



## 2026 Multimedia—Advanced Digital Design

Program CIP: 50.0102 — Digital Arts

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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 the intellectual and professional development of Mississippi students and educators while applying knowledge and educational research to the lives of the people of the state. The RCU works within the contexts of curriculum development and revision, research, assessment, professional development, and industrial training.

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## Standards

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, and English II, which could be integrated into the content of the units. Mississippi's CTE Multimedia—Advanced Digital Design is aligned to the following standards:

### **Advance CTE Content Standards**

#### *Information Technology Cluster*

- Web and Digital Communications Career Pathway (IT-WD)

#### *Arts, A/V Technology, and Communications Cluster*

- Printing Technology Career Pathway (AR-PRT)
- A/V Technology and Film Career Pathway (AR-AV)
- Visual Arts Career Pathway (AR-VIS)

The standards were extensively researched and reviewed by leaders in the industry, secondary and postsecondary instructors, and university specialists. For each content standard, performance elements representing major topic areas with accompanying performance indicators were developed. Measurements of assessment of the performance elements and performance indicators were developed at the basic, intermediate, and advanced levels. A complete copy of the standards can be accessed at <https://careertech.org/career-clusters/resources/>.

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

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

### **College- and Career-Readiness Standards**

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

[mdek12.org/academiceducation/mississippi-college-and-career-readiness-standards/](https://mdek12.org/academiceducation/mississippi-college-and-career-readiness-standards/)

### **Career and Technical Student Organizations (CTSOs)**

Mississippi's Career and Technical Education (CTE) curricula are aligned with the programs, activities, and competitive events offered through Career and Technical Student Organizations (CTSOs). These organizations provide students with opportunities to apply classroom knowledge in real-world contexts, develop leadership and employability skills, and connect with industry and community partners. Each pathway includes an appendix identifying the CTSOs most closely connected to the curriculum, ensuring that students' classroom learning is reinforced through co-curricular experiences that prepare them for success in both postsecondary education and the workforce.

[mdek12.org/cte/so/](https://mdek12.org/cte/so/)

## 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](http://rcu.msstate.edu).

### **Learning Management System: An Online Resource**

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

Should you need additional instructions, contact the RCU at 662.325.2510 or [helpdesk@rcu.msstate.edu](mailto:helpdesk@rcu.msstate.edu).

## Executive Summary

### Pathway Description

The Multimedia pathway is a four-credit program that teaches digital audio/video production, digital design, web design, animation, and broadcasting. This pathway requires completion of Multimedia Core, two additional offerings from available Multimedia courses, and Multimedia Capstone for students to be considered a CTE completer. Students are also taught about multimedia history, theory, and communication skills for effective presentations. This pathway is ideal for students interested in creative careers such as digital design, web design, or video production. It also provides students with valuable communication and technology skills applicable to a variety of career paths. This pathway is available at several Mississippi high schools and career centers. For additional information, contact your local school counselor or career center.

### Grade Level and Class Size Recommendations

It is recommended that students enter this program as sophomores. 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 and teacher at a time.

### Student Prerequisites

For students to experience success in the program, the following student prerequisites are suggested:

1. C or higher in English (the previous year)
  2. C or higher in high school-level math (last course taken, or the instructor can specify the level of math instruction needed)
  3. Instructor approval
- or**
1. Instructor approval

### Assessment

The latest assessment blueprint for the curriculum can be found at [rcu.msstate.edu/curriculum/](http://rcu.msstate.edu/curriculum/).

### Applied Academic Credit

The latest academic credit information can be found at [mdek12.org/secondaryeducation/approved-courses/](http://mdek12.org/secondaryeducation/approved-courses/).

### Educator Licensure

The latest educator licensure information can be found at [mdek12.org/licensure/](http://mdek12.org/licensure/).

### 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](mailto:helpdesk@rcu.msstate.edu).

## Course Outline

This curriculum consists of one 1-credit course.

**Multimedia—Advanced Digital Design—Course Code: XXXXXX**

| Unit         | Title                                 | Hours      |
|--------------|---------------------------------------|------------|
| 1            | Introduction, Safety, and Orientation | 10         |
| 2            | Introduction to Vector-Based Design   | 40         |
| 3            | Advanced Layout Design                | 40         |
| 4            | Advanced Branding                     | 50         |
| <b>Total</b> |                                       | <b>140</b> |

## Career Pathway Outlook

### Overview

The Multimedia—Advanced Digital Design curriculum is part of the multimedia pathway within the Arts, Entertainment, and Design career cluster. This course is designed to complement and extend the Multimedia—Digital Design course. This pathway emphasizes advanced skills in digital design to provide students with hands-on experience in producing high-quality digital content. It also positions students well for associate degrees and higher education, catering to careers ranging from technical writing to executive roles in multimedia-related fields. Most multimedia careers require at least an associate degree, although careers with the highest earning potential, such as postsecondary teachers, usually require advanced degrees.

### Needs of the Future Workforce

The U.S. Bureau of Labor Statistics projects strong demand for digital design professionals through 2032. This is driven by the growing demand for visually engaging content across various industries. Occupations such as digital interface developers, graphic designers, and web designers are expected to see constant employment opportunities due to evolving digital marketing needs. As of May 2023, the average wage for digital designers was approximately \$62,000. Specialized roles, such as UX/UI designers and multimedia artists, earn upwards of \$80,000 annually. Employment for digital designers with expertise in interactive media is projected to grow 8% from 2022 to 2032, faster than the average for all occupations. Most digital design roles require a bachelor's degree in graphic design, visual communications, or a related field, and around 70% of program graduates secure jobs in design or media-related industries. In Mississippi, graphic design ranks among the top career paths in the multimedia cluster, with expanding demand in both corporate and independent sectors.

Table 1.1: Current and Projected Occupation Report

| Description                                                 | Jobs, 2022 | Projected Jobs, 2032 | Change (Number) | Change (Percent) | Average Hourly Earnings, 2025 |
|-------------------------------------------------------------|------------|----------------------|-----------------|------------------|-------------------------------|
| Multimedia Artists and Animators, Including Special Effects | 80         | 90                   | 10              | 12.5%            | \$14.71                       |
| Graphic Designers                                           | 1,860      | 2,090                | 230             | 12.4%            | \$15.77                       |
| Web Developers                                              | 200        | 270                  | 70              | 35.0%            | \$19.70                       |
| Web and Digital Interface Designers                         | 230        | 290                  | 60              | 26.1%            | \$19.35                       |
| Art, Drama, and Music Teachers, Postsecondary               | 660        | 700                  | 40              | 6.1%             | \$19.14                       |
| Communications Teachers, Postsecondary                      | 180        | 200                  | 20              | 11.1%            | \$18.71                       |
| Audio and Video Equipment Technicians                       | 190        | 200                  | 10              | 5.3%             | \$13.55                       |

Source: Mississippi Department of Employment Security; mdes.ms.gov (2025).

### Perkins V Requirements and Academic Infusion

The Multimedia—Advanced Digital Design curriculum meets Perkins V requirements of introducing students to and preparing them for high-skill, high-wage occupations in arts, entertainment, and design fields. It also offers students a program of study, including secondary, postsecondary, and higher education courses, that will further prepare them for careers in multimedia. Additionally, this curriculum is integrated with academic college- and career-readiness standards. Lastly, it focuses on ongoing and meaningful professional

development for teachers as well as relationships with industry.

### **Transition to Postsecondary Education**

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

### **Best Practices**

#### *Innovative Instructional Technologies*

Classrooms should be equipped with tools that will teach today's digital learners through applicable and modern practices. The Multimedia—Advanced Digital Design 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. Mississippi offers CTSOs that will foster the types of learning expected from the Multimedia—Advanced Digital Design curriculum, such as SkillsUSA and TSA. Student organizations provide participants and members with growth opportunities and competitive events. They also open doors to the world of multimedia 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 Multimedia—Advanced Digital Design 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. This curriculum provides opportunities for students to work together and help each other complete complex tasks. Many field experiences within the Multimedia—Advanced Digital Design curriculum will allow and encourage collaboration with professionals currently in the multimedia field.

#### *Work-Based Learning*

Work-based learning is an extension of understanding competencies taught in the Multimedia—Advanced Digital Design classroom. The Multimedia pathway may require students to obtain a minimum of 35 clinical-type hours, which may include, but are not limited to, clinicals, worksite field experiences, entrepreneurship, internships, pre-apprenticeships, school-based enterprises, job placements, portfolios, and simulated worksites. These real-world connections and applications provide a link to all types of students regarding knowledge, skills, and professional dispositions. Thus, supervised collaboration and immersion into the multimedia industry are keys to students' success, knowledge, and skills development. For more information on embedded WBL, visit the [Mississippi Work-Based Learning Manual](http://Mississippi Work-Based Learning Manual) on the RCU website, [rcu.msstate.edu](http://rcu.msstate.edu).

## Professional Organizations

Association for Career and Technical Education (ACTE)

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

Mississippi Association for Career and Technical Education (MSACTE)

[mississippiacte.com](http://mississippiacte.com)

Mississippi Educational Computing Association (MECA)

[ms-meca.org](http://ms-meca.org)

SkillsUSA

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

Technology Student Association (TSA)

[tsaweb.org](http://tsaweb.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](mailto: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 Multimedia pathway utilizes a national certification, work-based learning, or another accountability measure that aligns with Perkins V as a quality indicator, this material may be assessed based 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, Safety, and Orientation

### Competencies and Suggested Objectives

1. Apply school and program policies, course expectations, and safety procedures, and explore careers related to digital design. <sup>DOK2</sup>
  - a. Identify course expectations, school policies, and program policies related to digital design.
  - b. Apply safety procedures in the classroom and lab and demonstrate safe use of all equipment.
  - c. Explore career opportunities related to the multimedia industry.
2. Analyze and apply 21st-century skills in relation to the classroom environment. <sup>DOK3</sup>
  - a. Identify the potential influences that shape personality development, including personality traits, heredity, and environmental factors.
  - b. Develop a report on how personality traits affect teamwork and leadership skills.
  - c. Engage in effective leadership, decision-making, and communication skills.
  - d. Review and revise a working resumé with a portfolio and continue to update throughout the course.
  - e. Describe the purpose of student organizations relating to personality, leadership, and teamwork development.
  - f. Develop a plan for engaging in digital citizenship.
3. Explain legal requirements and digital citizenship considerations for careers in digital design. <sup>DOK2</sup>
  - a. Describe ways to avoid legal liability problems in the occupation.
  - b. Discuss digital citizenship as it pertains to the professional and personal aspects of occupations in digital design.
4. Investigate the ethical use of artificial intelligence (AI) in digital design. <sup>DOK3</sup>
  - a. Develop guidelines that promote ethical use of AI.
  - b. Discuss the effects of AI on user experience, privacy, and security.
  - c. Discuss the ethical considerations of AI in digital design, such as bias, transparency, and accountability.

**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.

**Note:** This unit will be ongoing throughout the year. Time allotted for this unit will be distributed over the entire year.

### Mississippi Career Connections

AI tools are becoming part of everyday work in digital design, whether in advertising agencies on the Gulf Coast, small media studios in Jackson, or in-house design teams across the state. To help students see how this relates to real jobs, have them choose one AI tool used in the design field, such as image enhancement, captioning, layout suggestions, or audio editing, and review how a professional might use it responsibly. Students create a short list of “best practices” that address accuracy, fairness, privacy, and when human judgment is still needed. This gives students a clearer picture of how AI fits into modern design careers in Mississippi and the importance of using these tools ethically.

## Unit 2: Introduction to Vector-Based Design

### Competencies and Suggested Objectives

1. Create and customize the workspace in a vector-based design program (e.g., Adobe Illustrator, CorelDRAW, Inkscape, etc.). <sup>DOK3</sup>
  - a. Apply concepts to become proficient in the following:
    - Managing artboards
    - Navigating the properties panel
    - Using rulers, grids, and guides
    - Using a toolbar
2. Apply principles and tools to create and edit vector-based designs. <sup>DOK3</sup>
  - a. Use the following vector-based design tools to create various forms of digital media:
    - Draw
    - Select
    - Navigate
    - Paint
    - Text
    - Modify
    - Layers
3. Demonstrate importing, saving, exporting, and bridging files across platforms and formats to ensure compatibility. <sup>DOK2</sup>
  - a. Explore the following types:
    - Portable Document Format (PDF)
    - Portable Network Graphic (PNG)
    - Encapsulated PostScript (EPS)
    - AI
    - Scalable Vector Graphics (SVG)
    - Photoshop Document (PSD)
    - Cyan, Magenta, Yellow, and Key (CMYK) vs. Red, Green, and Blue (RGB)

### Mississippi Career Connections

Students should take on the role of a designer creating a vector-based project for a Mississippi-based client, such as a local arts festival, a small business, a tourism group, or a school event. Students choose their client and decide what they'll design (a logo, a sticker, an event badge, a promotional graphic, etc.). They will set up their workspace and create the design using vector-based tools. Once finished, students export the file in two formats (one for print and one for web) and briefly explain why each format meets the client's needs. This gives students a chance to practice real design decisions while connecting their work to careers in Mississippi's creative and marketing industries.

## Unit 3: Advanced Layout Design

### Competencies and Suggested Objectives

1. Apply and integrate the principles of layout design, typography, and color modes to create diverse designs. <sup>DOK4</sup>
  - a. Using the principles of layout design, typography, and color modes, create examples of the following:
    - Brochures
    - Infographics
    - Magazines
    - Flyers
    - Large format advertisements (billboards, banners, jumbotrons, etc.)
    - E-publications
2. Apply the use of grids, columns, margins, and bleeds to organize and refine layout designs. <sup>DOK3</sup>
  - a. Demonstrate the use of grids and columns to organize content within a layout.
  - b. Explain and apply the concepts of margins and bleeds to ensure proper spacing and edge-to-edge printing in design projects.
3. Produce and present a cohesive design product that integrates layout principles and design elements. <sup>DOK3</sup>
  - a. Create and present a design project that effectively uses layout techniques and incorporates grid systems in design projects.

### Mississippi Career Connections

Using the same client from the previous unit, students are now asked to create a publication that expands on the themes from their newly created vector-based design. Students should choose the format that best fits the client's needs using the following:

- Grids, columns, margins, and bleeds to structure the layout
- Typography and color modes for print or digital use
- Text and images to support clarity and aesthetics

Once the project is complete, students should export the design in the proper format for their client's needs. Students should present their work to classmates and explain how their design choices support both the intended message and the audience of their client. This activity connects classroom design skills to real marketing, print, and media careers in Mississippi.

## Unit 4: Advanced Branding

### Competencies and Suggested Objectives

1. Analyze and explain the foundational principles of branding, including key components that contribute to a strong and effective brand. <sup>DOK3</sup>
  - a. Analyze the following branding concepts:
    - Defining branding
    - Developing brand identity
    - Understanding client needs
2. Apply and integrate the elements of a branding kit to create a comprehensive branding strategy for yourself or a client. <sup>DOK3</sup>
  - a. Use the following elements to create a branding strategy:
    - Logo
    - Color scheme
    - Typography
    - Font (type and size)
    - Slogan
    - Imagery
    - Voice and tone

### Mississippi Career Connections

As a comprehensive final product, students should develop a complete branding kit for their Mississippi-based client. The kit should include a logo, color scheme, typography choices, imagery, a slogan, and a clear voice and tone. Students then explain how this brand identity brings together the design pieces they created in earlier units and how consistent branding is used by businesses, tourism organizations, nonprofits, and local agencies in Mississippi to reach their audiences. This activity helps students see how the skills learned throughout the course connect to real-world expectations in the design industry.

## 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 (MM/DD/YY) on which the student mastered the competency.

| Unit 1: Introduction, Safety, and Orientation |    |                                                                                                                                        |
|-----------------------------------------------|----|----------------------------------------------------------------------------------------------------------------------------------------|
|                                               | 1. | Apply school and program policies, course expectations, and safety procedures, and explore careers related to digital design.          |
|                                               | 2. | Analyze and apply 21st-century skills in relation to the classroom environment.                                                        |
|                                               | 3. | Explain legal requirements and digital citizenship considerations for careers in digital design.                                       |
|                                               | 4. | Investigate the ethical use of artificial intelligence (AI) in digital design.                                                         |
| Unit 2: Introduction to Vector-Based Design   |    |                                                                                                                                        |
|                                               | 1. | Create and customize the workspace in a vector-based design program (e.g., Adobe Illustrator, CorelDRAW, Inkscape, etc.).              |
|                                               | 2. | Apply principles and tools to create and edit vector-based designs.                                                                    |
|                                               | 3. | Demonstrate importing, saving, exporting, and bridging files across platforms and formats to ensure compatibility.                     |
| Unit 3: Advanced Layout Design                |    |                                                                                                                                        |
|                                               | 1. | Apply and integrate the principles of layout design, typography, and color modes to create diverse designs.                            |
|                                               | 2. | Apply the use of grids, columns, margins, and bleeds to organize and refine layout designs.                                            |
|                                               | 3. | Produce and present a cohesive design product that integrates layout principles and design elements.                                   |
| Unit 4: Advanced Branding                     |    |                                                                                                                                        |
|                                               | 1. | Analyze and explain the foundational principles of branding, including key components that contribute to a strong and effective brand. |
|                                               | 2. | Apply and integrate the elements of a branding kit to create a comprehensive branding strategy for yourself or a client.               |

## Appendix A: Industry Standards

| Standards | Units |   |   |   |
|-----------|-------|---|---|---|
|           | 1     | 2 | 3 | 4 |
| WDC1      | X     | X |   |   |
| WDC2      | X     | X | X | X |
| WDC3      |       | X | X | X |
| WDC4      | X     | X | X | X |
| WDC5      |       |   |   |   |
| WDC6      |       | X | X | X |
| WDC7      |       |   | X | X |
| WDC8      |       |   | X | X |
| WDC9      |       |   |   |   |
| WDC10     | X     | X | X | X |
| PRT1      |       | X |   |   |
| PRT2      | X     | X | X | X |
| PRT3      |       |   |   | X |
| AVT1      | X     |   |   |   |
| AVT2      | X     |   |   |   |
| AVT3      |       |   |   |   |
| AVT4      |       |   |   |   |
| VIS1      | X     |   |   |   |
| VIS2      | X     | X | X | X |
| VIS3      | X     | X | X | X |

### Information Technology Career Cluster™ (IT)

#### WDC Web & Digital Communications Career Pathway

1. Analyze customer requirements to design and develop a web or digital communication product.
2. Apply the design and development process to produce user-focused web and digital communications solutions.
3. Write product specifications that define the scope of work aligned to customer requirements.
4. Demonstrate the effective use of tools for digital communication production, development, and project management.
5. Develop, administer, and maintain web applications.
6. Design, create, and publish a digital communication product based on customer needs.
7. Evaluate the functionality of a digital communication product using industry accepted techniques and metrics.
8. Implement quality assurance processes to deliver quality digital communication products and services.
9. Perform maintenance and customer support functions for digital communication products.
10. Comply with intellectual property laws, copyright laws, and ethical practices when creating web/digital communications.

### Arts, A/V Technology, & Communications Career Cluster™ (AR)

#### PRT Printing Technology Career Pathway

1. Manage the printing process, including customer service and sales, scheduling, production, and quality control.
2. Demonstrate the production of various print, multimedia, or digital media products.
3. Perform finishing and distribution operations related to the printing process.

**AV      A/V Technology & Film Career Pathway**

1. Describe the history, terminology, occupations and value of audio, video, and film technology.
2. Demonstrate the use of basic tools and equipment used in audio, video, and film production.
3. Demonstrate technical support skills for audio, video and/or film productions.
4. Design an audio, video, and/or film production.

**VIS      Visual Arts Career Pathway**

1. Describe the history and evolution of the visual arts and its role in and impact on society.
2. Analyze how the application of visual arts elements and principles of design communicate and express ideas.
3. Analyze and create two and three-dimensional visual art forms using various media.

## Appendix B: 21st Century Skills

| Standards | Units |   |   |   |
|-----------|-------|---|---|---|
|           | 1     | 2 | 3 | 4 |
| CS1       | X     | X | X | X |
| CS2       | X     | X |   |   |
| CS3       | X     |   |   |   |
| CS4       | X     |   |   |   |
| CS6       | X     | X | X | X |
| CS7       | X     | X | X | X |
| CS8       | X     | X | X | X |
| CS9       | X     | X | X | X |
| CS10      | X     | X | X | X |
| CS11      | X     | X | X | X |
| CS12      | X     | X | X | X |
| CS13      | X     | X | X | X |
| CS14      | X     | X | X | X |
| CS15      | X     | X | X | X |
| CS16      | X     | X | X | X |

### CSS1-21st Century Themes

#### CS1 Global Awareness

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

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

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

#### CS3 Civic Literacy

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

#### CS4 Health Literacy

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

#### 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

| Standards  | Units |   |   |   |
|------------|-------|---|---|---|
|            | 1     | 2 | 3 | 4 |
| RI.11.1.   | X     | X | X | X |
| RI.11.2.   | X     | X | X | X |
| RI.11.3.   | X     | X | X | X |
| RI.11.4.   | X     | X | X | X |
| RI.11.5.   | X     | X | X | X |
| RI.11.6.   | X     | X | X | X |
| RI.11.7.   | X     | X | X | X |
| RI.11.10.  | X     | X | X | X |
| W.11.1.    | X     | X | X | X |
| W.11.2.    | X     | X | X | X |
| W.11.3.    | X     |   |   |   |
| W.11.4.    | X     | X | X | X |
| W.11.5.    | X     | X | X | X |
| W.11.6.    | X     | X | X | X |
| W.11.7.    | X     | X | X | X |
| W.11.8.    | X     | X | X | X |
| W.11.9.    | X     | X | X | X |
| W.11.10.   | X     | X | X | X |
| SL.11.1.   | X     | X | X | X |
| SL.11.2.   | X     | X | X | X |
| SL.11.3.   | X     | X | X | X |
| SL.11.4.   | X     | X | X | X |
| SL.11.5.   | X     | X | X | X |
| L.11.1.    | X     | X | X | X |
| L.11.2.    | X     | X | X | X |
| L.11.4.    | X     | X | X | X |
| L.11.5.    | X     | X | X | X |
| L.11.6.    | X     | X | X | X |
| RST.11.1.  | X     | X | X | X |
| RST.11.2.  | X     | X | X | X |
| RST.11.3.  | X     | X | X | X |
| RST.11.4.  | X     | X | X | X |
| RST.11.5.  | X     | X | X | X |
| RST.11.6.  | X     | X | X | X |
| RST.11.7.  | X     | X | X | X |
| RST.11.9.  | X     | X | X | X |
| WHST.11.2. | X     | X | X | X |
| WHST.11.4. | X     | X | X | X |
| WHST.11.5. | X     | X | X | X |
| WHST.11.6. | X     | X | X | X |
| WHST.11.7. | X     | X | X | X |
| WHST.11.8. | X     | X | X | X |

## Reading Standards for Informational Text (11-12) - College and Career Readiness Anchor Standards for Informational Text

### **RI.11 Key Ideas and Details**

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

### **RI.11 Craft and Structure**

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).
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.
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.

### **RI.11 Integration of Knowledge and Ideas**

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.
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).
9. Analyze seventeenth-, eighteenth-, and nineteenth-century foundational U.S. documents of historical and literary significance (including The Declaration of Independence, the Preamble to the Constitution, the Bill of Rights, and Lincoln's Second Inaugural Address) for their themes, purposes, and rhetorical features.

### **RI.11 Range of Reading and Level of Text Complexity**

10. By the end of grade 11, read and comprehend literary nonfiction in the grades 11–CCR text complexity band proficiently, with scaffolding as needed at the high end of the range. By the end of grade 12, read and comprehend literary nonfiction at the high end of the grades 11–CCR text complexity band independently and proficiently.

## College and Career Readiness Anchor Standards for Writing

### **W.11 Text Types and Purposes**

1. Write arguments to support claims in an analysis of substantive topics or texts, using valid reasoning and relevant and sufficient evidence.
  - a. Introduce precise, knowledgeable claim(s), establish the significance of the claim(s), distinguish the claim(s) from alternate or opposing claims, and create an organization that logically sequences claim(s), counterclaims, reasons, and evidence.
  - b. Develop claim(s) and counterclaims fairly and thoroughly, supplying the most relevant evidence for each while pointing out the strengths and limitations of both in a manner that anticipates the audience's knowledge level, concerns, values, and possible biases.
  - c. Use words, phrases, and clauses as well as varied syntax to link the major sections of the text, create cohesion, and clarify the relationships between claim(s) and reasons, between reasons and evidence, and between claim(s) and counterclaims.
  - d. Establish and maintain a formal style and objective tone while attending to the norms and conventions of the discipline in which they are writing.
  - e. Provide a concluding statement or section that follows from and supports the argument presented.
2. Write informative/explanatory texts to examine and convey complex ideas, concepts, and information clearly and accurately through the effective selection, organization, and analysis of content.
  - a. Introduce a topic; organize complex ideas, concepts, and information so that each new element builds on that which precedes it to create a unified whole; include formatting (e.g., headings), graphics (e.g., figures, tables), and multimedia when useful to aiding comprehension.

- b. Develop the topic thoroughly by selecting the most significant and relevant facts, extended definitions, concrete details, quotations, or other information and examples appropriate to the audience's knowledge of the topic.
  - c. Use appropriate and varied transitions and syntax to link the major sections of the text, create cohesion, and clarify the relationships among complex ideas and concepts.
  - d. Use precise language, domain-specific vocabulary, and techniques such as metaphor, simile, and analogy to manage the complexity of the topic.
  - e. Establish and maintain a formal style and objective tone while attending to the norms and conventions of the discipline in which they are writing.
  - f. Provide a concluding statement or section that follows from and supports the information or explanation presented (e.g., articulating implications or the significance of the topic).
3. Write narratives to develop real or imagined experiences or events using effective technique, well-chosen details, and well-structured event sequences.
- a. Engage and orient the reader by setting out a problem, situation, or observation and its significance, establishing one or multiple point(s) of view, and introducing a narrator and/or characters; create a smooth progression of experiences or events.
  - b. Use narrative techniques, such as dialogue, pacing, description, reflection, and multiple plot lines, to develop experiences, events, and/or characters.
  - c. Use a variety of techniques to sequence events so that they build on one another to create a coherent whole and build toward a particular tone and outcome (e.g., a sense of mystery, suspense, growth, or resolution).
  - d. Use precise words and phrases, telling details, and sensory language to convey a vivid picture of the experiences, events, setting, and/or characters.
  - e. Provide a conclusion that follows from and reflects on what is experienced, observed, or resolved over the course of the narrative.

**W.11 Production and Distribution of Writing**

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

**W.11 Research to Build and Present Knowledge**

- 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.
- 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.
- 9. Draw evidence from literary or informational texts to support analysis, reflection, and research.
  - a. Apply grades 11–12 Reading standards to literature (e.g., “Demonstrate knowledge of eighteenth-, nineteenth- and early-twentieth-century foundational works of American literature, including how two or more texts from the same period treat similar themes or topics”).
  - b. Apply grades 11–12 Reading standards to literary nonfiction (e.g., “Delineate and evaluate the reasoning in seminal U.S. texts, including the application of constitutional principles and use of legal reasoning [e.g., in U.S. Supreme Court Case majority opinions and dissents] and the premises, purposes, and arguments in works of public advocacy [e.g., The Federalist, presidential addresses]”).

**W.11 Range of Writing**

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

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

### **SL.11 Comprehension and Collaboration**

1. Initiate and participate effectively in a range of collaborative discussions (one-on-one, in groups, and teacher-led) with diverse partners on grades 11–12 topics, texts, and issues, building on others' ideas and expressing their own clearly and persuasively.
  - a. Come to discussions prepared, having read and researched material under study; explicitly draw on that preparation by referring to evidence from texts and other research on the topic or issue to stimulate a thoughtful, well-reasoned exchange of ideas.
  - b. Work with peers to promote civil, democratic discussions and decision-making, set clear goals and deadlines, and establish individual roles as needed.
  - c. Propel conversations by posing and responding to questions that probe reasoning and evidence; ensure a hearing for a full range of positions on a topic or issue; clarify, verify, or challenge ideas and conclusions; and promote divergent and creative perspectives.
  - d. Respond thoughtfully to diverse perspectives; synthesize comments, claims, and evidence made on all sides of an issue; resolve contradictions when possible; and determine what additional information or research is required to deepen the investigation or complete the task.
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.
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.

### **SL.11 Presentation of Knowledge and Ideas**

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

## College and Career Readiness Anchor Standards for Language

### **L.11 Conventions of Standard English**

1. Demonstrate command of the conventions of standard English grammar and usage when writing or speaking.
  - a. Apply the understanding that usage is a matter of convention, can change over time, and is sometimes contested.
  - b. Resolve issues of complex or contested usage, consulting references (e.g., Merriam-Webster's Dictionary of English Usage, Garner's Modern American Usage) as needed.
2. Demonstrate command of the conventions of standard English capitalization, punctuation, and spelling when writing.
  - a. Observe hyphenation conventions.
  - b. Spell correctly.

### **L.11 Knowledge of Language**

3. Apply knowledge of language to understand how language functions in different contexts, to make effective choices for meaning or style, and to comprehend more fully when reading or listening.
  - a. Vary syntax for effect, consulting references (e.g., Tufte's Artful Sentences) for guidance as needed; apply an understanding of syntax to the study of complex texts when reading.

### **L.11 Vocabulary Acquisition and Use**

4. Determine or clarify the meaning of unknown and multiple-meaning words and phrases based on grades 11–12 reading and content, choosing flexibly from a range of strategies.
  - a. Use context (e.g., the overall meaning of a sentence, paragraph, or text; a word's position or function in a sentence) as a clue to the meaning of a word or phrase.
  - b. Identify and correctly use patterns of word changes that indicate different meanings or parts of speech (e.g., conceive, conception, conceivable).

- c. Consult general and specialized reference materials (e.g., dictionaries, glossaries, thesauruses), both print and digital, to find the pronunciation of a word or determine or clarify its precise meaning, its part of speech, its etymology, or its standard usage.
- d. Verify the preliminary determination of the meaning of a word or phrase (e.g., by checking the inferred meaning in context or in a dictionary).
- 5. Demonstrate understanding of figurative language, word relationships, and nuances in word meanings.
  - a. Interpret figures of speech (e.g., hyperbole, paradox) in context and analyze their role in the text.
  - b. Analyze nuances in the meaning of words with similar denotations.
- 6. Acquire and use accurately general academic and domain-specific words and phrases, sufficient for reading, writing, speaking, and listening at the college and career readiness level; demonstrate independence in gathering vocabulary knowledge when considering a word or phrase important to comprehension or expression.

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

#### **RST.11 Key Ideas and Details**

- 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.
- 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.
- 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.

#### **RST.11 Craft and Structure**

- 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.
- 5. Analyze how the text structures information or ideas into categories or hierarchies, demonstrating understanding of the information or ideas.
- 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 Integration of Knowledge and Ideas**

- 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.
- 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.
- 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.

#### **RST.11 Range of Reading and Level of Text Complexity**

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

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

#### **WHST.11 Text Types and Purposes**

- 1. Write arguments focused on discipline-specific content.
  - a. Introduce precise, knowledgeable claim(s), establish the significance of the claim(s), distinguish the claim(s) from alternate or opposing claims, and create an organization that logically sequences the claim(s), counterclaims, reasons, and evidence.
  - b. Develop claim(s) and counterclaims fairly and thoroughly, supplying the most relevant data and evidence for each while pointing out the strengths and limitations of both claim(s) and counterclaims in a discipline-appropriate form that anticipates the audience’s knowledge level, concerns, values, and possible biases.
  - c. Use words, phrases, and clauses as well as varied syntax to link the major sections of the text, create cohesion, and clarify the relationships between claim(s) and reasons, between reasons and evidence, and between claim(s) and counterclaims.
  - d. Establish and maintain a formal style and objective tone while attending to the norms and conventions of the discipline in which they are writing.
  - e. Provide a concluding statement or section that follows from or supports the argument presented.

2. Write informative/explanatory texts, including the narration of historical events, scientific procedures/experiments, or technical processes.
  - a. Introduce a topic and organize complex ideas, concepts, and information so that each new element builds on that which precedes it to create a unified whole; include formatting (e.g., headings), graphics (e.g., figures, tables), and multimedia when useful to aiding comprehension.
  - b. Develop the topic thoroughly by selecting the most significant and relevant facts, extended definitions, concrete details, quotations, or other information and examples appropriate to the audience's knowledge of the topic.
  - c. Use varied transitions and sentence structures to link the major sections of the text, create cohesion, and clarify the relationships among complex ideas and concepts.
  - d. Use precise language, domain-specific vocabulary and techniques such as metaphor, simile, and analogy to manage the complexity of the topic; convey a knowledgeable stance in a style that responds to the discipline and context as well as to the expertise of likely readers.
  - e. Provide a concluding statement or section that follows from and supports the information or explanation provided (e.g., articulating implications or the significance of the topic).
3. (Not applicable as a separate requirement)
- WHST.11 Production and Distribution of Writing**
  4. Produce clear and coherent writing in which the development, organization, and style are appropriate to task, purpose, and audience. Produce clear and coherent writing in which the development, organization, and style are appropriate to task, purpose, and audience.
  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.
  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 Research to Build and Present Knowledge**
  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.
  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.
  9. Draw evidence from informational texts to support analysis, reflection, and research.
- WHST.11 Range of Writing**
  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.

## Appendix D: Common Core for State Standards for Mathematics

| Standards | Units |   |   |   |
|-----------|-------|---|---|---|
|           | 1     | 2 | 3 | 4 |
| N-RN.1.   |       | X |   |   |
| N-Q.1.    | X     | X | X | X |
| N-Q.2.    | X     | X | X | X |
| N-Q.3.    | X     | X | X | X |
| A-SSE.1.  | X     | X | X | X |
| A-SSE.2.  | X     | X | X | X |
| A-SSE.3.  | X     | X | X | X |

### Mathematics (High School) - Number and Quantity

#### The Real Number System (N-RN)

1. Explain how the definition of the meaning of rational exponents follows from extending the properties of integer exponents to those values, allowing for a notation for radicals in terms of rational exponents.
2. Rewrite expressions involving radicals and rational exponents using the properties of exponents.
3. Explain why the sum or product of two rational numbers is rational; that the sum of a rational number and an irrational number is irrational; and that the product of a nonzero rational number and an irrational number is irrational.

#### Quantities (N-Q)

1. Use units as a way to understand problems and to guide the solution of multi-step problems; choose and interpret units consistently in formulas; choose and interpret the scale and the origin in graphs and data displays.
2. Define appropriate quantities for the purpose of descriptive modeling.
3. Choose a level of accuracy appropriate to limitations on measurement when reporting quantities.

### Algebra

#### Seeing Structure in Expressions (A-SSE)

1. Interpret expressions that represent a quantity in terms of its context.
  - a. Interpret parts of an expression, such as terms, factors, and coefficients.
  - b. Interpret complicated expressions by viewing one or more of their parts as a single entity. For example, interpret  $P(1+r)^n$  as the product of  $P$  and a factor not depending on  $P$ .
2. Choose and produce an equivalent form of an expression to reveal and explain properties of the quantity represented by the expression.
3. Choose and produce an equivalent form of an expression to reveal and explain properties of the quantity represented by the expression.
  - a. Factor a quadratic expression to reveal the zeros of the function it defines.
  - b. Complete the square in a quadratic expression to reveal the maximum or minimum value of the function it defines.
  - c. Use the properties of exponents to transform expressions for exponential functions.
4. Derive the formula for the sum of a finite geometric series (when the common ratio is not 1), and use the formula to solve problems. For example, calculate mortgage payments.

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

| Standards | Units |   |   |   |
|-----------|-------|---|---|---|
|           | 1     | 2 | 3 | 4 |
| T1        | X     | X | X | X |
| T2        | X     | X | X | X |
| T3        | X     | X | X | X |
| T4        | X     | X | X | X |
| T5        | X     | X | X | X |
| T6        | X     | X | X | X |

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

#### T1 Creativity and Innovation

Students demonstrate creative thinking, construct knowledge, and develop innovative products and processes using technology. Students do the following:

- Apply existing knowledge to generate new ideas, products, or processes.
- Create original works as a means of personal or group expression.
- Use models and simulations to explore complex systems and issues.
- 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:

- Interact, collaborate, and publish with peers, experts, or others employing a variety of digital environments and media.
- Communicate information and ideas effectively to multiple audiences using a variety of media and formats.
- Develop cultural understanding and global awareness by engaging with learners of other cultures.
- 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:

- Plan strategies to guide inquiry.
- Locate, organize, analyze, evaluate, synthesize, and ethically use information from a variety of sources and media.
- Evaluate and select information sources and digital tools based on the appropriateness to specific tasks.
- 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 F: TSA Competition Alignment

| TSA Competition                 | Units |   |   |   |
|---------------------------------|-------|---|---|---|
|                                 | 1     | 2 | 3 | 4 |
| Digital Video Production        |       | X | X |   |
| Photographic Technology         |       | X | X |   |
| Prepared Presentation           | X     |   |   | X |
| Promotional Design              |       | X | X | X |
| STEM Mass Media                 | X     |   | X | X |
| Video Game Design               |       | X | X |   |
| Virtual Reality Simulation (VR) |       | X | X |   |
| Webmaster                       |       |   | X | X |

### National TSA Conferences High School Competitive Events: 2025 – 2026

1. **Digital Video Production:** Participants develop and submit a digital video and a documentation portfolio (including such items as a storyboard, script, summary of references and sources, and equipment list) that reflects the annual theme. Semifinalists participate in an interview.
2. **Photographic Technology:** Participants produce a photographic portfolio - demonstrating expertise in photo and imaging technology processes - to convey a message based on the annual theme. Semifinalists have 24 hours to complete a portfolio of photos (with required documentation) taken onsite at the national TSA conference. Finalists are determined based on the quality of the semifinal portfolio, the portfolio presentation, and interview responses.
3. **Prepared Presentation:** Participants deliver a three-to-five-minute oral presentation related to the current national TSA conference theme. Both semifinalists and finalists are determined based on the quality of the presentation and the appropriate use and content of the accompanying required slide deck.
4. **Promotional Design:** Participants use computerized graphic communications layout and design skills to produce a promotional resource packet. The resource must address the annual theme/problem and include at least four printed publication items and required documentation. Semifinalists demonstrate publishing competency in an onsite technical design challenge.
5. **STEM Mass Media:** In response to an annual theme, participants use written and verbal communication skills to convey a news story in both a video broadcast (preliminary round) and a digital written format (semifinal round). Participants must demonstrate a strong understanding of journalism etiquette and the common practices of the field of mass media.
6. **Video Game Design:** Participants design, build, and launch an E-rated online video game – with accompanying required documentation - that addresses the annual theme. Semifinalists participate in an interview to demonstrate the knowledge and expertise they gained during the development of the game.
7. **Virtual Reality Simulation (VR):** Participants use video and 3D computer graphics tools and design processes to create a two-to-three-minute VR visualization (accompanied by supporting documentation) that addresses the annual theme. Semifinalists deliver a presentation about their visualization and participate in an interview.
8. **Webmaster:** Participants design, build, and launch a website that addresses the annual challenge. Semifinalists participate in an interview to demonstrate the knowledge and expertise gained during the development of the website

## Appendix G: SkillsUSA Competition Alignment

| SkillsUSA Competition                  | Units |   |   |   |
|----------------------------------------|-------|---|---|---|
|                                        | 1     | 2 | 3 | 4 |
| Advertising Design                     |       | X | X | X |
| Career Pathways-Arts and Communication | X     | X | X | X |
| Prepared Speech                        | X     |   |   | X |
| Promotional Bulletin Board             |       |   | X | X |
| Web Design and Development             |       |   | X | X |

### National SkillsUSA Conferences High School Competitive Events: 2025 - 2026

1. **Advertising Design:** This competition tests technical skills and creative aptitude as though competitors worked for an advertising agency. In addition to a written test, competitors will recreate a provided advertisement on a computer. Competitors are judged on their accuracy, proficiency with industry software, and ability to meet a deadline. The competition also includes a creative portion. The creative portion involves the application of creative thinking and a design challenge. Layout, drawing, and illustration skills are used, as well as the ability to create vibrant, effective designs using a computer.
2. **Career Pathways – Arts and Communication:** Student teams use their course of study as the basis of a project that will benefit their class, school, community or industry. The project must highlight an aspect of their Career Cluster training. Upon completion of the project, the students will develop a display and use it within the community to explain their training and project. This competition will judge mastery of their training, its application, the project's benefit to their community, and display and presentation techniques. Teams must be entered in the appropriate Career Pathways - Arts and Communication based on the course enrollment of the students (not on the content of the project).
3. **Prepared Speech (includes Middle School):** The competition requires students to deliver a five- to seven-minute prepared speech based on the annual SkillsUSA competition theme. Competitors are evaluated on their ability to present thoughts relating to the central theme clearly and effectively, and are rated on voice, mechanics and platform deportment.
4. **Promotional Bulletin Board (includes Middle School):** (Team of 3) The competition evaluates bulletin board displays created by SkillsUSA chapters based on the annual SkillsUSA competition theme. The bulletin boards promote SkillsUSA, career and technical education in general and related occupational information. An accompanying professional portfolio documents the development and construction of the bulletin board. An oral presentation explains the process, purpose and educational value of the bulletin board.
5. **Web Design and Development:** (Team of 2) Teams complete a series of challenges focusing on creating a website for a client and a specific target audience. Judging will focus on meeting the client's needs, usability and accessibility, and industry-standard best practices. Teams will also be evaluated on the process they use to meet the challenges and how well they work as a team. Teams will need Internet access as all competition materials (including the coding environment) will only be available online.