

Standards by Grade Level

Seventh Grade



Table of Contents

Purpose.....	2
Guiding Principle	2
Standards.....	2
COMPUTER SCIENCE.....	2
ENGLISH LANGUAGE ARTS.....	6
FINANCIAL LITERACY.....	12
FINE ARTS: DANCE.....	14
FINE ARTS: DRAMA	15
FINE ARTS: MUSIC.....	17
FINE ARTS: VISUAL ARTS.....	18
MATHEMATICS.....	20
SCIENCE.....	31
SOCIAL STUDIES	32
TECHNOLOGY.....	35
WORLD LANGUAGES AND CULTURES.....	39

Purpose

The *Standards by Grade Level for Seventh Grade* is a compilation of all learning standards for seventh grade. This document does not take the place of Ohio's Learning Standards and Model Curricula. The Department of Education designed this tool to view the standards by grade level instead of content area. Every student should receive instruction aligned to the learning standards.

Guiding Principle

Prioritizing student learning

Continue to value and use **Ohio's Learning Standards** as the basis for guiding instruction and student acquisition of knowledge and skills. Ensure opportunities for students to master **core subject areas** and pursue **well-rounded learning** (such as fine arts, technology, computer science and world languages and cultures).

Standards

COMPUTER SCIENCE	
Instructional Supports: Ohio's Learning Standards for Computer Science Computer Science Model Curriculum	
Code	Standard
Computing Systems	
Topic 1: Devices	
CS.D.7.a	Develop and implement a process to evaluate existing computing devices capabilities based on personal interaction with the device.
Topic 2: Hardware and software	
CS.HS.7.a	Evaluate hardware and software combinations used to accomplish a task.
Topic 3: Troubleshooting	
CS.T.7.a	Use a systematic process to identify and evaluate the source of a routine computing problem. Select the best solution to solve the computing problem and communicate the solution to others.

COMPUTER SCIENCE

Networks and the Internet

Topic 1: Networking

NI.N.7.a	Explain the role of hardware components and diagram the infrastructure of networks and the internet (including cloud servers).
NI.N.7.b	Explain the protocols (i.e., rules) and why they are used to transmit data across networks and the internet.

Topic 2: Cybersecurity

NI.C.7.a	Identify and apply introductory methods of encryption to model the secure transmission of information.
NI.C.7.b	Describe the types of malware to show how malware affects information.
NI.C.7.c	Identify cybersecurity concerns and measures needed to protect electronic information.

Data and Analysis

Topic 1: Data collection and storage

DA.DCS.7.a	Compare and contrast digital data collection tools to make them more useful and reliable.
DA.DCS.7.b	Evaluate various file formats to understand data storage capabilities.
DA.DCS.7.c	Create a logical file structure to organize data to support individual and collaborative work.

Topic 2: Visualization and communication

DA.VC.7.a	Communicate relations between data sets to interpret results.
DA.VC.7.b	Create a spreadsheet utilizing formulas, functions and graphs to represent and analyze data.

Topic 3: Inference and modeling

DA.IM.7.a	Create and analyze models and simulations to accurately hypothesize a real-world situation.
-----------	---

COMPUTER SCIENCE

Algorithmic Thinking and Programming

Topic 1: Algorithms

ATP.A.7.a	Select and modify pseudocode for a multi-step process to solve a problem.
-----------	---

Topic 2: Variables and data representation

ATP.VDR.7.a	Use test cases to trace variable values to determine the result.
-------------	--

Topic 3: Control structures

ATP.CS.7.a	Use and apply decisions and loops in a program to solve a problem.
------------	--

Topic 4: Modularity

ATP.M.7.a	Decompose problems into parts to facilitate the design, implementation and review of increasingly complex programs.
-----------	---

Topic 4: Program development

ATP.PD.7.a	Write code that utilizes algorithms, variables and control structures to solve problems or as a creative expression.
------------	--

ATP.PD.7.b	Test, trace and debug to refine code.
------------	---------------------------------------

ATP.PD.7.c	Identify procedures that utilize parameters.
------------	--

Impacts of Computing

Topic 1: Culture

IC.Cu.7.a	Compare current technologies from the present to the past to evaluate the effect on people's everyday activities.
-----------	---

IC.Cu.7.b	Evaluate various technologies to identify issues of bias and accessibility.
-----------	---

IC.Cu.7.c	Identify and explore careers related to the field of computer science.
-----------	--

IC.Cu.7.d	Explain how computing impacts innovation in other fields.
-----------	---

Topic 2: Social Interactions

IC.SI.7.a	Analyze and present beneficial and harmful effects of electronic communications to understand their impacts on interpersonal, global, economic, political, business and cultural interactions.
-----------	--

COMPUTER SCIENCE**Topic 3: Safety, Law and Ethics**

IC.SLE.7.a	Describe tradeoffs between allowing information to be public and keeping information private and secure to inform decision making.
IC.SLE.7.b	Identify the social and economic implications of privacy in the context of safety, law or ethics to understand how privacy impacts these areas.
IC.SLE.7.c	Evaluate the development of new technologies in communication, entertainment and business to understand the impact.
IC.SLE.7.d	Provide appropriate credit when using resources or artifacts that are not our own.
IC.SLE.7.e	Explain the connection between the longevity of data on the internet, personal online identity and personal privacy.

ENGLISH LANGUAGE ARTS

Instructional Supports:

Ohio's Learning Standards for English Language Arts
 English Language Arts Model Curriculum with Instructional Supports

Code	Standard
Reading Standards for Literature	
Key Ideas and details	
RL.7.1	Cite several pieces of textual evidence to support analysis of what the text says explicitly as well as inferences drawn from the text.
RL.7.2	Analyze literary text development. <ul style="list-style-type: none"> a. Determine a theme of a text and analyze its development over the course of the text. b. Incorporate the development of a theme and other story details into an objective summary of the text.
RL.7.3	Analyze how particular elements of a story or drama interact (e.g., how setting shapes the characters or plot).
Craft and structure	
RL.7.4	Determine the meaning of words and phrases as they are used in a text, including figurative and connotative meanings; analyze the impact of specific language choices, such as sensory words or phrases, on meaning and tone, including rhymes and other repetitions of sounds (e.g., alliteration) on a specific verse or stanza of a poem or section of a story or drama.
RL.7.5	Analyze how a drama's or poem's form or structure (e.g., soliloquy, sonnet) contributes to its meaning.
RL.7.6	Analyze how an author uses the point of view to develop and contrast the perspectives of different characters or narrators in a text.
Integration of knowledge and ideas	
RL.7.7	Compare and contrast a written story, drama, or poem to its audio, filmed, staged, or multimedia version, analyzing the effects of techniques unique to each medium (e.g., lighting, sound, color, or camera focus and angles in a film).
RL.7.8	(Not applicable to literature)
RL.7.9	Compare and contrast a fictional portrayal of a time, place, or character and a historical account of the same period as a means of understanding how authors of fiction use or alter history.
Range of reading and level of text complexity	
RL.7.10	By the end of the year, read and comprehend literature, including stories, dramas, and poems, in the grades 6–8 text complexity band proficiently, with scaffolding as needed at the high end of the range. Build background knowledge and activate prior knowledge in order to make text-to-self, text-to-text, and text-to-world connections that deepen understanding of the text.

ENGLISH LANGUAGE ARTS

Reading Standards for Information Text

Key ideas and details

RI.7.1	Cite several pieces of textual evidence to support analysis of what the text says explicitly as well as inferences drawn from the text.
RI.7.2	Analyze informational text development. a. Determine two or more central ideas in a text and analyze their development over the course of the text. b. Provide an objective summary of the text that includes the central ideas and their development.
RI.7.3	Analyze the interactions between individuals, events, and ideas in a text (e.g., how ideas influence individuals or events, or how individuals influence ideas or events).

Craft and structure

RI.7.4	Determine the meaning of words and phrases as they are used in a text, including figurative, connotative, and technical meanings; analyze the impact of a specific word choice on meaning and tone.
RI.7.5	Analyze the structure an author uses to organize a text, including how the major sections contribute to the whole and to the development of the ideas.
RI.7.6	Determine an author's perspective or purpose in a text and analyze how the author distinguishes his or her position from that of others.

Integration of knowledge and ideas

RI.7.7	Compare and contrast a text to an audio, video, or multimedia version of the text, analyzing each medium's portrayal of the subject (e.g., how the delivery of a speech affects the impact of the words).
RI.7.8	Trace and evaluate the argument and specific claims in a text, assessing whether the reasoning is sound and the evidence is relevant and sufficient to support the claims.
RI.7.9	Analyze how two or more authors writing about the same topic shape their presentations of key information by emphasizing different evidence or advancing different interpretations of facts.

Range of reading and level of text complexity

RI.7.10	By the end of the year, read and comprehend literary nonfiction in the grades 6–8 text complexity band proficiently, with scaffolding as needed at the high end of the range.
---------	---

Reading Standards for Foundational Skills

NOT APPLICABLE (ENDS IN GRADE 5)

ENGLISH LANGUAGE ARTS

Writing Standards

Text Types and purposes

<p>W.7.1</p>	<p>Write arguments to support claims with clear reasons and relevant evidence.</p> <ul style="list-style-type: none"> a. Establish a thesis statement to present an argument. b. Introduce claim(s), acknowledge alternate or opposing claims, and organize the reasons and evidence logically. c. Support claim(s) with logical reasoning and relevant evidence, using accurate, credible sources and demonstrating an understanding of the topic or text. d. Use words, phrases, and clauses to create cohesion and clarify the relationships among claim(s), reasons, and evidence. e. Establish and maintain a formal style. f. Provide a concluding statement or section that follows from and supports the argument presented.
<p>W.7.2</p>	<p>Write informative/explanatory texts to examine a topic and convey ideas, concepts, and information through the selection, organization, and analysis of relevant content.</p> <ul style="list-style-type: none"> a. Establish a thesis statement to present information. b. Introduce a topic clearly, previewing what is to follow; organize ideas, concepts, and information, using strategies such as definition, classification, comparison/contrast, and cause/effect; include formatting (e.g., headings), graphics (e.g., charts, tables), and multimedia to aid comprehension, if needed. c. Develop the topic with relevant facts, definitions, concrete details, quotations, or other information and examples. d. Use appropriate transitions to create cohesion and clarify the relationships among ideas and concepts. e. Use precise language and domain-specific vocabulary to inform about or explain the topic. f. Establish and maintain a formal style. g. Provide a concluding statement or section that follows from and supports the information or explanation presented.
<p>W.7.3</p>	<p>Write narratives to develop real or imagined experiences or events using effective technique, relevant descriptive details, and well-structured event sequences.</p> <ul style="list-style-type: none"> a. Engage and orient the reader by establishing a context and point of view and introducing a narrator and/or characters; organize an event sequence that unfolds naturally and logically. b. Use narrative techniques, such as dialogue, pacing, and description, to develop experiences, events, and/or characters. c. Use a variety of transition words, phrases, and clauses to convey sequence and signal shifts from one-time frame or setting to another. d. Use precise words and phrases, relevant descriptive details, and sensory language to capture the action and convey experiences and events. e. Provide a conclusion that follows from and reflects on the narrated experiences or events.

ENGLISH LANGUAGE ARTS
Production and distribution of writing

W.7.4	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.7.5	With some guidance and support from peers and adults, develop and strengthen writing as needed by planning, revising, editing, rewriting, or trying a new approach, focusing on how well purpose and audience have been addressed. (Editing for conventions should demonstrate command of Language standards 1–3 up to and including grade 7.)
W.7.6	Use technology, including the Internet, to produce and publish writing and link to and cite sources, as well as to interact and collaborate with others, including linking to and citing sources.

Research to build and present knowledge

W.7.7	Conduct short research projects to answer a question, drawing on several sources and generating additional related, focused questions for further research and investigation.
W.7.8	Gather relevant information from multiple print and digital sources, using search terms effectively; assess the credibility and accuracy of each source; and quote or paraphrase the data and conclusions of others while avoiding plagiarism and following a standard format for citation.
W.7.9	<p>Draw evidence from literary or informational texts to support analysis, reflection, and research.</p> <ul style="list-style-type: none"> a. Apply grade 7 Reading standards to literature (e.g., “Compare and contrast a fictional portrayal of a time, place, or character and a historical account of the same period as a means of understanding how authors of fiction use or alter history”). b. Apply grade 7 Reading standards to literary nonfiction (e.g. “Trace and evaluate the argument and specific claims in a text, assessing whether the reasoning is sound and the evidence is relevant and sufficient to support the claims”).

Range of writing

W.7.10	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 discipline-specific tasks, purposes, and audiences.
--------	---

ENGLISH LANGUAGE ARTS

Speaking and Listening Standards

Comprehension and collaboration

SL.7.1	<p>Engage effectively in a range of collaborative discussions (one-on-one, in groups, and teacher-led) with diverse partners on grade 7 topics, texts, and issues, building on others' ideas and expressing their own clearly.</p> <ul style="list-style-type: none"> a. Come to discussions prepared, having read or researched material under study; explicitly draw on that preparation by referring to evidence on the topic, text, or issue to probe and reflect on ideas under discussion. b. Follow rules for collegial discussions, track progress toward specific goals and deadlines, and define individual roles as needed. c. Pose questions that elicit elaboration and respond to others' questions and comments with relevant observations and ideas that bring the discussion back on topic as needed. d. Acknowledge new information expressed by others and, when warranted, modify their own views.
SL.7.2	<p>Analyze the main ideas and supporting details presented in diverse media and formats (e.g., visually, quantitatively, orally) and explain how the ideas clarify a topic, text, or issue under study.</p>
SL.7.3	<p>Delineate a speaker's argument and specific claims, evaluating the soundness of the reasoning and the relevance and sufficiency of the evidence.</p>

Presentation of Knowledge and Ideas

SL.7.4	<p>Present claims and findings, emphasizing salient points in a focused, coherent manner with pertinent descriptions, facts, details, and examples; use appropriate eye contact, adequate volume, and clear pronunciation.</p>
SL.7.5	<p>Include multimedia components and visual displays in presentations to clarify claims and findings and emphasize salient points.</p>
SL.7.6	<p>Adapt speech to a variety of contexts and tasks, demonstrating command of formal English when indicated or appropriate. (See grade 7 Language standards 1 and 3 for specific expectations.)</p>

Language standards

Conventions of Standard English

L.7.1	<p>Demonstrate command of the conventions of standard English grammar and usage when writing or speaking.</p> <ul style="list-style-type: none"> a. Explain the function of phrases and clauses in general and their function in specific sentences. b. Choose among simple, compound, complex, and compound-complex sentences to signal differing relationships among ideas. c. Place phrases and clauses within a sentence, recognizing and correcting misplaced and dangling modifiers.
L.7.2	<p>Demonstrate command of the conventions of standard English capitalization, punctuation, and spelling when writing.</p> <ul style="list-style-type: none"> a. Use a comma to separate coordinate adjectives (e.g., It was a fascinating, enjoyable movie but not He wore an old[,] green shirt). b. Spell correctly.

ENGLISH LANGUAGE ARTS

Knowledge of Language

L.7.3

Use knowledge of language and its conventions when writing, speaking, reading, or listening.

- Choose language that expresses ideas precisely and concisely.
- Recognize and eliminate wordiness and redundancy.

Acquisition of Vocabulary and Use

L.7.4

Determine or clarify the meaning of unknown and multiple-meaning words and phrases based on grade 7 reading and content, choosing flexibly from a range of strategies.

- Use context (e.g., the overall meaning of a sentence or paragraph; a word's position or function in a sentence) as a clue to the meaning of a word or phrase.
- Use common, grade-appropriate Greek or Latin affixes and roots as clues to the meaning of a word (e.g., belligerent, bellicose, rebel).
- 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 or part of speech.
- 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).

FINANCIAL LITERACY

Instructional Supports:

[Ohio's Learning Standards for Financial Literacy in Middle Grades](#)
[Financial Literacy Model Curriculum](#)

Code	Standard
Financial responsibility and decision making	
1	Financial responsibility entails being accountable for managing money to satisfy one's current and future economic choices.
2	Financial responsibility involves life-long decision-making strategies which include consideration of alternatives and consequences.
3	Competencies (knowledge and skills), commitment (motivation and enthusiasm), competition (globalization and automation), training, work ethic, abilities and attitude are all factors impacting one's earning potential and employability.
4	Income sources include job earnings and benefits, entrepreneurship, saving and investment earnings, government payments, grants, inheritances, etc. Workers can experience dramatic income dips and spikes from month to month.
5	Taxes, retirement, insurance, employment benefits, and both voluntary and involuntary deductions impact take-home pay.
Planning and money management	
6	Financial responsibility includes the development of a spending and savings plan (personal budget).
7	Financial institutions offer a variety of products and services to address financial responsibility.
8	Financial experts provide guidance and advice on a wide variety of financial issues.
9	Planning for and paying local, state and federal taxes is a financial responsibility.
Informed consumer	
10	An informed consumer makes decisions on purchases that may include a decision-making strategy to determine if purchases are within their budget.
11	Consumer advocates, organizations and regulations provide important information and help protect against potential consumer fraud.
12	Compare bank terms before opening an account.
13	Consumer protections laws help safeguard individuals from fraud and potential loss.
14	Planned purchasing decisions factor in direct (price) and indirect costs (e.g. sales/use tax, excise tax, shipping, handling, and delivery charges, etc.).

FINANCIAL LITERACY**Investing**

15	Using key investing principles one can achieve the goal of increasing net worth.
16	Investment strategies must take several factors into consideration such as compounding interest, costs, fees, tax implications and the time value of money.
17	Government agencies are charged with regulating providers of financial services to help protect investors.

Credit and debt

18	Credit is a contractual agreement in which a borrower receives something of value now and agrees to repay to lender at some later date.
19	Debt is an obligation owed by one party to a second party.
20	Effectively balancing credit and debt helps one achieve some short and long-term goals.
21	Financial documents and contractual obligations inform the consumer and define the terms and conditions of establishing credit and incurring debt.
22	Many options exist for paying for post-secondary education opportunities.

Risk management and insurance

23	Safeguards exist that help protect one's identity, money and property.
----	--

FINE ARTS: DANCE
Instructional Supports:
[Ohio's 2012 Learning Standards for Dance](#)
[Grade 6-8 Dance Model Curriculum](#)
[Fine Arts Instructional Strategies](#)

Code	Standard
Perceiving / Knowing (PE)	
1PE	Demonstrate a perspective by explaining different societal values on the meaning and function of dances made, performed or shared.
2PE	View choreographic works and improvisations by various influential choreographers.
3PE	Explore the expressive body range of movement possibilities.
4PE	Sense and express the impact and interrelationship between dance and the body's physical and emotional state of being.
5PE	Recognize and discuss how thoughtful inquiry influences dance making, performing and sharing.
6PE	Observe dances with attention to rhythmic structure, with or without musical accompaniment.
Producing / Performing (PR)	
1PR	Explore and refine the body's movement possibilities in relation to varied dance techniques and choreography.
2PR	Perform dances from various global cultures, theatrical styles and historical periods.
3PR	Embody dance performance with attention to rhythmic structure with or without musical accompaniment.
4PR	Create dance movement studies with clear intent and attention to dance elements, features and choreographic principles.
5PR	Perform movement phrases with increased focus, alignment, strength, flexibility, coordination and skill.
6PR	Recognize the importance of warm-up and cross-discipline training to dance (e.g., sports, yoga, Pilates, swimming, running, walking and cycling).
7PR	Demonstrate self-direction and independence.

FINE ARTS: DANCE

Responding (RE)

1RE	Discuss ways that dance contributes to a community and provide examples.
2RE	Analyze and describe the movement patterns and the expressive and stylistic characteristics of selected dances.
3RE	Evaluate and refine collaborative rehearsal processes.
4RE	Articulate the intended meanings of the dances they create.
5RE	Critique a dance based on how effectively the formal, technical and expressive aspects communicate a theme or idea.
6RE	Demonstrate initiative and confidence when creating and presenting dances to express their feelings, ideas and viewpoints.

FINE ARTS: DRAMA

Instructional Supports:

[Ohio's 2012 Learning Standards for Drama](#)
[Grade 6-8 Drama Model Curriculum](#)
[Fine Arts Instructional Strategies](#)

Code	Standard
Creating (CE)	
1CE	Consider and discuss the consequences of a character's actions in a theatrical production.
2CE	Compare and contrast the basic principles and elements of various theatrical styles (e.g., comedy, drama, tragedy and farce).
3CE	Demonstrate the ways in which cultural traditions and perspectives are reflected in the content of live theatre, film, video and electronic media.
4CE	Use a variety of dramatic and theatrical vocabulary accurately when constructing and communicating meaning from informal and formal theatre.
5CE	Research the roles and responsibilities of performing and technical artists in drama, theatre, film, video and media.

FINE ARTS: DRAMA**Producing / Performing (PR)**

1PR	Construct a scripted or improvised scene that uses a plot curve with developed characters and vivid dialogue.
2PR	Explore and dramatize the principles of composition to create a stage environment by blocking the scripted action and stage positions of the characters.
3PR	Collaborate with peers to dramatize a contemporary social issue and its impact on society.
4PR	Examine and demonstrate how theatrical artists (e.g., actors, directors, playwrights) conceptualize and convey an idea or message.
5PR	Direct a group to change the production style of a dramatic and theatrical work from a past time period to the present.

Responding (RE)

1RE	Compare and contrast their opinions about actual performances with that of others referencing various sources (e.g., print and electronic media).
2RE	Analyze and explain the setting, interactions of characters and conflicts in a dramatic work.
3RE	Determine the effectiveness of a given art form in communicating an idea or concept.
4RE	Research and report on the contribution of the playwright or screenwriter for a specific dramatic work.
5RE	Create criteria and apply it to the review of a theatrical performance (e.g., class, school, community or professional performance).
6RE	Use constructive feedback to refine and improve their acting, improvisational or playwriting skills.
7RE	Discuss the role and value of drama and theatre in their lives and the lives of others

FINE ARTS: MUSIC

Instructional Supports:

[Ohio's 2012 Learning Standards for Music](#)
[Grade 6-8 Music Model Curriculum](#)
[Fine Arts Instructional Strategies](#)

Code	Standard
Creating (CE)	
1CE	Recognize, identify and demonstrate form in world music (e.g., Western and non-Western) and popular music.
2CE	Identify the style and historical period of various music examples.
3CE	Recognize and identify historical and cultural contexts (e.g., time and place of a music event) that have influenced music.
4CE	Identify key signatures of major scales.
5CE	Describe a varied repertoire of music with appropriate music vocabulary.
6CE	Identify various careers for musicians (e.g., in education, entertainment and technical support).
Producing / Performing (PR)	
1PR	Independently or collaboratively, perform a varied repertoire of music, representing diverse genres and cultures and showing expression and technical accuracy at a level that includes modest ranges and changes of tempo, key and meter.
2PR	Perform accurately, independently or collaboratively, with good posture producing an appropriate tone quality.
3PR	Improvise, compose and arrange music.
4PR	Read, write and perform rhythmic (including dotted rhythms) and melodic patterns in a variety of meters.
5PR	Notate concert pitch major scales (i.e., Band C, F, Bb, Eb, Ab; Strings: A, D, G, C, F).
6PR	Read and notate melodies in treble and bass clef using key signatures.

FINE ARTS: MUSIC

Responding (RE)

1RE	Apply multiple criteria to evaluate the quality and effectiveness of music performance and composition including their own.
2RE	Compare and contrast a variety of live or recorded music performances using appropriate audience etiquette.
3RE	Develop criteria based on elements of music to support personal preferences for specific music works.
4RE	Explain how and why people use and respond to music.
5RE	Compare and contrast the meaning of common terms and processes used in various arts disciplines.

FINE ARTS: VISUAL ARTS

Instructional Supports:

[Ohio's 2012 Learning Standards for Visual Art](#)
[Grade 6-8 Visual Art Model Curriculum](#)
[Fine Arts Instructional Strategies](#)

Code	Standard
Perceiving / Knowing (PE)	
1PE	Explore how personal experiences, interest, cultural heritage and gender influence an artist's style and choice of subject matter.
2PE	Identify professions that use artistic skills and problem-solving.
3PE	Identify sources of visual culture in society and the media and discuss how the messages they convey affect personal and consumer choices.
4PE	Observe a variety of artworks noticing details, themes and ideas and group them into patterns and categories.
5PE	Examine designed objects and identify the processes and decisions made to produce them with attention to purpose, aesthetics, social issues and cultural and personal meaning.
6PE	Connect various art forms to their social, cultural or political purposes and include regional examples.

FINE ARTS: VISUAL ARTS**Producing / Performing (PR)**

1PR	Improve craftsmanship and refine ideas in response to feedback.
2PR	Manipulate materials, tools and technology in conventional and unconventional ways to create a work of art.
3PR	Represent depth and volume in their two-dimensional works of art.
4PR	Apply art and design principles in the construction of three-dimensional artworks.
5PR	Create a work of art in collaboration with others to address a social or cultural issue.
6PR	Demonstrate understanding of visual literacy, illustration and graphic communication.

Responding (RE)

1RE	Speculate about an artist's intentions and message in a work using relevant references to the work.
2RE	Compare and contrast diverse viewpoints about works of art.
3RE	Interpret selected artworks and synthesize their interpretations with the interpretations of others.
4RE	Classify and categorize examples of artworks from various eras and cultures.
5RE	Describe how experiences in galleries, museums and other cultural institutions can stimulate the imagination and enrich people's lives.
6RE	Develop and use criteria to guide reflection and assessment of selected personal artworks.
7RE	Assess one's own work and working process and the work of others in relation to criteria and standards.

MATHEMATICS

Instructional Supports:

[Ohio's Learning Standards for Grade 7 Mathematics](#)
[Ohio's Kindergarten – Grade 8 Learning Progressions](#)
[Grade 7 Mathematics Model Curriculum](#)

Code	Standard
Standards for Mathematical Practice	
MP.1	Make sense of problems and persevere in solving them.
<p>In grade 7, students solve problems involving ratios and rates and discuss how they solved them. Students solve real-world problems through the application of algebraic and geometric concepts. Students seek the meaning of a problem and look for efficient ways to represent and solve it. They may check their thinking by asking themselves, “What is the most efficient way to solve the problem?”, “Does this make sense?”, and “Can I solve the problem in a different way?”. When students compare arithmetic and algebraic solutions to the same problem, they identify correspondences between different approaches.</p>	
MP.2	Reason abstractly and quantitatively.
<p>In grade 7, students represent a wide variety of real-world contexts through the use of real numbers and variables in mathematical expressions, equations, and inequalities. Students contextualize to understand the meaning of the number or variable as related to the problem and decontextualize to manipulate symbolic representations by applying properties of operations.</p>	
MP.3	Construct viable arguments and critique the reasoning of others.
<p>In grade 7, students construct arguments using verbal or written explanations accompanied by expressions, equations, inequalities, models, and graphs, tables, and other data displays (i.e. box plots, dot plots, histograms, etc.). They further refine their mathematical communication skills through mathematical discussions in which they critically evaluate their own thinking and the thinking of other students. For example, as students notice when geometric conditions determine a unique triangle, more than one triangle, or no triangle, they have an opportunity to construct viable arguments and critique the reasoning of others. Students should be encouraged to answer questions such as these: “How did you get that?” “Why is that true?” “Does that always work?” They explain their thinking to others and respond to others’ thinking.</p>	
MP.4	Model with mathematics.
<p>In grade 7, students model problem situations symbolically, graphically, in tables, and contextually. Students form expressions, equations, or inequalities from real-world contexts and connect symbolic and graphical representations. Students use experiments or simulations to generate data sets and create probability models. Proportional relationships present opportunities for modeling. For example, for modeling purposes, the number of people who live in an apartment building might be taken as proportional to the number of stories in the building. Students should be encouraged to answer questions such as “What are some ways to represent the quantities?” or “How might it help to create a table, chart, or graph?”</p>	

MATHEMATICS

MP.5 Use appropriate tools strategically.

Students consider available tools (including estimation and technology) when solving a mathematical problem and decide when certain tools might be helpful. For instance, students in grade 7 may decide to represent similar data sets using dot plots with the same scale to visually compare the center and variability of the data. Students might use physical objects or applets to generate probability data and use graphing calculators or spreadsheets to manage and represent data in different forms. Teachers might ask, “What approach are you considering?” or “Why was it helpful to use ___?”

MP.6 Attend to precision.

In grade 7, students continue to refine their mathematical communication skills by using clear and precise language in their discussions with others and in their own reasoning. Students define variables, specify units of measure, and label axes accurately. Students use appropriate terminology when referring to rates, ratios, probability models, geometric figures, data displays, and components of expressions, equations or inequalities. Teachers might ask, “What mathematical language, definitions, or properties can you use to explain ___?”

MP.7 Look for and make use of structure.

Students routinely seek patterns or structures to model and solve problems. For instance, students recognize patterns that exist in ratio tables making connections between the constant of proportionality in a table with the slope of a graph. Students apply properties to generate equivalent expressions (i.e. $6 + 2n = 2(3 + n)$ by distributive property) and solve equations (i.e. $2c + 3 = 15$, $2c = 12$ by subtraction property of equality; $c = 6$ by division property of equality). Students compose and decompose two- and three-dimensional figures to solve real-world problems involving scale drawings, surface area, and volume. Students examine tree diagrams or systematic lists to determine the sample space for compound events and verify that they have listed all possibilities. Solving an equation such as $8 = 4(n - 1/2)$ is easier if students can see and make use of structure, temporarily viewing $(n - 1/2)$ as a single entity.

MP.8 Look for and express regularity in repeated reasoning.

In grade 7, students use repeated reasoning to understand algorithms and make generalizations about patterns. During multiple opportunities to solve and model problems, they may notice that $\frac{a}{b} = \frac{c}{d}$ if and only if $ad = bc$ and construct other examples and models that confirm their generalization. Students should be encouraged to answer questions such as “How would we prove that ___?” or “How is this situation both similar to and different from other situations using these operations?”

MATHEMATICS

Ratios and Proportional Relationships

Analyze proportional relationships and use them to solve real-world and mathematical problems.

7.RP.1	Compute unit rates associated with ratios of fractions, including ratios of lengths, areas, and other quantities measured in like or different units. <i>For example, if a person walks $\frac{1}{2}$ mile in each $\frac{1}{4}$ hour, compute the unit rate as the complex fraction⁶ $(\frac{1}{2})/(\frac{1}{4})$ miles per hour, equivalently 2 miles per hour.</i>
7.RP.2	Recognize and represent proportional relationships between quantities. <ul style="list-style-type: none"> a. Decide whether two quantities are in a proportional relationship, e.g., by testing for equivalent ratios in a table or graphing on a coordinate plane and observing whether the graph is a straight line through the origin. b. Identify the constant of proportionality (unit rate) in tables, graphs, equations, diagrams, and verbal descriptions of proportional relationships. c. Represent proportional relationships by equations. <i>For example, if total cost t is proportional to the number n of items purchased at a constant price p, the relationship between the total cost and the number of items can be expressed as $t = pn$.</i> d. Explain what a point (x, y) on the graph of a proportional relationship means in terms of the situation, with special attention to the points $(0, 0)$ and $(1, r)$ where r is the unit rate.
7.RP.3	Use proportional relationships to solve multistep ratio and percent problems. <i>Examples: simple interest, tax, markups and markdowns, gratuities and commissions, fees, percent increase and decrease, percent error.</i>

The Number System

Apply and extend previous understandings of operations with fractions to add, subtract, multiply, and divide rational numbers.

7.NS.1	Apply and extend previous understandings of addition and subtraction to add and subtract rational numbers; represent addition and subtraction on a horizontal or vertical number line diagram. <ul style="list-style-type: none"> a. Describe situations in which opposite quantities combine to make 0. <i>For example, a hydrogen atom has 0 charge because its two constituents are oppositely charged.</i> b. Understand $p + q$ as the number located a distance q from p, in the positive or negative direction depending on whether q is positive or negative. Show that a number and its opposite have a sum of 0 (are additive inverses). Interpret sums of rational numbers by describing real-world contexts. c. Understand subtraction of rational numbers as adding the additive inverse, $p - q = p + (-q)$. Show that the distance between two rational numbers on the number line is the absolute value of their difference, and apply this principle in real-world contexts. d. Apply properties of operations as strategies to add and subtract rational numbers.
--------	--

MATHEMATICS

Apply and extend previous understandings of operations with fractions to add, subtract, multiply, and divide rational numbers.

7.NS.2	<p>Apply and extend previous understandings of multiplication and division and of fractions to multiply and divide rational numbers.</p> <p>a. Understand that multiplication is extended from fractions to rational numbers by requiring that operations continue to satisfy the properties of operations, particularly the distributive property, leading to products such as $(-1)(-1) = 1$ and the rules for multiplying signed numbers. Interpret products of rational numbers by describing real-world contexts.</p> <p>b. Understand that integers can be divided, provided that the divisor is not zero, and every quotient of integers (with non-zero divisor) is a rational number. If p and q are integers, then $-(p/q) = (-p)/q = p/(-q)$. Interpret quotients of rational numbers by describing real-world contexts.</p> <p>c. Apply properties of operations as strategies to multiply and divide rational numbers.</p> <p>d. Convert a rational number to a decimal using long division; know that the decimal form of a rational number terminates in 0s or eventually repeats.</p>
7.NS.3	Solve real-world and mathematical problems involving the four operations with rational numbers. Computations with rational numbers extend the rules for manipulating fractions to complex fractions.

Expressions and Equations

Use properties of operations to generate equivalent expressions.

7.EE.1	Apply properties of operations as strategies to add, subtract, factor, and expand linear expressions with rational coefficients.
7.EE.2	In a problem context, understand that rewriting an expression in an equivalent form can reveal and explain properties of the quantities represented by the expression and can reveal how those quantities are related. <i>For example, a discount of 15% (represented by $p - 0.15p$) is equivalent to $(1 - 0.15)p$, which is equivalent to $0.85p$ or finding 85% of the original price.</i>

Solve real-life and mathematical problems using numerical and algebraic expressions and equations.

7.EE.3	Solve multi-step real-life and mathematical problems posed with positive and negative rational numbers in any form (whole numbers, fractions, and decimals), using tools strategically. Apply properties of operations to calculate with numbers in any form; convert between forms as appropriate; and assess the reasonableness of answers using mental computation and estimation strategies. <i>For example, if a woman making \$25 an hour gets a 10% raise, she will make an additional $1/10$ of her salary an hour, or \$2.50, for a new salary of \$27.50. If you want to place a towel bar $9\frac{3}{4}$ inches long in the center of a door that is $27\frac{1}{2}$ inches wide, you will need to place the bar about 9 inches from each edge; this estimate can be used as a check on the exact computation.</i>
--------	--

MATHEMATICS

7.EE.4	<p>Use variables to represent quantities in a real-world or mathematical problem, and construct simple equations and inequalities to solve problems by reasoning about the quantities.</p> <p>a. Solve word problems leading to equations of the form $px + q = r$ and $p(x + q) = r$, where p, q, and r are specific rational numbers. Solve equations of these forms fluently. Compare an algebraic solution to an arithmetic solution, identifying the sequence of the operations used in each approach. <i>For example, the perimeter of a rectangle is 54 cm. Its length is 6 cm. What is its width?</i></p> <p>b. Solve word problems leading to inequalities of the form $px + q > r$ or $px + q < r$, where p, q, and r are specific rational numbers. Graph the solution set of the inequality and interpret it in the context of the problem. <i>For example, as a salesperson, you are paid \$50 per week plus \$3 per sale. This week you want your pay to be at least \$100. Write an inequality for the number of sales you need to make, and describe the solutions.</i></p>
--------	---

Geometry

Draw, construct, and describe geometrical figures and describe the relationships between them.

7.G.1	<p>Solve problems involving similar figures with right triangles, other triangles, and special quadrilaterals.</p> <p>a. Compute actual lengths and areas from a scale drawing and reproduce a scale drawing at a different scale.</p> <p>b. Represent proportional relationships within and between similar figures.</p>
7.G.2	<p>Draw (freehand, with ruler and protractor, and with technology) geometric figures with given conditions.</p> <p>a. Focus on constructing triangles from three measures of angles or sides, noticing when the conditions determine a unique triangle, more than one triangle, or no triangle.</p> <p>b. Focus on constructing quadrilaterals with given conditions noticing types and properties of resulting quadrilaterals and whether it is possible to construct different quadrilaterals using the same conditions.</p>
7.G.3	<p>Describe the two-dimensional figures that result from slicing three-dimensional figures, as in plane sections of right rectangular prisms and right rectangular pyramids.</p>

Solve real-life and mathematical problems involving angle measure, circles, area, surface area, and volume.

7.G.4	<p>Work with circles.</p> <p>a. Explore and understand the relationships among the circumference, diameter, area, and radius of a circle.</p> <p>b. Know and use the formulas for the area and circumference of a circle and use them to solve real-world and mathematical problems.</p>
7.G.5	<p>Use facts about supplementary, complementary, vertical, and adjacent angles in a multi-step problem to write and solve simple equations for an unknown angle in a figure.</p>
7.G.6	<p>Solve real-world and mathematical problems involving area, volume, and surface area of two- and three-dimensional objects composed of triangles, quadrilaterals, polygons, cubes, and right prisms.</p>

MATHEMATICS

Statistics and Probability

Use sampling to draw conclusions about a population.

7.SP.1

Understand that statistics can be used to gain information about a population by examining a sample of the population.
 a. Differentiate between a sample and a population.
 b. Understand that conclusions and generalizations about a population are valid only if the sample is representative of that population. Develop an informal understanding of bias.

Broaden understanding of statistical problem solving.

7.SP.2

Broaden statistical reasoning by using the GAISE model:
 a. Formulate Questions: Recognize and formulate a statistical question as one that anticipates variability and can be answered with quantitative data. *For example, "How do the heights of seventh graders compare to the heights of eighth graders?"* (GAISE Model, step 1)
 b. Collect Data: Design and use a plan to collect appropriate data to answer a statistical question. (GAISE Model, step 2)
 c. Analyze Data: Select appropriate graphical methods and numerical measures to analyze data by displaying variability within a group, comparing individual to individual, and comparing individual to group. (GAISE Model, step 3)
 d. Interpret Results: Draw logical conclusions and make generalizations from the data based on the original question. (GAISE Model, step 4)

7.SP.3

Describe and analyze distributions.
 a. Summarize quantitative data sets in relation to their context by using mean absolute deviation^G (MAD), interpreting mean as a balance point.
 b. Informally assess the degree of visual overlap of two numerical data distributions with roughly equal variabilities, measuring the difference between the centers by expressing it as a multiple of a measure of variability. *For example, the mean height of players on the basketball team is 10 cm greater than the mean height of players on the soccer team, about twice the variability (mean absolute deviation) on either team; on a dot plot^G (line plot), the separation between the two distributions of heights is noticeable*

7.SP.4

Deleted standard

Investigate chance processes and develop, use, and evaluate probability models.

7.SP.5

Understand that the probability of a chance event is a number between 0 and 1 that expresses the likelihood of the event occurring. Larger numbers indicate greater likelihood. A probability near 0 indicates an unlikely event; a probability around $\frac{1}{2}$ indicates an event that is neither unlikely nor likely; and a probability near 1 indicates a likely event.

7.SP.6

Approximate the probability of a chance event by collecting data on the chance process that produces it and observing its long-run relative frequency, and predict the approximate relative frequency given the probability. *For example, when rolling a number cube 600 times, predict that a 3 or 6 would be rolled roughly 200 times, but probably not exactly 200 times.*

MATHEMATICS

7.SP.7	<p>Develop a probability model^G and use it to find probabilities of events. Compare probabilities from a model to observed frequencies; if the agreement is not good, explain possible sources of the discrepancy.</p> <ol style="list-style-type: none"> Develop a uniform probability model^G by assigning equal probability to all outcomes, and use the model to determine probabilities of events. <i>For example, if a student is selected at random from a class, find the probability that Jane will be selected and the probability that a girl will be selected.</i> Develop a probability model (which may not be uniform) by observing frequencies in data generated from a chance process. <i>For example, find the approximate probability that a spinning penny will land heads up or that a tossed paper cup will land open-end down. Do the outcomes for the spinning penny appear to be equally likely based on the observed frequencies?</i>
7.SP.8	<p>Find probabilities of compound events using organized lists, tables, tree diagrams, and simulations.</p> <ol style="list-style-type: none"> Understand that, just as with simple events, the probability of a compound event is the fraction of outcomes in the sample space^G for which the compound event occurs. Represent sample spaces for compound events using methods such as organized lists, tables, and tree diagrams. <i>For an event described in everyday language, e.g., “rolling double sixes,” identify the outcomes in the sample space which compose the event.</i> Design and use a simulation to generate frequencies for compound events. <i>For example, use random digits as a simulation tool to approximate the answer to the question: If 40% of donors have type A blood, what is the probability that it will take at least 4 donors to find one with type A blood?</i>

PHYSICAL EDUCATION

Instructional Supports:
[Ohio's Learning Standards for Physical Education](#)

Code	Standard
Standard 1	Demonstrates competency in a variety of motor skills and movement patterns.
Benchmark A: Demonstrate movement skills and patterns in a variety of individual performance activities and lifetime physical activities.	
Specialized skills and movement patterns	
1	Demonstrate a routine that includes variety of movement patterns in dance, gymnastics or fitness (e.g., yoga, Zumba) with a partner or small group.
2	Demonstrate the critical elements of specialized locomotor and non-locomotor skills in a variety of movement forms (e.g., fitness, track and field, martial arts) in various settings.
3	Perform basic folk/square/line-dance sequences to music.
Benchmark B: Demonstrate critical elements of specialized manipulative skills in a variety of settings.	
Application of specialized manipulative skills	
1	Send, receive, dribble and shoot using appropriate critical elements in practice and small-sided invasion games.
2	Strike an object with hand or implement using appropriate critical elements in controlled practice and singles/ small-sided net/wall games.
3	Strike and field an object with foot, hand or implement using appropriate critical elements in controlled practice and small-sided striking/fielding games.
4	Send an object to a target in controlled practice and individual/small-sided games.

PHYSICAL EDUCATION

Standard 2 Applies knowledge of concepts, principles, strategies and tactics related to movement and performance.

Benchmark A: Apply tactical concepts and performance principles in game-like settings.

Tactics and principles

- | | |
|---|---|
| 1 | Create space and position self in space to create scoring opportunities. |
| 2 | Defend space and position self in space to prevent opponents from attacking or scoring. |
| 3 | Select correct decision in game-like settings. |

Benchmark B: Demonstrate knowledge of critical elements and biomechanical principles for specialized skills.

Principles and critical elements

- | | |
|---|---|
| 1 | Analyze movement using knowledge of critical elements (key points) in specialized skills in fitness, sport/games, individual performance activities and movement forms. |
| 2 | Identify ways to improve movement performance using cues, drills or fitness activities. |

Standard 3 Demonstrates the knowledge and skills to achieve and maintain a health-enhancing level of physical activity and fitness.

Benchmark A: Develops a plan to meet the recommendation for daily physical activity.

Physical activity knowledge

- | | |
|---|--|
| 1 | Analyze a variety of moderate to vigorous school, home and community physical activity opportunities to meet physical activity guidelines. |
| 2 | Identify active alternatives to screen time. |

Evaluate level of physical activity

- | | |
|---|--|
| 3 | Analyze physical activity assessment data and create a plan to improve or maintain physical activity levels. |
|---|--|

Benchmark B: Utilizes principles and practices to design a personalized health-related fitness plan.

Health-related fitness knowledge

- | | |
|---|---|
| 1 | Describe and use technology to monitor fitness (e.g., heart monitor, pedometer, phone and iPod apps). |
|---|---|

PHYSICAL EDUCATION

Cardio	
2	Adjust intensity and/or pace to stay within target heart rate or rate of perceived exertion (using RPE scale).
Muscular strength and endurance	
3	Apply the principle of specificity to identify exercises to improve muscular strength and endurance.
Flexibility	
4	Identify activities to improve lower body flexibility.
Planning (FITT and other principles)	
5	Design a fitness plan based on the results of health-related fitness assessment.
Healthy habits in relation to fitness	
6	Identify healthy food choices and appropriate servings to balance calorie intake with energy expenditure.
Standard 4	Exhibits responsible personal and social behavior that respects self and others.
Benchmark A: Develop and apply rules, safe practices and procedures in physical activity settings.	
Safety	
1	Make a conscious decision about playing within the rules, procedures and etiquette of a game or activity.
2	Acknowledge and apply rules to game situations to ensure personal and group safety.
Self-direction	
3	Engage in activities, stay on task, challenge oneself and take responsibility for actions.
Benchmark B: Communicate effectively with others to promote respect and conflict resolution in physical activity settings.	
Cooperation	
1	Offer positive suggestions or constructive feedback to facilitate group progress.

PHYSICAL EDUCATION
Respect

2	Demonstrate cooperation with peers of different gender, race and ability in physical activity settings.
---	---

Resolving conflict

3	Resolve conflict with sensitivity to the rights and feelings of others.
---	---

4	Accept and respect decisions made by the designated official.
---	---

Standard 5	Recognizes the value of physical activity for health, enjoyment, challenge, self-expression and/or social interaction.
-------------------	---

Benchmark A: Makes a connection between participation in physical activity and physical, emotional and intellectual health.	
--	--

Health reasons to be physically active

1	Identify activities that can provide health benefits for at least three components of fitness.
---	--

2	Describe how different physical activities have an impact on emotional health.
---	--

3	Describe how different physical activities have an impact on intellectual health.
---	---

Benchmark B: Discusses the positive impact physical activity has on his or her life.	
---	--

Values physical activity through various means

1	Analyze reasons to enjoy specific physical activities.
---	--

2	Analyze a specific activity the student plays because he or she finds it challenging.
---	---

3	Analyze reasons to enjoy specific physical activities the student plays because of the opportunities for social interaction.
---	--

SCIENCE
Instructional Supports:

Ohio's Learning Standards and Model Curriculum for Science
[Science Resources](#)

Code	Standard
Earth science	
7.ESS.1	The hydrologic cycle illustrates the changing states of water as it moves through the lithosphere, biosphere, hydrosphere and atmosphere.
7.ESS.2	Thermal-energy transfers in the ocean and the atmosphere contribute to the formation of currents, which influence global climate patterns.
7.ESS.3	The atmosphere has different properties at different elevations and contains a mixture of gases that cycle through the lithosphere, biosphere, hydrosphere and atmosphere.
7.ESS.4	The relative patterns of motion and positions of Earth, moon and sun cause solar and lunar eclipses, tides and phases of the moon.
7.ESS.5	The relative positions of Earth and the sun cause patterns we call seasons.
Physical science	
7.PS.1	Elements can be organized by properties.
7.PS.2	Matter can be separated or changed, but in a closed system, the number and types of atoms remains constant.
7.PS.3	Energy can be transformed or transferred but is never lost.
7.PS.4	Energy can be transferred through a variety of ways.
Life science	
7.LS.1	Energy flows and matter is transferred continuously from one organism to another and between organisms and their physical environments.
7.LS.2	In any particular biome, the number, growth and survival of organisms and populations depend on biotic and abiotic factors.

SOCIAL STUDIES

Instructional Supports:

[Ohio's Learning Standards for Social Studies](#)
[Grade 7 Social Studies Model Curriculum](#)

Code	Standard
History Strand	
Historical thinking and skills	
1	Historians and archaeologists describe historical events and issues from the perspectives of people living at the time to avoid evaluating the past in terms of today's norms and values.
Early civilizations	
2	The civilizations that developed in Greece and Rome had an enduring impact on later civilizations. This legacy includes governance and law, engineering and technology, art and architecture, as well as literature and history. The Roman Empire also played an instrumental role in the spread of Christianity.
Feudalism and transitions	
3	The Roman Empire collapsed due to various internal and external factors (political, social and economic) which led to the development of feudalism and the manorial system in the region. The fall of Rome and later invasions also allowed for the creation of new empires in the region.
4	The Mongols conquered much of Asia which led to unified states in China and Korea. Mongol failure to conquer Japan allowed a feudal system to persist.
5	Achievements in medicine, science, mathematics and geography by the Islamic civilization dominated most of the Mediterranean after the decline of the Roman Empire. These achievements were introduced into Western Europe as a result of the Muslim conquests, Crusades and trade, influencing the European Renaissance.
6	The decline of feudalism, the rise of nation-states and the Renaissance in Europe introduced revolutionary ideas, leading to cultural, scientific and social changes.
7	The Reformation introduced changes in religion including the emergence of Protestant faiths and a decline in the political power and social influence of the Roman Catholic Church.
First global age	
8	Empires in Africa and Asia grew as commercial and cultural centers along trade routes.

SOCIAL STUDIES

9	The advent of the trans-Saharan slave trade had profound effects on both West and Central Africa and the receiving societies.
10	European economic and cultural influence dramatically increased through explorations, conquests and colonization.
11	The Columbian exchange (i.e., the exchange of fauna, flora and pathogens) among previously unconnected parts of the world reshaped societies in ways still evident today.

Geography Strand
Spatial thinking and skills

12	Maps and other geographic representations can be used to trace the development of human settlement over time.
----	---

Human systems

13	Geographic factors promote or impede the movement of people, products and ideas.
14	Trade routes connecting Africa, Europe and Asia helped foster the spread of ideas, technology, goods and major world religions (Buddhism, Christianity, Hinduism, Islam and Judaism) that impacted the Eastern Hemisphere.
15	Improvements in transportation, communication and technology have facilitated cultural diffusion among peoples around the world.

Government Strand
Civic participation and skills

16	Analyzing individual and group perspectives is essential to understanding historic and contemporary issues. Opportunities for civic engagement exist for students to connect real-world issues and events to classroom learning.
----	--

Roles and systems of government

17	Greek democracy and the Roman Republic were a radical departure from monarchy and theocracy, influencing the structure and function of modern democratic governments.
18	With the decline of feudalism, consolidation of power resulted in the emergence of nation-states.

SOCIAL STUDIES
Economics Strand
Economic decision making and skills

19	Individuals, governments and businesses must analyze costs and benefits when making economic decisions. A cost- benefit analysis consists of determining the potential costs and benefits of an action and then balancing the costs against the benefits.
----	---

Scarcity

20	The variability in the distribution of productive resources in the various regions of the world contributed to specialization, trade and interdependence.
----	---

Markets

21	The growth of cities and empires fostered the growth of markets. Market exchanges encouraged specialization and the transition from barter to monetary economies.
----	---

TECHNOLOGY

Instructional Supports:
[Ohio's Learning Standards for Technology](#)
[Technology resources](#)

Code	Standard
Information and Communications Technology	
Topic 1: Identify and use appropriate digital learning tools and resources to accomplish a defined task.	
6-8.ICT.1.a.	Develop criteria for selecting digital learning tools and resources to accomplish a defined task.
6-8.ICT.1.b.	Select and use digital learning tools or resources to support planning, implementing and reflecting upon a defined task.
6-8.ICT.1.c.	Evaluate the use of digital learning tools and resources to support learning and productivity.
Topic 2: Use digital learning tools and resources to locate, evaluate and use information.	
6-8.ICT.2.a.	Use advanced search techniques to locate needed information using digital learning tools and resources.
6-8.ICT.2.b.	Use multiple criteria to evaluate the validity of information found with digital learning tools and resources.
6-8.ICT.2.c.	Apply principles of copyright, use digital citation tools and use strategies to avoid plagiarism.
Topic 3: Use digital learning tools and resources to construct knowledge.	
6-8.ICT.3.a.	Analyze and integrate textual, visual and quantitative information (e.g., images, diagrams, maps, graphs, infographics, videos, animations, interactives) from multiple digital learning tools and resources.
6-8.ICT.3.b.	Analyze data collected or retrieved from a variety of digital learning tools and resources to determine if patterns or trends are present.
6-8.ICT.3.c.	Create artifacts using digital learning tools and resources to demonstrate knowledge.
Topic 4: Use digital learning tools and resources to communicate and disseminate information to multiple audiences.	
6-8.ICT.4.a.	Use digital learning tools and resources to identify communication needs considering goals, audience and content.
6-8.ICT.4.b.	Select and use a variety of media formats to communicate information to a target audience.
6-8.ICT.4.c.	Discuss and identify ways to communicate and disseminate information so that users with varied needs can access information.
6-8.ICT.4.d.	Evaluate the effectiveness of a digital tool to communicate information with multiple audiences.

TECHNOLOGY

Society and Technology

Topic 1: Demonstrate an understanding of technology’s impact on the advancement of humanity – economically, environmentally and ethically.

6-8.ST.1.a.	Advocate and exhibit ethical, legal and responsible practices when utilizing technology.
6-8.ST.1.b.	Explore the advantages and disadvantages of widespread use, accessibility and reliance on technology in one’s world.
6-8.ST.1.c.	Review and demonstrate ethical considerations and legal requirements involved in the creation and use of digital technologies.
6-8.ST.1.d.	Analyze an environmental concern and investigate technology solutions to that problem.

Topic 2: Analyze the impact of communication and collaboration in both digital and physical environments.

6-8.ST.2.a.	Critique specific instances of how technology has impacted access to information, communications and collaboration.
6-8.ST.2.b.	Explain the positive and negative impact the use of technology can have on personal, professional and community relationships.
6-8.ST.2.c.	Investigate how social media impacts society and the digital identities of individuals and organizations.
6-8.DT.2.d.	Apply appropriate interactions and digital etiquette in varying contexts, reflecting upon potential impacts in both digital and physical environments.

Topic 3: Explain how technology, society and the individual impact one another.

6-8.ST.3.a.	Discuss and define how issues (e.g., economic, political, scientific and cultural) are influenced by the development and use of technology.
6-8.ST.3.b.	Explain how new technology development is driven by factors such as commercialization, creative/inventive thinking and cultural/historical influence.
6-8.ST.3.c.	Analyze how technological innovations and inventions can have multiple applications, both intended and unintended.
6-8.ST.3.d.	Describe the impact of an individual’s wants, values and interests on the development of new technologies.
6-8.ST.3.e.	Manage components of one’s digital identity and one’s digital footprint.
6-8.ST.3.f.	Evaluate current and past revisions to laws, rules and policies as society responds to technological advancements.

TECHNOLOGY

Design and Technology

Topic 1: Define and describe technology, including its core concepts of systems, resources, requirements, processes, controls, optimization and trade-offs.

6-8.DT.1.a.	Explore and document how technology can impact efficiency.
6-8.DT.1.b.	Analyze how tools, materials and processes are used to alter the natural and human-designed worlds.
6-8.DT.1.c.	Define and categorize the requirements of a design as either criteria or constraints.
6-8.DT.1.d.	Explain how optimization is the process of making a product as fully functional and effective as possible.
6-8.DT.1.e.	Describe how trade-offs involve a choice of one quality over another.
6-8.DT.1.f.	Give examples of how trade-offs must occur when optimizing a design in order to maintain design requirements.

Topic 2: Identify a problem and use an engineering design process to solve the problem.

6-8.DT.2.a.	Apply a complete design process to solve an identified individual or community problem: research, develop, test, evaluate and present several possible solutions, and redesign to improve the solution.
6-8.DT.2.b.	Describe how invention is a process of turning ideas and imagination into devices and systems.
6-8.DT.2.c.	Explain how innovation is the process of modifying an existing system or system element(s) to improve it.
6-8.DT.2.d.	Consider multiple factors, including criteria and constraints, (e.g., research, cost, time, materials, feedback, safety) to justify decisions when developing products and systems to solve problems.
6-8.DT.2.e.	Identify and explain why effective designs develop from non-linear, flexible application of a design process.

Topic 3: Demonstrate that solutions to complex problems require collaboration, interdisciplinary understanding and systems thinking.

6-8.DT.3.a.	Collaborate to solve a problem as an interdisciplinary team modeling different roles and functions.
6-8.DT.3.b.	Explain ways that invention and innovation within one field can transfer into other fields of technology.
6-8.DT.3.c.	Evaluate the effectiveness of the group's collaboration during the engineering design process and the contribution of the varying roles.
6-8.DT.3.d.	Give examples of how changes in one part of a system can impact other parts of that system.
6-8.DT.3.e.	Deconstruct a system into its component parts and describe how they interrelate.

TECHNOLOGY**Topic 4: Evaluate designs using functional, aesthetic and creative elements.**

6-8.DT.4.a.	Examine the progression of a product to identify how the functional, aesthetic and creative elements were applied.
6-8.DT.4.b.	Analyze environments or products that are examples of the application of the principles of universal or inclusive design.
6-8.DT.4.c.	Apply the design principle “form follows function” to develop a product.

WORLD LANGUAGES AND CULTURES

Instructional Supports:

[Ohio's Learning Standards for World Languages and Cultures](#)
[World Languages Resource Center](#)

Students will engage with and progress through language and culture courses at differing stages of their K-12 education. The novice proficiency levels are displayed below. Choose the column that fits the proficiency level of your student(s). Additional levels can be found in the world languages and cultures standards.

Functions	Novice Low	Novice Mid	Novice High
Interpretive Intercultural Communication (E.INT-C)			
Investigate Intercultural Products, Practices and Perspectives	Recognize a few typical products and practices related to familiar, everyday life in native and other cultures.	Identify typical cultural products and practices related to familiar, everyday life in native and other cultures to help understand perspectives.	Identify and compare typical products and practices related to familiar, everyday life in native and other cultures to help understand perspectives.
Compare Intercultural Behaviors	Recognize a few very simple behaviors in other cultures.	Identify familiar or everyday behaviors in other cultures.	Identify and compare familiar or everyday behaviors in native and other cultures.
Comprehend Authentic Texts that are Spoken, Written or Signed	Understand a few familiar words or phrases in: a. Simple, authentic informational texts; b. Simple, authentic fictional texts; c. Simple, overheard or observed conversations.	Understand very basic information in: a. Simple, authentic informational texts; b. Simple, authentic fictional texts; c. Simple, overheard or observed conversations.	Understand the topic and some isolated facts in: a. Simple, authentic informational texts; b. Simple, authentic fictional texts; c. Simple, overheard or observed conversations.
Interpretive Literacy (E.INT-LIT)			
Infer Meaning of Texts	Recognize traditional and nontraditional letters, accents, characters or tone marks, as well as cognates and familiar or practiced words.	Recognize non-traditional letters, accents, characters or tone marks, as well as cognates and words from context.	Recognize cognates and infer meaning of unfamiliar words or phrases using context clues and background knowledge.

WORLD LANGUAGES AND CULTURES

Recognize and Use Organizational Features of Texts	Recognize visual, aural and organizational features to identify the purpose of very simple texts, such as lists, labels, titles or headlines.	Recognize visual, aural and organizational features to identify the purpose of simple texts, such as schedules, song refrains, simple poems or infographics.	Use visual, aural and organizational features to identify the purpose of simple texts, such as announcements, instructions, fables or graphics.
Apply Self-Questioning Skills	Use literal or factual self-questioning before, during and after engaging with texts, such as “Who, where, when, what or how many?”	Use literal or factual self-questioning before, during and after engaging with texts, such as “What time, who is, why or how?”	Use a mixture of literal and inferential self-questioning before, during and after engaging with texts, such as “What happened or what might happen next?”
Make Text Connections	Make personal connections to a text using background knowledge or experiences.	Make personal connections to a text using background knowledge or experiences.	Make simple text-to-text connections using information from previous texts.
Use Resources Appropriately	Use digital and cultural resources appropriately.	Use digital and cultural resources appropriately.	Use digital and cultural resources appropriately.
Interpersonal Intercultural Communication (E.INP-C)			
Investigate Intercultural Products, Practices and Perspectives	Identify a few typical products and practices related to familiar, everyday life in native and other cultures.	Identify typical products and practices related to familiar, everyday life in native and other cultures.	Identify products and practices related to everyday life to help understand perspectives of native and other cultures.
Interact with Culturally Appropriate Language and Behavior	Interact in very familiar intercultural situations using practiced language and behaviors.	Interact in very familiar intercultural situations using practiced language and behaviors and show cultural awareness by recognizing a few culturally inappropriate behaviors.	Interact in familiar, everyday intercultural situations using practiced language and behaviors, and show cultural awareness by recognizing culturally inappropriate behaviors.
Exchange Information	Provide basic information on very familiar topics.	Request and share simple information on familiar or everyday topics.	Request and share information on familiar and everyday topics.
Meet Personal Needs	Express a few basic personal needs in very familiar situations.	Express basic needs in familiar or everyday situations.	Interact with others to meet basic needs in familiar and everyday situations.

WORLD LANGUAGES AND CULTURES

Express and React to Preferences and Opinions	Express a few basic preferences or feelings.	Express basic preferences or feelings and react to those of others.	Express, ask about, and react to simple preferences, feelings or opinions on familiar topics.
Interpersonal Literacy (E.INP-LIT)			
Communicate, React and Show Interest	Use familiar, relevant vocabulary or structures and rehearsed or imitated cultural behaviors to communicate, react and show interest.	Use familiar, relevant vocabulary and structures and rehearsed or imitated cultural behaviors to communicate, react and show interest.	Use culturally appropriate and relevant language and rehearsed or learned behaviors to communicate, react and show interest.
Continue and Extend Conversations	Use a few very simple verbal or nonverbal rejoinders or interjections.	Use very simple verbal and nonverbal interrogatives, rejoinders, interjections or requests for clarification.	Use simple interrogatives, rejoinders interjections, requests for clarification or transition words.
Increase Comprehensibility and Clarity of Expression	Increase comprehensibility using gestures, hand shapes, facial expressions or repetition.	Increase comprehensibility using gestures, hand shapes, facial expressions, repetition or word substitution.	Increase comprehensibility and clarify information using word substitution, rephrasing, circumlocution or attention to pronunciation, tone or pitch.
Infer Meaning of Unfamiliar Language	Infer meaning of unfamiliar language from gestures, facial and body expressions or context clues during simple interactions.	Infer meaning of unfamiliar language from gestures, facial and body expressions or context clues during simple interactions.	Infer meaning of unfamiliar language from gestures, facial and body expressions, context clues or topic of conversation.
Use Resources Appropriately	Use digital and cultural resources appropriately.	Use digital and cultural resources appropriately.	Use digital and cultural resources appropriately.
Presentational Intercultural Communication (E.P-C)			
Investigate Intercultural Products, Practices and Perspectives	Identify a few typical products and practices related to familiar, everyday life in native and other cultures.	Identify typical products and practices related to familiar, everyday life in native and other cultures.	Identify similarities and differences between typical products and practices related to everyday life to help understand perspectives of native and other cultures.

WORLD LANGUAGES AND CULTURES

Communicate in Culturally Appropriate Ways	Present in very familiar intercultural situations using memorized or practiced language and behaviors.	Present in very familiar intercultural situations using practiced or learned language and behaviors.	Present in very familiar situations using practiced or learned language and behaviors.
Inform and Describe	Name very familiar people, places and objects.	Give simple information about very familiar topics.	Give simple descriptions of familiar and everyday topics.
Narrate About Life and Activities	Provide very basic details about self.	Provide simple details about self, interests and activities.	Provide details about personal life, interests and activities.
Express Preferences	Express likes and dislikes about very familiar topics from native and other cultures.	Express likes and dislikes about familiar topics from native and other cultures.	Express preferences on familiar and everyday topics or topics of interest from native and other cultures.
Presentational Literacy (E.P-LIT)			
Choose Relevant, Authentic Content	Use familiar vocabulary and structures that are relevant to the topic and very simple authentic resources as needed.	Use familiar vocabulary and structures that are relevant to the topic and very simple authentic resources as needed.	Use familiar content, structures and syntax that are relevant to the topic and authentic resources as needed.
Organize Information	Organize very simple information in a logical sequence and support with gestures or visuals	Organize simple information in a logical sequence and support with gestures or visuals.	Organize information in a logical sequence, with topic sentence, simple details and conclusion, and support with gestures, visuals or additional language as needed.
Increase Comprehensibility	Communicate with emerging awareness of pronunciation, spelling, punctuation, hand shapes or signing parameters.	Communicate with awareness of pronunciation, spelling, punctuation, hand shapes or signing parameters.	Communicate with attention to pronunciation, spelling, punctuation, hand shapes or signing parameters.
Maintain Audience Interest	Maintain audience interest via gestures, creativity, emotion, technology or visuals.	Maintain audience interest via gestures, creativity, emotion, humor, technology or visuals.	Maintain audience interest via content, creativity, emotion, humor, technology or visuals.
Use Resources Appropriately	Use digital and cultural resources appropriately.	Use digital and cultural resources appropriately.	Use digital and cultural resources appropriately.