foundation Articulated by the CCSS with Technical Elements Outside the Scope of the CCSS

- **External and internal work-based communications skills (e.g., client-based communications, cross-organizational)**
- **Job seeking skills (e.g., research, applying, interviewing, maintaining a career portfolio)**
- **The application/extension of core content in non-routine ways (e.g., transfer of knowledge)**



Examples of Skills Requiring Academic Foundation/ Outside the Scope of the CCSS:

SKILLS STATEMENTS	COMMON CORE STANDARDS
<p>ESS09.03 Demonstrate skills related to seeking and applying for employment to find and obtain a desired job: <i>Use multiple resources to locate job opportunities.</i></p>	<p>W/WHST.9-10.7 Conduct short as well as more sustained research projects to answer a question (including a self-generated question) or solve a problem; narrow or broaden the inquiry when appropriate; synthesize multiple sources on the subject, demonstrating understanding of the subject under investigation.</p>
<p>ESS02.02 Demonstrate use of the concepts, strategies, and systems for obtaining and conveying ideas and information to enhance communication in the workplace: <i>Write internal and external business correspondence that conveys and/or obtains information effectively.</i></p>	<p>SMP3 Construct viable arguments and critique the reasoning of others.</p> <p>SMP5 Use appropriate tools strategically</p> <p>SMP6 Attend to precision</p>

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KEY FINDING 3: **Skills That Could Be Reflected in CCSS-Aligned Instruction**

- **Study skills (e.g., reading strategies)**
- **Motivation/self-discipline skills (e.g., meeting goals and objectives)**
- **Adaptability skills (e.g., adapting communications to meet group dynamics, as part of the problem-solving process)**
- **“Enjoyment” of learning**
- **Recognizing strengths and weaknesses**



Examples of Skills That Could Be Taught Through CCSS-Aligned Instruction Include:

- **ESS03.01.07** Generate new and creative ideas to solve problems by brainstorming possible solutions.
- **ESS03.03** Identify, write and monitor workplace performance goals to guide progress in assigned areas of responsibility and accountability: *Write realistic performance goals, objectives and action plans.*
- **ESS07.03** Employ teamwork skills to achieve collective goals and use team members' talents effectively: *Adapt effectively to changes in projects and work activities.*
- **ESS09.01.01** Demonstrate self-discipline, self-worth, positive attitude, and integrity in a work situation.

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KEY FINDING 4:

Skills Not Covered by the CCSS in ELA/Literacy OR Mathematics

- **Conflict resolution skills**
- **Mentoring skills**
- **Technology-based project management skills (e.g., using technology for information sharing, intra-office communications)**
- **Career planning and exploration (e.g., identifying opportunities, certifications, internships)**
- **Ethical reasoning (e.g., understanding legal implications, instituting organizational policies)**
- **Quality control systems and practices (e.g., understanding intra-office function and interactions)**
- **Workplace safety and health (e.g., understanding regulatory compliance, assessment workplace conditions)**
- **Understanding emergency procedures and response techniques (e.g., First Aid, use of safety equipment)**



Major Takeaways

- **The CCSS cover many college-ready *AND* career-ready *AND* life-ready skills**
- **The knowledge and skills needed to excel in academics, technical settings and life overlap significantly**
- **These skills cannot be gained absent content and content is not very useful without the skills necessary to transfer and use that knowledge.**
- **The CCSS are an effective tool for helping students develop skills but they don't cover every skill standard – because they were designed to cover only core academic knowledge and skills**



Activity/Discussion

Which, if any of those identified standards, are you already teaching in your CTE programs of study?

How can you strengthen the use of those Common Core State Standards?

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Understanding the Skills in the CCSS Resources

www.achieve.org/Skills-CCSS

- ✓ Report, with illustrative examples
- ✓ Appendix B: Commonly Identified (High School-Level) Common Core State Standards
- ✓ Appendices C & D: Full Analysis Tables in ELA/Literacy and Mathematics
- ✓ Sortable/Filtered Excel Files of Skills, CCSS, and Ratings for each set of skill standards
- ✓ Charting College- and Career-Ready Skills Venn diagram



