2025 Fire Science

Program CIP: 43.0203 Fire Science/Firefighting

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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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Acknowledgments

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Dr. Lance Evans, State Superintendent of Education, Executive Secretary
Mr. Glen V. East, Chair
Mr. Matt Miller, Vice-Chair
Dr. Ronnie L. McGehee
Mr. Bill Jacobs
Mr. Mike Pruitt
Ms. Mary Werner
Dr. Wendi Barrett
Ms. Billye Jean Stroud
Mr. Matt Mayo
Ms. Kate Riddle, Student Representative
Mr. Crosby Parker, Student Representative

The following Mississippi Department of Education (MDE) and RCU managers and specialists assisted in the development of the Fire Science curriculum:

Brett Robinson, the associate state superintendent of the MDE Office of Career and Technical Education (CTE) and Workforce Development, supported the RCU and teachers throughout the development of the framework and supporting materials.
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Danny Pannell, Desoto County Career and Technology Center, Olive Branch
Christopher White, Career Development Center, Jackson

Standards

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 Fire Science curriculum is aligned to the following standards:

National Emergency Medical Services (EMS Educational Standards)
The National EMS Education Standards (the Standards) outline the minimal terminal objectives for entry-level EMS personnel to achieve within the parameters outlined in the National EMS Scope of Practice Model. Permission is not required for public-use domain items. U.S. Department of Transportation. (2009). National EMS Educational Standards. Washington, D.C. Reprinted from https://www.ems.gov/assets/EMS_Education-Standards_2021_FNL.pdf.

College and Career-Ready Standards
The College and Career-Ready 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 the *Mississippi College- and Career-Ready Standards* (MS CCRS) because they provide a consistent, clear understanding of what students are expected to learn so that teachers and parents know what they need to do to help them. Reprinted from mdek12.org/OAE/college-and-career-readiness-standards

International Society for Technology in Education Standards (ISTE)
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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.
battelleforkids.org/networks/p21/frameworks-resources

Preface

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

The following are resources for Mississippi teachers:

Curriculum, Assessment, Professional Learning
: Program resources can be found at the RCU's website, 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, contact the RCU at 662.325.2510 or helpdesk@rcu.msstate.edu.

Executive Summary

Pathway Description
Fire Science is a two-year instructional program that develops future leaders and officers in the fire science field. The classroom concepts include hands-on experiences and projects intended to equip students to enter occupations such as emergency/disaster management, firefighting, fire inspection/investigation, and the medical field. Upon completion of the two-year program, graduates may obtain entry-level employment or further pursue the field within a postsecondary program.

College, Career, and Certifications
There are three certifications that could be attained with this curriculum. Students will be adequately prepared to meet the requirements of each.

- FEMA National Incident Management System (NIMS)—measures incident-management competence
- Community Emergency Response Teams (CERT)—educates participants about disaster preparedness
- Presidential Youth Fitness Program—measures physical fitness through benchmarks; students must score at or above the 85th percentile on all required activities.

Grade Level and Class Size Recommendations
It is recommended that students enter this program as a 10th grader. Exceptions to this are a district-level decision based on class size, enrollment numbers, student maturity, and CTE delivery method. This is a hands-on, lab- or shop-based course. Therefore, a maximum of 15 students is recommended per class with only one class with the teacher at a time.

Student Prerequisites
The following prerequisites are suggested for students to experience success in the program:

1. C or higher in English (the previous year)
2. C or higher in math (last course taken or the instructor can specify the math)
3. Instructor approval and TABE reading score (eighth grade or higher)
4. 10th grade level or higher

or

1. TABE reading score (eighth grade or higher)
2. Instructor approval

or

1. Instructor approval

Assessment
The latest assessment blueprint for the curriculum can be found at:
https://www.rcu.msstate.edu/curriculum

Applied Academic Credit
The latest academic credit information can be found at:
mdek12.org/ese/approved-course-for-the-secondary-schools.

Teacher Licensure
The latest teacher licensure information can be found at:
mdek12.org/oel/apply-for-an-educator-license.

Professional Learning
If you have specific questions about the content of any training sessions provided, please contact the RCU at 662.325.2510 or helpdesk@rcu.msstate.edu.

Course Outlines

Option 1—Four 1-Carnegie Unit Courses

This curriculum consists of four 1-credit courses, which should be completed in the following sequence:

1. **Fundamentals of Fire Science—Course Code: 991052**
2. **Beginning Fire Science—Course Code: 991053**
3. **Intermediate Fire Science—Course Code: 991054**
4. **Advanced Fire Science—Course Code: 991055**

Course Description: Fundamentals of the Fire Science
The Fundamentals of Fire Science introduces the basic requirements and skills for becoming a firefighter and obtaining employment in fire science. Students are also introduced to the history and mission of the fire service. Additionally, students will learn various functions and roles in a typical fire service.

Course Description: Beginning Fire Science
The Beginning Fire Science course provides students with the knowledge to describe, identify, and demonstrate the proper operation of various personal and protective fire service equipment. In addition to protective equipment, students will discuss and demonstrate the proper use, maintenance, and care of field equipment.

Course Description: Intermediate Fire Science
The Intermediate Fire Science course provides students with the opportunity to gain in-depth knowledge about search and rescue techniques and the science of fire. Firefighter safety is an important aspect of this course.

Course Description: Advanced Fire Science
The Advanced Fire Science course engages students in the physical requirements of being a firefighter. Students will individually demonstrate the physical ability activities. This course also provides students with the opportunity to gain knowledge about emergency medical response and patient care.

Fundamentals of Fire Science – Course Code: 991052

Unit	Unit Name	Hours
1	Introduction into the Fire Service	15
2	Physical Ability Test for the Fire Service	25
3	Organization and History of the Fire Service	15
4	Firefighter Safety, Personal Protective Equipment, and Self-Contained Breathing Apparatus	30
5	Fire Service Communications	15
6	Introduction to the Incident Command System (ICS)	15
7	Building Construction and Pre-Incident Plans	25
Total		**140**

Beginning Fire Science – Course Code: 991053

8	Response and Size-Up	20
9	Introduction to Tools and Equipment on the Apparatus	20
10	Water Supply, Hoses, and Nozzles	20
11	Fire Behavior and Ventilation	40
12	Portable Fire Extinguishers and Fire Suppression	40
Total		**140**

Intermediate Fire Science– Course Code: 991054

13	Forcible Entry	15
14	Search and Rescue	45
15	Firefighter Survival	45
16	Introduction to Ladders	15
17	Vehicle Fires and Vehicle Extrication	20
Total		**140**

Advanced Fire Science – Course Code: 991055

18	Introduction to Ropes	35
19	Awareness of Hazardous Materials	35
20	CPR and Emergency Medical Care	35
21	Fire Prevention Programs	20
22	Introduction to a Community Emergency Response Team (CERT)	15
Total		**140**

Option 2—Two 2-Carnegie Unit Courses

This curriculum consists of two 2-credit courses, which should be completed in the following sequence:

1. **Fire Science I—Course Code: 991050**
2. **Fire Science II—Course Code: 991051**

Course Description: Fire Science I
The Fire Science I course is an entry-level course. Students gain foundational competencies related to the organization of the fire service and the basic introduction to fire equipment and use. Students receive hands-on experiences.

Course Description: Fire Science II
Fire Science II provides students with the opportunity to gain advanced knowledge and skills to function as a firefighter and emergency responder. Students receive advanced hands-on experiences.

Fire Science I– Course Code: 991050

Unit	Unit Name	Hours
1	Introduction into the Fire Service	15
2	Physical Ability Test for the Fire Service	25
3	Organization and History of the Fire Service	15
4	Firefighter Safety, Personal Protective Equipment, and Self-Contained Breathing Apparatus	30
5	Fire Service Communications	15
6	Introduction to the Incident Command System (ICS)	15
7	Building Construction and Pre-Incident Plans	25
8	Response and Size-Up	20
9	Introduction to Tools and Equipment on the Apparatus	20
10	Water Supply, Hoses, and Nozzles	20
11	Fire Behavior and Ventilation	40
12	Portable Fire Extinguishers and Fire Suppression	40
Total		**280**

Fire Science II– Course Code: 991051

13	Forcible Entry	15
14	Search and Rescue	45
15	Firefighter Survival	45
16	Introduction to Ladders	15
17	Vehicle Fires and Vehicle Extrication	20
18	Introduction to Ropes	35
19	Awareness of Hazardous Materials	35
20	CPR and Emergency Medical Care	35
21	Fire Prevention Programs	20

22	Introduction to a Community Emergency Response Team (CERT)	15
Total		**280**

Career Pathway Outlook

Overview

Fire Science focuses on all aspects of fire, such as fire behavior and investigation. Fire Science-related professionals must exhibit the following characteristics: communication skills, compassion, decision-making skills, mental preparedness, physical stamina, and physical strength. Becoming a firefighter is one of several fire science-related career choices. These professionals serve as first responders during accidents, natural disasters, and other emergencies. They routinely respond to emergencies by putting out fires using water hoses, fire extinguishers, and water pumps. Finding and rescuing occupants of burning buildings or other emergencies and treating those who are sick or injured are expectations that the public has of firefighters, as well as routinely inspecting equipment and preparing written reports. Students interested in this full-time position will need to understand the technical demands and how to manage the stressors encountered while on duty. Students could pursue postsecondary level training to become one or more of the following: firefighter, fire inspector, corporate safety officer, fire prevention specialist, fire investigator, and emergency management director.

Most careers in fire science require a high school diploma. However, careers with the highest earning potential—Fire Inspectors and Fire Chiefs, for example—usually require more advanced degrees and specific certifications. Firefighters may be promoted to engineer, lieutenant, captain, battalion chief, assistant chief, deputy chief, and fire chief. Promotion to positions beyond battalion chief may require a bachelor's degree, preferably in Fire Science, Public Administration, or a related field.

Needs of the Future Workforce

According to the U.S. Bureau of Labor Statistics, employment of firefighters is projected to grow 4% through 2031, and nearly 28,000 openings are projected each year, on average, over the decade. The median annual wage for firefighters was $50,700 in 2021. The median annual wage at that time for fire inspectors and investigators was $64,000, and nearly 1,800 openings are projected each year on average through 2031. The employment of public safety telecommunicators is projected to grow by 4 percent through 2031, and about 10,900 openings are projected each year through 2031. The data in Table 1.1 below, including the average hourly earnings, was compiled from the Mississippi Department of Employment Security in 2024.

Table 1.1: Current and Projected Occupation Report

Description	Jobs, 2020	Projected Jobs, 2030	Change (Number)	Change (Percent)	Average Hourly Earnings, 2024
First-Line Supervisors of Firefighting and Prevention Workers	1,290	1,410	120	9.3%	$22.26
Firefighters	3,620	4,020	400	11%	$15.80
Fire Inspectors and Investigators	50	60	10	20%	$24.57
Forest Fire Inspectors and Prevention Specialists	210	240	30	14.3%	$14.59

Police, Fire, and Ambulance Dispatchers	1,400	1,530	130	9.3%	$21.96

Sources: Mississippi Department of Employment Security, mdes.ms.gov (2024).

Perkins V Requirements and Academic Infusion

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

Best Practices

Innovative Instructional Technologies

Classrooms should be equipped with tools that will teach today's digital learners through applicable and modern practices. The Fire Science educator'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, for example—create unique learners. By providing various teaching and assessment strategies, students with various learning preferences can have more opportunities to succeed.

CTE Student Organizations

Teachers should investigate opportunities to sponsor a student organization. SkillsUSA is an example of a student organization with many outlets for fire science. Student organizations provide participants and members with growth opportunities and competitive events. They also open the doors to the world of fire science 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 Fire Science 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 Fire Science curriculum provides opportunities for students to work together and help each other complete complex tasks. There are many field experiences within the Fire Science curriculum that will allow and encourage collaboration with professionals currently in the fire science field.

Work-Based Learning

Work-based learning is an extension of understanding competencies taught in the Fire Science 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 fire science professionals. Thus, supervised collaboration and immersion in the fire science industry around the students are keys to students' success, knowledge, and skills development.

Professional Organizations

Exploring: Learning for Life
exploring.learningforlife.org

International Association of Fire Fighters (IAFF)
iaff.org

SkillsUSA
skillsusa.org

Using This Document

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
All teachers should request to be added to the Canvas Resource Guide for their course. For questions or to be added to the guide, send a Help Desk ticket to the RCU by emailing helpdesk@rcu.msstate.edu.

Perkins V Quality Indicators and Enrichment Material
Some of the units may include an enrichment section at the end. This material will greatly enhance the learning experiences of students. If the Fire Science program is using a national certification, work-based learning, or another measure of accountability that aligns with Perkins V as a quality indicator, this material could very well be assessed on that quality indicator. It is the responsibility of the teacher to ensure all competencies for the selected quality indicator are covered throughout the year.

Unit 1: Introduction to the Fire Service

Competencies and Suggested Objectives
1. Discuss the educational and physical requirements for becoming a firefighter in the state of Mississippi. DOK1 a. Explain the minimum educational requirements for employment in the fire service. • Possess a high school diploma or general education diploma • Correct usage of grammar, spelling, and proper writing techniques • Correct usage of mathematics, specifically fundamental math skills and algebra • The ability to operate and learn existing/new firefighting technologies b. Describe the minimum physical requirements for employment in the fire service as dictated by the Mississippi Trainee Agility Test (MSTAT). c. Describe the employability skills necessary for employment in the fire service (e.g., being well-groomed, having interpersonal skills, and working well with others).
2. Discuss the earnings, promotional tracks, and career opportunities available in the fire service (e.g., emergency medical technician basics, EMT paramedics, fire officers, firefighters). DOK1
3. Research, create, and present a portfolio for a chosen career, including the items below, demonstrating the required educational, physical, and professional qualifications necessary. DOK4 a. Cover letter b. Job application c. Résumé
4. Students take the safety test for this course, with 100% mastery required for all students. DOK1
5. Research the student organizations associated with fire science (e.g., SkillsUSA). DOK1

Note: Safety is to be taught as an ongoing part of the program. Students are required to complete a written safety test with 100% accuracy before entering the shop for lab simulations and projects. This test should be documented in each student's file.

Unit 2: Physical Ability Test for the Fire Service

Competencies and Suggested Objectives
1. Explain the importance of being physically fit for duty in the fire service. DOK1
2. Explore ways to adapt to physically strenuous and hazardous environments in the fire service. DOK2
3. Examine the importance of proper hydration and nutrition in the fire service. DOK1
4. Demonstrate and maintain the minimum standards for a physical ability test as dictated by the MSTAT. DOK2 a. Ability to run 1.5 miles in 14 minutes or step mill for 3 minutes, 20 seconds b. Ability to carry 70 pounds for 75 feet c. Pull uncharged hose for 75 feet d. Drag a 175-pound rescue randy for 75 feet for a total of 90 seconds e. Perform an evacuation walk with a 50-foot roll of 1 3/4-inch hose for 400 yards ** *These requirements must be maintained throughout your career due to the physical nature of the fire service.*

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Unit 3: Organization and History of the Fire Service

Competencies and Suggested Objectives
1. Describe the foundation of the American Fire Service. DOK2 a. Explore the creation and operation of the first volunteer service. b. Explain the transition from volunteer fire services to paid, full-time services. c. Discuss the great fires and emergency events of the United States and their impact on the fire service. • The Great Chicago Fire • Wildfires • 9/11 or other terrorist events • Natural disasters • Station Nightclub fire d. Examine the impact of technology on the fire service.
2. Discuss the mission of the fire service. DOK2 a. Meet with local fire service office(s) and explore their mission statement(s). b. Explore the mission of the fire service through the advancement of technologies. c. Explore the National Fire Protection Association (NFPA) codes and standards (e.g., 1001-1, Firefighter I and 1001-2, Firefighter II).
3. Identify the divisions of labor, unity of command, and span of control required to successfully accomplish the mission of the fire service. DOK2 a. Explore how the divisions of labor are broken down into smaller tasks to accomplish larger, more complex actions and goals. b. Investigate how unity of command provides structure within the fire service to reduce conflicts and improve the quality of fire services provided. c. Explain how the span of control (typically 3-5 subordinates per person) creates improved unity of command, divisions of labor usage, and overall quality of fire services.
4. Explore the chain of command and discuss different duties in a typical fire service. DOK2 a. Fire chief, including their reporting authority (i.e., municipal, county, state, and federal officials) b. Deputy chiefs c. Fire marshal d. Investigative branch e. Training officer f. Safety officer g. Battalion chief h. Company officer i. Firefighter
5. Examine the various types and roles of specialized response units. DOK2 a. Hazmat technician b. Technical rescue technician c. Dive rescue technicians d. Emergency Medical Services (EMS) personnel

6. Identify and examine the various fire service apparatuses, highlighting the advantages and disadvantages of each. DOK2
   a. Engine
   b. Ladder
   c. Wildland vehicles
   d. Tankers
   e. Command vehicles
   f. Rescue vehicles
   g. EMS vehicles
   h. Urban Search and Rescue (USAR) and Overland Search and Rescue (OSAR)

Note: Safety is to be taught as an ongoing part of the program. Students are required to complete a written safety test with 100% accuracy before entering the shop for lab simulations and projects. This test should be documented in each student's file.

Unit 4: Firefighter Safety, Personal Protective Equipment, and Self-Contained Breathing Apparatus

Competencies and Suggested Objectives
1. Discover safety organizations. (e.g., Occupational Safety and Health Administration [OSHA] and National Fire Protection Association [NFPA]) DOK1
2. Discuss the importance of scene safety from the below perspectives. DOK2 a. Cause of death and injury prevention b. Safety during training c. Safety during emergency response d. Safe driving practices e. Safety at emergency incidents f. Safety at the fire station g. Safety outside your workplace
3. Describe and utilize the various fire service Personal Protective Equipment (PPE). DOK2 a. Structural firefighting PPE b. Wildland PPE c. Hazardous materials PPE d. Emergency medical services PPE
4. Describe the proper usage of structural firefighting PPE. DOK2 a. Demonstrate proper turn-out drill technique according to NFPA 1001-1 and 1001-2 standards.
5. Discuss the maintenance and care of structural firefighting PPE according to manufacturer recommendations to ensure safe operation. DOK1
6. Describe, identify, and demonstrate the proper operation of the various components of a Self-Contained Breathing Apparatus (SCBA). DOK2
7. Discuss and demonstrate the proper maintenance and care of a SCBA according to manufacturer recommendations to ensure safe operation. DOK2
8. Discuss and demonstrate the various breathing techniques utilized to extend the bottle time of a SCBA. DOK2
9. Demonstrate a standard air consumption test utilizing a SCBA. DOK2

Note: Safety is to be taught as an ongoing part of the program. Students are required to complete a written safety test with 100% accuracy before entering the shop for lab simulations and projects. This test should be documented in each student's file.

Unit 5: Fire Service Communications

Competencies and Suggested Objectives
1. Discuss the Communications Center. DOK1 a. Telecommunicators b. Communications center c. Computer Aided Dispatch (CAD) d. Call Response and Dispatch
2. Explain the communication center operations in the fire service. DOK1 a. Receiving and dispatching emergency calls b. Location validation c. Call classification and prioritization d. Unit selection e. Dispatch
3. Discuss the radio equipment and radio operations in the fire service. DOK1 a. Radio equipment b. Operations c. Using a radio

Note: Safety is to be taught as an ongoing part of the program. Students are required to complete a written safety test with 100% accuracy before entering the shop for lab simulations and projects. This test should be documented in each student's file.

Unit 6: Introduction to the Incident Command System (ICS)

Competencies and Suggested Objectives
1. Explore the key components of the ICS and how they function as a unit to provide scene management, especially for large, prolonged accidents. DOK2 a. Command b. Operations c. Planning d. Logistics e. Finance/Administration
2. Review standard operating guidelines and procedures. DOK1 a. Identify and review the differences between guidelines and procedures in the fire service.
3. Identify the divisions of labor, unity of command, and span of control required to successfully accomplish the mission of the fire service. DOK2 a. Explore how the divisions of labor are broken down into smaller tasks to accomplish larger, more complex actions and goals. b. Investigate how unity of command provides structure within the fire service to reduce conflicts and improve the quality of fire services provided. c. Explain how the span of control (typically 3-5 subordinates per person) creates improved unity of command, divisions of labor usage, and overall quality of fire services.
4. Discuss the importance of proper communication between the branches of ICS. DOK1 a. Transfer of command
5. Explain the jurisdictional boundaries of a fire service and how mutual aid interactions allow for cooperation between different entities. DOK 2
6. Explore the framework of the Federal Emergency Management Agency (FEMA) and the National Incident Management System (NIMS) (IS100, IS200, IS700, IS800). DOK1

Note: Safety is to be taught as an ongoing part of the program. Students are required to complete a written safety test with 100% accuracy before entering the shop for lab simulations and projects. This test should be documented in each student's file.

Unit 7: Building Construction and Pre-Incident Plans

Competencies and Suggested Objectives
1. Identify and describe the various types of building materials (e.g., masonry, concrete, steel, wood). DOK1
2. Explain the different construction types. DOK1 a. Type I (fire-resistant) b. Type II (non-combustible) c. Type III (ordinary) d. Type IV (heavy timber) e. Type V (wood frame)
3. Identify and describe the different building components (e.g., foundation, walls, roofs). DOK1
4. Compare and contrast modern construction and legacy construction. DOK3 a. Balloon frame
5. Explain the purpose of pre-incident plans. DOK3 a. Examine the purpose of pre-incident plans in relation to the responders. b. Examine the purpose of pre-incident plans in relation to the citizens. c. Create and present a pre-incident plan for a local facility.

Note: Safety is to be taught as an ongoing part of the program. Students are required to complete a written safety test with 100% accuracy before entering the shop for lab simulations and projects. This test should be documented in each student's file.

Unit 8: Response and Size-Up

Competencies and Suggested Objectives
1. Explain the initial practices of an emergency response. DOK2 a. Explain how fire stations process typical dispatch information. b. Discuss how to safely ride a fire apparatus. c. Describe how to manage traffic at an emergency scene. d. Discuss the actions firefighters must take when arriving at an emergency scene. e. Describe how to shut off a structure's utilities.
2. Discuss the purpose and process of a size-up. DOK2 a. Describe the processes of performing an initial size-up. b. Discuss probabilities and facts. c. Explain how the size-up process determines the incident accident plan. d. Examine the five objectives of an incident accident plan. e. Discuss the offensive and defensive fire attacks.

Note: Safety is to be taught as an ongoing part of the program. Students are required to complete a written safety test with 100% accuracy before entering the shop for lab simulations and projects. This test should be documented in each student's file.

Unit 9: Introduction to Tools and Equipment on the Apparatus

Competencies and Suggested Objectives
1. Discuss and demonstrate the proper operation of tools and equipment. DOK2 a. Rope b. Forcible entry tools c. Overhaul tools d. Hydraulic tools e. Power tools
2. Explore the importance of tool maintenance and care. DOK1

Note: Safety is to be taught as an ongoing part of the program. Students are required to complete a written safety test with 100% accuracy before entering the shop for lab simulations and projects. This test should be documented in each student's file.

Unit 10: Water Supply, Hoses, and Nozzles

Competencies and Suggested Objectives
1. Describe the equipment and procedures utilized to access static water sources. DOK1
2. Describe the characteristics of mobile water supply apparatuses. DOK1
3. Explain how municipal water systems supply water to communities. DOK2
4. Describe the characteristics of wet and dry barrel hydrants. DOK1
5. Explain the principles of fire hydraulics. DOK2
6. Explain how friction loss and elevation affect water pressure. DOK2
7. Describe how to prevent water hammer. DOK1
8. Describe the characteristics and uses of small and large-diameter hoses. DOK1
9. Discuss the characteristics and uses of attack and supply hoses. DOK1
10. Identify the common types of couplings. DOK1 a. Threaded couplings b. Storz-type couplings
11. Describe the uses of reducers and appliances. DOK1
12. Describe and demonstrate how to operate a fire hydrant and connect a supply line to a hydrant. DOK2
13. Describe how to unload a fire hose. DOK2 a. Demonstrate the proper technique for unloading a single lay and a triple lay.
14. Describe and demonstrate a proper hose drag. DOK2
15. Describe and demonstrate how to replace a damaged hose line. DOK2
16. Describe and demonstrate how to drain a fire hose. DOK2
17. Demonstrate the various types of hose rolls/lays. DOK2 a. Donut roll b. Self-locking donut roll c. Twin donut roll d. Single lay e. Triple lay
18. Examine the different types of appliances and demonstrate proper maintenance and care of the appliances. DOK1 a. Wyes b. Siamese c. Gate valves d. Master streams
19. Discuss the various types of nozzles and demonstrate proper maintenance and care of the nozzles. DOK1 a. Fog nozzle b. Smooth bore nozzle c. Piercing nozzle d. Cellar nozzle

Note: Safety is to be taught as an ongoing part of the program. Students are required to complete a written safety test with 100% accuracy before entering the shop for lab simulations and projects. This test should be documented in each student's file.

Unit 11: Fire Behavior and Ventilation

Competencies and Suggested Objectives
1. Describe the chemistry of fire. DOK1 a. Solid b. Liquid c. Gas
2. Identify the five forms of energy. DOK1 a. Chemical b. Mechanical c. Electrical d. Nuclear e. Light
3. Explain the concept of the fire triangle and fire tetrahedron. DOK2 a. Triangle: oxygen, fuel, and heat b. Tetrahedron: oxygen, fuel, heat, and chemical chain reaction
4. Describe the by-products of combustion. DOK1
5. Explain how fires are spread DOK2 a. Direct contact b. Conduction c. Convection d. Radiation
6. Describe the four methods of extinguishing a fire. DOK1 a. Cool the burning material b. Exclude oxygen from the fire c. Remove fuel from the fire d. Interrupt the chemical chain reaction
7. Identify the various classes of fires. DOK1 a. Class A (ordinary) b. Class B (flammable fuels) c. Class C (electricity) d. Class D (metals) e. Class K (grease)
8. Describe the four phases of solid fuel fires. DOK1 a. Ignition phase b. Growth phase c. Fully developed phase d. Decay phase
9. Describe the conditions that lead to flameover, flashover, and backdraft. DOK1
10. Describe the process of reading smoke. DOK1
11. Explore how wind effect impacts fire behavior (e.g., wind speed, direction). DOK1
12. Demonstrate the three types of ventilation techniques. DOK2 a. Natural b. Mechanical c. Hydraulic

13. Explain the difference between vent-limited fires and fuel-limited fires. DOK2
14. Describe how ventilation operations affect flow paths. DOK1
15. Describe the two different types of ventilation. DOK1 a. Horizontal ventilation b. Vertical ventilation

Note: Safety is to be taught as an ongoing part of the program. Students are required to complete a written safety test with 100% accuracy before entering the shop for lab simulations and projects. This test should be documented in each student's file.

Unit 12: Portable Fire Extinguishers and Fire Suppression

Competencies and Suggested Objectives
1. Discuss fire suppression size-up and demonstrate performing a fire ground size-up. DOK2 a. Construction type b. Stage of the fire c. Offensive attack vs. Defensive attack
2. Describe the methods of fire extinguishment. DOK1 a. Cooling off the fuel b. Cutting off the supply of oxygen c. Interrupting the chemical chain reaction
3. Describe the primary purpose of portable fire extinguishers. DOK1
4. Explain the classification and rating system for portable fire extinguishers based on both the traditional lettering system and pictographs. DOK1 a. Class A b. Class B c. Class C d. Class D e. Class K
5. Describe the different types of extinguishing agents. DOK1 a. Water b. Dry chemical c. Carbon dioxide d. Foam e. Wet chemicals f. Halogenated agents g. Dry powder
6. Explain and demonstrate the basic steps of Portable Fire Extinguisher Operation (PASS). DOK2 a. Pull b. Aim c. Squeeze d. Sweep
7. Demonstrate the proper selection of fire extinguishers based on the type of fire. DOK2
8. Describe how to recharge a fire extinguisher (e.g., dry chemical, water can). DOK1
9. Describe fire ground operations. DOK1
10. Discuss salvage and overhaul of a fire scene. DOK1

Note: Safety is to be taught as an ongoing part of the program. Students are required to complete a written safety test with 100% accuracy before entering the shop for lab simulations and projects. This test should be documented in each student's file.

Unit 13: Forcible Entry

Competencies and Suggested Objectives
1. Explain forcible entry and when it is required. DOK1
2. Describe the types of forcible entry tools. DOK1 a. Striking b. Prying c. Cutting d. Lock/specialty tools
3. Discuss the different door constructions and how to force entry. DOK2 a. Metal vs. wood b. Hollow core vs. solid core c. Inward opening vs. outward opening d. Revolving doors e. Sliding doors f. Overhead doors
4. Compare and contrast the different window constructions and frame designs and how to force entry. DOK3 a. Glass – annealed, double/triple-pane, plate, laminated, tempered b. Windows – double-hung, single-hung, jalousie, awning, horizontal sliding, casement
5. Identify the parts and types of locks and describe how to force entry. DOK1 a. Parts - latch, operator lever, deadbolt b. Locks - cylindrical locks, padlocks, mortise locks, rim locks
6. Identify how to breach walls and floors (e.g., load bearing, non-bearing, exterior walls, interior walls, floors). DOK1

Note: Safety is to be taught as an ongoing part of the program. Students are required to complete a written safety test with 100% accuracy before entering the shop for lab simulations and projects. This test should be documented in each student's file.

Unit 14: Search and Rescue

Competencies and Suggested Objectives
1. Discuss search and rescue size-up. DOK1 a. Risk-benefit analysis b. Occupancy factors c. Occupant information d. Building size and arrangement
2. Differentiate between primary and secondary searches. DOK2
3. Discuss and demonstrate search and rescue techniques. DOK2 a. Two-man search and rescue b. Company officer-led search and rescue c. Left-hand pattern search technique d. Right-hand pattern search technique e. Confined space techniques
4. Discuss and demonstrate various victim rescue carries and drags. DOK2 a. Two-person extremity carry b. Cradle-in-Arms carry c. Two-person chair carry d. Various emergency drags e. Patient packaging
5. Discuss coordinating search and rescue operations with the fire suppression team. DOK1

Enrichment
1. Develop an Incident Action Plan (IAP), establishing command and performing a size-up. DOK4 • Ground-level fire • Above-ground fire

Note: Safety is to be taught as an ongoing part of the program. Students are required to complete a written safety test with 100% accuracy before entering the shop for lab simulations and projects. This test should be documented in each student's file.

Unit 15: Firefighter Survival

Competencies and Suggested Objectives
1. Describe the rules of engagement for firefighter survival. DOK1
2. Discuss team integrity and personnel accountability systems. DOK1 a. Personnel Accountability System (PAS) b. Personnel Accountability Report (PAR)
3. Explain emergency communication procedures. DOK2 a. Demonstrate initiating a mayday. b. Demonstrate giving a LUNAR Report (Location, Unit, Name, Air/Assignment, Resources). c. Demonstrate giving an evacuation signal.
4. Explain the purpose of rapid intervention teams/crews (RIT/RIC) and demonstrate how to use a rapid intervention pack (RIT pack). DOK2
5. Demonstrate firefighter survival techniques. DOK2 a. Locating a hose b. Locating a door or window c. Opening a wall d. Safe location e. Escape from an entanglement
6. Demonstrate air management. DOK1 a. Skip breathing
7. Discuss and demonstrate rescuing a downed firefighter. DOK2
8. Discuss rehabilitation on the fire scene. DOK1
9. Discuss critical incident stress management. DOK1

Note: Safety is to be taught as an ongoing part of the program. Students are required to complete a written safety test with 100% accuracy before entering the shop for lab simulations and projects. This test should be documented in each student's file.

Unit 16: Introduction to Ladders

Competencies and Suggested Objectives
1. Describe the different types of ladders below and their usages: DOK1 a. Roof b. Attic c. Extension
2. Identify the parts of the ladder. DOK1
3. Demonstrate the proper procedures for ladder carrying. DOK2 a. One-man carry b. Two-man shoulder carry c. Two-man suitcase carry
4. Demonstrate the proper techniques for raising, lowering, securing, climbing, and working from a ladder. DOK2
5. Demonstrate rescuing victims from a ladder. DOK2

Note: Safety is to be taught as an ongoing part of the program. Students are required to complete a written safety test with 100% accuracy before entering the shop for lab simulations and projects. This test should be documented in each student's file.

Unit 17: Vehicle Fires and Vehicle Extrication

Competencies and Suggested Objectives
1. Discuss and demonstrate suppressing a vehicle fire for the various types of motor vehicles. DOK2 a. Passenger vehicle (passenger area, engine compartment) b. Alternative-fuel vehicles c. Overhaul of vehicle fire
2. Discuss a vehicle's anatomy for the purpose of extrication. DOK1
3. Discuss and demonstrate the usage of various vehicle extrication tools (e.g., Jaws of Life). DOK2 a. Hydraulic pumps b. Cutters c. Spreaders d. Rams e. Cribbing f. Chains g. Glass-cutting equipment

Enrichment
1. Perform a vehicle extrication utilizing the following vehicle extrication tools and techniques. DOK2 • Tools - spreaders, rams, cutters, miscellaneous hand tools, junk vehicle • Techniques - removing glass, removing doors, performing a roof flap, performing a dash roll, and victim extrication

Note: Safety is to be taught as an ongoing part of the program. Students are required to complete a written safety test with 100% accuracy before entering the shop for lab simulations and projects. This test should be documented in each student's file.

Unit 18: Introduction to Ropes

Competencies and Suggested Objectives
1. Examine and describe the characteristics of the three primary ropes used in the fire service. DOK1 a. Life safety ropes b. Escape ropes c. Utility ropes
2. Describe and demonstrate the proper way to clean and inspect ropes. DOK2
3. Describe and demonstrate the proper way to store ropes. DOK2
4. Describe and demonstrate how to tie various knots. DOK2 a. Square b. Safety c. Figure 8 on bite (follow through) d. Figure 8 knot e. Bowline knot f. Double loop Figure 8
5. Demonstrate hoisting utilizing ropes for various fire service tools. DOK2 a. Axe b. Pike pole c. Hose lines

Note: Safety is to be taught as an ongoing part of the program. Students are required to complete a written safety test with 100% accuracy before entering the shop for lab simulations and projects. This test should be documented in each student's file.

Unit 19: Awareness of Hazardous Materials

Competencies and Suggested Objectives
1. Identify, compare, and contrast hazardous material and hazardous waste. DOK3
2. Discuss the various ways hazardous materials can enter the body. DOK1 a. Inhalation b. Absorption c. Ingestion d. Injection
3. Discuss the additional levels of responsibility regarding hazardous materials. DOK1 a. Awareness level b. Operations level c. Technician level d. Specialist level
4. Differentiate between hazardous materials incidents and other emergencies (fire, rope, vehicle). DOK3
5. Examine the four major sections of the *Emergency Response Guidebook* (ERG) and how to utilize it. DOK1 a. Yellow (UN number), Blue (name of chemical), Orange (guide), Green (isolation and distances) b. Describe how to identify a UN placard or label on a vehicle. c. Describe the military's usage of markings to indicate hazardous materials and Weapons of Mass Destruction (WMD).
6. Describe the characteristics of the various storage containers for hazardous materials. DOK1 a. Bulk storage b. Non-bulk storage/vessels c. Drums d. Intermediate bulk containers/ton containers e. Bags f. Cylinders g. Chemical tankers h. Railroad cars i. Carboys
7. Describe how to identify the product, owner, and emergency telephone on a pipeline marker. DOK1
8. Demonstrate how to read a Safety Data Sheet (SDS), identify the hazardous material(s), and explain when shipping papers are utilized. DOK2
9. Describe the common containers used to hold radioactive material. DOK1
10. Identify the three control zones. DOK1 a. Hot b. Warm c. Cold
11. Describe and identify the categories of hazardous materials PPE. DOK1 a. Level A (fully encapsulated) b. Level B (splash protection and SCBA)

c. Level C (splash protection) d. Level D (station uniform)
12. Illustrate the proper donning (put on) procedure for a Level B non-encapsulated chemical protective clothing ensemble. DOK2
13. Identify and describe the types of decontamination. DOK1 a. Emergency decontamination b. Gross decontamination c. Technical decontamination d. Mass decontamination
14. Explain how cross-contamination can occur. DOK1
15. Examine the characteristics of liquid fuel fires. DOK1
16. Explain the concepts of vapor density and flammability limits. DOK2
17. Describe the cause and effects of a Boiling Liquid Expanding Vapor Explosion (BLEVE). DOK2

Note: Safety is to be taught as an ongoing part of the program. Students are required to complete a written safety test with 100% accuracy before entering the shop for lab simulations and projects. This test should be documented in each student's file.

Unit 20: CPR and Emergency Medical Care

Competencies and Suggested Objectives
1. Perform the skills obtained in training or certification for Basic Life Support for Health Care Providers. DOK2 a. Demonstrate the procedure for administering cardiopulmonary resuscitation (CPR) to infants, children, and adults. b. Demonstrate the procedure for administering CPR using an Automated External Defibrillator (AED) for infants, children, and adults. c. Demonstrate the procedure for the removal of a foreign-body airway obstruction for infants, children, and adults.
2. Demonstrate the necessary skills to provide first aid treatment. DOK2 a. Obtaining vital signs (e.g., heart rate, respirations, blood pressure) b. Bleeding control c. Shock management d. Immobilization (long bone, joint, spinal) e. Hypothermia/hyperthermia f. Burns (chemical, electrical, thermal) g. Poisoning h. Sudden illnesses (heart attack, stroke, fainting, seizures, diabetic reactions) i. Oxygen administration by non-rebreather mask, bag-valve-mask (BVM) j. Lifting and moving patients

Note: Safety is to be taught as an ongoing part of the program. Students are required to complete a written safety test with 100% accuracy before entering the shop for lab simulations and projects. This test should be documented in each student's file.

Unit 21: Fire Prevention Programs

Competencies and Suggested Objectives
1. Identify the various fire prevention programs utilized today. DOK1
2. Examine the importance of fire prevention and public education programs for the safety of local communities. DOK1
3. Install and maintain a smoke alarm. DOK2
4. Discuss how to execute a fire safety survey of an occupied structure. DOK2

Enrichment
1. Develop a fire prevention program or public education program for a community business or location and present this program for selected community EMS officials. DOK4

Note: Safety is to be taught as an ongoing part of the program. Students are required to complete a written safety test with 100% accuracy before entering the shop for lab simulations and projects. This test should be documented in each student's file.

Unit 22: Introduction to a Community Emergency Response Team (CERT)

Competencies and Suggested Objectives
1. Examine the principles of a CERT. DOK1 a. Provide essential resources to the community and first responders during crises and disasters. b. Examine the importance of always being prepared and meeting the needs of the community during crises and disasters. c. Explore the importance of always being ready to respond in an organized and timely manner to an incident.
2. Identify the roles within a CERT. DOK1 a. Provide essential food and water to first responders and citizens during incidents. b. Assist in finding accommodations for victims facing the loss of home or displacement. c. Assist first responders under their supervision as needed during an incident, such as search and rescue, traffic control, disaster shelter placement, and maintenance.
3. Examine CERT equipment. DOK1 a. Explore the importance of having equipment and material organized and maintained for rapid deployment.
4. Discuss the methods of response to an incident. DOK1 a. Discuss the importance of staging and entering the scene as needed.
5. Demonstrate a Student Emergency Response Team (SERT) to an emergency scenario. DOK2
6. Provide on-going assistance to the school during the school year, such as at athletic events, school functions, and any community function where the team services would apply. DOK2

Enrichment
1. Establish a School Emergency Response Team (SERT). DOK3 • The SERT will be developed in the classroom under the instructor's supervision and will plan, implement, and train within the school. The team will focus on the provision of food, water, and clothing for the school in the case of an emergency.

Note: Safety is to be taught as an ongoing part of the program. Students are required to complete a written safety test with 100% accuracy before entering the shop for lab simulations and projects. This test should be documented in each student's file.

Student Competency Profile

Student's 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.

Unit 1: Introduction to the Fire Service		
	1.	Discuss the educational and physical requirements for becoming a firefighter in the state of Mississippi.
	2.	Discuss the earnings, promotional tracks, and career opportunities available in the fire service.
	3.	Research, create, and present a portfolio for a chosen career including the items below, demonstrating the required educational, physical, and professional qualifications necessary.
	4.	Students take the safety test for this course; 100% mastery is required for all students.
	5.	Research the student organizations associated with Fire Science.
Unit 2: Physical Ability Test for the Fire Service		
	1.	Explain the importance of being physically fit for duty in the fire service.
	2.	Explore ways to adapt to physically strenuous and hazardous environments in the fire service.
	3.	Examine the importance of proper hydration and nutrition in the fire service.
	4.	Demonstrate and maintain the minimum standards for a physical ability test as dictated by the Mississippi Trainee Agility Test (MSTAT).
Unit 3: Organization and History of the Fire Service		
	1.	Describe the foundation of the American Fire Service.
	2.	Discuss the mission of the fire service.
	3.	Identify the divisions of labor, unity of command, and span of control required to successfully accomplish the mission of the fire service.
	4.	Explore the chain of command and discuss different duties in a typical fire service.
	5.	Examine the various types and roles of specialized response units.
	6.	Identify and examine the various fire service apparatuses, highlighting the advantages and disadvantages of each.
Unit 4: Firefighter Safety, Personal Protective Equipment, and Self-Contained Breathing Apparatus		
	1.	Discover safety organizations.

	2.	Discuss the importance of scene safety from the below perspectives.
	3.	Describe and utilize the various fire service Personal Protective Equipment (PPE).
	4.	Describe the proper usage of structural firefighting PPE.
	5.	Discuss the maintenance and care of structural firefighting PPE according to manufacturer recommendations to ensure safe operation.
	6.	Describe, identify, and demonstrate proper operation of the various components of a Self-Contained Breathing Apparatus (SCBA).
	7.	Discuss and demonstrate the proper maintenance and care of a SCBA according to manufacturer recommendations to ensure safe operation.
	8.	Discuss and demonstrate the various breathing techniques utilized to extend the bottle time of a SCBA.
	9.	Demonstrate a standard air consumption test utilizing a SCBA.
Unit 5: Fire Service Communications		
	1.	Discuss the Communications Center.
	2.	Explain the communication center operations in the fire service.
	3.	Discuss the radio equipment and radio operations in the fire service.
Unit 6: Introduction to the Incident Command System (ICS)		
	1.	Explore the key components of the ICS and how they function as a unit to provide scene management, especially for large, prolonged accidents.
	2.	Review standard operating guidelines and procedures.
	3.	Identify the divisions of labor, unity of command, and span of control required to successfully accomplish the mission of the fire service.
	4.	Discuss the importance of proper communication between the branches of ICS.
	5.	Explain jurisdictional boundaries of a fire service and how mutual aid interactions allow for cooperation between different entities.
	6.	Explore the framework of the Federal Emergency Management Agency (FEMA) and the National Incident Management System (NIMS).
Unit 7: Building Construction and Pre-Incident Plans		
	1.	Identify and describe the various types of building materials.
	2.	Identify and describe different construction types.
	3.	Identify and describe the different building components.
	4.	Compare and contrast modern construction and legacy construction.
	5.	Explain the purpose of pre-incident plans.
Unit 8: Response and Size-Up		
	1.	Explain the initial practices of an emergency response.
	2.	Discuss the purpose and process of a size-up.
Unit 9: Introduction to Tools and Equipment on the Apparatus		
	1.	Discuss and demonstrate the proper operation of tools and equipment.

	2.	Explore the importance of tool maintenance and care.
Unit 10: Water Supply, Hoses, and Nozzles		
	1.	Describe the equipment and procedures utilized to access static sources of water.
	2.	Describe the characteristics of mobile water supply apparatuses.
	3.	Explain how municipal water systems supply water to communities.
	4.	Describe the characteristics of wet and dry barrel hydrants.
	5.	Explain the principles of fire hydraulics.
	6.	Explain how friction loss and elevation affect water pressure.
	7.	Describe how to prevent water hammer.
	8.	Describe the characteristics and uses of small and large-diameter hoses.
	9.	Discuss the characteristics and uses of attack and supply hoses.
	10.	Identify the common types of couplings.
	11.	Describe the uses of reducers and appliances.
	12.	Describe and demonstrate how to operate a fire hydrant and connect a supply line to a hydrant.
	13.	Describe how to unload a fire hose.
	14.	Describe and demonstrate a proper hose drag.
	15.	Describe and demonstrate how to replace a damaged hose line.
	16.	Discuss and demonstrate how to drain a fire hose.
	17.	Demonstrate the various types of hose rolls/lays.
	18.	Examine the different types of appliances and demonstrate proper maintenance and care of the appliances.
	19.	Discuss the various types of nozzles and demonstrate proper maintenance and care of the nozzles.
Unit 11: Fire Behavior and Ventilation		
	1.	Describe the chemistry of fire.
	2.	Identify the five forms of energy.
	3.	Explain the concept of the fire triangle and fire tetrahedron.
	4.	Describe the by-products of combustion.
	5.	Explain how fires are spread.
	6.	Describe the four methods of extinguishing a fire.
	7.	Identify the various classes of fires.
	8.	Describe the four phases of solid fuel fires.
	9.	Describe the conditions that lead to flameover, flashover, and backdraft.
	10.	Describe the process of reading smoke.
	11.	Explore how wind effect impacts fire behavior.

	12.	Demonstrate the three types of ventilation techniques.
	13.	Explain the difference between vent-limited fires and fuel-limited fires.
	14.	Describe how ventilation operations affect flow paths.
	15.	Describe the two different types of ventilation.
Unit 12: Portable Fire Extinguishers and Fire Suppression		
	1.	Discuss fire suppression size-up and demonstrate performing a fire ground size-up.
	2.	Describe the methods of fire extinguishment.
	3.	Describe the primary purpose of portable fire extinguishers.
	4.	Explain the classification and rating system for portable fire extinguishers based on both the traditional lettering system and pictographs.
	5.	Describe the different types of extinguishing agents.
	6.	Explain and demonstrate the basic steps of Portable Fire Extinguisher Operation (PASS).
	7.	Demonstrate the proper selection of fire extinguishers based on the type of fire.
	8.	Describe how to recharge a fire extinguisher.
	9.	Describe fire ground operations.
	10.	Discuss salvage and overhaul of a fire scene.
Unit 13: Forcible Entry		
	1.	Explain forcible entry and when it is required.
	2.	Describe the types of forcible entry tools.
	3.	Discuss the different door constructions and how to force entry.
	4.	Compare and contrast the different window constructions and frame designs and how to force entry.
	5.	Identify the parts and types of locks and describe how to force entry.
	6.	Identify how to breach walls and floors.
Unit 14: Search and Rescue		
	1.	Discuss search and rescue size-up.
	2.	Differentiate between primary and secondary searches.
	3.	Discuss and demonstrate search and rescue techniques.
	4.	Discuss and demonstrate various victim rescue carries and drags.
	5.	Discuss coordinating search and rescue operations with the fire suppression team.
Unit 15: Firefighter Survival		
	1.	Describe the rules of engagement for firefighter survival.
	2.	Discuss team integrity and personnel accountability systems.
	3.	Explain emergency communication procedures.

	4.	Explain the purpose of rapid intervention teams/crews (RIT/RIC) and demonstrate how to use a rapid intervention pack (RIT pack).
	5.	Demonstrate firefighter survival techniques.
	6.	Demonstrate air management.
	7.	Discuss and demonstrate rescuing a downed firefighter.
	8.	Discuss rehabilitation on the fire scene.
	9.	Discuss critical incident stress management.
Unit 16: Introduction to Ladders		
	1.	Describe the different types of ladders below and their usages.
	2.	Identify the parts of the ladder.
	3.	Demonstrate the proper procedures for ladder carrying.
	4.	Demonstrate the proper techniques for raising, lowering, securing, climbing, and working from a ladder.
	5.	Demonstrate rescuing victims from a ladder.
Unit 17: Vehicle Fires and Vehicle Extrication		
	1.	Discuss and demonstrate suppressing a vehicle fire for the various types of motor vehicles.
	2.	Discuss a vehicle's anatomy for the purpose of extrication.
	3.	Discuss and demonstrate the usage of various vehicle extrication tools.
Unit 18: Introduction to Ropes		
	1.	Examine and describe the characteristics of the three primary ropes used in the fire service.
	2.	Describe and demonstrate the proper way to clean and inspect ropes.
	3.	Describe and demonstrate the proper way to store ropes.
	4.	Describe and demonstrate how to tie various knots.
	5.	Demonstrate hoisting utilizing ropes for various fire service tools.
Unit 19: Awareness of Hazardous Materials		
	1.	Identify, compare, and contrast hazardous material and hazardous waste.
	2.	Discuss the various ways hazardous materials can enter the body.
	3.	Discuss the additional levels of responsibility regarding hazardous materials.
	4.	Differentiate between hazardous materials incidents and other emergencies.
	5.	Examine the four major sections of the *Emergency Response Guidebook* and how to utilize it.
	6.	Describe the characteristics of the various storage containers for hazardous materials.
	7.	Describe how to identify the product, owner, and emergency telephone on a pipeline marker.

	8.	Demonstrate how to read a Safety Data Sheet (SDS), identify the hazardous material(s), and explain when shipping papers are utilized.
	9.	Describe the common containers used to hold radioactive material.
	10.	Identify the three control zones.
	11.	Describe and identify the categories of hazardous materials PPE.
	12.	Illustrate the proper donning (put on) procedure for a Level B non-encapsulated chemical protective clothing ensemble.
	13.	Identify and describe the types of decontamination.
	14.	Explain how cross-contamination can occur.
	15.	Examine the characteristics of liquid fuel fires.
	16.	Explain the concepts of vapor density and flammability limits.
	17.	Describe the cause and effects of a Boiling Liquid Expanding Vapor Explosion (BLEVE).
Unit 20: CPR and Emergency Medical Care		
	1.	Perform the skills obtained in training or certification for Basic Life Support for Health Care Providers.
	2.	Demonstrate the necessary skills to provide first aid treatment.
Unit 21: Fire Prevention Programs		
	1.	Identify the various fire prevention programs utilized today.
	2.	Examine the importance of fire prevention and public education programs for the safety of local communities.
	3.	Install and maintain a smoke alarm.
	4.	Discuss how to execute a fire safety survey of an occupied structure.
Unit 22: Introduction to a Community Emergency Response Team (CERT)		
	1.	Examine the principles of CERT.
	2.	Identify the roles within a CERT.
	3.	Examine CERT equipment.
	4.	Discuss the methods of response to an incident.
	5.	Demonstrate a Student Emergency Response Team (SERT) to an emergency scenario.
	6.	Provide on-going assistance to the school during the school year, such as at athletic events, school functions, and any community function where the team services would apply.

Appendix A: Industry Standards

NFPA 1001: Standard for Fire Fighter Professional Qualifications, 2019 Edition Standards Crosswalk for Fire Science													
	Units	**Unit 1**	**Unit 2**	**Unit 3**	**Unit 4**	**Unit 5**	**Unit 6**	**Unit 7**	**Unit 8**	**Unit 9**	**Unit 10**	**Unit 11**	**Unit 12**
NFPA 1001													
NFPA 1.5.1		X	X	X	X	X							
NFPA 1.5.2			X		X	X	X		X				
NFPA 1.5.3			X	X	X	X	X	X	X	X	X	X	X
NFPA 1.5.4					X	X	X	X	X	X	X	X	X
NFPA 1.5.5					X			X	X	X	X		
NFPA 2.6.1		X	X	X	X	X							
NFPA 2.6.2			X		X	X	X		X				
NFPA 2.6.3			X	X	X	X	X	X	X	X	X	X	X
NFPA 2.6.4					X	X	X	X	X	X	X	X	X
NFPA 2.6.5					X			X	X	X	X		

	Units	**Unit 13**	**Unit 14**	**Unit 15**	**Unit 16**	**Unit 17**	**Unit 18**	**Unit 19**	**Unit 20**	**Unit 21**	**Unit 22**
NFPA 1001											
NFPA 1.5.1				X					X	X	X
NFPA 1.5.2		X	X	X					X		
NFPA 1.5.3		X		X	X						
NFPA 1.5.4		X	X	X	X	X	X		X		X
NFPA 1.5.5		X	X	X		X	X	X	X	X	X
NFPA 2.6.1				X					X	X	X
NFPA 2.6.2		X	X	X					X		
NFPA 2.6.3		X		X	X						
NFPA 2.6.4		X	X	X	X	X	X		X		X
NFPA 2.6.5		X	<X	X		X	X	X	X	X	X

1. Fire Fighter I
   NFPA1.5.1 General
   NFPA1.5.2 Fire Department Communications
   NFPA1.5.3 Fireground Operations
   NFPA1.5.4 Rescue Operations

NFPA1.5.5 Preparedness and Maintenance

2. Fire Fighter II
   NFPA2.6.1 General
   NFPA2.6.2 Fire Department Communications
   NFPA2.6.3 Fireground Operations
   NFPA2.6.4 Rescue Operations
   NFPA2.6.5 Fire and Life Safety Initiatives, Preparedness, and Maintenance

National Emergency Medical Services (EMS) Educational Standards

National Emergency Medical Services (EMS) Educational Standards Crosswalk for Fire Science and Emergency Medical Services

	Units	Unit 1	Unit 2	Unit 3	Unit 4	Unit 5	Unit 6	Unit 7	Unit 8	Unit 9	Unit 10	Unit 11	Unit 12
EMS													
EMS1		X		X									
EMS6		X				X							
EMS14			X	X	X	X	X	X	X			X	

	Units	Unit 13	Unit 14	Unit 15	Unit 16	Unit 17	Unit 18	Unit 19	Unit 20	Unit 21	Unit 22
EMS											
EMS1				X							
EMS2											
EMS3								X	X		
EMS6		X	X			X		X	X		X
EMS8				X				X			
EMS9		X	X								
EMS11											
EMS12		X	X			X		X	X		X
EMS13											
EMS14		X	X			X		X	X		X

EMS1 Preparatory
EMS2 Anatomy and Physiology
EMS3 Medical Terminology
EMS6 Public Health
EMS8 Airway Management, Respiration, and Artificial Ventilation
EMS9 Assessment
EMS11 Shock and Resuscitation
EMS12 Trauma
EMS13 Special Patient Populations
EMS14 EMS Operations

Appendix B: 21st Century Skills[1]

21st Century Crosswalk for Fire Science											
	Units	**Unit 1**	**Unit 2**	**Unit 3**	**Unit 4**	**Unit 5**	**Unit 6**	**Unit 7**	**Unit 8**	**Unit 9**	**Unit 10**
21st Century Standards											
CS1		X		X			X				
CS2		X									
CS3		X		X			X				
CS4		X	X	X	X	X	X	X	X	X	X
CS5					X		X				
CS6		X	X		X	X	X		X		
CS7			X		X	X	X	X	X	X	X
CS8			X		X	X	X	X	X		
CS9		X		X				X	X	X	X
CS10		X		X							
CS11		X		X							
CS12			X		X	X	X		X		
CS13		X	X		X	X	X	X	X		
CS14			X		X	X	X	X	X		
CS15		X	X		X	X	X	X	X		
CS16			X		X	X	X	X	X		
		Unit 11	**Unit 12**	**Unit 13**	**Unit 14**	**Unit 15**	**Unit 16**	**Unit 17**	**Unit 18**	**Unit 19**	**Unit 20**
CS1				X	X						X
CS2											
CS3											X
CS4		X	X	X	X	X	X	X	X	X	X
CS5		X	X			X				X	
CS6		X	X		X	X				X	X
CS7		X	X	X	X	X	X	X	X	X	X
CS8		X	X	X	X	X				X	X
CS9		X	X	X	X	X	X	X	X	X	X
CS10											
CS11											
CS12		X	X	X	X	X					X
CS13		X	X	X	X	X					X
CS14		X	X	X	X	X					X
CS15		X	X	X	X	X				X	X
CS16		X	X	X	X	X				X	X
		Unit 21	**Unit 22**								
CS1		X	X								
CS2		X	X								
CS3		X	X								
CS4		X	X								
CS5		X	X								
CS6		X	X								
CS7		X	X								
CS8		X	X								
CS9											
CS10											
CS11											
CS12											
CS13											
CS14		X	X								
CS15											
CS16		X	X								

[1] *21st century skills.* (n.d.). Washington, DC: Partnership for 21st Century Skills.

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

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

Appendix C: College and Career Ready Standards

English Standards										
	Units	**Unit 1**	**Unit 2**	**Unit 3**	**Unit 4**	**Unit 5**	**Unit 6**	**Unit 7**	**Unit 8**	**Unit 9**	**Unit 10**
RL.9.1		X		X	X	X				X	
RL.9.2		X		X	X	X				X	
RL.9.3											
RL.9.4				X							
RL.9.5											
RL.9.6											
RL.9.7											
RL.9.8											
RL.9.9											
RL.9.10											
RL.9.10											
RI.9.3											
RI.9.5											
RI.9.6											
RI.9.7											
RI.9.8											
RI.9.9											
W.9.1		X		X	X	X					
W.9.2											
W.9.3											
W.9.4											
W.9.5											
W.9.6											
W.9.7		X		X	X	X					
W.9.8											
W.9.9											
W.9.10											
SL.9.1		X	X	X	X	X	X	X	X	X	X
SL.9.2		X	X	X	X	X	X	X	X	X	X
SL.9.3		X		X		X					
SL.9.4											
SL.9.5											
SL.9.6											
L.9.1		X	X	X	X	X	X	X	X	X	X
L.9.2		X	X	X	X	X	X	X	X	X	X
L.9.3											
L.9.4											
L.9.5											
L.9.6		X	X	X	X	X	X	X	X	X	X
RL.10.10											
RH.9-10.1											
RH.9-10.2		X	X	X	X	X	X	X	X	X	X
RH.9-10.3											
RH.9-10.4		X	X	X	X	X	X	X	X	X	X
RH.9-10.5											
RH.9-10.6											
RH.9-10.7		X	X	X	X	X	X	X	X	X	X
RH.9-10.8											
RH.9-10.9											
RH.9-10.10											
RST.9-10.1											
RST.9-10.2		X	X	X	X	X	X	X	X	X	X
RST.9-10.3											
RST.9-10.4		X	X	X	X	X	X	X	X	X	X

RST.9-10.5											
RST.9-10.6											
RST.9-10.7											
RST.9-10.8		X	X	X	X	X	X	X	X	X	X
RST.9-10.9											
RST.9-10.10											
WHST.9-10.1											
WHST.9-10.2		X	X	X	X	X	X	X	X	X	X
WHST.9-10.3											
WHST.9-10.4											
WHST.9-10.5											
WHST.9-10.6											
WHST.9-10.7											
WHST.9-10.8											
WHST.9-10.9											
WHST.9-10.10											
RL.11.1											
RL.11.2											
RL.11.3											
RL.11.4		X	X	X	X	X	X	X	X	X	X
RL.11.5											
RL.11.6											
RL.11.7		X	X	X	X	X	X	X	X	X	X
RL.11.8											
RL.11.9											
RL.11.10											
RI.11.3											
RI.11.4											
RI.11.5											
RI.11.6											
RI.11.7											
RI.11.8											
RI.11.9											
RI.11.10											
W.11.1											
W.11.2											
W.11.3											
W.11.4											
W.11.5											
W.11.6											
W.11.7		X	X	X	X	X	X	X	X	X	X
W.11.8											
W.11.9											
W.11.10											
SL.11.1		X	X	X	X	X	X	X	X	X	X
SL.11.2											
SL.11.3											
SL.11.4											
SL.11.5											
SL.11.6		X	X	X	X	X	X	X	X	X	X
L.11.1											
L.11.2											
L.11.3											
L.11.4											
RL.12.10											
RH.11-12.1		X		X							
RH.11-12.2											
RH.11-12.3											
RH.11-12.4											
RH.11-12.5											
RH.11-12.6											
RH.11-12.7											
RH.11-12.8											
RH.11-12.9											
RH.11-12.10											

RST.11-12.1											
RST.11-12.2											
RST.11-12.3											
RST.11-12.4											
RST.11-12.5											
RST.11-12.6											
RST.11-12.7											
RST.11-12.8											
RST.11-12.9											
RST.11-12.10		X	X	X	X	X	X	X	X	X	X
WHST.11-12.1											
WHST.11-12.2											
WHST.11-12.6											
WHST.11-12.8											

English Standards

	Units	Unit 11	Unit 12	Unit 13	Unit 14	Unit 15	Unit 16	Unit 17	Unit 18	Unit 19	Unit 20
RL.9.1											
RL.9.2											
RL.9.3											
RL.9.4		X	X	X	X	X	X	X	X	X	X
RL.9.5											
RL.9.6											
RL.9.7											
RL.9.8											
RL.9.9											
RL.9.10											
RL.9.10											
RI.9.3											
RI.9.5											
RI.9.6											
RI.9.7											
RI.9.8											
RI.9.9											
W.9.1											
W.9.2											
W.9.3											
W.9.4											
W.9.5											
W.9.6											
W.9.7											
W.9.8											
W.9.9											
W.9.10											
SL.9.1		X	X	X	X	X	X	X	X	X	X
SL.9.2		X	X	X	X	X	X	X	X	X	X
SL.9.3											
SL.9.4											X
SL.9.5											X
SL.9.6											X
L.9.1		X	X	X	X	X	X	X	X	X	X
L.9.2		X	X	X	X	X	X	X	X	X	X
L.9.3											
L.9.4											
L.9.5											
L.9.6		X	X	X	X	X	X	X	X	X	X
RL.10.10											
RH.9-10.1											
RH.9-10.2		X	X	X	X	X	X	X	X	X	X
RH.9-10.3											
RH.9-10.4		X	X	X	X	X	X	X	X	X	X
RH.9-10.5											
RH.9-10.6											
RH.9-10.7		X	X	X	X	X	X	X	X	X	X
RH.9-10.8											
RH.9-10.9											
RH.9-10.10											
RST.9-10.1											
RST.9-10.2		X	X	X	X	X	X	X	X	X	X
RST.9-10.3											
RST.9-10.4		X	X	X	X	X	X	X	X	X	X

RST.9-10.5											
RST.9-10.6											
RST.9-10.7											
RST.9-10.8		X	X	X	X	X	X	X	X	X	X
RST.9-10.9											
RST.9-10.10											
WHST.9-10.1											
WHST.9-10.2		X	X	X	X	X	X	X	X	X	X
WHST.9-10.3											
WHST.9-10.4											
WHST.9-10.5											
WHST.9-10.6											
WHST.9-10.7											
WHST.9-10.8											
WHST.9-10.9											
WHST.9-10.10											
RL.11.1											
RL.11.2											
RL.11.3											
RL.11.4											
RL.11.5											
RL.11.6											
RL.11.7											
RL.11.8											
RL.11.9											
RL.11.10											
RI.11.3											
RI.11.4		X	X	X	X	X	X	X	X	X	X
RI.11.5											
RI.11.6											
RI.11.7		X	X	X	X	X	X	X	X	X	X
RI.11.8											
RI.11.9											
RI.11.10											
W.11.1											
W.11.2											
W.11.3											
W.11.4											
W.11.5											
W.11.6											
W.11.7		X	X	X	X	X	X	X	X	X	X
W.11.8											
W.11.9											
W.11.10											
SL.11.1		X	X	X	X	X	X	X	X	X	X
SL.11.2											
SL.11.3											
SL.11.4											
SL.11.5											
SL.11.6		X	X	X	X	X	X	X	X	X	X
L.11.1											
L.11.2											
L.11.3											
L.11.4											
RL.12.10											
RH.11-12.1											
RH.11-12.2											
RH.11-12.3											
RH.11-12.4											
RH.11-12.5											
RH.11-12.6											
RH.11-12.7											
RH.11-12.8											
RH.11-12.9											
RH.11-12.10											

RST.11-12.1											
RST.11-12.2											
RST.11-12.3											
RST.11-12.4											
RST.11-12.5											
RST.11-12.6											
RST.11-12.7											
RST.11-12.8											
RST.11-12.9											
RST.11-12.10		X	X	X	X	X	X	X	X	X	X
WHST.11-12.1											
WHST.11-12.2											
WHST.11-12.6											
WHST.11-12.8											

English Standards

	Units	Unit 21	Unit 22								
RL.9.1											
RL.9.2											
RL.9.3											
RL.9.4		X									
RL.9.5											
RL.9.6											
RL.9.7											
RL.9.8											
RL.9.9											
RL.9.10											
RL.9.10											
RI.9.3											
RI.9.5											
RI.9.6											
RI.9.7											
RI.9.8											
RI.9.9											
W.9.1											
W.9.2											
W.9.3											
W.9.4											
W.9.5											
W.9.6											
W.9.7											
W.9.8											
W.9.9											
W.9.10											
SL.9.1		X	X								
SL.9.2		X	X								
SL.9.3											
SL.9.4											
SL.9.5											
SL.9.6											
L.9.1		X	X								
L.9.2		X	X								
L.9.3											
L.9.4											
L.9.5											
L.9.6		X	X								
RL.10.10											
RH.9-10.1											
RH.9-10.2		X	X								
RH.9-10.3											
RH.9-10.4		X	X								
RH.9-10.5											
RH.9-10.6											
RH.9-10.7		X	X								
RH.9-10.8											
RH.9-10.9											
RH.9-10.10											
RST.9-10.1											
RST.9-10.2		X	X								
RST.9-10.3											
RST.9-10.4		X	X								

RST.9-10.5											
RST.9-10.6											
RST.9-10.7											
RST.9-10.8		X	X								
RST.9-10.9											
RST.9-10.10											
WHST.9-10.1											
WHST.9-10.2		X	X								
WHST.9-10.3											
WHST.9-10.4											
WHST.9-10.5											
WHST.9-10.6											
WHST.9-10.7											
WHST.9-10.8											
WHST.9-10.9											
WHST.9-10.10											
RL.11.1											
RL.11.2											
RL.11.3											
RL.11.4											
RL.11.5											
RL.11.6											
RL.11.7											
RL.11.8											
RL.11.9											
RL.11.10											
RI.11.3											
RI.11.4		X	X								
RI.11.5											
RI.11.6											
RI.11.7		X	X								
RI.11.8											
RI.11.9											
RI.11.10											
W.11.1											
W.11.2											
W.11.3											
W.11.4											
W.11.5											
W.11.6											
W.11.7		X	X								
W.11.8											
W.11.9											
W.11.10											
SL.11.1		X	X								
SL.11.2											
SL.11.3											
SL.11.4											
SL.11.5											
SL.11.6											
L.11.1											
L.11.2											
L.11.3											
L.11.4											
RL.12.10											
RH.11-12.1											
RH.11-12.2											
RH.11-12.3											
RH.11-12.4											
RH.11-12.5											
RH.11-12.6											
RH.11-12.7											
RH.11-12.8											
RH.11-12.9											
RH.11-12.10											

RST.11-12.1											
RST.11-12.2											
RST.11-12.3											
RST.11-12.4											
RST.11-12.5											
RST.11-12.6											
RST.11-12.7											
RST.11-12.8											
RST.11-12.9											
RST.11-12.10		X	X								
WHST.11-12.1											
WHST.11-12.2											
WHST.11-12.6											
WHST.11-12.8											

Common Core English I

Reading Literature Key Ideas and Details

RL.9.1 Cite strong and thorough textual evidence to support analysis of what the text says explicitly as well as inferences drawn from the text.

RL.9.2 Determine a theme or central idea of a text and analyze in detail its development over the course of the text, including how it emerges and is shaped and refined by specific details; provide an objective summary of the text.

RL.9.3 Analyze how complex characters (e.g., those with multiple or conflicting motivations) develop over the course of a text, interact with other characters, and advance the plot or develop the theme.

Craft and Structure

RL.9.4 Determine the meaning of words and phrases as they are used in the text, including figurative and connotative meanings; analyze the cumulative impact of specific word choices on meaning and tone (e.g., how the language evokes a sense of time and place; how it sets a formal or informal tone).

RL.9.5 Analyze how an author's choices concerning how to structure a text, order events within it (e.g., parallel plots), and manipulate time (e.g., pacing, flashbacks) create such effects as mystery, tension, or surprise.

RL.9.6 Analyze a point of view or cultural experience reflected in a work of literature from outside the United States, drawing on a wide reading of world literature.

Integration of Knowledge and Ideas

RL.9.7 Analyze the representation of a subject or a key scene in two different artistic mediums, including what is emphasized or absent in each treatment (e.g., Auden's "Musée des Beaux Arts" and Breughel's Landscape with the Fall of Icarus).

RL.9.8 Not applicable to literature.

Common Core English I

RL.9.9 Analyze how an author draws on and transforms source material in a specific work (e.g., how Shakespeare treats a theme or topic from Ovid or the Bible or how a later author draws on a play by Shakespeare).

Range of Reading and Level of Text Complexity

RL.9.10 By the end of grade 9, read and comprehend literature, including stories, dramas, and poems, in the grades 9-10 text complexity band proficiently, with scaffolding as needed at the high end of the range.

Common Core English I

Reading Informational Text Key Ideas and Details

RI.9.3 Analyze how the author unfolds an analysis or series of ideas or events, including the order in which the points are made, how they are introduced and developed, and the connections that are drawn between them.

Craft and Structure

RI.9.5 Analyze in detail how an author's ideas or claims are developed and refined by particular sentences, paragraphs, or larger portions of a text (e.g., a section or chapter).
RI.9.6 Determine an author's point of view or purpose in a text and analyze how an author uses rhetoric to advance that point of view or purpose.

Integration of Knowledge and Ideas

RI.9.7 Analyze various accounts of a subject told in different mediums (e.g., a person's life story in both print and multimedia), determining which details are emphasized in each account.
RI.9.8 Delineate and evaluate the argument and specific claims in a text, assessing whether the reasoning is valid, and the evidence is relevant and sufficient; identify false statements and fallacious reasoning.
RI.9.9 Analyze seminal U.S. documents of historical and literary significance (e.g., Washington's Farewell Address, the Gettysburg Address, Roosevelt's Four Freedoms speech, King's "Letter from Birmingham Jail"), including how they address related themes and concepts.

Common Core English I

Writing Text Types and Purposes

W.9.1 Write arguments to support claims in an analysis of substantive topics or texts, using valid reasoning and relevant and sufficient evidence.
W.9.1a Introduce precise claim(s), distinguish the claim(s) from alternate or opposing claims, and create an organization that establishes clear relationships among claim(s), counterclaims, reasons, and evidence.
W.9.1b Develop claim(s) and counterclaims fairly, supplying evidence for each while pointing out the strengths and limitations of both in a manner that anticipates the audience's knowledge level and concerns.
W.9.1c Use words, phrases, and clauses 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.
W.9.1d Establish and maintain a formal style and objective tone while attending to the norms and conventions of the discipline in which they are writing.
W.9.1e Provide a concluding statement or section that follows from and supports the argument presented.
W.9.2 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.
W.9.2a Introduce a topic; organize complex ideas, concepts, and information to make important connections and distinctions; include formatting (e.g., headings), graphics (e.g., figures, tables), and multimedia when useful to aiding comprehension.
W.9.2b Develop the topic with well-chosen, relevant, and sufficient facts, extended definitions, concrete details, quotations, or other information and examples appropriate to the audience's knowledge of the topic.
W.9.2c Use appropriate and varied transitions to link the major sections of the text, create cohesion, and clarify the relationships among complex ideas and concepts.

Common Core English I

W.9.2d Use precise language and domain-specific vocabulary to manage the complexity of the topic.
W.9.2e Establish and maintain a formal style and objective tone while attending to the norms and conventions of the discipline in which they are writing.
W.9.2f 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.9.3 Write narratives to develop real or imagined experiences or events using effective technique, well-chosen details, and well-structured event sequences.
W.9.3a Engage and orient the reader by setting out a problem, situation, or observation, establishing one or multiple point(s) of view, and introducing a narrator and/or characters; create a smooth progression of experiences or events.
W.9.3b Use narrative techniques, such as dialogue, pacing, description, reflection, and multiple plot lines, to develop experiences, events, and/or characters.
W.9.3c Use a variety of techniques to sequence events so that they build on one another to create a coherent whole.
W.9.3d Use precise words and phrases, telling details, and sensory language to convey a vivid picture of the experiences, events, setting, and/or characters.

W.9.3e 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.9.4 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.9.5 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 9–10.)
W.9.6 Use technology, including the Internet, to produce, publish, and update individual or shared writing products, taking advantage of technology's capacity to link to other information and to display information flexibly and dynamically.

Research to Build and Present Knowledge

W.9.7 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.

Common Core English I

W.9.8 Gather relevant information from multiple authoritative print and digital sources, using advanced searches effectively; assess the usefulness of each source in answering the research question; integrate information into the text selectively to maintain the flow of ideas, avoiding plagiarism and following a standard format for citation.
W.9.9 Draw evidence from literary or informational texts to support analysis, reflection, and research.
W.9.9a Apply grades 9–10 Reading standards to literature (e.g., "Analyze how an author draws on and transforms source material in a specific work [e.g., how Shakespeare treats a theme or topic from Ovid or the Bible or how a later author draws on a play by Shakespeare]").
W.9.9b Apply grades 9–10 Reading standards to literary nonfiction (e.g., "Delineate and evaluate the argument and specific claims in a text, assessing whether the reasoning is valid and the evidence is relevant and sufficient; identify false statements and fallacious reasoning").

Range of Writing

W.9.10 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 audience.

Common Core English I

SL.9.1 Initiate and participate effectively in a range of collaborative discussions (one-on-one, in groups, and teacher-led) with diverse partners on grades 9– 10 topics, texts, and issues, building on others' ideas and expressing their own clearly and persuasively.
SL.9.1a 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.
SL.9.1b Work with peers to set rules for collegial discussions and decision making (e.g., informal consensus, taking votes on key issues, presentation of alternate views), clear goals and deadlines, and individual roles as needed.
SL.9.1c Propel conversations by posing and responding to questions that relate the current discussion to broader themes or larger ideas; actively incorporate others into the discussion; and clarify, verify, or challenge ideas and conclusions.
SL.9.1d Respond thoughtfully to diverse perspectives, summarize points of agreement and disagreement, and, when warranted, qualify or justify their own views and understanding and make new connections in light of the evidence and reasoning presented.
SL.9.2 Integrate multiple sources of information presented in diverse media or formats (e.g., visually, quantitatively, orally) evaluating the credibility and accuracy of each source.
SL.9.3 Evaluate a speaker's point of view, reasoning, and use of evidence and rhetoric, identifying any fallacious reasoning or exaggerated or distorted evidence.

Presentation of Knowledge and Ideas

SL.9.4 Present information, findings, and supporting evidence clearly, concisely, and logically such that listeners can follow the line of reasoning and the organization, development, substance, and style are appropriate to purpose, audience, and task.

Common Core English I

SL.9.5 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.9.6 Adapt speech to a variety of contexts and tasks, demonstrating command of formal English when indicated or appropriate. (See grades 9–10 Language standards 1 and 3 for specific expectations.)

Common Core English I
Language
Conventions of Standard English

L.9.1 Demonstrate command of the conventions of standard English grammar and usage when writing or speaking.
L.9.1a Use parallel structure. *
L.9.1b Use various types of phrases (noun, verb, adjectival, adverbial, participial, prepositional, absolute) and clauses (independent, dependent; noun, relative, adverbial) to convey specific meanings and add variety and interest to writing or presentations.
L.9.2 Demonstrate command of the conventions of standard English capitalization, punctuation, and spelling when writing.
L.9.2a Use a semicolon (and perhaps a conjunctive adverb) to link two or more closely related independent clauses.
L.9.2b Use a colon to introduce a list or quotation.
L.9.2c Spell correctly

Knowledge of Language

L.9.3 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
L.9.3a Write and edit work so that it conforms to the guidelines in a style manual (e.g., MLA Handbook, Turabian's Manual for Writers) appropriate for the discipline and writing type.

Vocabulary Acquisition and Use

L.9.4 Determine or clarify the meaning of unknown and multiple-meaning words and phrases based on grades 9–10 reading and content, choosing flexibly from a range of strategies.
L.9.4a 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.
L.9.4b Identify and correctly use patterns of word changes that indicate different meanings or parts of speech (e.g., analyze, analysis, analytical; advocate, advocacy).

Common Core English I

L.9.4c 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, or its etymology.
L.9.4d 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.9.5 Demonstrate understanding of figurative language, word relationships, and nuances in word meanings.
L.9.5a Interpret figures of speech (e.g., euphemism, oxymoron) in context and analyze their role in the text.
L.9.5b Analyze nuances in the meaning of words with similar denotations.
L.9.6 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.

Common Core English II

Range of Reading and Level of Text Complexity

RL.10.10 By the end of grade 10, read and comprehend literature, including stories, dramas, and poems, at the high end of the grades 9-10 text complexity band independently and proficiently.

Grades 9-10: Literacy in History/SS

Reading in History/Social Studies Key Ideas and Details

RH.9-10.1 Cite specific textual evidence to support analysis of primary and secondary sources, attending to such features as the date and origin of the information.

RH.9-10.2 Determine the central ideas or information of a primary or secondary source; provide an accurate summary of how key events or ideas develop over the course of the text.

RH.9-10.3 Analyze in detail a series of events described in a text; determine whether earlier events caused later ones or simply preceded them.

Craft and Structure

RH.9-10.4 Determine the meaning of words and phrases as they are used in a text, including vocabulary describing political, social, or economic aspects of history/social science.

RH.9-10.5 Analyze how a text uses structure to emphasize key points or advance an explanation or analysis.

RH.9-10.6 Compare the point of view of two or more authors for how they treat the same or similar topics, including which details they include and emphasize in their respective accounts.

Integration of Knowledge and Ideas

RH.9-10.7 Integrate quantitative or technical analysis (e.g., charts, research data) with qualitative analysis in print or digital text.

RH.9-10.8 Assess the extent to which the reasoning and evidence in a text support the author's claims.

RH.9-10.9 Compare and contrast treatments of the same topic in several primary and secondary sources.

Range of Reading and Level of Text Complexity

RH.9-10.10 By the end of grade 10, read and comprehend history/social studies texts in the grades 9–10 text complexity band independently and proficiently.

Grades 9-10: Literacy in Science and Technical Subjects

Reading in Science and Technical Subjects Key Ideas and Details

RST.9-10.1 Cite specific textual evidence to support analysis of science and technical texts, attending to the precise details of explanations or descriptions.

RST.9-10.2 Determine the central ideas or conclusions of a text; trace the text's explanation or depiction of a complex process, phenomenon, or concept; provide an accurate summary of the text.

RST.9-10.3 Follow precisely a complex multistep procedure when carrying out experiments, taking measurements, or performing technical tasks, attending to special cases or exceptions defined in the text.

Craft and Structure

RST.9-10.4 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 9–10 texts and topics.

RST.9-10.5 Analyze the structure of the relationships among concepts in a text, including relationships among key terms (e.g., force, friction, reaction force, energy).

RST.9-10.6 Analyze the author's purpose in providing an explanation, describing a procedure, or discussing an experiment in a text, defining the question the author seeks to address.

Integration of Knowledge and Ideas

RST.9-10.7 Translate quantitative or technical information expressed in words in a text into visual form (e.g., a table or chart) and translate information expressed visually or mathematically (e.g., in an equation) into words.

RST.9-10.8 Assess the extent to which the reasoning and evidence in a text support the author's claim or a recommendation for solving a scientific or technical problem.

RST.9-10.9 Compare and contrast findings presented in a text to those from other sources (including their own experiments), noting when the findings support or contradict previous explanations or accounts

Range of Reading and Level of Text Complexity

RST.9-10.10 By the end of grade 10, read and comprehend science/technical texts in the grades 9–10 text complexity band independently and proficiently.

Grades 9-10: Writing in History/SS, Science, and Technical Subjects

Writing Text Types and Purposes

WHST.9-10.1 Write arguments focused on discipline-specific content.

WHST.9-10.1a Introduce precise claim(s), distinguish the claim(s) from alternate or opposing claims, and create an organization that establishes clear relationships among the claim(s), counterclaims, reasons, and evidence.

WHST.9-10.1b Develop claim(s) and counterclaims fairly, supplying data and evidence for each while pointing out the strengths and limitations of both claim(s) and counterclaims in a discipline-appropriate form and in a manner that anticipates the audience's knowledge level and concerns.

WHST.9-10.1c Use words, phrases, and clauses 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.

WHST.9-10.1d Establish and maintain a formal style and objective tone while attending to the norms and conventions of the discipline in which they are writing.

WHST.9-10.1e Provide a concluding statement or section that follows from or supports the argument presented.

WHST.9-10.2 Write informative/explanatory texts, including the narration of historical events, scientific procedures/ experiments, or technical processes.

WHST.9-10.2a Introduce a topic and organize ideas, concepts, and information to make important connections and distinctions; include formatting (e.g., headings), graphics (e.g., figures, tables), and multimedia when useful to aiding comprehension.

WHST.9-10.2b Develop the topic with well-chosen, relevant, and sufficient facts, extended definitions, concrete details, quotations, or other information and examples appropriate to the audience's knowledge of the topic.

Grades 9-10

Writing in History/SS, Science, and Technical Subjects

WHST.9-10.2c Use varied transitions and sentence structures to link the major sections of the text, create cohesion, and clarify the relationships among ideas and concepts.

WHST.9-10.2d Use precise language and domain-specific vocabulary to manage the complexity of the topic and convey a style appropriate to the discipline and context as well as to the expertise of likely readers.

WHST.9-10.2e Establish and maintain a formal style and objective tone while attending to the norms and conventions of the discipline in which they are writing.

WHST.9-10.2f 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).

WHST.9-10.3 Not Applicable

Production and Distribution of Writing

WHST.9-10.4 Produce clear and coherent writing in which the development, organization, and style are appropriate to task, purpose, and audience.

WHST.9-10.5 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.9-10.6 Use technology, including the Internet, to produce, publish, and update individual or shared writing products, taking advantage of technology's capacity to link to other information and to display information flexibly and dynamically.

Research to Build and Present Knowledge

WHST.9-10.7 Conduct short as well as more sustained research projects to answer a question (including a self-generated question) or solve a problem; narrow or broaden the inquiry when appropriate; synthesize multiple sources on the subject, demonstrating understanding of the subject under investigation.

WHST.9-10.8 Gather relevant information from multiple authoritative print and digital sources, using advanced searches effectively; assess the usefulness of each source in answering the research question; integrate information into the text selectively to maintain the flow of ideas, avoiding plagiarism and following a standard format for citation.
WHST.9-10.9 Draw evidence from informational texts to support analysis, reflection, and research.

Grades 9-10
Writing in History/SS, Science, and Technical Subjects
Range of Writing

WHST.9-10.10 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.

English III
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 a 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.

English III
Reading Informational Text Key Ideas and Details

Rl.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

Rl.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).
Rl.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.
Rl.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

Rl.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.
Rl.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).
Rl.11.9 Analyze seventeenth-, eighteenth-, and nineteenth-century foundational U.S. documents of historical and literary significance (including Them 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

Rl.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.

English III

Writing

W.11.1 Write arguments to support claims in an analysis of substantive topics or texts, using valid reasoning and relevant and sufficient evidence.
W.11.1a 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.
W.11.1b 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.
W.11.1c 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.
W.11.1d Establish and maintain a formal style and objective tone while attending to the norms and conventions of the discipline in which they are writing.
W.11.1e 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.
W.11.2a 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.

English III

W.11.2b 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.
W.11.2c 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.

W.11.2d Use precise language, domain-specific vocabulary, and techniques such as metaphor, simile, and analogy to manage the complexity of the topic.
W.11.2e Establish and maintain a formal style and objective tone while attending to the norms and conventions of the discipline in which they are writing.
W.11.2f 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.
W.11.3a 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.
W.11.3b Use narrative techniques, such as dialogue, pacing, description, reflection, and multiple plot lines, to develop experiences, events, and/or characters.
W.11.3c 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).
W.11.3d Use precise words and phrases, telling details, and sensory language to convey a vivid picture of the experiences, events, setting, and/or characters.
W.11.3e 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.)

English III

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.)
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.
W.11.9a 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").
W.11.9b 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.

English III
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.
SL11.1a 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.
SL.11.1b Work with peers to promote civil, democratic discussions and decision making, set clear goals and deadlines, and establish individual roles as needed.
SL.11.1c 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.
SL.11.1d 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.

English III

SL11.5 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 for specific expectations.)

English III
Language
Conventions of Standard English

L.11.1a Apply the understanding that usage is a matter of convention, can change over time, and is sometimes contested.
L.11.1b 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.11.2a Observe hyphenation conventions.
L.11.3a 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.
L.11.4b Identify and correctly use patterns of word changes that indicate different meanings or parts of speech (e.g., conceive, conception, conceivable).

English IV
Range of Reading and Level of Text Complexity

RL.12.10 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.

Grades 11-12: Literacy in History/SS

Reading in History/Social Studies Key Ideas and Details

RH.11-12.1 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.11-12.2 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.11-12.3 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.11-12.4 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.11-12.5 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.11-12.6 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.11-12.7 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.11-12.8 Evaluate an author's premises, claims, and evidence by corroborating or challenging them with other information.
RH.11-12.9 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.11-12.10 By the end of grade 12, read and comprehend history/social studies texts in the grades 11–CCR text complexity band independently and proficiently.

Grades 11-12: Literacy in Science and Technical Subjects

Reading in Science and Technical Subjects Key Ideas and Details

RST. 11-12.1 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.11-12.2 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.11-12.3 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.11-12.4 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.11-12.5 Analyze how the text structures information or ideas into categories or hierarchies, demonstrating understanding of the information or ideas.
RST.11-12.6 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.
RST.11-12.7 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.11-12.8 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.11-12.9 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.11-12.10 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.

Grades 11-12: Writing I History/SS, Science and Technical Subjects

Writing

Text Types and Purposes

WHST.11-12.1a 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.
WHST.11-12.1b 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.
WHST.11-12.1c 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.
WHST.11-12.2a 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.

Grades 11-12: Writing I History/SS, Science and Technical Subjects

WHST.11-12.2d 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.

Production and Distribution of Writing

WHST.11-12.6 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.
WHST.11-12.8 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.

Appendix C: College and Career Ready Standards

	Units	Unit 1	Unit 2	Unit 7	Unit 8	Unit 20	Unit 22
N-Q.1		X	X	X	X	X	X
N-Q.2			X	X	X	X	X
N-Q.3			X	X	X	X	X

Number and Quantity

Reason quantitatively and use units to solve problems

N-Q.1 Use units 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. *

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

ISTE STANDARDS CROSSWALK FOR FIRE SCIENCE											
	Course	**Unit 1**	**Unit 2**	**Unit 3**	**Unit 4**	**Unit 5**	**Unit 6**	**Unit 7**	**Unit 8**	**Unit 9**	**Unit 10**
ISTE Standards											
T1		X	X		X	X	X	X			
T2			X		X	X	X	X	X		
T3		X		X	X	X	X	X	X	X	X
T4		X	X		X	X	X	X	X		
T5				X			X				
T6		X	X		X	X	X	X	X	X	X
	Course	**Unit 11**	**Unit 12**	**Unit 13**	**Unit 14**	**Unit 15**	**Unit 16**	**Unit 17**	**Unit 18**	**Unit 19**	**Unit 20**
ISTE Standards											
T1				X	X	X					X
T2		X	X	X	X	X		X			X
T3		X	X		X	X				X	X
T4				X	X	X				X	X
T5						X					
T6		X	X		X	X	X	X	X		X
	Course	**Unit 21**	**Unit 22**								
ISTE Standards											
T1		X	X								
T2		X	X								
T3											
T4		X	X								
T5											
T6											

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.

Appendix E: Academic Standards

2013 MISSISSIPPI PHYSICAL EDUCATION FRAMEWORK CROSSWALK FOR FIRE SCIENCE

Based on the National Standards for Physical Education (NASPE)

	Unit	Unit 1	Unit 2	Unit 3	Unit 4	Unit 5	Unit 6	Unit 7	Unit 8	Unit 9	Unit 10
Standards											
GM			X		X				X	X	X
FM		X	X	X	X		X	X	X	X	X
S		X	X	X	X	X	X	X	X		
P		X	X	X	X	X	X	X	X		
C		X	X	X	X	X	X	X	X		
L		X	X	X	X	X	X	X	X	X	
F			X		X				X	X	X
AP			X		X				X	X	
		Unit 11	**Unit 12**	**Unit 13**	**Unit 14**	**Unit 15**	**Unit 16**	**Unit 17**	**Unit 18**	**Unit 19**	**Unit 20**
GM			X	X	X	X	X	X	X		X
FM		X	X	X	X	X	X	X	X	X	X
S				X	X	X					X
P				X	X	X					X
C		X	X	X	X	X				X	X
L				X	X	X					X
F		X	X	X	X	X	X	X	X	X	X
AP		X	X	X	X	X					X
		Unit 21	**Unit 22**								
GM		X	X								
FM		X	X								
S		X	X								
P		X	X								
C		X	X								
L		X	X								
F		X	X								
AP		X	X								

Content Strands

Gross Motor Skills Development (GM)
Fine Motor Skills Development (FM)
Social Skills (S)
Personal Skills (P)
Cognitive Development (C)
Lifelong Learning/Participation (L)
Fitness (F)
Adapted Physical Education (AP)

National Standards for Physical Education

• Demonstrates competency in motor skills and movement patterns needed to perform a variety of physical activities (GM, FM, C)

• Demonstrates an understanding of movement concepts, principles, strategies, and tactics as they apply to the learning, development and performance of physical activities (C, L, P, AP)

• Participates regularly in physical activity (GM, L, F, C, L, S)
• Achieves and maintains a health-enhancing level of physical fitness (F, L, C, AP)
• Exhibits responsible personal and social behavior that respects self and others in physical activity settings. (C, S, P, L, GM, AP)
• Values physical activity for health, enjoyment, challenge, self-expression, and/or social interaction. (S, L, F, GM, AP)