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Part 141: Mississippi Secondary Curriculum Frameworks in Career and Technical Education, Middle School, Keystone



## 2021 Keystone

Program CIP: 37.0103 Personal Decision-Making Skills

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The Research and Curriculum Unit (RCU), located in Starkville, as part of Mississippi State University (MSU), was established to foster educational enhancements and innovations. In keeping with the land-grant mission of MSU, the RCU is dedicated to improving the quality of life for Mississippians. The RCU enhances intellectual and professional development of Mississippi students and educators while applying knowledge and educational research to the lives of the people of the state. The RCU works within the contexts of curriculum development and revision, research, assessment, professional development, and industrial training.

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# Standards

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Standards and alignment crosswalks are referenced in the appendices. Depending on the curriculum, these crosswalks should identify alignment to the standards mentioned below, as well as possible related academic topics as required in the Subject Area Testing Program in Algebra I, Biology I, English II, and U.S. History from 1877, which could be integrated into the content of the units. Mississippi's CTE Keystone curriculum is aligned to the following standards:

## **International Society for Technology in Education Standards (ISTE)**

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[iste.org](http://iste.org)

## **College- and Career-Ready Standards**

College- and career-readiness standards emphasize critical thinking, teamwork, and problem-solving skills. Students will learn the skills and abilities demanded by the workforce of today and the future. Mississippi adopted Mississippi College and Career Ready Standards (MCCRS) to provide a consistent, clear understanding of what students are expected to learn and so teachers and parents know what they need to do to help them.

[mde.k12.ms.us/mccrs](http://mde.k12.ms.us/mccrs)

## **Framework for 21st Century Learning**

In defining 21st-century learning, the Partnership for 21st Century Skills has embraced key themes and skill areas that represent the essential knowledge for the 21st century: global awareness; financial, economic, business and entrepreneurial literacy; civic literacy; health literacy; environmental literacy; learning and innovation skills; information, media, and technology skills; and life and career skills. 21 *Framework Definitions* (2019).

[battelleforkids.org/networks/p21/frameworks-resources](http://battelleforkids.org/networks/p21/frameworks-resources)

# Preface

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Secondary CTE programs in Mississippi face many challenges resulting from sweeping educational reforms at the national and state levels. Schools and teachers are increasingly being held accountable for providing applied learning activities to every student in the classroom. This accountability is measured through increased requirements for mastery and attainment of competency as documented through both formative and summative assessments. This document provides information, tools, and solutions that will aid students, teachers, and schools in creating and implementing applied, interactive, and innovative lessons. Through best practices, alignment with national standards and certifications, community partnerships, and a hands-on, student-centered concept, educators will be able to truly engage students in meaningful and collaborative learning opportunities.

The courses in this document reflect the statutory requirements as found in Section 37-3-49, *Mississippi Code of 1972*, as amended (Section 37-3-46). In addition, this curriculum reflects guidelines imposed by federal and state mandates (Laws, 1988, Ch. 487, §14; Laws, 1991, Ch. 423, §1; Laws, 1992, Ch. 519, §4 eff. from and after July 1, 1992; Strengthening Career and Technical Education for the 21st Century Act, 2019 [Perkins V]; and Every Student Succeeds Act, 2015).

# Mississippi Teacher Professional Resources

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The following are resources for Mississippi teachers:

Curriculum, Assessment, Professional Learning

Program resources can be found at the RCU's website, [rcu.msstate.edu](http://rcu.msstate.edu).

Learning Management System: An Online Resource

Learning management system information can be found at the RCU's website, under Professional Learning.

Should you need additional instructions, call the RCU at 662.325.2510.

# Executive Summary

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## **Course Description**

Keystone is a course to be taught in either seventh, eighth, or ninth grade and is to be used as an introduction to career pathways and career decision-making. The course was developed specifically to meet the needs of those schools participating in career academies. This introductory course includes content in self-development, career clusters, pathways, and choices, as well as financial planning. The course is designed to be taught in a “flipped” classroom environment where students are introduced to the content outside of class and experience the content during class.

## **Grade Level and Class Size**

Students should be enrolled in seventh, eighth, or ninth grade in order to take Keystone. Exceptions to this are a district-level decision based on class size, enrollment numbers, and student maturity. A maximum of 25 students is recommended for classroom-based courses such as this.

## **Teacher Licensure**

The latest teacher licensure information can be found at [mdek12.org/oel/apply-for-an-educator-license](http://mdek12.org/oel/apply-for-an-educator-license).

## **Professional Learning**

If you have specific questions about the content of any of training sessions provided, please contact the RCU at 662.325.2510.



## Course Outline

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### Keystone—Course Code: 990002

<b>Unit</b>	<b>Unit Name</b>	<b>Hours</b>
1	Orientation, Course Introduction, and Ethics	15
2	Learning and Personality Styles	5
3	The 16 National Career Clusters: Agriculture, Food and Natural Resources	5
4	The 16 National Career Clusters: Architecture and Construction	5
5	The 16 National Career Clusters: Arts, A/V Technology and Communications	5
6	The 16 National Career Clusters: Business Management and Administration	5
7	The 16 National Career Clusters: Education and Training	5
8	The 16 National Career Clusters: Finance	5
9	The 16 National Career Clusters: Government and Public Administration	5
10	The 16 National Career Clusters: Health Science	5
11	The 16 National Career Clusters: Hospitality and Tourism	5
12	The 16 National Career Clusters: Human Services	5
13	The 16 National Career Clusters: Information Technology	5
14	The 16 National Career Clusters: Law, Public Safety, Corrections and	5
15	The 16 National Career Clusters: Manufacturing	5
16	The 16 National Career Clusters: Marketing	5
17	The 16 National Career Clusters: Science, Technology, Engineering and Math	5
18	The 16 National Career Clusters: Transportation, Distribution and Logistics	5
19	Financial Literacy/Reality Fair	20
20	College and Career Focus	20
<b>Total</b>		<b>140</b>

# Career Pathway Outlook

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## Overview

The Keystone course provides an overview of the 16 Career Clusters in the National Career Clusters Framework. The overview will consist of various jobs, earnings, and requirements for students to explore throughout the course.

## Needs of the Future Workforce

Data for this synopsis were compiled from employment projections prepared by the U.S. Census Bureau, the U.S. Bureau of Labor Statistics (2019), and the Mississippi Department of Employment Security (2019).

Table 1.1: Current and Projected Occupation Report

Description	Jobs, 2016	Projected Jobs, 2026	Change (Number)	Change (Percent)	Average Hourly Earnings, 2019
Management Occupations	63,150	68,070	4,920	7.8	\$39.19
Business and Financial Operations Occupations	32,730	34,440	1,710	5.2	\$29.23
Computer and Mathematical Occupations	12,210	13,030	820	6.7	\$33.62
Architecture and Engineering Occupations	15,320	16,410	1,090	7.1	\$36.01
Life, Physical, and Social Science Occupations	7,260	7,660	400	5.5	\$29.84
Community and Social Service Occupations	15,120	16,490	1,370	9.1	\$18.99
Legal Occupations	6,040	6,300	260	4.3	\$35.75
Education, Training, and Library Occupations	77,340	84,310	6,970	9.0	\$21.24
Arts, Design, Entertainment, Sports, and Media Occupations	8,660	8,880	220	2.5	\$22.35
Healthcare Practitioners and Technical Occupations	78,060	84,220	6,160	7.9	\$30.86
Healthcare Support Occupations	31,400	34,830	3,430	10.9	\$12.37
Protective Service Occupations	32,540	33,690	1,150	3.5	\$15.90
Food Preparation and Serving Related Occupations	97,530	109,540	12,010	12.3	\$10.16
Building and Grounds Cleaning and Maintenance Occupations	39,020	42,480	3,460	8.9	\$11.34
Personal Care and Service Occupations	34,890	38,320	3,430	9.8	\$11.22
Sales and Related Occupations	122,620	127,230	4,610	3.8	\$14.61

Office and Administrative Support Occupations	171,440	168,460	(2,980)	(1.7)	\$15.61
Farming, Fishing, and Forestry Occupations	13,980	13,700	(280)	(2.0)	\$17.64
Construction and Extraction Occupations	44,980	47,290	2,310	5.1	\$19.24
Installation, Maintenance, and Repair Occupations	54,030	57,420	3,390	6.3	\$20.82
Production Occupations	103,140	103,960	820	0.8	\$16.92
Transportation and Material Moving Occupations	92,550	97,530	4,980	5.4	\$16.01

*Source:* Mississippi Department of Employment Security; [mdes.ms.gov](http://mdes.ms.gov) (2019).

### **Perkins V Requirements and Academic Infusion**

The Keystone curriculum meets Perkins V requirements of introducing students to and preparing them for high-skill, high-wage occupations. It also offers students a program of study, including secondary, postsecondary, and institutions of higher learning courses, that will further prepare them for fitness and nutrition careers. Additionally, this curriculum is integrated with academic college- and career-readiness standards. Lastly, the curriculum focuses on ongoing and meaningful professional development for teachers, as well as relationships with industry.

### **Transition to Postsecondary Education**

The latest articulation information for secondary to postsecondary can be found at the Mississippi Community College Board website, [mccb.edu](http://mccb.edu).

## **Best Practices**

### *Innovative Instructional Technologies*

Classrooms should be equipped with tools that will teach today's digital learners through applicable and modern practices. The instructor's goal should be to include teaching strategies that incorporate current technology. To make use of the latest online communication tools—wikis, blogs, podcasts, and social media platforms, for example—the classroom teacher is encouraged to use a learning management system that introduces students to education in an online environment and places more of the responsibility of learning on the student.

### *Differentiated Instruction*

Students learn in a variety of ways, and numerous factors—students' background, emotional health, and circumstances—create unique learners. By providing various teaching and assessment strategies, students with various learning preferences can have more opportunity to succeed.

### *CTE Student Organizations*

Teachers should investigate opportunities to sponsor a student organization. There are several here in Mississippi that will foster the types of learning expected from the Keystone curriculum. Student organizations provide participants and members with growth opportunities and competitive events. They also open the doors to careers and scholarship opportunities.

### *Cooperative Learning*

Cooperative learning can help students understand topics when independent learning cannot. Therefore, you will see several opportunities in the Keystone curriculum for group work. To function in today's workforce, students need to be able to work collaboratively with others and solve problems without excessive conflict. The Keystone curriculum provides opportunities for students to work together and help each other complete complex tasks. There are many field experiences within the Keystone curriculum that will allow and encourage collaboration with professionals in a variety of fields.

### *Project-Based Learning*

The Keystone curriculum is intended to be taught in a student-led, inquiry-based, flipped classroom environment. It is important that the career cluster units in particular be taught in the flipped classroom environment. Students should develop projects based on what they want to research and learn about each cluster. The flipped classroom model suggests that much of this research and information-gathering is done *outside* of the classroom, while project work takes place during class time. For more information, please visit [jonbergmann.com](http://jonbergmann.com).

### *Work-Based Learning*

Work-based learning is an extension of understanding competencies taught in the Keystone classroom. This curriculum is designed in a way that necessitates active involvement by the students in the community around them and the global environment. These real-world connections and applications link all types of students to knowledge, skills, and professional dispositions. Work-based learning should encompass ongoing and increasingly more complex involvement with local companies and professionals. Thus, supervised collaboration and immersion into the industry around students are keys to students' success, knowledge, and skills development.

# Professional Organizations

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Association of Career and Technical Education  
[acteonline.org](http://acteonline.org)

Distributive Education Clubs of America  
[deca.org](http://deca.org)

Family, Career, and Community Leaders of America  
[fcclainc.org](http://fcclainc.org)

Future Business Leaders of America  
[fbla-pbl.org](http://fbla-pbl.org)

Future Educators of America  
[futureeducators.org](http://futureeducators.org)

Future Farmers of America  
[ffa.org](http://ffa.org)

Health Occupational Students of America  
[hosa.org](http://hosa.org)

Mississippi Association of Career and Technical Education  
[mississippiacte.com](http://mississippiacte.com)

SkillsUSA  
[skillsusa.org](http://skillsusa.org)

Technology Student Association  
[tsaweb.org](http://tsaweb.org)

# Using This Document

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## **Suggested Time on Task**

This section indicates an estimated number of clock hours of instruction that should be required to teach the competencies and objectives of the unit. A minimum of 140 hours of instruction is required for each Carnegie unit credit. The curriculum framework should account for approximately 75-80% of the time in the course. The remaining percentage of class time will include instruction in non-tested material, review for end-of-course testing, and special projects.

## **Competencies and Suggested Objectives**

A competency represents a general concept or performance that students are expected to master as a requirement for satisfactorily completing a unit. Students will be expected to receive instruction on all competencies. The suggested objectives represent the enabling and supporting knowledge and performances that will indicate mastery of the competency at the course level.

## **Teacher Resources**

Teacher resources for this curriculum may be found in multiple places. Many program areas have teacher resource documents that accompany the curriculum and can be downloaded from the same site as the curriculum. The teacher resource document contains references, lesson ideas, websites, teaching and assessment strategies, scenarios, skills to master, and other resources divided by unit. This document could be updated periodically by RCU staff. Please check the entire document, including the entries for each unit, regularly for new information. If you have something you would like to add or have a question about the document, call or email the RCU's instructional design specialist for your program. The teacher resource document can be downloaded at [rcu.msstate.edu/curriculum/curriculumdownload.aspx](http://rcu.msstate.edu/curriculum/curriculumdownload.aspx). All teachers should request to be added to the Canvas Resource Guide for their course. This is where all resources will be housed in the future if they are not already. To be added to the guide, [send a Help Desk ticket](#) to the RCU by emailing [helpdesk@rcu.msstate.edu](mailto:helpdesk@rcu.msstate.edu).

## **Perkins V Quality Indicators and Enrichment Material**

Many of the units include an enrichment section at the end. If the Keystone program is currently using the Mississippi Career Planning and Assessment System (MS-CPAS) as a measure of accountability, the enrichment section of material will not be tested. If this is the case, it is suggested to use the enrichment material when needed or desired by the teacher and if time allows in the class. This material will greatly enhance the learning experiences for students. If, however, the Keystone program is using a national certification or other measure of accountability that aligns with Perkins V as a quality indicator, this material could very well be tested. It is the responsibility of the teacher to ensure all competencies for the selected assessment are covered throughout the year.

## Unit 1: Orientation, Course Introduction, and Ethics

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<b>Competencies and Suggested Objectives</b>	
1. Describe course expectations, school policies, and safety procedures. <sup>DOK1</sup>	
a. Identify student expectations and policies for the course.	
b. Describe the operating procedures for the equipment utilized in the class.	
2. Understand the importance of employability skills to be successful in the workplace. <sup>DOK1</sup>	
a. Demonstrate effective written and verbal communication skills.	
b. Identify proper attire and appearance required for the workplace.	
c. Understand interpersonal skills and the ability to work well with others.	
d. Identify ethical behavior and the proper use of technology in the workplace.	
3. Explore student organizations related to the sixteen national career clusters. <sup>DOK1</sup>	
a. Discuss leadership and personal development in accordance with student organizations.	
b. Describe parliamentary procedure.	
c. Discuss officer roles and responsibilities.	

## Unit 2: Learning and Personality Styles

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<b>Competencies and Suggested Objectives</b>
1. Discover learning and personality styles. <sup>DOK1</sup> <ol style="list-style-type: none"><li>Complete learning and personality style inventories.</li><li>Identify elements that shape personality development.<ul style="list-style-type: none"><li>• Character traits</li><li>• Heredity</li><li>• Environment</li></ul></li><li>Identify conflicts between personality, management styles, and work techniques to manage in the workplace and life.</li></ol>
2. Develop characteristics of highly effective people. <sup>DOK2</sup> <ol style="list-style-type: none"><li>Participate in activities that strengthen self-motivation.</li><li>Recognize the importance of time management and personal responsibility.</li></ol>



## Unit 3: Agriculture, Food and Natural Resources

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### Competencies and Suggested Objectives

1. Understand career opportunities in the agriculture, food and natural resources career cluster. <sup>DOK2</sup>
  - a. Research the occupational outlook for jobs in the agriculture, food and natural resources career cluster.
    - Career pathways
    - Education and training
    - Salaries
    - Aptitudes
2. Identify the significance of the agriculture, food and natural resources career cluster in society. <sup>DOK3</sup>
  - a. Research the relationship of careers in agriculture, food and natural resources to society and other careers.
  - b. Participate in a real-world job scenario associated with the agriculture, food and natural resources career cluster.

## Unit 4: Architecture and Construction

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<b>Competencies and Suggested Objectives</b>
<ol style="list-style-type: none"><li>1. Understand career opportunities in the architecture and construction career cluster. <sup>DOK2</sup><ol style="list-style-type: none"><li>a. Research the occupational outlook for jobs in the architecture and construction career cluster.<ul style="list-style-type: none"><li>• Career pathways</li><li>• Education and training</li><li>• Salaries</li><li>• Aptitudes</li></ul></li></ol></li></ol>
<ol style="list-style-type: none"><li>2. Identify the significance of the architecture and construction career cluster in society. <sup>DOK2</sup><ol style="list-style-type: none"><li>a. Research the relationship of careers in architecture and construction to society and other careers.</li><li>b. Participate in a real-world job scenario associated with the architecture and construction career cluster.</li></ol></li></ol>

## Unit 5: Arts, A/V Technology and Communications

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### Competencies and Suggested Objectives

1. Understand career opportunities in the arts, audio/video technology and communications career cluster. <sup>DOK2</sup>
  - a. Research the occupational outlook for jobs in the arts, audio/video technology and communications career cluster.
    - Career pathways
    - Education and training
    - Salaries
    - Aptitudes
2. Identify the significance of the arts, audio/video technology and communications career cluster in society. <sup>DOK2</sup>
  - a. Research the relationship of careers in arts, audio/video technology and communications to society and other careers.
  - b. Participate in a real-world job scenario associated with the arts, audio/video technology and communications career cluster.

## Unit 6: Business Management and Administration

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### Competencies and Suggested Objectives

1. Understand career opportunities in the business management and administration career cluster. <sup>DOK2</sup>
  - a. Research the occupational outlook for jobs in the business management and administration career cluster.
    - Career pathways
    - Education and training
    - Salaries
    - Aptitudes
2. Identify the significance of the business management and administration career cluster in society. <sup>DOK2</sup>
  - a. Research the relationship of careers in business management and administration to society and other careers.
  - b. Participate in a real-world job scenario associated with the business management and administration career cluster.

## Unit 7: Education and Training

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<b>Competencies and Suggested Objectives</b>
1. Understand career opportunities in the education and training career cluster. <sup>DOK2</sup> <ol style="list-style-type: none"><li>Research the occupational outlook for jobs in the education and training career cluster.<ul style="list-style-type: none"><li>Career pathways</li><li>Education and training</li><li>Salaries</li><li>Aptitudes</li></ul></li></ol>
2. Identify the significance of the education and training career cluster in society. <sup>DOK2</sup> <ol style="list-style-type: none"><li>Research the relationship of careers in education and training to society and other careers.</li><li>Participate in a real-world job scenario associated with the education and training career cluster.</li></ol>

## Unit 8: Finance

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<b>Competencies and Suggested Objectives</b>
1. Understand career opportunities in the finance career cluster. <sup>DOK2</sup> <ol style="list-style-type: none"><li>Research the occupational outlook for jobs in the finance career cluster.<ul style="list-style-type: none"><li>• Career pathways</li><li>• Education and training</li><li>• Salaries</li><li>• Aptitudes</li></ul></li></ol>
2. Identify the significance of the finance career cluster in society. <sup>DOK2</sup> <ol style="list-style-type: none"><li>Research the relationship of careers in finance to society and other careers.</li><li>Participate in a real-world job scenario associated with the finance career cluster.</li></ol>

## Unit 9: Government and Public Administration

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<b>Competencies and Suggested Objectives</b>
<ol style="list-style-type: none"><li>1. Understand career opportunities in the government and public administration career cluster. <sup>DOK2</sup><ol style="list-style-type: none"><li>a. Research the occupational outlook for jobs in the government and public administration career cluster.<ul style="list-style-type: none"><li>• Career pathways</li><li>• Education and training</li><li>• Salaries</li><li>• Aptitudes</li></ul></li></ol></li></ol>
<ol style="list-style-type: none"><li>2. Identify the significance of the government and public administration career cluster in society. <sup>DOK2</sup><ol style="list-style-type: none"><li>a. Research the relationship of careers in government and public administration to society and other careers.</li><li>b. Participate in a real-world job scenario associated with the government and public administration career cluster.</li></ol></li></ol>

- Career pathways
- Education and training
- Salaries
- Aptitudes

## Unit 10: Health Science

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<b>Competencies and Suggested Objectives</b>
1. Understand career opportunities in the health science career cluster. <sup>DOK2</sup> <ol style="list-style-type: none"><li>Research the occupational outlook for jobs in the health science career cluster.<ul style="list-style-type: none"><li>Career pathways</li><li>Education and training</li><li>Salaries</li><li>Aptitudes</li></ul></li></ol>
2. Identify the significance of the health science career cluster in society. <sup>DOK2</sup> <ol style="list-style-type: none"><li>Research the relationship of careers in health science to society and other careers.</li><li>Participate in a real-world job scenario associated with the health science career cluster.</li></ol>

- Career pathways
- Education and training
- Salaries
- Aptitudes



# Unit 11: Hospitality and Tourism

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<b>Competencies and Suggested Objectives</b>
<ol style="list-style-type: none"><li>1. Understand career opportunities in the hospitality and tourism career cluster. <sup>DOK2</sup><ol style="list-style-type: none"><li>a. Research the occupational outlook for jobs in the hospitality and tourism career cluster.<ul style="list-style-type: none"><li>• Career pathways</li><li>• Education and training</li><li>• Salaries</li><li>• Aptitudes</li></ul></li></ol></li></ol>
<ol style="list-style-type: none"><li>2. Identify the significance of the hospitality and tourism career cluster in society. <sup>DOK2</sup><ol style="list-style-type: none"><li>a. Research the relationship of careers in hospitality and tourism to society and other careers.</li><li>b. Participate in a real-world job scenario associated with the hospitality and tourism career cluster.</li></ol></li></ol>

## Unit 12: Human Services

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<b>Competencies and Suggested Objectives</b>
<ol style="list-style-type: none"><li>1. Understand career opportunities in the human services career cluster. <sup>DOK2</sup><ol style="list-style-type: none"><li>a. Research the occupational outlook for jobs in the human services career cluster.<ul style="list-style-type: none"><li>• Career pathways</li><li>• Education and training</li><li>• Salaries</li><li>• Aptitudes</li></ul></li></ol></li></ol>
<ol style="list-style-type: none"><li>2. Identify the significance of the human services career cluster in society. <sup>DOK2</sup><ol style="list-style-type: none"><li>a. Research the relationship of careers in human services to society and other careers.</li><li>b. Participate in a real-world job scenario associated with the human services career cluster.</li></ol></li></ol>

## Unit 13: Information Technology

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<b>Competencies and Suggested Objectives</b>
<ol style="list-style-type: none"><li>1. Understand career opportunities in the information technology career cluster. <sup>DOK2</sup><ol style="list-style-type: none"><li>a. Research the occupational outlook for jobs in the information technology career cluster.<ul style="list-style-type: none"><li>• Career pathways</li><li>• Education and training</li><li>• Salaries</li><li>• Aptitudes</li></ul></li></ol></li></ol>
<ol style="list-style-type: none"><li>2. Identify the significance of the information technology career cluster in society. <sup>DOK2</sup><ol style="list-style-type: none"><li>a. Research the relationship of careers in information technology to society and other careers.</li><li>b. Participate in a real-world job scenario associated with the information technology career cluster.</li></ol></li></ol>

## Unit 14: Law, Public Safety, Corrections, and Security

---

<b>Competencies and Suggested Objectives</b>
<ol style="list-style-type: none"><li>1. Understand career opportunities in the law, public safety, corrections, and security career cluster. <sup>DOK2</sup><ol style="list-style-type: none"><li>a. Research the occupational outlook for jobs in the law, public safety, corrections, and security career cluster.<ul style="list-style-type: none"><li>• Career pathways</li><li>• Education and training</li><li>• Salaries</li><li>• Aptitudes</li></ul></li></ol></li></ol>
<ol style="list-style-type: none"><li>2. Identify the significance of the law, public safety, corrections, and security career cluster in society. <sup>DOK2</sup><ol style="list-style-type: none"><li>a. Research the relationship of careers in law, public safety, corrections, and security to society and other careers.</li><li>b. Participate in a real-world job scenario associated with the law, public safety, corrections, and security career cluster.</li></ol></li></ol>

- Career pathways
- Education and training
- Salaries
- Aptitudes

## Unit 15: Manufacturing

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<b>Competencies and Suggested Objectives</b>
<ol style="list-style-type: none"><li>1. Understand career opportunities in the manufacturing career cluster. <sup>DOK2</sup><ol style="list-style-type: none"><li>a. Research the occupational outlook for jobs in the manufacturing career cluster.<ul style="list-style-type: none"><li>• Career pathways</li><li>• Education and training</li><li>• Salaries</li><li>• Aptitudes</li></ul></li></ol></li></ol>
<ol style="list-style-type: none"><li>2. Identify the significance of the manufacturing career cluster in society. <sup>DOK2</sup><ol style="list-style-type: none"><li>a. Research the relationship of careers in manufacturing to society and other careers.</li><li>b. Participate in a real-world job scenario associated with the manufacturing career cluster.</li></ol></li></ol>

## Unit 16: Marketing

---

<b>Competencies and Suggested Objectives</b>
1. Understand career opportunities in the marketing career cluster. <sup>DOK2</sup> <ol style="list-style-type: none"><li>Research the occupational outlook for jobs in the marketing career cluster.<ul style="list-style-type: none"><li>Career pathways</li><li>Education and training</li><li>Salaries</li><li>Aptitudes</li></ul></li></ol>
2. Identify the significance of the marketing career cluster in society. <sup>DOK2</sup> <ol style="list-style-type: none"><li>Research the relationship of careers in marketing to society and other careers.</li><li>Participate in a real-world job scenario associated with the marketing career cluster.</li></ol>

## Unit 17: Science, Technology, Engineering and Math

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<b>Competencies and Suggested Objectives</b>
<ol style="list-style-type: none"><li>1. Understand career opportunities in the science, technology, engineering and math career cluster. <sup>DOK2</sup><ol style="list-style-type: none"><li>a. Research the occupational outlook for jobs in the science, technology, engineering and math career cluster.<ul style="list-style-type: none"><li>• Career pathways</li><li>• Education and training</li><li>• Salaries</li><li>• Aptitudes</li></ul></li></ol></li></ol>
<ol style="list-style-type: none"><li>2. Identify the significance of the science, technology, engineering and math career cluster in society. <sup>DOK2</sup><ol style="list-style-type: none"><li>a. Research the relationship of careers in science, technology, engineering and math to society and other careers.</li><li>b. Participate in a real-world job scenario associated with the science, technology, engineering and math career cluster.</li></ol></li></ol>

## Unit 18: Transportation, Distribution and Logistics

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<b>Competencies and Suggested Objectives</b>
<ol style="list-style-type: none"><li>1. Understand career opportunities in the transportation, distribution and logistics career cluster. <sup>DOK2</sup><ol style="list-style-type: none"><li>a. Research the occupational outlook for jobs in the transportation, distribution and logistics career cluster.<ul style="list-style-type: none"><li>• Career pathways</li><li>• Education and training</li><li>• Salaries</li><li>• Aptitudes</li></ul></li></ol></li></ol>
<ol style="list-style-type: none"><li>2. Identify the significance of the transportation, distribution and logistics career cluster in society. <sup>DOK2</sup><ol style="list-style-type: none"><li>a. Research the relationship of careers in transportation, distribution and logistics to society and other careers.</li><li>b. Participate in a real-world job scenario associated with the transportation, distribution and logistics career cluster.</li></ol></li></ol>

- Career pathways
- Education and training
- Salaries
- Aptitudes



## Unit 19: Financial Literacy/Reality Fair

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<b>Competencies and Suggested Objectives</b>
<p>1. Understand how employment relates to the needs and functions of society. <sup>DOK2</sup></p> <ul style="list-style-type: none"><li>a. Describe how the U.S. economy operates as a free-enterprise system.<ul style="list-style-type: none"><li>• Consumers</li><li>• Producers</li><li>• Supply and demand</li><li>• Competition</li></ul></li><li>b. Explain how the global economy affects individuals, communities, and our country.</li><li>c. Examine how socio-economic factors and technology affect employment trends.</li></ul>
<p>2. Create a personal budget. <sup>DOK3</sup></p> <ul style="list-style-type: none"><li>a. Identify reasons to keep track of spending habits.</li><li>b. Identify sources of income and expenses.</li><li>c. Explain the concept of “paying yourself first.”</li><li>d. Identify goals of saving.</li><li>e. Examine types of saving and investing.</li></ul>
<p>3. Research the options for the best credit for personal financial use. <sup>DOK2</sup></p> <ul style="list-style-type: none"><li>a. Examine the types and the cost of credit.<ul style="list-style-type: none"><li>• Student loans</li><li>• Credit cards</li><li>• Debit cards</li><li>• Mortgage loans</li><li>• Auto loans</li></ul></li><li>b. Compare the advantages and disadvantages of using credit.</li><li>c. Discover credit history and what actions affect credit reports.</li></ul>
<p>4. Understand the significance of debt. <sup>DOK1</sup></p> <ul style="list-style-type: none"><li>a. Identify the different types and causes of debt.</li><li>b. Identify ways to manage debt.<ul style="list-style-type: none"><li>• Budgeting</li><li>• Monitoring credit score</li></ul></li></ul>
<p>5. Demonstrate the proper use of financial documents and transactions. <sup>DOK2</sup></p> <ul style="list-style-type: none"><li>• Deposit slips</li><li>• Checks</li><li>• Debit card transaction</li><li>• Credit card transactions</li><li>• Bank statements</li><li>• Check registers</li></ul>

## Unit 20: College and Career Focus

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<b>Competencies and Suggested Objectives</b>
<p>1. Understand essential skills and techniques for employability. <sup>DOK2</sup></p> <ol style="list-style-type: none"><li>a. Identify soft and transferable skills essential for employment.</li><li>b. Demonstrate effective interview techniques and behavior.</li><li>c. Identify proper job application techniques.</li></ol>
<p>2. Explore local and national career opportunities. <sup>DOK1</sup></p> <ol style="list-style-type: none"><li>a. Utilize various sources to research career information.<ul style="list-style-type: none"><li>• Career planning software</li><li>• College planning tool</li><li>• Government databases</li></ul></li><li>b. Discover essential career exploration information.<ul style="list-style-type: none"><li>• Job responsibilities</li><li>• Job skills</li><li>• Education and training</li><li>• Salary</li><li>• Projected growth</li></ul></li><li>c. Evaluate work sites and/or participate in virtual field trips.</li></ol>
<p>3. Develop a five-year plan for high school, college and/or career. <sup>DOK3</sup></p> <ol style="list-style-type: none"><li>a. Determine goals related to desired career/profession.</li><li>b. Identify the program of study in necessary high school and college for desired career.<ul style="list-style-type: none"><li>• Courses</li><li>• Electives</li><li>• Extracurricular activities</li></ul></li><li>c. Explore financial opportunities that assist with college costs.<ul style="list-style-type: none"><li>• Financial aid programs</li><li>• Scholarships</li></ul></li></ol>

# Student Competency Profile

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**Student Name:** \_\_\_\_\_

This record is intended to serve as a method of noting student achievement of the competencies in each unit. It can be duplicated for each student, and it can serve as a cumulative record of competencies achieved in the course.

In the blank before each competency, place the date on which the student mastered the competency.

<b>Unit 1: Orientation, Course Introduction, and Ethics</b>		
	1.	Identify course expectations, district and school policies, and safety procedures related to the Keystone course.
	2.	Understand the importance of employability skills to be successful in the workplace.
	3.	Explore student organizations related to the sixteen national career clusters.
<b>Unit 2: Learning and Personality Styles</b>		
	1.	Discover learning and personality styles.
	2.	Develop characteristics of highly effective people.
<b>Unit 3: Agriculture, Food and Natural Resources</b>		
	1.	Understand career opportunities in the agriculture, food and natural resources career cluster.
	2.	Identify the significance of the agriculture, food and natural resources career cluster in society.
<b>Unit 4: Architecture and Construction</b>		
	1.	Understand career opportunities in the architecture and construction career cluster.
	2.	Identify the significance of the architecture and construction career cluster in society.
<b>Unit 5: Arts, A/V Technology and Communications</b>		
	1.	Understand career opportunities in the arts, audio/video technology and communications career cluster.
	2.	Identify the significance of the arts, audio/video technology and communications career cluster in society.
<b>Unit 6: Business Management and Administration</b>		
	1.	Understand career opportunities in the business management and administration career cluster.
	2.	Identify the significance of the business management and administration career cluster in society.

<b>Unit 7: Education and Training</b>		
	1.	Understand career opportunities in the education and training career cluster.
	2.	Identify the significance of the education and training career cluster in society.
<b>Unit 8: Finance</b>		
	1.	Understand career opportunities in the finance career cluster.
	2.	Identify the significance of the finance career cluster in society.
<b>Unit 9: Government and Public Administration</b>		
	1.	Understand career opportunities in the government and public administration career cluster.
	2.	Identify the significance of the government and public administration career cluster in society.
<b>Unit 10: Health Science</b>		
	1.	Understand career opportunities in the health science career cluster.
	2.	Identify the significance of the health science career cluster in society.
<b>Unit 11: Hospitality and Tourism</b>		
	1.	Understand career opportunities in the hospitality and tourism career cluster.
	2.	Identify the significance of the hospitality and tourism career cluster in society.
<b>Unit 12: Human Services</b>		
	1.	Understand career opportunities in the human services career cluster.
	2.	Identify the significance of the human services career cluster in society.
<b>Unit 13: Information Technology</b>		
	1.	Understand career opportunities in the information technology career cluster. <sup>DOK2</sup>
	2.	Identify the significance of the information technology career cluster in society.
<b>Unit 14: Law, Public Safety, Corrections, and Security</b>		
	1.	Understand career opportunities in the law, public safety, corrections, and security career cluster.
	2.	Identify the significance of the law, public safety, corrections, and security career cluster in society.
<b>Unit 15: Manufacturing</b>		
	1.	Understand career opportunities in the manufacturing career cluster
	2.	Identify the significance of the manufacturing career cluster in society
<b>Unit 16: Marketing</b>		
	1.	Understand career opportunities in the marketing career cluster.
	2.	Identify the significance of the marketing career cluster in society.

<b>Unit 17: Science, Technology, Engineering and Math</b>		
	1.	Understand career opportunities in the science, technology, engineering and math career cluster.
	2.	Identify the significance of the science, technology, engineering and math career cluster in society.
<b>Unit 18: Transportation, Distribution and Logistics</b>		
	1.	Understand career opportunities in the transportation, distribution and logistics career cluster.
	2.	Identify the significance of the transportation, distribution and logistics career cluster in society.
<b>Unit 19: Financial Literacy/Reality Fair</b>		
	1.	Understand how employment relates to the needs and functions of society.
	2.	Create a personal budget.
	3.	Research the options for the best credit for personal financial use.
	4.	Understand the significance of debt.
	5.	Demonstrate the proper use of financial documents and transactions.
<b>Unit 20: College and Career Focus</b>		
	1.	Understand essential skills and techniques for employability.
	2.	Explore local and national career opportunities.
	3.	Develop a five-year plan for high school, college and/or career.

Source: Miss. Code Ann. §§ 37-1-3 and 37-31-103

## Appendix A: 21st Century Skills<sup>1</sup>

	Units	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
21 <sup>st</sup> Century Standards																					
CS1		x		x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	
CS2							x		x								x				x
CS3		x	x						x				x		x						
CS4				x							x		x								
CS5		x		x	x												x		x	x	
CS6						x													x		
CS7			x																		x
CS8		x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
CS9				x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
CS10				x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
CS11				x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
CS12		x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
CS13			x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
CS14		x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
CS15		x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
CS16		x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x

### CSS1-21st Century Themes

#### CS1 Global Awareness

1. Using 21st century skills to understand and address global issues
2. Learning from and working collaboratively with individuals representing diverse cultures, religions, and lifestyles in a spirit of mutual respect and open dialogue in personal, work, and community contexts
3. Understanding other nations and cultures, including the use of non-English languages

#### CS2 Financial, Economic, Business, and Entrepreneurial Literacy

1. Knowing how to make appropriate personal economic choices
2. Understanding the role of the economy in society
3. Using entrepreneurial skills to enhance workplace productivity and career options

#### CS3 Civic Literacy

1. Participating effectively in civic life through knowing how to stay informed and understanding governmental processes
2. Exercising the rights and obligations of citizenship at local, state, national, and global levels
3. Understanding the local and global implications of civic decisions

#### CS4 Health Literacy

1. Obtaining, interpreting, and understanding basic health information and services and using such information and services in ways that enhance health
2. Understanding preventive physical and mental health measures, including proper diet, nutrition, exercise, risk avoidance, and stress reduction
3. Using available information to make appropriate health-related decisions
4. Establishing and monitoring personal and family health goals
5. Understanding national and international public health and safety issues

<sup>1</sup>21st century skills. (n.d.). Washington, DC: Partnership for 21st Century Skills.

**CS5 Environmental Literacy**

1. Demonstrate knowledge and understanding of the environment and the circumstances and conditions affecting it, particularly as relates to air, climate, land, food, energy, water, and ecosystems.
2. Demonstrate knowledge and understanding of society's impact on the natural world (e.g., population growth, population development, resource consumption rate, etc.).
3. Investigate and analyze environmental issues, and make accurate conclusions about effective solutions.
4. Take individual and collective action toward addressing environmental challenges (e.g., participating in global actions, designing solutions that inspire action on environmental issues).

CSS2-Learning and Innovation Skills

**CS6 Creativity and Innovation**

1. Think Creatively
2. Work Creatively with Others
3. Implement Innovations

**CS7 Critical Thinking and Problem Solving**

1. Reason Effectively
2. Use Systems Thinking
3. Make Judgments and Decisions
4. Solve Problems

**CS8 Communication and Collaboration**

1. Communicate Clearly
2. Collaborate with Others

CSS3-Information, Media and Technology Skills

**CS9 Information Literacy**

1. Access and Evaluate Information
2. Use and Manage Information

**CS10 Media Literacy**

1. Analyze Media
2. Create Media Products

**CS11 ICT Literacy**

1. Apply Technology Effectively

CSS4-Life and Career Skills

**CS12 Flexibility and Adaptability**

1. Adapt to change
2. Be Flexible

**CS13 Initiative and Self-Direction**

1. Manage Goals and Time
2. Work Independently
3. Be Self-directed Learners

**CS14 Social and Cross-Cultural Skills**

1. Interact Effectively with others
2. Work Effectively in Diverse Teams

**CS15 Productivity and Accountability**

1. Manage Projects
2. Produce Results

**CS16 Leadership and Responsibility**

1. Guide and Lead Others
2. Be Responsible to Others



# ~~2015 Keystone~~

~~Mississippi Department of Education~~

~~Program CIP: 37.0103 Personal Decision-Making Skills~~

~~Direct inquiries to~~

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~~Brad Skelton, Curriculum Manager, Research and Curriculum Unit at Mississippi State University~~

## Standards

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Standards are superscripted in each unit and are referenced in the appendices. Standards in the *Keystone Curriculum Framework and Supporting Materials* are based on the following:

### **Common Core State Standards Initiative**

The Common Core State Standards provide a consistent, clear understanding of what students are expected to learn, so teachers and parents know what they need to do to help them. The standards are designed to be robust and relevant to the real world, reflecting the knowledge and skills that our young people need for success in college and careers. With American students fully prepared for the future, our communities will be best positioned to compete successfully in the global economy. Copyright 2010. National Governors Association Center for Best Practices and Council of Chief State School Officers. All rights reserved. States and territories of the United States as well as the District of Columbia that have adopted the Common Core State Standards in whole are exempt from this provision and no attribution to the National Governors Association Center for Best Practices and Council of Chief State School Officers is required. Reprinted from <http://www.corestandards.org/>.

### **International Society for Technology in Education (ISTE) Standards for Students**

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### **21st Century Skills and Information and Communication Technologies Literacy Standards**

In defining 21st century learning, the Partnership for 21st Century Skills has embraced five content and skill areas that represent the essential knowledge for the 21st century: global awareness; civic engagement; financial, economic, and business literacy; learning skills that encompass problem solving, critical thinking, and self-directional skills; and Information and Communication Technology (ICT) literacy.

## Preface

---

~~Secondary Career and Technical Education programs in Mississippi are faced with many challenges resulting from sweeping educational reforms at the national and state levels. Schools and teachers are increasingly being held accountable for providing true learning activities to every student in the classroom. This accountability is measured through increased requirements for mastery and attainment of competency as documented through both formative and summative assessments.~~

~~The courses in this document reflect the statutory requirements as found in Section 37-3-49, Mississippi Code of 1972, as amended (Section 37-3-46). In addition, this curriculum reflects guidelines imposed by federal and state mandates (Laws, 1988, ch. 487, §14; Laws, 1991, ch. 423, §1; Laws, 1992, ch. 519, §4 eff. from and after July 1, 1992; Carl D. Perkins Vocational Education Act IV, 2007; and No Child Left Behind Act of 2001).~~

## ~~Mississippi Teacher Professional Resources~~

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~~The following are resources for Mississippi teachers.~~

~~Curriculum, Assessment, Professional Learning, and other program resources can be found at The Research and Curriculum Unit's website: <http://www.rcu.msstate.edu>~~

~~Learning Management System: An online resource~~

~~Learning Management System information can be found at the RCU's website, under Professional Learning.~~

~~Should you need additional instructions, please call 662.325.2510.~~

~~My PLC: An online registration for all professional development sessions~~

~~To register for any session, teachers will need an account in the registration system, MyPLC, <https://myple.rcu.msstate.edu>. To create an account, click on the link and navigate to the "Request a Guest ID" link. The ID should be the teacher's first initial and last name and the last four (4) digits of the social security number. Teachers should complete the entire form, which will then be sent to a secure server. Upon activation of the teacher's account, he or she will receive an e-mail with login instructions. The teacher may then browse for the available sessions and register for the desired courses.~~

~~Should you need additional instructions, please call 662.325.2510.~~



## Executive Summary

---

### **Course Description**

Keystone is a course to be taught in either 7<sup>th</sup>, 8<sup>th</sup>, or 9<sup>th</sup> grade and is to be used as an introduction to career pathways and career decision-making. The course was developed particularly to meet the needs of those schools participating in career academies. This introductory course includes content in self-development, career clusters, pathways, and choices, as well as financial planning. The course is designed to be taught in a “flipped” classroom environment where students are introduced to the content outside of class and actually *experience* the content during class.

### **Industry Certification**

None

### **Assessment**

The latest assessment blueprint for the curriculum can be found at the following location:  
<http://www.rcu.msstate.edu/Curriculum/CurriculumDownload.aspx>

### **Student Prerequisites**

Students should be enrolled in 7<sup>th</sup>, 8<sup>th</sup>, or 9<sup>th</sup> grade in order to take Keystone.

### **Teacher Licensure**

The latest teacher licensure information can be found at  
<http://www.mde.k12.ms.us/educator-licensure>

### **Professional Learning**

If you have specific questions about the content of any of training sessions provided, please contact the Research and Curriculum Unit at 662.325.2510 and ask for a professional learning specialist.

## Course Outline

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### Keystone—Course Code: 990002

Unit	Unit Name	Hours
1	Orientation, Course Introduction, and Ethics	5
2	Learning and Personality Styles	5
3	The 16 National Career Clusters: Agriculture, Food & Natural Resources	5
4	The 16 National Career Clusters: Architecture & Construction	5
5	The 16 National Career Clusters: Arts, A/V Technology & Communications	5
6	The 16 National Career Clusters: Business Management & Administration	5
7	The 16 National Career Clusters: Education & Training	5
8	The 16 National Career Clusters: Finance	5
9	The 16 National Career Clusters: Government & Public Administration	5
10	The 16 National Career Clusters: Health Science	5
11	The 16 National Career Clusters: Hospitality & Tourism	5
12	The 16 National Career Clusters: Human Services	5
13	The 16 National Career Clusters: Information Technology	5
14	The 16 National Career Clusters: Law, Public Safety, Corrections & Security	5
15	The 16 National Career Clusters: Manufacturing	5
16	The 16 National Career Clusters: Marketing	5
17	The 16 National Career Clusters: Science, Technology, Engineering & Math	5
18	The 16 National Career Clusters: Transportation, Distribution & Logistics	5
19	Financial Literacy/Reality Fair	20
20	College and Career Focus/Development of a Six-Year Plan	15
21	Revisions, Goal Setting, Professionalism, and Presentation	15
Total		140

# Keystone Research Synopsis

## Introduction

Keystone is a course to be taught in either 7<sup>th</sup>, 8<sup>th</sup>, or 9<sup>th</sup> grade and is to be used as an introduction to career pathways and career decision-making. The course was developed particularly to meet the needs of those schools participating in career academies. This introductory course includes content in self-development, career clusters, pathways, and choices, as well as financial planning. The course is designed to be taught in a “flipped” classroom environment where students are introduced to the content outside of class and actually *experience* the content during class.

## Needs of the Future Workforce

Data for this synopsis were compiled from the Mississippi Department of Employment Security (2014). Employment opportunities for each of the occupations listed below are

Table 1.1: Current and Projected Occupation Report

Occupation	Mississippi					National				
	2010 Employment	2020 Projected Employment	Projected Growth		Mean Hourly Wage	2012 Employment	2022 Projected Employment	Projected Growth		Mean Hourly Wage
			Number	Percent				Number	Percent	
Management Occupations	50,010	51,330	1,320	2.60	\$39.82	8,861.50	9,498.00	636.6	7.2	\$51.64
Business and Financial Operations Occupations	25,450	27,920	2,470	9.70	\$26.52	7,167.60	8,065.70	898.1	12.5	\$33.05
Computer and Mathematical Occupations	9,450	10,590	1,140	12.10	\$29.09	3,814.70	4,500.50	685.8	18	\$37.85
Architecture and Engineering Occupations	15,620	16,260	640	4.10	\$31.50	2,474.50	2,654.00	179.6	7.3	\$37.08
Life, Physical, and Social Science Occupations	7,270	7,790	520	7.20	\$28.20	1,249.10	1,374.80	125.7	10.1	\$32.44
Community and Social Service Occupations	16,420	18,390	1,970	12.00	\$18.30	2,374.70	2,783.40	408.8	17.2	\$21.07
Legal Occupations	4,940	4,830	-110	(2.20)	\$34.20	1,247.00	1,379.90	132.9	10.7	\$47.30
Education, Training, and Library Occupations	77,880	88,480	10,600	13.60	\$19.10	9,115.90	10,131.70	1,015.80	11.1	\$24.46
Arts, Design, Entertainment, Sports, and Media Occupations	9,310	10,040	730	7.80	\$19.00	2,570.90	2,751.60	180.6	7	\$25.89
Healthcare Practitioners and Technical Occupations	75,390	88,170	12,780	17.00	\$29.50	8,049.70	9,782.60	1,732.90	21.5	\$34.97
Healthcare Support Occupations	43,830	51,270	7,440	17.00	\$11.00	4,110.20	5,266.00	1,155.80	28.1	\$13.16
Protective Service Occupations	25,410	28,190	2,780	10.90	\$14.00	3,325.30	3,588.30	263	7.9	\$20.54
Food Preparation and Serving-Related Occupations	93,870	95,870	2,000	2.10	\$9.00	11,780.10	12,882.00	1,101.80	9.4	\$10.30
Building and Grounds Cleaning and Maintenance Occupations	33,110	36,520	3,410	10.30	\$10.20	5,522.30	6,213.30	691	12.5	\$12.29
Personal Care and Service Occupations	24,010	27,370	3,360	14.00	\$10.70	5,375.60	6,498.50	1,122.90	20.9	\$11.84
Sales and Related Occupations	113,080	117,980	4,900	4.30	\$13.70	15,105.00	16,200.50	1,095.50	7.3	\$18.04
Office and Administrative Support Occupations	163,220	166,650	3,430	2.10	\$14.30	22,470.10	24,004.10	1,534.00	6.8	\$16.40
Farming, Fishing, and Forestry Occupations	4,440	4,580	140	3.20	\$14.40	947.2	915	-32.2	-3.4	\$11.68
Construction and Extraction Occupations	44,770	47,150	2,380	5.30	\$17.00	6,092.20	7,394.10	1,301.90	21.4	\$21.46
Installation, Maintenance, and Repair Occupations	47,450	49,930	2,480	5.20	\$18.40	5,514.80	6,046.00	531.2	9.6	\$20.86
Production Occupations	100,610	104,590	3,980	4.00	\$15.10	8,941.90	9,017.50	75.6	0.8	\$16.45
Transportation and Material Moving Occupations	85,290	90,200	4,910	5.80	\$14.50	9,245.70	10,036.40	790.6	8.6	\$15.96

Source: Mississippi Department of Employment Security; [www.mdes.ms.gov](http://www.mdes.ms.gov) (accessed April 29, 2014).

## **Perkins IV Requirements**

The Keystone curriculum meets Perkins IV requirements of high-skill, high-wage, and/or high-demand occupations by introducing students to and preparing students for occupations. It also offers students a program of study including secondary, postsecondary, and IHL courses that will prepare them for occupations in these fields. Additionally, the Keystone curriculum is integrated with the common core state standards (CCSS). Lastly, the curriculum focuses on ongoing and meaningful professional development for teachers as well as relationships with industry.

## **Curriculum Content**

The following national standards were referenced in the curriculum:

- ~~21st Century Skills and Information and Communication Technologies Literacy Standards~~
- ~~Common Core State Standards (CCSS)~~
- ~~International Society for Technology in Education (ISTE) Standards for Students (ISTE-S)~~

## **Best Practices**

### Innovative Instructional Technologies

~~Recognizing that today's students are digital learners, the classroom should be equipped with tools that will teach them in the way they need to learn. The Keystone curriculum includes opportunities for teaching strategies that incorporate current technology. Each classroom should incorporate one teacher desktop or laptop as well as student computers in a networked environment. It is suggested that each classroom be equipped with an interactive white board and projector, intensifying the interaction between students and teachers during class. Teachers are encouraged to make use of the latest online communication tools such as wikis, blogs, and podcasts. They are also encouraged to teach using a learning management system, which introduces students to education in an online environment and places the responsibility of learning on the student.~~

### Differentiated Instruction

~~Students learn in a variety of ways. Some are visual learners, needing only to read information and study it to succeed. Others are auditory learners, thriving best when information is read aloud to them. Still others are tactile learners, needing to participate actively in their learning experiences. Add the student's background, emotional health, and circumstances, and a very unique learner emerges. To combat this, the Keystone curriculum is written to include many projects which could allow students to choose the type of product they will produce or to perform a certain task. By encouraging various teaching and assessment strategies, students with various learning styles can succeed.~~

### Career and Technical Education Student Organizations

~~Teachers are encouraged to investigate and charter one of the many student organizations available to students. All career and technical education student organizations are relevant to this curriculum because all career clusters are addressed.~~

## **Conclusions**

Based on the previous information, the Keystone curriculum will be filled with opportunities to develop workforce skills. Widely used teaching strategies such as cooperative learning, project-based learning, and demonstration will also be included. These will help to prepare students for the hands-on environment they will likely experience upon entering the workforce. The curriculum document will be updated regularly to reflect the needs of the current workforce.

## Professional Organizations

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### ~~Distributive Education Clubs of America~~

~~1908 Association Drive  
Reston, VA 20191  
703.860.5000  
<http://www.deca.org/>  
[info@deca.org](mailto:info@deca.org)~~

### ~~Family, Career, and Community Leaders of America~~

~~1910 Association Drive  
Reston, VA 20191-1584  
703.476.4900  
<http://www.feclaine.org/content/fecla/>~~

### ~~Future Business Leaders of America~~

~~1912 Association Drive  
Reston, VA 20191-1591  
800.325.2946  
<http://www.fbla-pbl.org/>~~

### ~~Future Educators of America~~

~~1525 Wilson Blvd., Suite 705  
Arlington, VA 22209  
800.766.1156  
<http://www.futureeducators.org/>~~

### ~~Future Farmers of America~~

~~P.O. Box 68960, 6060 FFA Drive  
Indianapolis, IN 46268-0960  
317.802.6060  
<https://www.ffa.org/Pages/default.aspx>~~

### ~~Health Occupational Students of America~~

~~548 Silicon Drive, Suite 101  
Southlake, TX 76092  
(800) 321-HOSA  
<http://www.hosa.org/>~~

### ~~Mississippi Association of Career and Technical Education~~

~~P.O. Box 85  
Raymond, MS 39154  
601.857.5763  
<http://www.mississippiacte.com/>~~

SkillsUSA  
14001 SkillsUSA Way  
Leesburg, VA 20176  
703.777.8810  
<http://www.skillsusa.org/>

Technology Student Association  
1914 Association Drive  
Reston, VA 20191-1540  
888.860.9010  
<http://www.tsaweb.org/>

## Using This Document

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### **Suggested Time on Task**

This section indicates an estimated number of clock hours of instruction that should be required to teach the competencies and objectives of the unit. A minimum of 140 hours of instruction is required for each Carnegie unit credit. The curriculum framework should account for approximately 75–80% of the time in the course.

### **Competencies and Suggested Objectives**

A competency represents a general concept or performance that students are expected to master as a requirement for satisfactorily completing a unit. Students will be expected to receive instruction on all competencies. The suggested objectives represent the enabling and supporting knowledge and performances that will indicate mastery of the competency at the course level.

### **Integrated Academic Topics, 21st Century Skills and Information and Communication Technology Literacy Standards, ACT College Readiness Standards, and Technology Standards for Students**

This section identifies related academic topics as required in the Subject Area Testing Program (SATP) in Algebra I, Biology I, English II, and U.S. History from 1877, which are integrated into the content of the unit. Research-based teaching strategies also incorporate ACT College Readiness standards. This section also identifies the 21st Century Skills and Information and Communication Technology Literacy skills. In addition, national technology standards for students associated with the competencies and suggested objectives for the unit are also identified.

### **References**

A list of suggested references is provided for each unit. The list includes some of the primary instructional resources that may be used to teach the competencies and suggested objectives. Again, these resources are suggested, and the list may be modified or enhanced based on needs and abilities of students and on available resources. Again, these resources are suggested, and the list may be modified or enhanced based on needs and abilities of students and on available resources.



## Important Information for Teachers of the Keystone Curriculum

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The Keystone curriculum is intended to be taught in a student-led, inquiry-based, flipped classroom environment. It is important that the career cluster units in particular be taught in the flipped classroom environment. Students should develop projects based on what they want to research and learn about each cluster. The flipped classroom model suggests that much of this research and information-gathering is done *outside* of the classroom, while project work takes place during class time. For more information, please visit <http://jonbergmann.com/>, <http://flippedclassroom.org>, and <http://teachinquiry.com>.

## ~~Unit 1: Orientation, Course Introduction, and Ethics~~

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### ~~Competencies and Suggested Objectives~~

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|--|
| <del>1. Identify course expectations, district and school policies, and safety procedures related to the Keystone Course. <sup>DOK1, CS3, CS8, CS12, CS15, CS16</sup><br/>a. Summarize course expectations and district and school policies.<br/>b. Describe the operating procedures for the equipment utilized in the class.</del>   |
| <del>2. Investigate ethical, cultural, and societal issues of self and of others. <sup>DOK1, CS1, CS3, CS5, CS14, CS16</sup><br/>a. Discuss personal responsibility of being prepared for class and working in groups.<br/>b. Discuss proper behavior and attire required for off-campus visits.<br/>c. Discuss ethics related to computer and technology use.<br/>d. Discuss ethics in an educational environment.<br/>e. Discuss ethics in the occupational environment.</del> |
| <del>3. Identify the Sixteen National Career Clusters. <sup>DOK1, CS1, CS8</sup><br/>a. Investigate each cluster and the career pathways within each one.</del>  |

## Unit 2: Learning and Personality Styles

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<b>Competencies and Suggested Objectives</b>
<p>3. Discover learning and personality styles. <sup>DOK1, CS3, CS8, CS12, CS14</sup></p> <ul style="list-style-type: none"><li>d. Complete learning style and personality style inventories.</li><li>e. Identify forces that shape personality development including personality traits, heredity, and environment.</li><li>f. Discuss how conflicting learning and personality styles are handled in the workplace and in life.</li></ul>
<p>4. Develop characteristics of highly effective people. <sup>DOK2, CS3, CS7, CS8, CS12, CS13, CS14, CS15, CS16</sup></p> <ul style="list-style-type: none"><li>a. Participate in activities that strengthen self-motivation.</li><li>b. Recognize the importance of time management and personal responsibility.</li></ul>

## Unit 3: Agriculture, Food & Natural Resources

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### Competencies and Suggested Objectives

1. Using videos, multimedia, guest speakers, or other interactive methods, investigate career opportunities in the Agriculture, Food & Natural Resources career cluster, including available jobs, salaries, benefits, education, career advancements, and working conditions. DOK2, CS1, CS4, CS5
2. Assess the role of Agriculture, Food & Natural Resources careers in society. DOK3, CS1, CS4, CS5, CS8, CS9, CS10, CS11, CS12, CS13, CS14, CS15, CS16
  - a. Discover the roles that careers in the Agriculture, Food & Natural Resources career cluster play in society.
  - b. Participate in a real-world job scenario associated with the Agriculture, Food & Natural Resources career cluster.

## Unit 4: Architecture and Construction

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<b>Competencies and Suggested Objectives</b>
<p>1. Using videos, multimedia, guest speakers, or other interactive methods, investigate career opportunities in the Architecture and Construction career cluster, including available jobs, salaries, benefits, education, career advancements, and working conditions. <sup>DOK2, CS1, CS5</sup></p>
<p>2. Assess the role of Architecture and Construction careers in society. <sup>DOK3, CS1, CS5, CS8, CS9, CS10, CS11, CS12, CS13, CS14, CS15, CS16</sup></p> <ul style="list-style-type: none"><li>a. Discover the roles that careers in the Architecture and Construction career cluster play in society.</li><li>b. Participate in a real-world job scenario associated with the Architecture and Construction career cluster.</li></ul>

## Unit 5: Arts, A/V Technology & Communications

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### Competencies and Suggested Objectives

1. Using videos, multimedia, guest speakers, or other interactive methods, investigate career opportunities in the Arts, A/V Technology & Communications career cluster, including available jobs, salaries, benefits, education, career advancements, and working conditions. DOK2, CS1, CS6, CS9, CS10, CS11
2. Assess the role of Arts, A/V Technology & Communications careers in society. DOK3, CS1, CS6, CS8, CS9, CS10, CS11, CS12, CS13, CS14, CS15, CS16
  - a. Discover the roles that careers in the Arts, A/V Technology & Communications career cluster play in society.
  - b. Participate in a real-world job scenario associated with the Arts, A/V Technology & Communications career cluster.

## Unit 6: Business Management and Administration

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### Competencies and Suggested Objectives

1. Using videos, multimedia, guest speakers, or other interactive methods, investigate career opportunities in the Business Management and Administration career cluster, including available jobs, salaries, benefits, education, career advancements, and working conditions. DOK2, CS1, CS2
2. Assess the role of Business Management and Administration careers in society. DOK3, CS1, CS2, CS8, CS9, CS10, CS11, CS12, CS13, CS14, CS15, CS16
  - a. Discover the roles that careers in the Business Management and Administration career cluster play in society.
  - b. Participate in a real-world job scenario associated with the Business Management and Administration career cluster.

## Unit 7: Education and Training

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### Competencies and Suggested Objectives

1. Using videos, multimedia, guest speakers, or other interactive methods, investigate career opportunities in the Education and Training career cluster, including available jobs, salaries, benefits, education, career advancements, and working conditions. <sup>DOK2, CS1, CS8, CS12, CS13, CS16</sup>

2. Assess the role of Education and Training careers in society. <sup>DOK3, CS1, CS8, CS9, CS10, CS11, CS12, CS13, CS14, CS15, CS16</sup>

a. Discover the roles that careers in the Education and Training career cluster play in society.

b. Participate in a real-world job scenario associated with the Education and Training career cluster.



## Unit 8: Finance

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<b>Competencies and Suggested Objectives</b>
1. Using videos, multimedia, guest speakers, or other interactive methods, investigate career opportunities in the Finance career cluster, including available jobs, salaries, benefits, education, career advancements, and working conditions. <small>DOK2, CS1, CS2</small>
2. Assess the role of Finance careers in society. <small>DOK3, CS1, CS2, CS8, CS9, CS10, CS11, CS12, CS13, CS14, CS15, CS16</small> a. Discover the roles that careers in the Finance career cluster play in society. b. Participate in a real-world job scenario associated with the Finance career cluster.

## ~~Unit 9: Government and Public Administration~~

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### ~~Competencies and Suggested Objectives~~

- ~~1. Using videos, multimedia, guest speakers, or other interactive methods, investigate career opportunities in the Government and Public Administration career cluster, including available jobs, salaries, benefits, education, career advancements, and working conditions. DOK2, CS1, CS3~~
- ~~2. Assess the role of Government and Public Administration careers in society. DOK3, CS1, CS3, CS8, CS9, CS10, CS11, CS12, CS13, CS14, CS15, CS16~~
  - ~~a. Discover the roles that careers in the Government and Public Administration career cluster play in society.~~
  - ~~b. Participate in a real-world job scenario associated with the Government and Public Administration career cluster.~~

## Unit 10: Health Science

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<b>Competencies and Suggested Objectives</b>
1. Using videos, multimedia, guest speakers, or other interactive methods, investigate career opportunities in the Health Science career cluster, including available jobs, salaries, benefits, education, career advancements, and working conditions. <sup>DOK2, CS1, CS4</sup>
2. Assess the role of Health Science careers in society. <sup>DOK3, CS1, CS4, CS8, CS9, CS10, CS11, CS12, CS13, CS14, CS15, CS16</sup> <ol style="list-style-type: none"><li>Discover the roles that careers in the Health Science career cluster play in society.</li><li>Participate in a real-world job scenario associated with the Health Science career cluster.</li></ol>

## Unit 11: Hospitality and Tourism

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### Competencies and Suggested Objectives

1. Using videos, multimedia, guest speakers, or other interactive methods, investigate career opportunities in the Hospitality and Tourism career cluster, including available jobs, salaries, benefits, education, career advancements, and working conditions. <sup>DOK2, CS1, CS8, CS12, CS14</sup>
2. Assess the role of Hospitality and Tourism careers in society. <sup>DOK3, CS1, CS8, CS9, CS10, CS11, CS12, CS13, CS14, CS15, CS16</sup>
  - a. Discover the roles that careers in the Hospitality and Tourism career cluster play in society.
  - b. Participate in a real-world job scenario associated with the Hospitality and Tourism career cluster.

## Unit 12: Human Services

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<b>Competencies and Suggested Objectives</b>
1. Using videos, multimedia, guest speakers, or other interactive methods, investigate career opportunities in the Human Services career cluster, including available jobs, salaries, benefits, education, career advancements, and working conditions. <sup>DOK2, CS1, CS3, CS4, CS14</sup>
2. Assess the role of Human Services careers in society. <sup>DOK3, CS1, CS3, CS4, CS8, CS9, CS10, CS11, CS12, CS13, CS14, CS15, CS16</sup> <ol style="list-style-type: none"><li>Discover the roles that careers in the Human Services career cluster play in society.</li><li>Participate in a real-world job scenario associated with the Human Services career cluster.</li></ol>

## Unit 13: Information Technology

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### **Competencies and Suggested Objectives**

1. ~~Using videos, multimedia, guest speakers, or other interactive methods, investigate career opportunities in the Information Technology career cluster, including available jobs, salaries, benefits, education, career advancements, and working conditions.~~ <sup>DOK2, CS9, CS10, CS14</sup>
2. ~~Assess the role of Information Technology careers in society.~~ <sup>DOK3, CS1, CS8, CS9, CS10, CS11, CS12, CS13, CS14, CS15, CS16</sup>
  - a. ~~Discover the roles that careers in the Information Technology career cluster play in society.~~
  - b. ~~Participate in a real-world job scenario associated with the Information Technology career cluster.~~

## ~~Unit 14: Law, Public Safety, Corrections, & Security~~

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### ~~Competencies and Suggested Objectives~~

- ~~1. Using videos, multimedia, guest speakers, or other interactive methods, investigate career opportunities in the Law, Public Safety, Corrections, & Security career cluster, including available jobs, salaries, benefits, education, career advancements, and working conditions. DOK2, CS1, CS3, CS14~~
- ~~2. Assess the role of Law, Public Safety, Corrections, & Security careers in society. DOK3, CS1, CS3, CS8, CS9, CS10, CS11, CS12, CS13, CS14, CS15, CS16~~
  - ~~a. Discover the roles that careers in the Law, Public Safety, Corrections, & Security career cluster play in society.~~
  - ~~b. Participate in a real-world job scenario associated with the Law, Public Safety, Corrections, & Security career cluster.~~

## Unit 15: Manufacturing

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<b>Competencies and Suggested Objectives</b>
<del>1. Using videos, multimedia, guest speakers, or other interactive methods, investigate career opportunities in the Manufacturing career cluster, including available jobs, salaries, benefits, education, career advancements, and working conditions. <sup>DOK2, CS1, CS5, CS15</sup></del>
<del>2. Assess the role of Manufacturing careers in society. <sup>DOK3, CS1, CS5, CS8, CS9, CS10, CS11, CS12, CS13, CS14, CS15, CS16</sup></del> <ul style="list-style-type: none"><li><del>a. Discover the roles that careers in the Manufacturing career cluster play in society.</del></li><li><del>b. Participate in a real-world job scenario associated with the Manufacturing career cluster.</del></li></ul>



## Unit 16: Marketing

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### **Competencies and Suggested Objectives**

1. ~~Using videos, multimedia, guest speakers, or other interactive methods, investigate career opportunities in the Marketing career cluster, including available jobs, salaries, benefits, education, career advancements, and working conditions.~~ <sup>DOK2, CS1, CS2</sup>
2. ~~Assess the role of Marketing careers in society.~~ <sup>DOK3, CS1, CS2, CS8, CS9, CS10, CS11, CS12, CS13, CS14, CS15, CS16</sup>
  - a. ~~Discover the roles that careers in the Marketing career cluster play in society.~~
  - b. ~~Participate in a real world job scenario associated with the Marketing career cluster.~~

## ~~Unit 17: Science, Technology, Engineering & Math~~

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### ~~Competencies and Suggested Objectives~~

~~1. Using videos, multimedia, guest speakers, or other interactive methods, investigate career opportunities in the Science, Technology, Engineering & Math career cluster, including available jobs, salaries, benefits, education, career advancements, and working conditions. DOK2, CS1, CS5, CS6~~

~~2. Assess the role of Science, Technology, Engineering & Math careers in society. DOK3, CS1, CS5, CS6, CS8, CS9, CS10, CS11, CS12, CS13, CS14, CS15, CS16~~

~~a. Discover the roles that careers in the Science, Technology, Engineering & Math career cluster play in society.~~

~~b. Participate in a real world job scenario associated with the Science, Technology, Engineering & Math career cluster.~~

## Unit 18: Transportation, Distribution & Logistics

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### Competencies and Suggested Objectives

1. Using videos, multimedia, guest speakers, or other interactive methods, investigate career opportunities in the Transportation, Distribution & Logistics career cluster, including available jobs, salaries, benefits, education, career advancements, and working conditions. DOK2, CS1, CS5, CS8
2. Assess the role of Transportation, Distribution & Logistics careers in society. DOK3, CS1, CS5, CS8, CS9, CS10, CS11, CS12, CS13, CS14, CS15, CS16
  - a. Discover the roles that careers in the Transportation, Distribution & Logistics career cluster play in society.
  - b. Participate in a real-world job scenario associated with the Transportation, Distribution & Logistics career cluster.

## Unit 19: Financial Literacy/Reality Fair

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<b>Competencies and Suggested Objectives</b>
<p>1. <del>Create a personal budget.</del> <sup>DOK3, CS2, CS11, CS16</sup></p> <ul style="list-style-type: none"><li>a. <del>Identify reasons to keep track of spending habits.</del></li><li>b. <del>Identify sources of income and expenses.</del></li><li>c. <del>Explain the concept of “paying yourself first.”</del></li><li>d. <del>Identify goals of saving.</del></li><li>e. <del>Examine types of saving and investing.</del></li><li>f. <del>Create a personal budget based on your findings.</del></li></ul>
<p>2. <del>Examine credit options, pros, and cons.</del> <sup>DOK2, CS2, CS9, CS10, CS11, CS16</sup></p> <ul style="list-style-type: none"><li>a. <del>Examine the types and the cost of credit.</del></li><li>b. <del>Compare the advantages and disadvantages of using credit.</del></li><li>c. <del>Discover credit history and what actions affect credit reports.</del></li></ul>
<p>5. <del>Examine the effects of debt.</del> <sup>DOK1, CS2, CS16</sup></p> <ul style="list-style-type: none"><li>a. <del>Define debt.</del></li><li>b. <del>Explore reasons people go into debt.</del></li><li>c. <del>Identify ways to stay out of debt.</del></li><li>d. <del>Determine consequences of debt on a household (i.e., person, family, business).</del></li></ul>
<p>6. <del>Recognize and demonstrate the use of forms used during financial planning, including deposit slips, checks, debit card transactions, credit card transactions, bank statements, and check registries.</del> <sup>DOK2, CS2, CS9, CS16</sup></p>

## Unit 20: College and Career Focus/Development of a Six-Year Plan

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### Competencies and Suggested Objectives

1. ~~Develop an awareness of the workplace.~~ <sup>DOK2, CS1, CS8, CS12, CS13, CS14, CS15, CS16</sup>
  - a. ~~Describe how employment relates to the needs and functions of the economy, society, and personal fulfillment.~~
  - b. ~~Analyze why people work.~~
  - c. ~~Describe the U.S. economy as a free enterprise system and explain how it works.~~
  - d. ~~Identify consumers, producers, supply and demand, and competition.~~
  - e. ~~Explain how the global economy affects individuals, communities, and our country.~~
  - f. ~~Examine the influences that society, economy, and technological advances have on employment trends and future employment training.~~
  - g. ~~Distinguish societal views on employment trends.~~
  - h. ~~Distinguish economic views on employment trends.~~
  - i. ~~Explore technological advances that affect employment trends in our country.~~
2. ~~Identify workplace skills that affect careers.~~ <sup>DOK1, CS1, CS12, CS13, CS14, CS15, CS16</sup>
  - a. ~~Recognize and develop transferable skills.~~
    - i. ~~Discuss what transferable skills are and how the skills are important in the workplace.~~
    - ii. ~~Explain what skills are needed in all professions, regardless of level.~~
3. ~~Explore local and national career opportunities.~~ <sup>DOK1, CS1, CS9, CS10, CS11</sup>
  - a. ~~Demonstrate the ability to locate, understand, and use career information.~~
    - i. ~~Research information on careers on the internet.~~
  - b. ~~Evaluate sources of career information.~~
    - ii. ~~Choices (or other career planning software)~~
    - iii. ~~Big Future (www.bigfuture.com)~~
    - iv. ~~Careers (www.careers.org)~~
    - v. ~~Occupational Outlook Handbook (www.bls.gov)~~
  - c. ~~Analyze the different types of career information for potential careers.~~
    - vi. ~~Explore the job responsibilities for this career/profession.~~
    - vii. ~~List and explain skills needed for this career/profession.~~
    - viii. ~~Identify education and training needed for this career/profession.~~
    - ix. ~~Explore the technology used in this career/profession.~~
    - x. ~~Identify salary possibilities.~~
    - xi. ~~Explain the projected growth/decline for this career/profession.~~
  - g. ~~Evaluate work sites and/or participate in virtual field trips.~~
    - xii. ~~Students can use the internet to see job conditions, work sites, and interviews with~~

<del>people in this career/profession.</del>
<del>4. Identify and demonstrate the steps to make career decisions.</del> <sup>DOK2, CS12, CS13, CS14, CS15, CS16</sup> <del>a. Determine how personality affects career decisions.</del> <del>b. Determine future goals for yourself in this career/profession.</del>
<del>5. Analyze the relationship between educational achievement and career success.</del> <sup>DOK2, CS12, CS13, CS14, CS15, CS16</sup> <del>a. Determine what courses/activities matter in high school.</del> <del>b. Determine what electives are most important to meeting career goals.</del>
<del>6. Develop a six year plan including four years of high school courses and activities plus two years of post secondary study and activities.</del> <sup>DOK3, CS7, CS9, CS10, CS11, CS12, CS13, CS14, CS15, CS16</sup> <del>a. Investigate local, state, and national scholarship opportunities.</del> <del>b. Discover financial aid programs, i.e., FAFSA, MTAG, and so forth.</del> <del>c. Complete a six year program of study to prepare for the future.</del>
<del>7. Demonstrate skills to complete a job application and a mock interview.</del> <sup>DOK3, CS7, CS12, CS13, CS14, CS15, CS16</sup>

## Unit 21: Revisions, Goal Setting, Professionalism, and Presentation

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<b>Competencies and Suggested Objectives</b>
<p><del>1. Complete and review a career planning computer course.</del> <sup>DOK2, CS1, CS12, CS13, CS14, CS15, CS16</sup></p> <ul style="list-style-type: none"><li><del>a. Input personal information in the career planning computer course.</del></li><li><del>b. Interpret data provided by the career planning computer course.</del></li><li><del>c. Document the information and your conclusions regarding the information provided by the career planning computer course.</del></li></ul>
<p><del>2. Set personal goals for a career and life plan.</del> <sup>DOK3, CS1, CS12, CS13, CS14, CS15, CS16</sup></p> <ul style="list-style-type: none"><li><del>a. Develop a functional personal goals list.</del></li><li><del>b. Discuss list with instructor and parents.</del></li><li><del>c. Refine goals based on input and further review.</del></li><li><del>d. Present complete written set of personal goals.</del></li></ul>
<p><del>3. Exhibit necessary professional behaviors to obtain and maintain desired employment.</del> <sup>DOK2, CS12, CS13, CS14, CS15, CS16</sup></p> <ul style="list-style-type: none"><li><del>a. Demonstrate characteristics desired by organization, such as punctuality, teamwork, positive work ethic, appropriate attire, positive personal attitudes and abilities.</del></li><li><del>b. Demonstrate appropriate interview and employment behaviors (i.e., effective speech, good posture, proper etiquette, appropriate eye contact and gestures).</del></li><li><del>c. Practice professional presentation techniques.</del></li></ul>

# Student Competency Profile

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**Student Name:** \_\_\_\_\_

This record is intended to serve as a method of noting student achievement of the competencies in each unit. It can be duplicated for each student, and it can serve as a cumulative record of competencies achieved in the course.

In the blank before each competency, place the date on which the student mastered the competency.

<b>Unit 1: Orientation, Course Introduction, and Ethics</b>	
1.	Identify course expectations, district and school policies, and, safety procedures related to the Keystone Course.
2.	Investigate ethical, cultural, and societal issues of self and of others.
3.	Identify the Sixteen National Career Clusters.
<b>Unit 2: Learning and Personality Styles</b>	
1.	Discover learning and personality styles.
2.	Develop characteristics of highly effective people.
<b>Unit 3: Agriculture, Food &amp; Natural Resources</b>	
1.	Using videos, multimedia, guest speakers, or other interactive methods, investigate career opportunities in the Agriculture, Food & Natural Resources career cluster, including available jobs, salaries, benefits, education, career advancements, and working conditions
2.	Assess the role of Agriculture, Food & Natural Resources careers in society.
<b>Unit 4: Architecture and Construction</b>	
1.	Using videos, multimedia, guest speakers, or other interactive methods, investigate career opportunities in the Architecture and Construction career cluster, including available jobs, salaries, benefits, education, career advancements, and working conditions.
2.	Assess the role of Architecture and Construction careers in society.
<b>Unit 5: Arts, A/V Technology &amp; Communications</b>	
1.	Using videos, multimedia, guest speakers, or other interactive methods, investigate career opportunities in the Arts, A/V Technology & Communications career cluster, including available jobs, salaries, benefits, education, career advancements, and working conditions.
2.	Assess the role of Arts, A/V Technology & Communications careers in society.
<b>Unit 6: Business Management and Administration</b>	
1.	Using videos, multimedia, guest speakers, or other interactive methods,



	investigate career opportunities in the Business Management and Administration career cluster, including available jobs, salaries, benefits, education, career advancements, and working conditions.
	2. Assess the role of Business Management and Administration careers in society.
<b>Unit 7: Education and Training</b>	
	1. Using videos, multimedia, guest speakers, or other interactive methods, investigate career opportunities in the Education and Training career cluster, including available jobs, salaries, benefits, education, career advancements, and working conditions.
	2. Assess the role of Education and Training careers in society.
<b>Unit 8: Finance</b>	
	1. Using videos, multimedia, guest speakers, or other interactive methods, investigate career opportunities in the Finance career cluster, including available jobs, salaries, benefits, education, career advancements, and working conditions.
	2. Assess the role of Finance careers in society.
<b>Unit 9: Government and Public Administration</b>	
	1. Using videos, multimedia, guest speakers, or other interactive methods, investigate career opportunities in the Government and Public Administration career cluster, including available jobs, salaries, benefits, education, career advancements, and working conditions.
	2. Assess the role of Government and Public Administration careers in society.
<b>Unit 10: Health Science</b>	
	1. Using videos, multimedia, guest speakers, or other interactive methods, investigate career opportunities in the Health Science career cluster, including available jobs, salaries, benefits, education, career advancements, and working conditions.
	2. Assess the role of Health Science careers in society.
<b>Unit 11: Hospitality and Tourism</b>	
	1. Using videos, multimedia, guest speakers, or other interactive methods, investigate career opportunities in the Hospitality and Tourism career cluster, including available jobs, salaries, benefits, education, career advancements, and working conditions.
	2. Assess the role of Hospitality and Tourism careers in society.
<b>Unit 12: Human Services</b>	
	1. Using videos, multimedia, guest speakers, or other interactive methods, investigate career opportunities in the Human Services career cluster, including available jobs, salaries, benefits, education, career advancements, and working conditions.
	2. Assess the role of Human Services careers in society.
<b>Unit 13: Information Technology</b>	

	1.	Using videos, multimedia, guest speakers, or other interactive methods, investigate career opportunities in the Information Technology career cluster, including available jobs, salaries, benefits, education, career advancements, and working conditions.
	2.	Assess the role of Information Technology careers in society.
<b>Unit 14: Law, Public Safety, Corrections, &amp; Security</b>		
	1.	Using videos, multimedia, guest speakers, or other interactive methods, investigate career opportunities in the Law, Public Safety, Corrections, & Security career cluster, including available jobs, salaries, benefits, education, career advancements, and working conditions.
	2.	Assess the role of Law, Public Safety, Corrections, & Security careers in society.
<b>Unit 15: Manufacturing</b>		
	1.	Using videos, multimedia, guest speakers, or other interactive methods, investigate career opportunities in the Manufacturing career cluster, including available jobs, salaries, benefits, education, career advancements, and working conditions.
	2.	Assess the role of Manufacturing careers in society.
<b>Unit 16: Marketing</b>		
	1.	Using videos, multimedia, guest speakers, or other interactive methods, investigate career opportunities in the Marketing career cluster, including available jobs, salaries, benefits, education, career advancements, and working conditions.
	2.	Assess the role of Marketing careers in society.
<b>Unit 17: Science, Technology, Engineering &amp; Math</b>		
	1.	Using videos, multimedia, guest speakers, or other interactive methods, investigate career opportunities in the Science, Technology, Engineering & Math career cluster, including available jobs, salaries, benefits, education, career advancements, and working conditions.
	2.	Assess the role of Science, Technology, Engineering & Math careers in society.
<b>Unit 18: Transportation, Distribution &amp; Logistics</b>		
	1.	Using videos, multimedia, guest speakers, or other interactive methods, investigate career opportunities in the Transportation, Distribution & Logistics career cluster, including available jobs, salaries, benefits, education, career advancements, and working conditions.
	2.	Assess the role of Transportation, Distribution & Logistics careers in society.
<b>Unit 19: Financial Literacy/Reality Fair</b>		
	1.	Create a personal budget.
	2.	Examine credit options, pros, and cons.
	3.	Examine the effects of debt.
	4.	Recognize and demonstrate the use of forms used during financial planning.

		including deposit slips, checks, debit card transactions, credit card transactions, bank statements, and check registries.
<b>Unit 20: College and Career Focus/Development of a Six-Year Plan</b>		
	1.	Develop an awareness of the workplace.
	2.	Identify workplace skills that affect careers.
	3.	Explore local and national career opportunities.
	4.	Identify and demonstrate the steps to make career decisions.
	5.	Analyze the relationship between educational achievement and career success.
	6.	Develop a six-year plan including four years of high school courses and activities plus two years of post-secondary study and activities.
	7.	Demonstrate skills to complete a job application and a mock interview.
<b>Unit 21: Revisions, Goal-Setting, Professionalism, and Presentation</b>		
	1.	Complete and review a career planning computer course.
	2.	Set personal goals for a career and life plan.
	3.	Exhibit necessary professional behaviors to obtain and maintain desired employment.

## Appendix A: Unit References

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### Unit 1

16 career clusters. (2014). Retrieved May 9, 2014, from <http://www.careertech.org/career-clusters/glance/careerclusters.html>

Covey, S. (1998). *The 7 habits of highly effective teens*. New York: Fireside.

Ethics in the classroom: What you need to know. (2009, September 9). Retrieved May 9, 2014, from <http://www.education.com/magazine/article/cheating-ethics/>

Teens and ethics. (2008). Retrieved May 9, 2014, from <http://www.education.com/magazine/article/Teens-and-Ethics/>

Ten commandments in computer ethics. (2012, February 06). Retrieved May 9, 2014, from <https://www.youtube.com/watch?v=HwSHJg7cSXM>

### Unit 2

Bixler, B. (n.d.). Learning style inventory. Retrieved May 9, 2014, from <http://www.personal.psu.edu/bxb11/LSI/LSI.htm>

Conflict resolution: Resolving conflict rationally and effectively. (n.d.). Retrieved May 9, 2014, from [http://www.mindtools.com/pages/article/newLDR\\_81.htm](http://www.mindtools.com/pages/article/newLDR_81.htm)

Covey, S. (1998). *The 7 habits of highly effective teens*. New York: Fireside.

Free personality test. (n.d.). Retrieved May 9, 2014, from <http://www.16personalities.com/free-personality-test>

Panico, G. (2003, Fall). Time management for teens. Retrieved May 9, 2014, from [http://www.glencoe.com/sec/health/updateshome/bul\\_arch/fall03\\_01.shtml](http://www.glencoe.com/sec/health/updateshome/bul_arch/fall03_01.shtml)

### **Unit 3**

16 career clusters. (2014). Retrieved May 9, 2014, from <http://www.careertech.org/career-clusters/glance/careerclusters.html>

National Center for O\*NET Development. Agriculture, Food and Natural Resources Career Cluster. *O\*NET OnLine*. Retrieved May 9, 2014, from <http://www.onetonline.org/find/career?c=1>

U.S. Bureau of Labor Statistics. (n.d.). Retrieved May 9, 2014, from <http://www.bls.gov/>

### **Unit 4**

16 career clusters. (2014). Retrieved May 9, 2014, from <http://www.careertech.org/career-clusters/glance/careerclusters.html>

National Center for O\*NET Development. Architecture and Construction Career Cluster. *O\*NET OnLine*. Retrieved May 9, 2014, from <http://www.onetonline.org/find/career?c=2&g=Go>

U.S. Bureau of Labor Statistics. (n.d.). Retrieved May 9, 2014, from <http://www.bls.gov/>

### **Unit 5**

16 career clusters. (2014). Retrieved May 9, 2014, from <http://www.careertech.org/career-clusters/glance/careerclusters.html>

National Center for O\*NET Development. Arts, Audio/Video Technology and Communications Career Cluster. *O\*NET OnLine*. Retrieved May 9, 2014, from <http://www.onetonline.org/find/career?c=3&g=Go>

U.S. Bureau of Labor Statistics. (n.d.). Retrieved May 9, 2014, from <http://www.bls.gov/>

### **Unit 6**

16 career clusters. (2014). Retrieved May 9, 2014, from <http://www.careertech.org/career-clusters/glance/careerclusters.html>

National Center for O\*NET Development. Business Management and Administration Career Cluster. *O\*NET OnLine*. Retrieved May 9, 2014, from <http://www.onetonline.org/find/career?c=4&g=Go>

U.S. Bureau of Labor Statistics. (n.d.). Retrieved May 9, 2014, from <http://www.bls.gov/>

## **Unit 7**

16 career clusters. (2014). Retrieved May 9, 2014, from <http://www.careertech.org/career-clusters/glance/careerclusters.html>

Brock, B.L. and Grady, M.L. (2007). *First year to first rate*. M. L. Corwin Press.

Harmin, M., and Toth, M. (2006). *Inspiring active learning*. ASCD.

National Center for O\*NET Development. Education and Training Career Cluster. *O\*NET OnLine*. Retrieved May 9, 2014, from <http://www.onetonline.org/find/career?c=5&g=Go>

Phi Delta International. *Future educators of America*. (2007). Retrieved December 20, 2007, from <http://www.pdkintl.org/fea/feahome.htm>.

Rosenblum, R. (2000). *You have to go to school you're the teacher*. Corwin Press.

Stronge, J. (2007). *Qualities of effective teachers*. ASCD.

U.S. Bureau of Labor Statistics. (n.d.). Retrieved May 9, 2014, from <http://www.bls.gov/>

Wong, H., and Wong, R. (2004). *The first days of school: How to be an effective teacher*. Harry K. Wong Publications, Inc.

## **Unit 8**

16 career clusters. (2014). Retrieved May 9, 2014, from <http://www.careertech.org/career-clusters/glance/careerclusters.html>

National Center for O\*NET Development. Finance Career Cluster. *O\*NET OnLine*. Retrieved May 9, 2014, from <http://www.onetonline.org/find/career?c=6&g=Go>

U.S. Bureau of Labor Statistics. (n.d.). Retrieved May 9, 2014, from <http://www.bls.gov/>

## **Unit 9**

16 career clusters. (2014). Retrieved May 9, 2014, from <http://www.careertech.org/career-clusters/glance/careerclusters.html>

National Center for O\*NET Development. Government and Public Administration Career Cluster. *O\*NET OnLine*. Retrieved May 9, 2014, from <http://www.onetonline.org/find/career?c=7&g=Go>

U.S. Bureau of Labor Statistics. (n.d.). Retrieved May 9, 2014, from <http://www.bls.gov/>

## **Unit 10**

16 career clusters. (2014). Retrieved May 9, 2014, from <http://www.careertech.org/career-clusters/glance/careerclusters.html>

National Center for O\*NET Development. Health Science Career Cluster. *O\*NET OnLine*. Retrieved May 9, 2014, from <http://www.onetonline.org/find/career?c=8&g=Go>

U.S. Bureau of Labor Statistics. (n.d.). Retrieved May 9, 2014, from <http://www.bls.gov/>

## **Unit 11**

16 career clusters. (2014). Retrieved May 9, 2014, from <http://www.careertech.org/career-clusters/glance/careerclusters.html>

National Center for O\*NET Development. Hospitality and Tourism Career Cluster. *O\*NET OnLine*. Retrieved May 9, 2014, from <http://www.onetonline.org/find/career?c=9&g=Go>

U.S. Bureau of Labor Statistics. (n.d.). Retrieved May 9, 2014, from <http://www.bls.gov/>

## **Unit 12**

16 career clusters. (2014). Retrieved May 9, 2014, from <http://www.careertech.org/career-clusters/glance/careerclusters.html>

National Center for O\*NET Development. Human Services Career Cluster. *O\*NET OnLine*. Retrieved May 9, 2014, from <http://www.onetonline.org/find/career?c=10&g=Go>

U.S. Bureau of Labor Statistics. (n.d.). Retrieved May 9, 2014, from <http://www.bls.gov/>

### **Unit 13**

16 career clusters. (2014). Retrieved May 9, 2014, from <http://www.careertech.org/career-clusters/glance/careerclusters.html>

National Center for O\*NET Development. Information Technology Career Cluster. *O\*NET OnLine*. Retrieved May 9, 2014, from <http://www.onetonline.org/find/career?c=11&g=Go>

U.S. Bureau of Labor Statistics. (n.d.). Retrieved May 9, 2014, from <http://www.bls.gov/>

### **Unit 14**

16 career clusters. (2014). Retrieved May 9, 2014, from <http://www.careertech.org/career-clusters/glance/careerclusters.html>

National Center for O\*NET Development. Law, Public Safety, Corrections and Security Career Cluster. *O\*NET OnLine*. Retrieved May 9, 2014, from <http://www.onetonline.org/find/career?c=12&g=Go>

U.S. Bureau of Labor Statistics. (n.d.). Retrieved May 9, 2014, from <http://www.bls.gov/>

### **Unit 15**

16 career clusters. (2014). Retrieved May 9, 2014, from <http://www.careertech.org/career-clusters/glance/careerclusters.html>

National Center for O\*NET Development. Manufacturing Career Cluster. *O\*NET OnLine*. Retrieved May 9, 2014, from <http://www.onetonline.org/find/career?c=13&g=Go>

U.S. Bureau of Labor Statistics. (n.d.). Retrieved May 9, 2014, from <http://www.bls.gov/>



## **Unit 16**

16 career clusters. (2014). Retrieved May 9, 2014, from <http://www.careertech.org/career-clusters/glance/careerclusters.html>

National Center for O\*NET Development. Marketing, Sales and Service Career Cluster. *O\*NET OnLine*. Retrieved May 9, 2014, from <http://www.onetonline.org/find/career?c=14&g=Go>

U.S. Bureau of Labor Statistics. (n.d.). Retrieved May 9, 2014, from <http://www.bls.gov/>

## **Unit 17**

16 career clusters. (2014). Retrieved May 9, 2014, from <http://www.careertech.org/career-clusters/glance/careerclusters.html>

National Center for O\*NET Development. Science, Technology, Engineering and Mathematics Career Cluster. *O\*NET OnLine*. Retrieved May 9, 2014, from <http://www.onetonline.org/find/career?c=15&g=Go>

U.S. Bureau of Labor Statistics. (n.d.). Retrieved May 9, 2014, from <http://www.bls.gov/>

## **Unit 18**

16 career clusters. (2014). Retrieved May 9, 2014, from <http://www.careertech.org/career-clusters/glance/careerclusters.html>

National Center for O\*NET Development. Transportation, Distribution and Logistics Career Cluster. *O\*NET OnLine*. Retrieved May 9, 2014, from <http://www.onetonline.org/find/career?c=16&g=Go>

U.S. Bureau of Labor Statistics. (n.d.). Retrieved May 9, 2014, from <http://www.bls.gov/>

## **Unit 19**

16 career clusters. (2014). Retrieved May 9, 2014, from <http://www.careertech.org/career-clusters/glance/careerclusters.html>

BigFuture. (2014). Retrieved May 9, 2014, from <https://bigfuture.collegeboard.org/>

Career resources. (2014). Retrieved May 9, 2014, from <http://www.careers.org/>

FAFSA: Free application for federal student aid. (2014, April 13). Retrieved May 9, 2014, from <https://fafsa.ed.gov/>

Free budget forms. (2014). Retrieved May 9, 2014, from <http://www.daveramsey.com/tools/budget-forms/>

Free enterprise. (n.d.). Retrieved May 9, 2014, from [http://www.socialstudieshelp.com/Eco\\_Free\\_Enterprise.htm](http://www.socialstudieshelp.com/Eco_Free_Enterprise.htm)

Mississippi tuition assistance grant (MTAG). (2014). Retrieved May 9, 2014, from <http://riseupms.com/state-aid/mtag/>

U.S. Bureau of Labor Statistics. (n.d.). Retrieved May 9, 2014, from <http://www.bls.gov/>

## **Unit 20**

Checks and checkbooks: Learn how to write checks and balance a checkbook. (2008). Retrieved May 9, 2014, from <http://www.enchantedlearning.com/economics/checks/>

Covey, S. (1998). *The 7 habits of highly effective teens*. New York: Fireside.

Credit card help: The basic fundamentals of credit cards. (n.d.). Retrieved May 9, 2014, from <http://www.creditcards.com/credit-card-news/help/10-ways-students-get-good-credit-6000.php>

Free budget forms. (2014). Retrieved May 9, 2014, from <http://www.daveramsey.com/tools/budget-forms/>

Host a reality fair. (2014). Retrieved May 9, 2014, from <http://www.scholastic.com/teachers/top-teaching/2011/05/host-reality-fair>

~~Personal finance made easy: Pay yourself first. (2009, April 30). Retrieved May 9, 2014, from <http://www.getrichslowly.org/blog/2008/06/16/personal-finance-made-easy-pay-yourself-first/>~~

## **Unit 21**

~~Bridges. (n.d.). Retrieved May 9, 2014, from <http://www.ms.bridges.com/>~~

~~Covey, S. (1998). The 7 habits of highly effective teens. New York: Fireside.~~

~~Personal goal setting: Planning to live your life your way. (2014). Retrieved May 9, 2014, from <http://www.mindtools.com/page6.html>~~

## Appendix B: 21st Century Skills<sup>2</sup>

<b>21<sup>st</sup> Century Crosswalk for Keystone</b>																						
	Units	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21
21 <sup>st</sup> Century Standards																						
CS1		*		*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
CS2							*		*								*				*	
CS3		*	*							*			*		*							
CS4				*							*		*									
CS5		*		*	*											*		*	*			
CS6						*												*				
CS7			*																		*	
CS8		*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
CS9				*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
CS10				*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
CS11				*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
CS12		*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
CS13			*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
CS14		*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
CS15		*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
CS16		*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*

### CSS1-21st Century Themes

#### CS1—Global Awareness

- 4. Using 21st century skills to understand and address global issues
- 5. Learning from and working collaboratively with individuals representing diverse cultures, religions, and lifestyles in a spirit of mutual respect and open dialogue in personal, work, and community contexts
- 6. Understanding other nations and cultures, including the use of non-English languages

#### CS2—Financial, Economic, Business, and Entrepreneurial Literacy

- 4. Knowing how to make appropriate personal economic choices
- 5. Understanding the role of the economy in society
- 6. Using entrepreneurial skills to enhance workplace productivity and career options

#### CS3—Civic Literacy

- 4. Participating effectively in civic life through knowing how to stay informed and understanding governmental processes
- 5. Exercising the rights and obligations of citizenship at local, state, national, and global levels
- 6. Understanding the local and global implications of civic decisions

#### CS4—Health Literacy

- 6. Obtaining, interpreting, and understanding basic health information and services and using such information and services in ways that enhance health
- 7. Understanding preventive physical and mental health measures, including proper diet, nutrition, exercise, risk avoidance, and stress reduction

<sup>2</sup>21st century skills. (n.d.). Washington, DC: Partnership for 21st Century Skills.

- ~~8. Using available information to make appropriate health-related decisions~~
- ~~9. Establishing and monitoring personal and family health goals~~
- ~~10. Understanding national and international public health and safety issues~~

**CS5—Environmental Literacy**

- ~~5. Demonstrate knowledge and understanding of the environment and the circumstances and conditions affecting it, particularly as relates to air, climate, land, food, energy, water, and ecosystems.~~
- ~~6. Demonstrate knowledge and understanding of society’s impact on the natural world (e.g., population growth, population development, resource consumption rate, etc.).~~
- ~~7. Investigate and analyze environmental issues, and make accurate conclusions about effective solutions.~~
- ~~8. Take individual and collective action toward addressing environmental challenges (e.g., participating in global actions, designing solutions that inspire action on environmental issues).~~

**CSS2—Learning and Innovation Skills**

**CS6—Creativity and Innovation**

- ~~4. Think Creatively~~
- ~~5. Work Creatively with Others~~
- ~~6. Implement Innovations~~

**CS7—Critical Thinking and Problem Solving**

- ~~5. Reason Effectively~~
- ~~6. Use Systems Thinking~~
- ~~7. Make Judgments and Decisions~~
- ~~8. Solve Problems~~

**CS8—Communication and Collaboration**

- ~~3. Communicate Clearly~~
- ~~4. Collaborate with Others~~

**CSS3—Information, Media and Technology Skills**

**CS9—Information Literacy**

- ~~3. Access and Evaluate Information~~
- ~~4. Use and Manage Information~~

**CS10—Media Literacy**

- ~~3. Analyze Media~~
- ~~4. Create Media Products~~

**CS11—ICT Literacy**

- ~~2. Apply Technology Effectively~~

**CSS4—Life and Career Skills**

**CS12—Flexibility and Adaptability**

- ~~3. Adapt to change~~
- ~~4. Be Flexible~~

**CS13—Initiative and Self-Direction**

- ~~4. Manage Goals and Time~~

- ~~5. Work Independently~~
- ~~6. Be Self-directed Learners~~
- CS14—Social and Cross-Cultural Skills**
  - ~~3. Interact Effectively with others~~
  - ~~4. Work Effectively in Diverse Teams~~
- CS15—Productivity and Accountability**
  - ~~3. Manage Projects~~
  - ~~4. Produce Results~~
- CS16—Leadership and Responsibility**
  - ~~3. Guide and Lead Others~~
  - ~~4. Be Responsible to Others~~

## Appendix C: Common Core Standards

<b>Common Core Crosswalk for English/Language Arts (11-12)</b>																						
	Units	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21
<b>Common Core Standards</b>																						
RST.11.1.																						
RST.11.2.																						
RST.11.3.		*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
RST.11.4.																						
RST.11.5.																						
RST.11.6.																						
RST.11.7.		*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
RST.11.8.																						
RST.11.9.		*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
RST.11.10.																						
WHST.11.1.		*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
WHST.11.2.		*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
WHST.11.3.																						
WHST.11.4.		*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
WHST.11.5.		*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
WHST.11.6.		*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
WHST.11.7.		*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
WHST.11.8.		*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
WHST.11.9.		*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
WHST.11.10.		*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*

### Reading Standards for Literature (11-12)

#### College and Career Readiness Anchor Standards for Reading Literature

##### Key Ideas and Details

~~RL.11.1. Cite strong and thorough textual evidence to support analysis of what the text says explicitly as well as inferences drawn from the text, including determining where the text leaves matters uncertain.~~

~~RL.11.2. Determine two or more themes or central ideas of a text and analyze their development over the course of the text, including how they interact and build on one another to produce a complex account; provide an objective summary of the text.~~

~~RL.11.3. Analyze the impact of the author’s choices regarding how to develop and relate elements of a story or drama (e.g., where a story is set, how the action is ordered, how the characters are introduced and developed).~~

### Craft and Structure

~~RL.11.4. Determine the meaning of words and phrases as they are used in the text, including figurative and connotative meanings; analyze the impact of specific word choices on meaning and tone, including words with multiple meanings or language that is particularly fresh, engaging, or beautiful. (Include Shakespeare as well as other authors.)~~

~~RL.11.5. Analyze how an author's choices concerning how to structure specific parts of a text (e.g., the choice of where to begin or end a story, the choice to provide a comedic or tragic resolution) contribute to its overall structure and meaning as well as its aesthetic impact.~~

~~RL.11.6. Analyze a case in which grasping point of view requires distinguishing what is directly stated in a text from what is really meant (e.g., satire, sarcasm, irony, or understatement).~~

### Integration of Knowledge and Ideas

~~RL.11.7. Analyze multiple interpretations of a story, drama, or poem (e.g., recorded or live production of a play or recorded novel or poetry), evaluating how each version interprets the source text. (Include at least one play by Shakespeare and one play by an American dramatist.)~~

~~RL.11.8. (Not applicable to literature)~~

~~RL.11.9. Demonstrate knowledge of eighteenth-, nineteenth- and early twentieth-century foundational works of American literature, including how two or more texts from the same period treat similar themes or topics.~~

### Range of Reading and Level of Text Complexity

~~RL.11.10. By the end of grade 11, read and comprehend literature, including stories, dramas, and poems, in the grades 11–CCR text complexity band proficiently, with scaffolding as needed at the high end of the range.~~

~~By the end of grade 12, read and comprehend literature, including stories, dramas, and poems, at the high end of the grades 11–CCR text complexity band independently and proficiently.~~



## **Reading Standards for Informational Text (11–12)**

### **College and Career Readiness Anchor Standards for *Informational Text***

#### Key Ideas and Details

~~RI.11.1. Cite strong and thorough textual evidence to support analysis of what the text says explicitly as well as inferences drawn from the text, including determining where the text leaves matters uncertain.~~

~~RI.11.2. Determine two or more central ideas of a text and analyze their development over the course of the text, including how they interact and build on one another to provide a complex analysis; provide an objective summary of the text.~~

~~RI.11.3. Analyze a complex set of ideas or sequence of events and explain how specific individuals, ideas, or events interact and develop over the course of the text.~~

#### Craft and Structure

~~RI.11.4. Determine the meaning of words and phrases as they are used in a text, including figurative, connotative, and technical meanings; analyze how an author uses and refines the meaning of a key term or terms over the course of a text (e.g., how Madison defines faction in Federalist No. 10).~~

~~RI.11.5. Analyze and evaluate the effectiveness of the structure an author uses in his or her exposition or argument, including whether the structure makes points clear, convincing, and engaging.~~

~~RI.11.6. Determine an author's point of view or purpose in a text in which the rhetoric is particularly effective, analyzing how style and content contribute to the power, persuasiveness, or beauty of the text.~~

#### Integration of Knowledge and Ideas

~~RI.11.7. Integrate and evaluate multiple sources of information presented in different media or formats (e.g., visually, quantitatively) as well as in words in order to address a question or solve a problem.~~

~~RI.11.8. Delineate and evaluate the reasoning in seminal U.S. texts, including the application of constitutional principles and use of legal reasoning (e.g., in U.S. Supreme Court majority opinions and dissents) and the premises, purposes, and arguments in works of public advocacy (e.g., The Federalist, presidential addresses).~~

~~RI.11.9. Analyze seventeenth-, eighteenth-, and nineteenth-century foundational U.S. documents of historical and literary significance (including The Declaration of~~

Independence, the Preamble to the Constitution, the Bill of Rights, and Lincoln's Second Inaugural Address) for their themes, purposes, and rhetorical features.

### Range of Reading and Level of Text Complexity

~~RI.11.10. By the end of grade 11, read and comprehend literary nonfiction in the grades 11–CCR text complexity band proficiently, with scaffolding as needed at the high end of the range.~~

~~By the end of grade 12, read and comprehend literary nonfiction at the high end of the grades 11–CCR text complexity band independently and proficiently.~~

### **College and Career Readiness Anchor Standards for *Writing***

#### Text Types and Purposes

~~W.11.1. Write arguments to support claims in an analysis of substantive topics or texts, using valid reasoning and relevant and sufficient evidence.~~

~~a. Introduce precise, knowledgeable claim(s), establish the significance of the claim(s), distinguish the claim(s) from alternate or opposing claims, and create an organization that logically sequences claim(s), counterclaims, reasons, and evidence.~~

~~b. Develop claim(s) and counterclaims fairly and thoroughly, supplying the most relevant evidence for each while pointing out the strengths and limitations of both in a manner that anticipates the audience's knowledge level, concerns, values, and possible biases.~~

~~c. Use words, phrases, and clauses as well as varied syntax to link the major sections of the text, create cohesion, and clarify the relationships between claim(s) and reasons, between reasons and evidence, and between claim(s) and counterclaims.~~

~~d. Establish and maintain a formal style and objective tone while attending to the norms and conventions of the discipline in which they are writing.~~

~~e. Provide a concluding statement or section that follows from and supports the argument presented.~~

~~W.11.2. Write informative/explanatory texts to examine and convey complex ideas, concepts, and information clearly and accurately through the effective selection, organization, and analysis of content.~~

~~a. Introduce a topic; organize complex ideas, concepts, and information so that each new element builds on that which precedes it to create a unified whole;~~

include formatting (e.g., headings), graphics (e.g., figures, tables), and multimedia when useful to aiding comprehension.

b. Develop the topic thoroughly by selecting the most significant and relevant facts, extended definitions, concrete details, quotations, or other information and examples appropriate to the audience's knowledge of the topic.

c. Use appropriate and varied transitions and syntax to link the major sections of the text, create cohesion, and clarify the relationships among complex ideas and concepts.

d. Use precise language, domain-specific vocabulary, and techniques such as metaphor, simile, and analogy to manage the complexity of the topic.

e. Establish and maintain a formal style and objective tone while attending to the norms and conventions of the discipline in which they are writing.

f. Provide a concluding statement or section that follows from and supports the information or explanation presented (e.g., articulating implications or the significance of the topic).

**W.11.3. Write narratives to develop real or imagined experiences or events using effective technique, well-chosen details, and well-structured event sequences.**

a. Engage and orient the reader by setting out a problem, situation, or observation and its significance, establishing one or multiple point(s) of view, and introducing a narrator and/or characters; create a smooth progression of experiences or events.

b. Use narrative techniques, such as dialogue, pacing, description, reflection, and multiple plot lines, to develop experiences, events, and/or characters

c. Use a variety of techniques to sequence events so that they build on one another to create a coherent whole and build toward a particular tone and outcome (e.g., a sense of mystery, suspense, growth, or resolution).

d. Use precise words and phrases, telling details, and sensory language to convey a vivid picture of the experiences, events, setting, and/or characters.

e. Provide a conclusion that follows from and reflects on what is experienced, observed, or resolved over the course of the narrative.

### Production and Distribution of Writing

**W.11.4. Produce clear and coherent writing in which the development, organization, and style are appropriate to task, purpose, and audience. (Grade-specific expectations for writing types are defined in standards 1–3 above.)**

~~W.11.5. Develop and strengthen writing as needed by planning, revising, editing, rewriting, or trying a new approach, focusing on addressing what is most significant for a specific purpose and audience. (Editing for conventions should demonstrate command of Language standards 1–3 up to and including grades 11–12 on page 54.)~~

~~W.11.6. Use technology, including the Internet, to produce, publish, and update individual or shared writing products in response to ongoing feedback, including new arguments or information.~~

### Research to Build and Present Knowledge

~~W.11.7. 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.~~

~~W.11.8. Gather relevant information from multiple authoritative print and digital sources, using advanced searches effectively; assess the strengths and limitations of each source in terms of the task, purpose, and audience; integrate information into the text selectively to maintain the flow of ideas, avoiding plagiarism and overreliance on any one source and following a standard format for citation.~~

~~W.11.9. Draw evidence from literary or informational texts to support analysis, reflection, and research.~~

~~a. Apply grades 11–12 Reading standards to literature (e.g., “Demonstrate knowledge of eighteenth-, nineteenth- and early twentieth-century foundational works of American literature, including how two or more texts from the same period treat similar themes or topics”).~~

~~b. Apply grades 11–12 Reading standards to literary nonfiction (e.g., “Delineate and evaluate the reasoning in seminal U.S. texts, including the application of constitutional principles and use of legal reasoning [e.g., in U.S. Supreme Court Case majority opinions and dissents] and the premises, purposes, and arguments in works of public advocacy [e.g., The Federalist, presidential addresses]”).~~

### Range of Writing

~~W.11.10. Write routinely over extended time frames (time for research, reflection, and revision) and shorter time frames (a single sitting or a day or two) for a range of tasks, purposes, and audiences.~~

## **College and Career Readiness Anchor Standards for *Speaking and Listening***

### Comprehension and Collaboration

~~SL.11.1. Initiate and participate effectively in a range of collaborative discussions (one-on-one, in groups, and teacher-led) with diverse partners on grades 11–12 topics, texts, and issues, building on others’ ideas and expressing their own clearly and persuasively.~~

~~a. Come to discussions prepared, having read and researched material under study; explicitly draw on that preparation by referring to evidence from texts and other research on the topic or issue to stimulate a thoughtful, well-reasoned exchange of ideas.~~

~~b. Work with peers to promote civil, democratic discussions and decision-making, set clear goals and deadlines, and establish individual roles as needed.~~

~~c. Propel conversations by posing and responding to questions that probe reasoning and evidence; ensure a hearing for a full range of positions on a topic or issue; clarify, verify, or challenge ideas and conclusions; and promote divergent and creative perspectives.~~

~~d. Respond thoughtfully to diverse perspectives; synthesize comments, claims, and evidence made on all sides of an issue; resolve contradictions when possible; and determine what additional information or research is required to deepen the investigation or complete the task.~~

~~SL.11.2. Integrate multiple sources of information presented in diverse formats and media (e.g., visually, quantitatively, orally) in order to make informed decisions and solve problems, evaluating the credibility and accuracy of each source and noting any discrepancies among the data.~~

~~SL.11.3. Evaluate a speaker’s point of view, reasoning, and use of evidence and rhetoric, assessing the stance, premises, links among ideas, word choice, points of emphasis, and tone used.~~

### Presentation of Knowledge and Ideas

~~SL.11.4. Present information, findings, and supporting evidence, conveying a clear and distinct perspective, such that listeners can follow the line of reasoning, alternative or opposing perspectives are addressed, and the organization, development, substance, and style are appropriate to purpose, audience, and a range of formal and informal tasks.~~

~~SL.11.5. 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.~~

~~SL.11.6. Adapt speech to a variety of contexts and tasks, demonstrating a command of formal English when indicated or appropriate. (See grades 11–12 Language standards 1 and 3 on page 54 for specific expectations.)~~

## **College and Career Readiness Anchor Standards for *Language***

### Conventions of Standard English

~~L.11.1. Demonstrate command of the conventions of standard English grammar and usage when writing or speaking.~~

~~a. Apply the understanding that usage is a matter of convention, can change over time, and is sometimes contested.~~

~~b. Resolve issues of complex or contested usage, consulting references (e.g., Merriam-Webster’s Dictionary of English Usage, Garner’s Modern American Usage) as needed.~~

~~L.11.2. Demonstrate command of the conventions of standard English capitalization, punctuation, and spelling when writing.~~

~~a. Observe hyphenation conventions.~~

~~b. Spell correctly.~~

### Knowledge of Language

~~L.11.3. Apply knowledge of language to understand how language functions in different contexts, to make effective choices for meaning or style, and to comprehend more fully when reading or listening.~~

~~a. Vary syntax for effect, consulting references (e.g., Tufte’s Artful Sentences) for guidance as needed; apply an understanding of syntax to the study of complex texts when reading.~~

### Vocabulary Acquisition and Use

~~L.11.4. Determine or clarify the meaning of unknown and multiple-meaning words and phrases based on grades 11–12 reading and content, choosing flexibly from a range of strategies.~~

~~a. Use context (e.g., the overall meaning of a sentence, paragraph, or text; a word’s position or function in a sentence) as a clue to the meaning of a word or phrase.~~

~~b. Identify and correctly use patterns of word changes that indicate different meanings or parts of speech (e.g., conceive, conception, conceivable).~~

~~c. Consult general and specialized reference materials (e.g., dictionaries, glossaries, thesauruses), both print and digital, to find the pronunciation of a word or determine or clarify its precise meaning, its part of speech, its etymology, or its standard usage.~~

~~d. Verify the preliminary determination of the meaning of a word or phrase (e.g., by checking the inferred meaning in context or in a dictionary).~~

~~L.11.5. Demonstrate understanding of figurative language, word relationships, and nuances in word meanings.~~

~~a. Interpret figures of speech (e.g., hyperbole, paradox) in context and analyze their role in the text.~~

~~b. Analyze nuances in the meaning of words with similar denotations.~~

~~L.11.6. Acquire and use accurately general academic and domain-specific words and phrases, sufficient for reading, writing, speaking, and listening at the college and career readiness level; demonstrate independence in gathering vocabulary knowledge when considering a word or phrase important to comprehension or expression.~~

## **Reading Standards for Literacy in History/Social Studies (11-12)**

### Key Ideas and Details

~~RH.11.1. Cite specific textual evidence to support analysis of primary and secondary sources, connecting insights gained from specific details to an understanding of the text as a whole.~~

~~RH.11.2. Determine the central ideas or information of a primary or secondary source; provide an accurate summary that makes clear the relationships among the key details and ideas~~

~~RH.11.3. Evaluate various explanations for actions or events and determine which explanation best accords with textual evidence, acknowledging where the text leaves matters uncertain~~

### Craft and Structure

~~RH.11.4. Determine the meaning of words and phrases as they are used in a text, including analyzing how an author uses and refines the meaning of a key term over the course of a text (e.g., how Madison defines faction in Federalist No. 10).~~

~~RH.11.5. Analyze in detail how a complex primary source is structured, including how key sentences, paragraphs, and larger portions of the text contribute to the whole.~~

~~RH.11.6. Evaluate authors' differing points of view on the same historical event or issue by assessing the authors' claims, reasoning, and evidence.~~

### Integration of Knowledge and Ideas

~~RH.11.7. Integrate and evaluate multiple sources of information presented in diverse formats and media (e.g., visually, quantitatively, as well as in words) in order to address a question or solve a problem.~~

~~RH.11.8. Evaluate an author's premises, claims, and evidence by corroborating or challenging them with other information.~~

~~RH.11.9. Integrate information from diverse sources, both primary and secondary, into a coherent understanding of an idea or event, noting discrepancies among sources.~~

### Range of Reading and Level of Text Complexity

~~RH.11.10. By the end of grade 12, read and comprehend history/social studies texts in the grades 11–CCR text complexity band independently and proficiently.~~

## **Reading Standards for Literacy in Science and Technical Subjects (11–12)**

### Key Ideas and Details

~~RST.11.1. Cite specific textual evidence to support analysis of science and technical texts, attending to important distinctions the author makes and to any gaps or inconsistencies in the account.~~

~~RST.11.2. Determine the central ideas or conclusions of a text; summarize complex concepts, processes, or information presented in a text by paraphrasing them in simpler but still accurate terms.~~

~~RST.11.3. Follow precisely a complex multistep procedure when carrying out experiments, taking measurements, or performing technical tasks; analyze the specific results based on explanations in the text.~~

### Craft and Structure

~~RST.11.4. Determine the meaning of symbols, key terms, and other domain-specific words and phrases as they are used in a specific scientific or technical context relevant to grades 11–12 texts and topics.~~



~~RST.11.5. Analyze how the text structures information or ideas into categories or hierarchies, demonstrating understanding of the information or ideas.~~

~~RST.11.6. Analyze the author's purpose in providing an explanation, describing a procedure, or discussing an experiment in a text, identifying important issues that remain unresolved.~~

### Integration of Knowledge and Ideas

~~RST.11.7. Integrate and evaluate multiple sources of information presented in diverse formats and media (e.g., quantitative data, video, multimedia) in order to address a question or solve a problem.~~

~~RST.11.8. Evaluate the hypotheses, data, analysis, and conclusions in a science or technical text, verifying the data when possible and corroborating or challenging conclusions with other sources of information.~~

~~RST.11.9. Synthesize information from a range of sources (e.g., texts, experiments, simulations) into a coherent understanding of a process, phenomenon, or concept, resolving conflicting information when possible.~~

### Range of Reading and Level of Text Complexity

~~RST.11.10. By the end of grade 12, read and comprehend science/technical texts in the grades 11–CCR text complexity band independently and proficiently.~~

## **Writing Standards for Literacy in History/Social Studies, Science, and Technical Subjects (11-12)**

### Text Types and Purposes

~~WHST.11.1. Write arguments focused on discipline-specific content.~~

~~a. Introduce precise, knowledgeable claim(s), establish the significance of the claim(s), distinguish the claim(s) from alternate or opposing claims, and create an organization that logically sequences the claim(s), counterclaims, reasons, and evidence.~~

~~b. Develop claim(s) and counterclaims fairly and thoroughly, supplying the most relevant data and evidence for each while pointing out the strengths and limitations of both claim(s) and counterclaims in a discipline-appropriate form that anticipates the audience's knowledge level, concerns, values, and possible biases.~~

~~c. Use words, phrases, and clauses as well as varied syntax to link the major sections of the text, create cohesion, and clarify the relationships between claim(s)~~

~~and reasons, between reasons and evidence, and between claim(s) and counterclaims.~~

~~d. Establish and maintain a formal style and objective tone while attending to the norms and conventions of the discipline in which they are writing.~~

~~e. Provide a concluding statement or section that follows from or supports the argument presented.~~

~~WHST.11.2. Write informative/explanatory texts, including the narration of historical events, scientific procedures/experiments, or technical processes.~~

~~a. Introduce a topic and organize complex ideas, concepts, and information so that each new element builds on that which precedes it to create a unified whole; include formatting (e.g., headings), graphics (e.g., figures, tables), and multimedia when useful to aiding comprehension.~~

~~b. Develop the topic thoroughly by selecting the most significant and relevant facts, extended definitions, concrete details, quotations, or other information and examples appropriate to the audience's knowledge of the topic.~~

~~c. Use varied transitions and sentence structures to link the major sections of the text, create cohesion, and clarify the relationships among complex ideas and concepts.~~

~~d. Use precise language, domain-specific vocabulary and techniques such as metaphor, simile, and analogy to manage the complexity of the topic; convey a knowledgeable stance in a style that responds to the discipline and context as well as to the expertise of likely readers.~~

~~e. Provide a concluding statement or section that follows from and supports the information or explanation provided (e.g., articulating implications or the significance of the topic).~~

~~WHST.11.3. (Not applicable as a separate requirement)~~

### Production and Distribution of Writing

~~WHST.11.4. Produce clear and coherent writing in which the development, organization, and style are appropriate to task, purpose, and audience. Produce clear and coherent writing in which the development, organization, and style are appropriate to task, purpose, and audience.~~

~~WHST.11.5. Develop and strengthen writing as needed by planning, revising, editing, rewriting, or trying a new approach, focusing on addressing what is most significant for a specific purpose and audience.~~

~~WHST.11.6. Use technology, including the Internet, to produce, publish, and update individual or shared writing products in response to ongoing feedback, including new arguments or information.~~

#### Research to Build and Present Knowledge

~~WHST.11.7. 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.~~

~~WHST.11.8. Gather relevant information from multiple authoritative print and digital sources, using advanced searches effectively; assess the strengths and limitations of each source in terms of the specific task, purpose, and audience; integrate information into the text selectively to maintain the flow of ideas, avoiding plagiarism and overreliance on any one source and following a standard format for citation.~~

~~WHST.11.9. Draw evidence from informational texts to support analysis, reflection, and research.~~

#### Range of Writing

~~WHST.11.10. Write routinely over extended time frames (time for reflection and revision) and shorter time frames (a single sitting or a day or two) for a range of discipline-specific tasks, purposes, and audiences.~~

## Common Core Crosswalk for Mathematics (11-12)

	Units	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	
<b>Common Core Standards</b>																							
S-IC.1.		*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
S-IC.2.																							
S-IC.3.																							
S-IC.4.		*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
S-IC.5.																							
S-IC.6.		*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
S-CP.1.																							
S-CP.2.																							
S-CP.3.																							
S-CP.4.																							
S-CP.5.				*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
S-CP.6.																							
S-CP.7.																							
S-CP.8.																							
S-CP.9.																							

### Mathematics (High School)

#### Number and Quantity

##### The Real Number System

N-RN.1. Explain how the definition of the meaning of rational exponents follows from extending the properties of integer exponents to those values, allowing for a notation for radicals in terms of rational exponents.

N-RN.2. Rewrite expressions involving radicals and rational exponents using the properties of exponents.

N-RN.3. Explain why the sum or product of two rational numbers is rational; that the sum of a rational number and an irrational number is irrational; and that the product of a nonzero rational number and an irrational number is irrational.

##### Quantities

N-Q.1. Use units as a way to understand problems and to guide the solution of multi-step problems; choose and interpret units consistently in formulas; choose and interpret the scale and the origin in graphs and data displays.

N-Q.2. Define appropriate quantities for the purpose of descriptive modeling.

N-Q.3. Choose a level of accuracy appropriate to limitations on measurement when reporting quantities.

## The Complex Number System

~~N-CN.1. Know there is a complex number  $i$  such that  $i^2 = -1$ , and every complex number has the form  $a + bi$  with  $a$  and  $b$  real.~~

~~N-CN.2. Use the relation  $i^2 = -1$  and the commutative, associative, and distributive properties to add, subtract, and multiply complex numbers.~~

~~N-CN.3. (+) Find the conjugate of a complex number; use conjugates to find moduli and quotients of complex numbers.~~

~~N-CN.4. (+) Represent complex numbers on the complex plane in rectangular and polar form (including real and imaginary numbers), and explain why the rectangular and polar forms of a given complex number represent the same number.~~

~~N-CN.5. (+) Represent addition, subtraction, multiplication, and conjugation of complex numbers geometrically on the complex plane; use properties of this representation for computation. For example,  $(-1 + \sqrt{3}i)^3 = 8$  because  $(-1 + \sqrt{3}i)$  has modulus 2 and argument  $120^\circ$ .~~

~~N-CN.6. (+) Calculate the distance between numbers in the complex plane as the modulus of the difference, and the midpoint of a segment as the average of the numbers at its endpoints.~~

~~N-CN.7. Solve quadratic equations with real coefficients that have complex solutions.~~

~~N-CN.8. (+) Extend polynomial identities to the complex numbers. For example, rewrite  $x^2 + 4$  as  $(x + 2i)(x - 2i)$ .~~

~~N-CN.9. (+) Know the Fundamental Theorem of Algebra; show that it is true for quadratic polynomials.~~

## Vector and Matrix Quantities

~~N-VM.1. (+) Recognize vector quantities as having both magnitude and direction. Represent vector quantities by directed line segments, and use appropriate symbols for vectors and their magnitudes (e.g.,  $\mathbf{v}$ ,  $|\mathbf{v}|$ ,  $\|\mathbf{v}\|$ ,  $v$ ).~~

~~N-VM.2. (+) Find the components of a vector by subtracting the coordinates of an initial point from the coordinates of a terminal point.~~

~~N-VM.3. (+) Solve problems involving velocity and other quantities that can be represented by vectors.~~

~~N-VM.4. (+) Add and subtract vectors~~

~~N-VM.4.a. Add vectors end-to-end, component-wise, and by the parallelogram rule. Understand that the magnitude of a sum of two vectors is typically not the sum of the magnitudes.~~

~~N-VM.4.b. Given two vectors in magnitude and direction form, determine the magnitude and direction of their sum.~~

~~N-VM.4.c. Understand vector subtraction  $v - w$  as  $v + (-w)$ , where  $-w$  is the additive inverse of  $w$ , with the same magnitude as  $w$  and pointing in the opposite direction. Represent vector subtraction graphically by connecting the tips in the appropriate order, and perform vector subtraction component-wise.~~

~~N-VM.5. (+) Multiply a vector by a scalar.~~

~~N-VM.5.a. Represent scalar multiplication graphically by scaling vectors and possibly reversing their direction; perform scalar multiplication component-wise, e.g., as  $c(v_x, v_y) = (cv_x, cv_y)$ .~~

~~N-VM.5.b. Compute the magnitude of a scalar multiple  $cv$  using  $\|cv\| = |c|v\|$ . Compute the direction of  $cv$  knowing that when  $|c|v \neq 0$ , the direction of  $cv$  is either along  $v$  (for  $c > 0$ ) or against  $v$  (for  $c < 0$ ).~~

~~N-VM.6. (+) Use matrices to represent and manipulate data, e.g., to represent payoffs or incidence relationships in a network.~~

~~N-VM.7. (+) Multiply matrices by scalars to produce new matrices, e.g., as when all of the payoffs in a game are doubled.~~

~~N-VM.8. (+) Add, subtract, and multiply matrices of appropriate dimensions.~~

~~N-VM.9. (+) Understand that, unlike multiplication of numbers, matrix multiplication for square matrices is not a commutative operation, but still satisfies the associative and distributive properties~~

~~N-VM.10. (+) Understand that the zero and identity matrices play a role in matrix addition and multiplication similar to the role of 0 and 1 in the real numbers. The determinant of a square matrix is nonzero if and only if the matrix has a multiplicative inverse.~~

~~N-VM.11. (+) Multiply a vector (regarded as a matrix with one column) by a matrix of suitable dimensions to produce another vector. Work with matrices as transformations of vectors.~~

~~N-VM.12. (+) Work with  $2 \times 2$  matrices as transformations of the plane, and interpret the absolute value of the determinant in terms of area.~~

## Algebra

### Seeing Structure in Expressions

~~A-SSE.1. Interpret expressions that represent a quantity in terms of its context.~~

~~A-SSE.1.a. Interpret parts of an expression, such as terms, factors, and coefficients.~~

~~A-SSE.1.b. Interpret complicated expressions by viewing one or more of their parts as a single entity. For example, interpret  $P(1+r)$  as the product of  $P$  and a factor not depending on  $P$ .~~

~~A-SSE.2. Choose and produce an equivalent form of an expression to reveal and explain properties of the quantity represented by the expression.~~

~~A-SSE.3. Choose and produce an equivalent form of an expression to reveal and explain properties of the quantity represented by the expression.~~

~~A-SSE.3.a. Factor a quadratic expression to reveal the zeros of the function it defines.~~

~~A-SSE.3.b. Complete the square in a quadratic expression to reveal the maximum or minimum value of the function it defines.~~

~~A-SSE.3.c. Use the properties of exponents to transform expressions for exponential functions.~~

~~A-SSE.4. Derive the formula for the sum of a finite geometric series (when the common ratio is not 1), and use the formula to solve problems. For example, calculate mortgage payments.~~

### Arithmetic with Polynomials and Rational Expressions

~~A-APR.1. Understand that polynomials form a system analogous to the integers, namely, they are closed under the operations of addition, subtraction, and multiplication; add, subtract, and multiply polynomials~~

~~A-APR.2. Know and apply the Remainder Theorem: For a polynomial  $p(x)$  and a number  $a$ , the remainder on division by  $x - a$  is  $p(a)$ , so  $p(a) = 0$  if and only if  $(x - a)$  is a factor of  $p(x)$ .~~

~~A-APR.3. Identify zeros of polynomials when suitable factorizations are available, and use the zeros to construct a rough graph of the function defined by the polynomial.~~

~~A-APR.4. Prove polynomial identities and use them to describe numerical relationships.~~

~~A-APR.5. (+) Know and apply the Binomial Theorem for the expansion of  $(x + y)^n$  in powers of  $x$  and  $y$  for a positive integer  $n$ , where  $x$  and  $y$  are any numbers, with coefficients determined for example by Pascal's Triangle.~~

~~A-APR.6. Rewrite simple rational expressions in different forms; write  $a(x)/b(x)$  in the form  $q(x) + r(x)/b(x)$ , where  $a(x)$ ,  $b(x)$ ,  $q(x)$ , and  $r(x)$  are polynomials with the degree of  $r(x)$  less than the degree of  $b(x)$ , using inspection, long division, or, for the more complicated examples, a computer algebra system.~~

~~A-APR.7. (+) Understand that rational expressions form a system analogous to the rational numbers, closed under addition, subtraction, multiplication, and division by a nonzero rational expression; add, subtract, multiply, and divide rational expressions.~~

### Creating Equations

~~A-CED.1. Create equations and inequalities in one variable and use them to solve problems. Include equations arising from linear and quadratic functions, and simple rational and exponential functions.~~

~~A-CED.2. Create equations in two or more variables to represent relationships between quantities; graph equations on coordinate axes with labels and scales.~~

~~A-CED.3. Represent constraints by equations or inequalities, and by systems of equations and/or inequalities, and interpret solutions as viable or nonviable options in a modeling context. For example, represent inequalities describing nutritional and cost constraints on combinations of different foods.~~

~~A-CED.4. Rearrange formulas to highlight a quantity of interest, using the same reasoning as in solving equations. For example, rearrange Ohm's law  $V = IR$  to highlight resistance  $R$ .~~

### Reasoning with Equations and Inequalities

~~A-REI.1. Explain each step in solving a simple equation as following from the equality of numbers asserted at the previous step, starting from the assumption that the original equation has a solution. Construct a viable argument to justify a solution method.~~

~~A-REI.2. Solve simple rational and radical equations in one variable, and give examples showing how extraneous solutions may arise.~~

~~A-REI.3. Solve linear equations and inequalities in one variable, including equations with coefficients represented by letters.~~

~~A-REI.4. Solve quadratic equations in one variable.~~



~~A-REI.4.a. Use the method of completing the square to transform any quadratic equation in  $x$  into an equation of the form  $(x - p)^2 = q$  that has the same solutions. Derive the quadratic formula from this form.~~

~~A-REI.4.b. Solve quadratic equations by inspection (e.g., for  $x^2 = 49$ ), taking square roots, completing the square, the quadratic formula and factoring, as appropriate to the initial form of the equation. Recognize when the quadratic formula gives complex solutions and write them as  $a \pm bi$  for real numbers  $a$  and  $b$ .~~

~~A-REI.5. Prove that, given a system of two equations in two variables, replacing one equation by the sum of that equation and a multiple of the other produces a system with the same solutions.~~

~~A-REI.6. Solve systems of linear equations exactly and approximately (e.g., with graphs), focusing on pairs of linear equations in two variables.~~

~~A-REI.7. Solve a simple system consisting of a linear equation and a quadratic equation in two variables algebraically and graphically. For example, find the points of intersection between the line  $y = -3x$  and the circle  $x^2 + y^2 = 3$ .~~

~~A-REI.8. (+) Represent a system of linear equations as a single matrix equation in a vector variable.~~

~~A-REI.9. (+) Find the inverse of a matrix if it exists and use it to solve systems of linear equations (using technology for matrices of dimension  $3 \times 3$  or greater).~~

~~A-REI.10. Understand that the graph of an equation in two variables is the set of all its solutions plotted in the coordinate plane, often forming a curve (which could be a line).~~

~~A-REI.11. Explain why the  $x$ -coordinates of the points where the graphs of the equations  $y = f(x)$  and  $y = g(x)$  intersect are the solutions of the equation  $f(x) = g(x)$ ; find the solutions approximately, e.g., using technology to graph the functions, make tables of values, or find successive approximations. Include cases where  $f(x)$  and/or  $g(x)$  are linear, polynomial, rational, absolute value, exponential, and logarithmic functions.~~

~~A-REI.12. Graph the solutions to a linear inequality in two variables as a half plane (excluding the boundary in the case of a strict inequality), and graph the solution set to a system of linear inequalities in two variables as the intersection of the corresponding half planes.~~

## Functions

### Interpreting Functions

~~F-IF.1. Understand that a function from one set (called the domain) to another set (called the range) assigns to each element of the domain exactly one element of the range. If  $f$  is a function and  $x$  is an element of its domain, then  $f(x)$  denotes the output of  $f$  corresponding to the input  $x$ . The graph of  $f$  is the graph of the equation  $y = f(x)$ .~~

~~F-IF.2. Use function notation, evaluate functions for inputs in their domains, and interpret statements that use function notation in terms of a context.~~

~~F-IF.3. Recognize that sequences are functions, sometimes defined recursively, whose domain is a subset of the integers. For example, the Fibonacci sequence is defined recursively by  $f(0) = f(1) = 1$ ,  $f(n+1) = f(n) + f(n-1)$  for  $n \geq 1$ .~~

~~F-IF.4. For a function that models a relationship between two quantities, interpret key features of graphs and tables in terms of the quantities, and sketch graphs showing key features given a verbal description of the relationship. Key features include: intercepts; intervals where the function is increasing, decreasing, positive, or negative; relative maximums and minimums; symmetries; end behavior; and periodicity.~~

~~F-IF.5. Relate the domain of a function to its graph and, where applicable, to the quantitative relationship it describes. For example, if the function  $h(n)$  gives the number of person-hours it takes to assemble  $n$  engines in a factory, then the positive integers would be an appropriate domain for the function.~~

~~F-IF.6. Calculate and interpret the average rate of change of a function (presented symbolically or as a table) over a specified interval. Estimate the rate of change from a graph.~~

~~F-IF.7. Graph functions expressed symbolically and show key features of the graph, by hand in simple cases and using technology for more complicated cases.~~

~~F-IF.7.a. Graph linear and quadratic functions and show intercepts, maxima, and minima.~~

~~F-IF.7.b. Graph square root, cube root, and piecewise-defined functions, including step functions and absolute value functions.~~

~~F-IF.7.c. Graph polynomial functions, identifying zeros when suitable factorizations are available, and showing end behavior.~~

~~F-IF.7.d. (+) Graph rational functions, identifying zeros and asymptotes when suitable factorizations are available, and showing end behavior.~~

~~F-IF.7.c. Graph exponential and logarithmic functions, showing intercepts and end behavior, and trigonometric functions, showing period, midline, and amplitude.~~

~~F-IF.8. Write a function defined by an expression in different but equivalent forms to reveal and explain different properties of the function.~~

~~F-IF.8.a. Use the process of factoring and completing the square in a quadratic function to show zeros, extreme values, and symmetry of the graph, and interpret these in terms of a context.~~

~~F-IF.8.b. Use the properties of exponents to interpret expressions for exponential functions.~~

~~F-IF.9. Compare properties of two functions each represented in a different way (algebraically, graphically, numerically in tables, or by verbal descriptions). For example, given a graph of one quadratic function and an algebraic expression for another, say which has the larger maximum.~~

### Building Functions

~~F-BF.1. Write a function that describes a relationship between two quantities.~~

~~F-BF.1.a. Determine an explicit expression, a recursive process, or steps for calculation from a context.~~

~~F-BF.1.b. Combine standard function types using arithmetic operations. For example, build a function that models the temperature of a cooling body by adding a constant function to a decaying exponential, and relate these functions to the model.~~

~~F-BF.1.c. (+) Compose functions. For example, if  $T(y)$  is the temperature in the atmosphere as a function of height, and  $h(t)$  is the height of a weather balloon as a function of time, then  $T(h(t))$  is the temperature at the location of the weather balloon as a function of time.~~

~~F-BF.2. Write arithmetic and geometric sequences both recursively and with an explicit formula, use them to model situations, and translate between the two forms.~~

~~F-BF.3. Identify the effect on the graph of replacing  $f(x)$  by  $f(x) + k$ ,  $k f(x)$ ,  $f(kx)$ , and  $f(x + k)$  for specific values of  $k$  (both positive and negative); find the value of  $k$  given the graphs. Experiment with cases and illustrate an explanation of the effects on the graph using technology. Include recognizing even and odd functions from their graphs and algebraic expressions for them.~~

~~F-BF.4. Find inverse functions.~~

~~F-BF.4.a. Solve an equation of the form  $f(x) = c$  for a simple function  $f$  that has an inverse and write an expression for the inverse.~~

~~F-BF.4.b. (+) Verify by composition that one function is the inverse of another.~~

~~F-BF.4.c. (+) Read values of an inverse function from a graph or a table, given that the function has an inverse.~~

~~F-BF.4.d. (+) Produce an invertible function from a non-invertible function by restricting the domain.~~

~~F-BF.5. (+) Understand the inverse relationship between exponents and logarithms and use this relationship to solve problems involving logarithms and exponents.~~

### Linear, Quadratic, and Exponential Models

~~F-LE.1. Distinguish between situations that can be modeled with linear functions and with exponential functions.~~

~~F-LE.1.a. Prove that linear functions grow by equal differences over equal intervals, and that exponential functions grow by equal factors over equal intervals.~~

~~F-LE.1.b. Recognize situations in which one quantity changes at a constant rate per unit interval relative to another.~~

~~F-LE.1.c. Recognize situations in which a quantity grows or decays by a constant percent rate per unit interval relative to another.~~

~~F-LE.2. Construct linear and exponential functions, including arithmetic and geometric sequences, given a graph, a description of a relationship, or two input-output pairs (include reading these from a table).~~

~~F-LE.3. Observe using graphs and tables that a quantity increasing exponentially eventually exceeds a quantity increasing linearly, quadratically, or (more generally) as a polynomial function.~~

~~F-LE.4. For exponential models, express as a logarithm the solution to  $ab^{ct} = d$  where  $a$ ,  $c$ , and  $d$  are numbers and the base  $b$  is 2, 10, or  $e$ ; evaluate the logarithm using technology.~~

~~F-LE.5. Interpret the parameters in a linear or exponential function in terms of a context.~~

## Trigonometric Functions

F-TF.1. Understand radian measure of an angle as the length of the arc on the unit circle subtended by the angle.

F-TF.2. Explain how the unit circle in the coordinate plane enables the extension of trigonometric functions to all real numbers, interpreted as radian measures of angles traversed counterclockwise around the unit circle.

F-TF.3. (+) Use special triangles to determine geometrically the values of sine, cosine, tangent for  $\pi/3$ ,  $\pi/4$  and  $\pi/6$ , and use the unit circle to express the values of sine, cosine, and tangent for  $\pi - x$ ,  $\pi + x$ , and  $2\pi - x$  in terms of their values for  $x$ , where  $x$  is any real number.

F-TF.4. (+) Use the unit circle to explain symmetry (odd and even) and periodicity of trigonometric functions.

F-TF.5. Choose trigonometric functions to model periodic phenomena with specified amplitude, frequency, and midline.

F-TF.6. (+) Understand that restricting a trigonometric function to a domain on which it is always increasing or always decreasing allows its inverse to be constructed.

F-TF.7. (+) Use inverse functions to solve trigonometric equations that arise in modeling contexts; evaluate the solutions using technology, and interpret them in terms of the context.

F-TF.8. Prove the Pythagorean identity  $\sin^2(\theta) + \cos^2(\theta) = 1$  and use it to find  $\sin(\theta)$ ,  $\cos(\theta)$ , or  $\tan(\theta)$  given  $\sin(\theta)$ ,  $\cos(\theta)$ , or  $\tan(\theta)$  and the quadrant of the angle.

F-TF.9. (+) Prove the addition and subtraction formulas for sine, cosine, and tangent and use them to solve problems.

## **Geometry**

### Congruence

G-CO.1. Know precise definitions of angle, circle, perpendicular line, parallel line, and line segment, based on the undefined notions of point, line, distance along a line, and distance around a circular arc.

G-CO.2. Represent transformations in the plane using, e.g., transparencies and geometry software; describe transformations as functions that take points in the plane as inputs and give other points as outputs. Compare transformations that preserve distance and angle to those that do not (e.g., translation versus horizontal stretch).

~~G-CO.3. Given a rectangle, parallelogram, trapezoid, or regular polygon, describe the rotations and reflections that carry it onto itself.~~

~~G-CO.4. Develop definitions of rotations, reflections, and translations in terms of angles, circles, perpendicular lines, parallel lines, and line segments.~~

~~G-CO.5. Given a geometric figure and a rotation, reflection, or translation, draw the transformed figure using, e.g., graph paper, tracing paper, or geometry software. Specify a sequence of transformations that will carry a given figure onto another.~~

~~G-CO.6. Use geometric descriptions of rigid motions to transform figures and to predict the effect of a given rigid motion on a given figure; given two figures, use the definition of congruence in terms of rigid motions to decide if they are congruent.~~

~~G-CO.7. Use the definition of congruence in terms of rigid motions to show that two triangles are congruent if and only if corresponding pairs of sides and corresponding pairs of angles are congruent.~~

~~G-CO.8. Explain how the criteria for triangle congruence (ASA, SAS, and SSS) follow from the definition of congruence in terms of rigid motions.~~

~~G-CO.9. Prove theorems about lines and angles. Theorems include: vertical angles are congruent; when a transversal crosses parallel lines, alternate interior angles are congruent and corresponding angles are congruent; points on a perpendicular bisector of a line segment are exactly those equidistant from the segment's endpoints.~~

~~G-CO.10. Prove theorems about triangles. Theorems include: measures of interior angles of a triangle sum to  $180^\circ$ ; base angles of isosceles triangles are congruent; the segment joining midpoints of two sides of a triangle is parallel to the third side and half the length; the medians of a triangle meet at a point.~~

~~G-CO.11. Prove theorems about parallelograms. Theorems include: opposite sides are congruent, opposite angles are congruent, the diagonals of a parallelogram bisect each other, and conversely, rectangles are parallelograms with congruent diagonals.~~

~~G-CO.12. Make formal geometric constructions with a variety of tools and methods (compass and straightedge, string, reflective devices, paper folding, dynamic geometric software, etc.). Copying a segment; copying an angle; bisecting a segment; bisecting an angle; constructing perpendicular lines, including the perpendicular bisector of a line segment; and constructing a line parallel to a given line through a point not on the line.~~

~~G-CO.13. Construct an equilateral triangle, a square, and a regular hexagon inscribed in a circle.~~

## Similarity, Right Triangles, and Trigonometry

~~G-SRT.1. Verify experimentally the properties of dilations given by a center and a scale factor:~~

~~G-SRT.1.a. A dilation takes a line not passing through the center of the dilation to a parallel line, and leaves a line passing through the center unchanged.~~

~~G-SRT.1.b. The dilation of a line segment is longer or shorter in the ratio given by the scale factor.~~

~~G-SRT.2. Given two figures, use the definition of similarity in terms of similarity transformations to decide if they are similar; explain using similarity transformations the meaning of similarity for triangles as the equality of all corresponding pairs of angles and the proportionality of all corresponding pairs of sides.~~

~~G-SRT.3. Use the properties of similarity transformations to establish the AA criterion for two triangles to be similar.~~

~~G-SRT.4. Prove theorems about triangles. Theorems include: a line parallel to one side of a triangle divides the other two proportionally, and conversely; the Pythagorean Theorem proved using triangle similarity.~~

~~G-SRT.5. Use congruence and similarity criteria for triangles to solve problems and to prove relationships in geometric figures.~~

~~G-SRT.6. Understand that by similarity, side ratios in right triangles are properties of the angles in the triangle, leading to definitions of trigonometric ratios for acute angles.~~

~~G-SRT.7. Explain and use the relationship between the sine and cosine of complementary angles.~~

~~G-SRT.8. Use trigonometric ratios and the Pythagorean Theorem to solve right triangles in applied problems.~~

~~G-SRT.9. (+) Derive the formula  $A = \frac{1}{2} ab \sin(C)$  for the area of a triangle by drawing an auxiliary line from a vertex perpendicular to the opposite side.~~

~~G-SRT.10. (+) Prove the Laws of Sines and Cosines and use them to solve problems.~~

~~G-SRT.11. (+) Understand and apply the Law of Sines and the Law of Cosines to find unknown measurements in right and non-right triangles (e.g., surveying problems; resultant forces).~~

## Circles

~~G-C.1. Prove that all circles are similar.~~

~~G-C.2. Identify and describe relationships among inscribed angles, radii, and chords. Include the relationship between central, inscribed, and circumscribed angles; inscribed angles on a diameter are right angles; the radius of a circle is perpendicular to the tangent where the radius intersects the circle.~~

~~G-C.3. Construct the inscribed and circumscribed circles of a triangle, and prove properties of angles for a quadrilateral inscribed in a circle.~~

~~G-C.4. (+) Construct a tangent line from a point outside a given circle to the circle.~~

~~G-C.5. Derive using similarity the fact that the length of the arc intercepted by an angle is proportional to the radius, and define the radian measure of the angle as the constant of proportionality; derive the formula for the area of a sector.~~

## Expressing Geometric Properties with Equations

~~G-GPE.1. Derive the equation of a circle of given center and radius using the Pythagorean Theorem; complete the square to find the center and radius of a circle given by an equation.~~

~~G-GPE.2. Derive the equation of a parabola given a focus and directrix.~~

~~G-GPE.3. (+) Derive the equations of ellipses and hyperbolas given the foci, using the fact that the sum or difference of distances from the foci is constant.~~

~~G-GPE.4. Use coordinates to prove simple geometric theorems algebraically. For example, prove or disprove that a figure defined by four given points in the coordinate plane is a rectangle; prove or disprove that the point  $(1, \sqrt{3})$  lies on the circle centered at the origin and containing the point  $(0, 2)$ .~~

~~G-GPE.5. Prove the slope criteria for parallel and perpendicular lines and use them to solve geometric problems (e.g., find the equation of a line parallel or perpendicular to a given line that passes through a given point).~~

~~G-GPE.6. Find the point on a directed line segment between two given points that partitions the segment in a given ratio.~~

~~G-GPE.7. Use coordinates to compute perimeters of polygons and areas of triangles and rectangles, e.g., using the distance formula.~~



## Geometric Measurement and Dimension

~~G-GMD.1. Give an informal argument for the formulas for the circumference of a circle, area of a circle, volume of a cylinder, pyramid, and cone. Use dissection arguments, Cavalieri's principle, and informal limit arguments.~~

~~G-GMD.2. (+) Give an informal argument using Cavalieri's principle for the formulas for the volume of a sphere and other solid figures.~~

~~G-GMD.3. Use volume formulas for cylinders, pyramids, cones, and spheres to solve problems.~~

~~G-GMD.4. Identify the shapes of two-dimensional cross-sections of three dimensional objects, and identify three dimensional objects generated by rotations of two dimensional objects.~~

## Modeling with Geometry

~~G-MG.1. Use geometric shapes, their measures, and their properties to describe objects (e.g., modeling a tree trunk or a human torso as a cylinder).~~

~~G-MG.2. Apply concepts of density based on area and volume in modeling situations (e.g., persons per square mile, BTUs per cubic foot).~~

~~G-MG.3. Apply geometric methods to solve design problems (e.g., designing an object or structure to satisfy physical constraints or minimize cost; working with typographic grid systems based on ratios).~~

## **Statistics and Probability**

### Interpreting Categorical and Quantitative Data

~~S-ID.1. Represent data with plots on the real number line (dot plots, histograms, and box plots).~~

~~S-ID.2. Use statistics appropriate to the shape of the data distribution to compare center (median, mean) and spread (interquartile range, standard deviation) of two or more different data sets.~~

~~S-ID.3. Interpret differences in shape, center, and spread in the context of the data sets, accounting for possible effects of extreme data points (outliers).~~

~~S-ID.4. Use the mean and standard deviation of a data set to fit it to a normal distribution and to estimate population percentages. Recognize that there are data sets for which such a procedure is not appropriate.~~

~~Use calculators, spreadsheets, and tables to estimate areas under the normal curve.~~

~~S-ID.5. Summarize categorical data for two categories in two-way frequency tables. Interpret relative frequencies in the context of the data (including joint, marginal, and conditional relative frequencies). Recognize possible associations and trends in the data.~~

~~S-ID.6. Represent data on two quantitative variables on a scatter plot, and describe how the variables are related.~~

~~S-ID.6.a. Fit a function to the data; use functions fitted to data to solve problems in the context of the data. Use given functions or choose a function suggested by the context. Emphasize linear, quadratic, and exponential models.~~

~~S-ID.6.b. Informally assess the fit of a function by plotting and analyzing residuals.~~

~~S-ID.6.c. Fit a linear function for a scatter plot that suggests a linear association.~~

~~S-ID.7. Interpret the slope (rate of change) and the intercept (constant term) of a linear model in the context of the data.~~

~~S-ID.8. Compute (using technology) and interpret the correlation coefficient of a linear fit.~~

~~S-ID.9. Distinguish between correlation and causation.~~

### Making Inferences and Justifying Conclusions

~~S-IC.1. Understand statistics as a process for making inferences about population parameters based on a random sample from that population.~~

~~S-IC.2. Decide if a specified model is consistent with results from a given data-generating process, e.g., using simulation. For example, a model says a spinning coin falls heads up with probability 0.5. Would a result of 5 tails in a row cause you to question the model?~~

~~S-IC.3. Recognize the purposes of and differences among sample surveys, experiments, and observational studies; explain how randomization relates to each.~~

~~S-IC.4. Use data from a sample survey to estimate a population mean or proportion; develop a margin of error through the use of simulation models for random sampling.~~

~~S-IC.5. Use data from a randomized experiment to compare two treatments; use simulations to decide if differences between parameters are significant.~~

~~S-IC.6. Evaluate reports based on data.~~

## Conditional Probability and the Rules of Probability

~~S-CP.1. Describe events as subsets of a sample space (the set of outcomes) using characteristics (or categories) of the outcomes, or as unions, intersections, or complements of other events (“or,” “and,” “not”).~~

~~S-CP.2. Understand that two events A and B are independent if the probability of A and B occurring together is the product of their probabilities, and use this characterization to determine if they are independent.~~

~~S-CP.3. Understand the conditional probability of A given B as  $P(A \text{ and } B)/P(B)$ , and interpret independence of A and B as saying that the conditional probability of A given B is the same as the probability of A, and the conditional probability of B given A is the same as the probability of B.~~

~~S-CP.4. Construct and interpret two-way frequency tables of data when two categories are associated with each object being classified. Use the two-way table as a sample space to decide if events are independent and to approximate conditional probabilities. For example, collect data from a random sample of students in your school on their favorite subject among math, science, and English. Estimate the probability that a randomly selected student from your school will favor science given that the student is in tenth grade. Do the same for other subjects and compare the results.~~

~~S-CP.5. Recognize and explain the concepts of conditional probability and independence in everyday language and everyday situations. For example, compare the chance of having lung cancer if you are a smoker with the chance of being a smoker if you have lung cancer.~~

~~S-CP.6. Find the conditional probability of A given B as the fraction of B’s outcomes that also belong to A, and interpret the answer in terms of the model.~~

~~S-CP.7. Apply the Addition Rule,  $P(A \text{ or } B) = P(A) + P(B) - P(A \text{ and } B)$ , and interpret the answer in terms of the model.~~

~~S-CP.8. (+) Apply the general Multiplication Rule in a uniform probability model,  $P(A \text{ and } B) = P(A)P(B|A) = P(B)P(A|B)$ , and interpret the answer in terms of the model.~~

~~S-CP.9. (+) Use permutations and combinations to compute probabilities of compound events and solve problems.~~

## Using Probability to Make Decisions

~~S-MD.1.(+) Define a random variable for a quantity of interest by assigning a numerical value to each event in a sample space; graph the corresponding probability distribution using the same graphical displays as for data distributions.~~

~~S-MD.2. (+) Calculate the expected value of a random variable; interpret it as the mean of the probability distribution.~~

~~S-MD.3.(+) Develop a probability distribution for a random variable defined for a sample space in which theoretical probabilities can be calculated; find the expected value. For example, find the theoretical probability distribution for the number of correct answers obtained by guessing on all five questions of a multiple-choice test where each question has four choices, and find the expected grade under various grading schemes.~~

~~S-MD.4.(+) Develop a probability distribution for a random variable defined for a sample space in which probabilities are assigned empirically; find the expected value. For example, find a current data distribution on the number of TV sets per household in the United States, and calculate the expected number of sets per household. How many TV sets would you expect to find in 100 randomly selected households?~~

~~S-MD.5. (+) Weigh the possible outcomes of a decision by assigning probabilities to payoff values and finding expected values.~~

~~S-MD.5.a. Find the expected payoff for a game of chance. For example, find the expected winnings from a state lottery ticket or a game at a fast-food restaurant.~~

~~S-MD.5.b. Evaluate and compare strategies on the basis of expected values. For example, compare a high deductible versus a low deductible automobile insurance policy using various, but reasonable, chances of having a minor or a major accident.~~

~~S-MD.6.(+) Use probabilities to make fair decisions (e.g., drawing by lots, using a random number generator).~~

~~S-MD.7. (+) Analyze decisions and strategies using probability concepts (e.g., product testing, medical testing, pulling a hockey goalie at the end of a game).~~

## ~~Appendix D: International Society for Technology in Education (ISTE)~~

<b>ISTE</b>																						
	Units	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21
<b>ISTE Standards</b>																						
<b>T1</b>		*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
<b>T2</b>		*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
<b>T3</b>		*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
<b>T4</b>		*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
<b>T5</b>		*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
<b>T6</b>		*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*

- ~~**T1**—Creativity and Innovation~~
- ~~**T2**—Communication and Collaboration~~
- ~~**T3**—Research and Information Fluency~~
- ~~**T4**—Critical Thinking, Problem Solving, and Decision Making~~
- ~~**T5**—Digital Citizenship~~
- ~~**T6**—Technology Operations and Concepts~~

~~**T1**—Creativity and Innovation~~  
 Students demonstrate creative thinking, construct knowledge, and develop innovative products and processes using technology. Students do the following:

- ~~a.—Apply existing knowledge to generate new ideas, products, or processes.~~
- ~~b.—Create original works as a means of personal or group expression.~~
- ~~c.—Use models and simulations to explore complex systems and issues.~~
- ~~d.—Identify trends and forecast possibilities.~~

~~**T2**—Communication and Collaboration~~  
 Students use digital media and environments to communicate and work collaboratively, including at a distance, to support individual learning and contribute to the learning of others. Students do the following:

- ~~a.—Interact, collaborate, and publish with peers, experts, or others employing a variety of digital environments and media.~~
- ~~b.—Communicate information and ideas effectively to multiple audiences using a variety of media and formats.~~
- ~~c.—Develop cultural understanding and global awareness by engaging with learners of other cultures.~~
- ~~d.—Contribute to project teams to produce original works or solve problems.~~

**T3**—~~Research and Information Fluency~~

~~Students apply digital tools to gather, evaluate, and use information. Students do the following:~~

- ~~a. Plan strategies to guide inquiry.~~
- ~~b. Locate, organize, analyze, evaluate, synthesize, and ethically use information from a variety of sources and media.~~
- ~~c. Evaluate and select information sources and digital tools based on the appropriateness to specific tasks.~~
- ~~d. Process data and report results.~~

**T4**—~~Critical Thinking, Problem Solving, and Decision Making~~

~~Students use critical thinking skills to plan and conduct research, manage projects, solve problems, and make informed decisions using appropriate digital tools and resources. Students do the following:~~

- ~~a. Identify and define authentic problems and significant questions for investigation.~~
- ~~b. Plan and manage activities to develop a solution or complete a project.~~
- ~~c. Collect and analyze data to identify solutions and/or make informed decisions.~~
- ~~d. Use multiple processes and diverse perspectives to explore alternative solutions.~~

**T5**—~~Digital Citizenship~~

~~Students understand human, cultural, and societal issues related to technology and practice legal and ethical behavior. Students do the following:~~

- ~~a. Advocate and practice safe, legal, and responsible use of information and technology.~~
- ~~b. Exhibit a positive attitude toward using technology that supports collaboration, learning, and productivity.~~
- ~~c. Demonstrate personal responsibility for lifelong learning.~~
- ~~d. Exhibit leadership for digital citizenship.~~

**T6**—~~Technology Operations and Concepts~~

~~Students demonstrate a sound understanding of technology concepts, systems, and operations. Students do the following:~~

- ~~a. Understand and use technology systems.~~
- ~~b. Select and use applications effectively and productively.~~
- ~~c. Troubleshoot systems and applications.~~
- ~~d. Transfer current knowledge to learning of new technologies.~~