

# Standards by Grade Level

## Third Grade



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## Purpose

The *Standards by Grade Level for Third Grade* is a compilation of all learning standards for third 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
<b>Computing Systems</b>	
<b>Topic 1: Devices</b>	
CS.D.3.a	Explore common components (i.e., parts) of a computing system and their function to understand and describe the role they play in a computer system.
<b>Topic 2: Hardware and software</b>	
CS.HS.3.a	Identify and use digital learning tools/devices to support planning, implementing and reflecting upon a defined task.
<b>Topic 3: Troubleshooting</b>	
CS.T.3.a	Apply troubleshooting strategies given problems and solutions to resolve hardware and software problems.

**COMPUTER SCIENCE**

**Networks and the Internet**

**Topic 1: Networking**

NI.N.3.a	Describe how communication occurs when information is sent and received over physical or wireless paths to explain communication systems (e.g., sending an email or visiting a website).
NI.N.3.b	Recognize that every device on a network has a unique identification to share or receive information from the global community.

**Topic 2: Cybersecurity**

NI.C.3.a	Explore digital safety concepts in order to explain that information can be both public and private, to determine what information can safely be shared and to know how to use passwords to protect information.
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**Data and Analysis**

**Topic 1: Data Collection and storage**

DA.DCS.3.a	Collect quantitative data over time from multiple sources to perform various tasks.
DA.DCS.3.b	Identify different types of information to store in different formats.

**Topic 2: Visualization and communication**

DA.VC.3.a	Create a chart or graph to inform a target audience about observations and data collected.
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**Topic 3: Inference and modeling**

DA.IM.3.a	Utilize data to make predictions and discuss whether there is adequate data to make reliable predictions.
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**Algorithmic thinking and programming**

**Topic 1: Algorithms**

ATP.A.3.a	Construct and reflect on errors in an algorithm to accomplish a given task.
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**Topic 2: Variables and data representation**

ATP.VDR.3.a	Define and identify a variable, a placeholder for storing a value, to understand how it is used in a multi-step process (i.e., algorithm).
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## COMPUTER SCIENCE

**Topic 3: Control structures**

ATP.CS.3.a	Create a program using sequences, events, loops and conditionals to solve a problem.
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**Topic 4: Modularity**

ATP.M.3.a	Decompose (i.e., break down) the steps needed or not needed (i.e., abstraction) into precise sequences of instructions to design an algorithm.
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**Topic 5: Program development**

ATP.PD.3.a	Use a design process to plan the development of a program that solves problems.
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ATP.PD.3.b	Using a given program known to contain errors, identify and debug errors to ensure it works.
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## Impacts of computing

**Topic 1: Culture**

IC.Cu.3.a	Identify computing technologies that have changed the world and express how those technologies influence and are influenced by cultural practice.
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IC.Cu.3.b	Identify how computing devices have built -in features to increase accessibility to all users.
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**Topic 2: Social interactions**

IC.SI.3.a	Collaborate and consider diverse perspectives to improve digital artifacts.
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**Topic 3: Safety, law and ethics**

IC.SLE.3.a	Use public domain or Creative Commons media, and refrain from copying or using material created by others without permission.
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IC.SLE.3.b	Determine whether information should be shared or kept private to protect student identity.
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IC.SLE.3.c	Communicate the importance of information security to protect one's own digital footprint.
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## ENGLISH LANGUAGE ARTS

### Instructional Supports:

[Ohio's Learning Standards for English Language Arts](#)  
[English Language Arts Model Curriculum with Instructional Supports](#)

Code	Standard
<b>Reading Standards for Literature</b>	
<b>Key ideas and details</b>	
RL.3.1	Ask and answer questions to demonstrate understanding of a text, referring explicitly to the text as the basis for the answers.
RL.3.2	Analyze literary text development. a. Determine a theme and explain how it is conveyed through key details in the text. b. Retell stories, including fables, folktales, and myths from diverse cultures.
RL.3.3	Describe characters in a story (e.g., their traits, motivations, or feelings) and explain how their actions contribute to the sequence of events.
<b>Craft and structure</b>	
RL.3.4	Determine the meaning of words and phrases as they are used in a text, distinguishing literal from nonliteral language.
RL.3.5	Refer to parts of stories, dramas, and poems when writing or speaking about a text, using terms such as chapter, scene, and stanza; describe how each successive part builds on earlier sections.
RL.3.6	Describe the difference between points of view in texts, particularly first- and third-person narration.
<b>Integration of knowledge and ideas</b>	
RL.3.7	Explain how specific aspects of a text's illustrations contribute to what is conveyed by the words in a story (e.g., emphasize aspects of a character or setting).
RL.3.8	(Not applicable to literature)
RL.3.9	Compare and contrast the themes, settings, and plots of stories written by the same author about the same or similar characters (e.g., in books from a series).

**ENGLISH LANGUAGE ARTS**

**Range of Reading and Level of Text Complexity**

RL.3.10	By the end of the year, read and comprehend literature, including stories, dramas, and poetry, at the high end of the grades 2–3 text complexity band independently and proficiently. Activate prior knowledge and draw on previous experiences in order to make text-to-self or text-to-text connections and comparisons.
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**Reading Standards for Information Text**

**Key ideas and details**

RI.3.1	Ask and answer questions to demonstrate understanding of a text, referring explicitly to the text as the basis for the answers.
RI.3.2	Analyze informational text development. a. Determine the main idea of a text. b. Retell the key details and explain how they support the main idea.
RI.3.3	Describe the relationship between a series of historical events, scientific ideas or concepts, or steps in technical procedures in a text, using language that pertains to time, sequence, and cause/effect.

**Craft and structure**

RI.3.4	Determine the meaning of general academic and domain-specific words and phrases in a text relevant to a grade 3 topic or subject area.
RI.3.5	Use text features and search tools (e.g., key words, sidebars, hyperlinks) to locate information relevant to a given topic efficiently.
RI.3.6	Distinguish their own perspective from that of the author of a text.

**Integration of knowledge and ideas**

RI.3.7	Use information gained from illustrations (e.g., maps, photographs) and the words in a text to demonstrate understanding of the text (e.g., where, when, why, and how key events occur).
RI.3.8	Describe the relationships between the evidence and points an author uses throughout a text.
RI.3.9	Compare and contrast the most important points and key details presented in two texts on the same topic.

**ENGLISH LANGUAGE ARTS**

**Range of Reading and Level of Text Complexity**

RI.3.10	By the end of the year, read and comprehend informational texts, including history/social studies, science, and technical texts, at the high end of the grades 2–3 text complexity band independently and proficiently.
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**Reading Standards for Foundational Skills**

**Print concept**

	Not Applicable
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**Phonological awareness**

	Not Applicable
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**Phonics and word recognition**

RF.3.3	<p>Know and apply grade-level phonics and word analysis skills in decoding words.</p> <ul style="list-style-type: none"> <li>a. Identify and know the meaning of the most common prefixes and derivational suffixes.</li> <li>b. Decode words with common Latin suffixes.</li> <li>c. Decode multi-syllable words.</li> <li>d. Read grade-appropriate irregularly spelled words.</li> </ul>
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**Fluency**

RF.3.4	<p>Read with sufficient accuracy and fluency to support comprehension.</p> <ul style="list-style-type: none"> <li>a. Read grade-level text with purpose and understanding.</li> <li>b. Read grade-level prose and poetry orally with accuracy, appropriate rate, and expression on successive readings.</li> <li>c. Use context to confirm or self-correct word recognition and understanding, rereading as necessary.</li> </ul>
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**Writing Standards**

**Text Types and purposes**

W.3.1	<p>Write opinion pieces on topics or texts, supporting a point of view with reasons.</p> <ul style="list-style-type: none"> <li>a. Introduce the topic or text they are writing about, state an opinion, and create an organizational structure that lists reasons.</li> <li>b. Provide reasons that support the opinion.</li> <li>c. Use linking words and phrases (e.g., because, therefore, since, for example) to connect opinion and reasons.</li> <li>d. Provide a concluding statement or section.</li> </ul>
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**ENGLISH LANGUAGE ARTS**

W.3.2	<p>Write informative/explanatory texts to examine a topic and convey ideas and information clearly.</p> <ul style="list-style-type: none"> <li>a. Introduce a topic and group related information together; include illustrations to aid comprehension, if needed.</li> <li>b. Develop the topic with facts, definitions, and details.</li> <li>c. Use linking words and phrases (e.g., also, another, and, more, but) to connect ideas within categories of information.</li> <li>d. Provide a concluding statement or section.</li> </ul>
W.3.3	<p>Write narratives to develop real or imagined experiences or events using effective technique, descriptive details, and clear event sequences.</p> <ul style="list-style-type: none"> <li>a. Establish a situation and introduce a narrator and/or characters; organize an event sequence that unfolds naturally.</li> <li>b. Use dialogue and descriptions of actions, thoughts, and feelings to develop experiences and events or show the response of characters to situations.</li> <li>c. Use temporal words and phrases to signal event order.</li> <li>d. Provide a sense of closure.</li> </ul>
<b>Production and distribution of writing</b>	
W.3.4	<p>With guidance and support from adults, produce writing in which the development and organization are appropriate to task and purpose. (Grade-specific expectations for writing types are defined in standards 1–3 above.)</p>
W.3.5	<p>With guidance and support from peers and adults, develop and strengthen writing as needed by planning, revising, and editing. (Editing for conventions should demonstrate command of Language standards 1–3 up to and including grade 3.)</p>
W.3.6	<p>With guidance and support from adults, use technology to produce and publish writing (using keyboarding skills), as well as to interact and collaborate with others.</p>
<b>Research to build and present knowledge</b>	
W.3.7	<p>Conduct short research projects that build knowledge about a topic.</p>
W.3.8	<p>Recall information from experiences or gather information from print and digital sources; take brief notes on sources and sort evidence into provided categories.</p>
W.3.9	<p>(Begins in grade 4)</p>

## ENGLISH LANGUAGE ARTS

## Range of writing

W.3.10	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.
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## Speaking and Listening Standards

## Comprehension and collaboration

SL.3.1	Engage effectively in a range of collaborative discussions (one-on-one, in groups, and teacher-led) with diverse partners on grade 3 topics and texts, building on others' ideas and expressing their own clearly. <ul style="list-style-type: none"> <li>a. Come to discussions prepared, having read or studied required material; explicitly draw on that preparation and other information known about the topic to explore ideas under discussion.</li> <li>b. Follow agreed-upon rules for discussions (e.g., gaining the floor in respectful ways, listening to others with care, speaking one at a time about the topics and texts under discussion).</li> <li>c. Ask questions to check understanding of information presented, stay on topic, and link their comments to the remarks of others.</li> <li>d. Explain their own ideas and understanding in light of the discussion</li> </ul>
SL.3.2	Determine the main ideas and supporting details of a text read aloud or information presented in diverse media and formats, including visually, quantitatively, and orally.
SL.3.3	Ask and answer questions about information from a speaker, offering appropriate elaboration and detail.
<b>Presentation of knowledge and ideas</b>	
SL.3.4	Report on a topic or text, tell a story, or recount an experience with appropriate facts and relevant, descriptive details, speaking clearly at an understandable pace.
SL.3.5	Create engaging audio recordings of stories or poems that demonstrate fluid reading at an understandable pace; add visual displays when appropriate to emphasize or enhance certain facts or details.
SL.3.6	Speak in complete sentences when appropriate to task and situation in order to provide requested detail or clarification. (See grade 3 Language standards 1 and 3 for specific expectations.)

## Language Standards

**ENGLISH LANGUAGE ARTS**

**Conventions of standard English**

L.3.1	<p>Demonstrate command of the conventions of standard English grammar and usage when writing or speaking.</p> <ul style="list-style-type: none"> <li>a. Explain the function of nouns, pronouns, verbs, adjectives, and adverbs in general and their functions in particular sentences.</li> <li>b. Form and use regular and irregular plural nouns.</li> <li>c. Use abstract nouns (e.g., childhood).</li> <li>d. Form and use regular and irregular verbs.</li> <li>e. Form and use the simple (e.g., I walked; I walk; I will walk) verb tenses.</li> <li>f. Ensure subject-verb and pronoun-antecedent agreement.</li> <li>g. Form and use comparative and superlative adjectives and adverbs and choose between them depending on what is to be modified.</li> <li>h. Use coordinating and subordinating conjunctions.</li> <li>i. Produce simple, compound, and complex sentences.</li> </ul>
L.3.2	<p>Demonstrate command of the conventions of standard English capitalization, punctuation, and spelling when writing.</p> <ul style="list-style-type: none"> <li>a. Capitalize appropriate words in titles.</li> <li>b. Use commas in addresses.</li> <li>c. Use commas and quotation marks in dialogue.</li> <li>d. Form and use possessives.</li> <li>e. Use conventional spelling for high frequency and other studied words and for adding suffixes to base words (e.g., sitting, smiled, cries, happiness).</li> <li>f. Use spelling patterns and generalizations (e.g., word families, position-based spellings, syllable patterns, ending rules, meaningful word parts) in writing words.</li> <li>g. Consult reference materials, including beginning dictionaries, as needed to check and correct spellings.</li> </ul>
<b>Knowledge of language</b>	
L.3.3	<p>Use knowledge of language and its conventions when writing, speaking, reading, or listening.</p> <ul style="list-style-type: none"> <li>a. Choose words and phrases for effect.</li> <li>b. Recognize and observe differences between the conventions of spoken and written standard English.</li> </ul>

**Vocabulary acquisition and use**

## ENGLISH LANGUAGE ARTS

L.3.4	<p>Determine or clarify the meaning of unknown and multiple-meaning word and phrases based on grade 3 reading and content, choosing flexibly from a range of strategies.</p> <ul style="list-style-type: none"> <li>a. Use sentence-level context as a clue to the meaning of a word or phrase.</li> <li>b. Determine the meaning of the new word formed when a known affix is added to a known word (e.g., agreeable/disagreeable, comfortable/uncomfortable, care/careless, heat/preheat).</li> <li>c. Use a known root word as a clue to the meaning of an unknown word with the same root (e.g., company, companion).</li> <li>d. Use glossaries or beginning dictionaries, both print and digital, to determine or clarify the precise meaning of key words and phrases.</li> </ul>
L.3.5	<p>L.3.5 Demonstrate understanding of word relationships and nuances in word meanings.</p> <ul style="list-style-type: none"> <li>a. Distinguish the literal and nonliteral meanings of words and phrases in context (e.g., take steps).</li> <li>b. Identify real-life connections between words and their use (e.g., describe people who are friendly or helpful).</li> <li>c. Distinguish shades of meaning among related words that describe states of mind or degrees of certainty (e.g., knew, believed, suspected, heard, wondered).</li> </ul>
L.3.6	<p>L.3.6 Acquire and use accurately grade-appropriate conversational, general academic, and domain specific words and phrases, including those that signal spatial and temporal relationships (e.g., After dinner that night, we went looking for them).</p>

## FINANCIAL LITERACY

### Instructional Supports:

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

Code	Standard
<b>Financial responsibility and decision making</b>	
1	Choices can be made with your money. Choices include spending, saving and donating. Money can also be saved in financial institutions.
2	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.
3	People may receive money as gifts, allowance or income. People earn income by working.
<b>Planning and money management</b>	
4	Financial responsibility includes the development of a spending and savings plan (personal budget).
<b>Informed consumer</b>	
5	An informed consumer makes decisions on purchases that may include a decision-making strategy to determine if purchases are within their budget.
<b>Credit and debt</b>	
6	Recognize that money is needed to purchase goods and services.
7	Borrowing includes at least two people who agree to a transaction. There are responsibilities with borrowing.
<b>Risk management and insurance</b>	
8	Individuals must protect their identity, money and property.

## FINE ARTS: DANCE

### Instructional Supports:

[Ohio's 2012 Learning Standards for Dance](#)  
[Grade 3-5 Dance Model Curriculum](#)  
[Fine Arts Instructional Strategies](#)

Code	Standard
<b>Perceiving / Knowing (PE)</b>	
1PE	Develop an understanding of dance concepts and vocabulary.
2PE	Observe, identify and describe basic choreographic elements.
3PE	Observe the dances created by peers and identify and discuss creative Problem-solving strategies.
4PE	Recognize the connection of somatic sensation of breath and kinesthetic awareness to their personal movement.
5PE	Recognize and describe the role of dance in their lives and communities.
<b>Producing / Performing (PR)</b>	
1PR	Explore and improvise with basic choreographic elements.
2PR	Improvise and create movements that reflect an understanding of themes from a range of sources, including other content areas.
3PR	Learn dances related to the cultures represented in the local community.
4PR	Demonstrate kinesthetic awareness, self-direction and safe practices when improvising and performing.
5PR	Assume shared responsibility for collaboration with peers to create original movement sequences and dances.
<b>Responding (RE)</b>	
1RE	Reflect and share personal reactions to viewing, creating and performing dances.
2RE	Recognize and identify personal characteristics and how these are reflected in their movements.
3RE	Describe themes, concepts and ideas from other content areas that are reflected in dances they view.

**FINE ARTS: DANCE**

4RE	Describe why safe practices and kinesthetic awareness are important for participation in dance.
5RE	Describe the relationship among visual, aural and kinesthetic elements in a dance that is performed or observed.
6RE	Discuss and develop individual and shared criteria to assess dance performances.

**FINE ARTS: DRAMA**

**Instructional Supports:**  
[Ohio's 2012 Learning Standards for Drama](#)  
[Grade 3-5 Drama Model Curriculum](#)  
[Fine Arts Instructional Strategies](#)

Code	Standard
<b>Perceiving / Knowing (PE)</b>	
1PE	Identify the plot and retell the sequence of events in a story, play or theatre experience.
2PE	Identify character types and relationships between characters including thoughts, feelings and information about them.
3PE	Explain how the cultural and physical setting of a dramatic and theatrical work affects characterization.
4PE	Differentiate dialogue from action in a specific piece of literature.
5PE	Discuss the playwright's intent in a script.
6PE	Recognize and describe the roles of writers in live theatre, film, video and other media forms of the day.
<b>Producing / Performing (PR)</b>	
1PR	Create the movement and expressive voice of a character to explain and solve problems encountered by the character.
2PR	Use voice, movement, space and physical objects to communicate a storyline and a character's thoughts, feelings and ideas.
3PR	Use various design components to create an appropriate and striking environment for a scene or story.
4PR	Direct peers in performing a task in a dramatic situation.
5PR	Express a character's thoughts and feelings in writing.

### FINE ARTS: DRAMA

6PR	Use problem-solving and communication skills to dramatize a story or current event.
7PR	Use elements and processes of theatre to integrate information from other academic content areas.
<b>Responding (RE)</b>	
1RE	Describe the visual, aural and kinetic elements present in stories and plays from various cultures.
2RE	Identify universal characters and themes in stories and plays from various time periods and cultures.
3RE	Compare and contrast the elements (e.g., plot, character, theme, and setting) of various narratives.
4RE	Share personal opinions about a play or theatre experience and respectfully consider the opinions of others.
5RE	Develop personal criteria to use for discussion, performance and evaluation of one's own theatrical experiences.

### FINE ARTS: MUSIC

#### Instructional Supports:

[Ohio's 2012 Learning Standards for Music](#)  
[Grade 3-5 Music Model Curriculum](#)  
[Fine Arts Instructional Strategies](#)

Code	Standard
<b>Creating (CE)</b>	
1CE	Visually and aurally, identify the four families of orchestral instruments.
2CE	Identify and discriminate between sounds produced by various instruments and the human voice.
3CE	Listen to and identify the music of different composers of world cultures.
4CE	Identify and respond to simple music forms (e.g., AB, ABA).
5CE	Identify elements of music using developmentally appropriate vocabulary.
6CE	Identify careers in music including composing, performing and conducting.



**FINE ARTS: MUSIC**

**Producing / Performing (PR)**

1PR	Sing a varied repertoire with accurate rhythm and pitch individually and with others.
2PR	Follow and respond to the cues of a conductor.
3PR	Use the head voice to produce a light, clear sound while maintaining appropriate posture.
4PR	Play a variety of classroom instruments with proper technique.
5PR	Sing, move and respond to music from world cultures and different composers.
6PR	Improvise and compose simple rhythmic and melodic phrases.
7PR	Read, write and perform using eighth notes, quarter notes, half notes and quarter rests in 2/4, 3/4 and 4/4 meter.
8PR	Read, write and perform in treble clef a extended pentatonic melodies in G, F and C.
9PR	Demonstrate appropriate audience etiquette at live performances.

**Responding (RE)**

1RE	Compare and discuss the use of similarly-named elements (e.g. form, line, rhythm) in music and other art forms.
2RE	Notice and describe what they hear in selected pieces of music and compare their responses to those of others.
3RE	Explain personal preferences for specific musical selections using music vocabulary.
4RE	Evaluate audience etiquette associated with various musical performances and settings.
5RE	Analyze music in terms of how it communicates words, feelings, moods or images.
6RE	Compare interpretations of the same piece of music as they occur through dance, drama and visual art.
7RE	Create criteria and use it to critique their own performances and the performances of others.

## FINE ARTS: VISUAL ARTS

### Instructional Supports:

[Ohio's 2012 Learning Standards for Visual Art](#)  
[Grade 3-5 Visual Art Model Curriculum](#)  
[Fine Arts Instructional Strategies](#)

Code	Standard
<b>Perceiving / Knowing (PE)</b>	
1CE	Observe and compare similar themes, subject matter and images in artworks from historical and contemporary eras.
2CE	Identify the relationships between and among selected elements and principles of art and design.
3CE	Use historical and cultural artworks to answer questions about daily life.
4CE	Recognize selected artists who contributed to the cultural heritages of the people of the United States.
5CE	Provide examples of how we encounter art and artists in everyday life.
6CE	Recognize and identify choices that give meaning to a personal work of art.
<b>Producing / Performing (PR)</b>	
1PR	Demonstrate skill and expression in the use of art techniques and processes.
2PR	Use appropriate visual art vocabulary during artmaking processes.
3PR	Find and solve problems of personal relevance and interest when developing artmaking ideas.
4PR	Create artworks that demonstrate awareness of two- and three-dimensional space.
5PR	Show increasing attention to the nuances of elements and principles of design when creating personal works of art.
6PR	Collaborate with others to create a work of art that addresses an interdisciplinary theme.

## FINE ARTS: VISUAL ARTS

## Responding (RE)

1RE	Examine and describe how art and design principles are used by artists to create visual effects.
2RE	Select an object and explain reasons why they think it is a work of art.
3RE	Compare and contrast their opinions of a work of art with those of their peers.
4RE	Identify artworks from their communities or regions and communicate how they reflect social influences and cultural traditions.
5RE	Use feedback and self-assessment to improve the quality of personal artworks.

## MATHEMATICS

### Instructional Supports:

[Ohio's Learning Standards for Grade 3 Mathematics](#)  
[Ohio's Kindergarten – Grade 8 Learning Progressions](#)  
[Grade 3 Mathematics Model Curriculum](#)

Code	Standard
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### Standards for Mathematical Practice

<b>MP.1</b>	<b>Make sense of problems and persevere in solving them.</b>
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In third grade, mathematically proficient students know that doing mathematics involves solving problems and discussing how they solved them. Students explain to themselves the meaning of a problem and look for ways to solve it. Students may use concrete objects, pictures, or drawings to help them conceptualize and solve problems, such as “Jim purchased 5 packages of muffins. Each package contained 3 muffins. How many muffins did Jim purchase?” or “Describe another situation where there would be 5 groups of 3 or  $5 \times 3$ .” Students may check their thinking by asking themselves, “Does this make sense?” Students listen to other students’ strategies and are able to make connections between various methods for a given problem.

<b>MP.2</b>	<b>Reason abstractly and quantitatively.</b>
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Third graders should recognize that a number represents a specific quantity. They connect the quantity to written symbols and create a logical representation of the problem at hand, considering both the appropriate units involved and the meaning of quantities. For example: students apply their understanding of the meaning of the equal sign as “the same as” to interpret an equation with an unknown. When given  $4 \times \square = 40$ , they might think:

- 4 groups of some number is the same as 40
- 4 times some number is the same as 40
- I know that 4 groups of 10 is 40 so the unknown number is 10
- The missing factor is 10 because 4 times 10 equals 40.

Teachers might ask, “How do you know” or “What is the relationship between the quantities?” to reinforce students’ reasoning and understanding.

<b>MP.3</b>	<b>Construct viable arguments and critique the reasoning of others.</b>
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Students may construct arguments using concrete referents, such as objects, pictures, and drawings. They refine their mathematical communication skills as they participate in mathematical discussions that the teacher facilitates by asking questions such as “How did you get that?” and “Why is that true?” Students explain their thinking to others and respond to others’ thinking. For example, after investigating patterns on the 100s chart, students might explain why the pattern makes sense.

## MATHEMATICS

### MP.4 Model with mathematics.

Students experiment with representing problem situations in multiple ways including numbers, words (mathematical language), drawing pictures, using objects, acting out, making a chart, list, or graph, creating equations, etc. Students need opportunities to connect the different representations and explain the connections. They should be able to use all of these representations as needed. Third graders should evaluate their results in the context of the situation and reflect on whether the results make sense.

For example, students use various contexts and a variety of models (e.g., circles, squares, rectangles, fraction bars, and number lines) to represent and develop understanding of fractions. Students use models to represent both equations and story problems and can explain their thinking. They evaluate their results in the context of the situation and reflect on whether the results make sense. Students should be encouraged to answer questions, such as “What math drawing or diagram could you make and label to represent the problem?” or “What are some ways to represent the quantities?”

### MP.5 Use appropriate tools strategically.

Third graders consider the available tools (including drawings and estimation) when solving a mathematical problem and decide when certain tools might be helpful. For instance, they may use graph paper to find all the possible rectangles that have a given perimeter. They compile the possibilities into an organized list or a table, and determine whether they have all the possible rectangles. Students should be encouraged to answer questions such as, “Why was it helpful to use \_\_\_?”

### MP.6 Attend to precision.

As third graders develop their mathematical communication skills, they try to use clear and precise language in their discussions with others and in their own reasoning. They are careful about specifying units of measure and state the meaning of the symbols they choose. For instance, when figuring out the area of a rectangle they record their answers in square units.

### MP.7 Look for and make use of structure.

Students look closely to discover a pattern or structure. For instance, students use properties of operations (e.g., commutative and distributive properties) as strategies to multiply and divide. Teachers might ask, “What do you notice when \_\_\_?” or “How do you know if something is a pattern?”

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

Students in third grade should notice repetitive actions in computation and look for more shortcut methods. For example, students may use the distributive property as a strategy for using products they know to solve products that they don't know. For example, if students are asked to find the product of  $7 \times 8$ , they might decompose 7 into 5 and 2 and then multiply  $5 \times 8$  and  $2 \times 8$  to arrive at  $40 + 16$  or 56. In addition, third graders continually evaluate their work by asking themselves, “Does this make sense? Students should be encouraged to answer questions, such as, “What is happening in this situation?” or “What predictions or generalizations can this pattern support?”

## MATHEMATICS

### Operations and Algebraic Thinking

#### Represent and solve problems involving multiplication and division.

3.OA.1	Interpret products of whole numbers, e.g., interpret $5 \times 7$ as the total number of objects in 5 groups of 7 objects each. (Note: These standards are written with the convention that $a \times b$ means $a$ groups of $b$ objects each; however, because of the commutative property, students may also interpret $5 \times 7$ as the total number of objects in 7 groups of 5 objects each).
3.OA.2	Interpret whole number quotients of whole numbers, e.g., interpret $56 \div 8$ as the number of objects in each share when 56 objects are partitioned equally into 8 shares, or as a number of shares when 56 objects are partitioned into equal shares of 8 objects each. <i>For example, describe a context in which a number of shares or a number of groups can be expressed as <math>56 \div 8</math>.</i>
3.OA.3	Use multiplication and division within 100 to solve word problems in situations involving equal groups, arrays, and measurement quantities, e.g., by using drawings and equations with a symbol for the unknown number to represent the problem. See <a href="#">Table 2, page 18</a> . Drawings need not show details, but should show the mathematics in the problem. (This applies wherever drawings are mentioned in the Standards.)
3.OA.4	Determine the unknown whole number in a multiplication or division equation relating three whole numbers. <i>For example, determine the unknown number that makes the equation true in each of the equations <math>8 \times \square = 48</math>; <math>5 = \square \div 3</math>; <math>6 \times 6 = \square</math>.</i>

#### Understand properties of multiplication and the relationship between multiplication and division.

3.OA.5	Apply properties of operations as strategies to multiply and divide. <i>For example, if <math>6 \times 4 = 24</math> is known, then <math>4 \times 6 = 24</math> is also known (Commutative Property of Multiplication); <math>3 \times 5 \times 2</math> can be found by <math>3 \times 5 = 15</math>, then <math>15 \times 2 = 30</math>, or by <math>5 \times 2 = 10</math>, then <math>3 \times 10 = 30</math> (Associative Property of Multiplication); knowing that <math>8 \times 5 = 40</math> and <math>8 \times 2 = 16</math>, one can find <math>8 \times 7</math> as <math>8 \times (5 + 2) = (8 \times 5) + (8 \times 2) = 40 + 16 = 56</math> (Distributive Property).</i> Students need not use formal terms for these properties.
3.OA.6	Understand division as an unknown-factor problem. <i>For example, find <math>32 \div 8</math> by finding the number that makes 32 when multiplied by 8.</i>

#### Multiply and divide within 100.

3.OA.7	Fluently <sup>G</sup> multiply and divide within 100, using strategies such as the relationship between multiplication and division, e.g., knowing that $8 \times 5 = 40$ , one knows $40 \div 5 = 8$ , or properties of operations. Limit to division without remainders. By the end of Grade 3, know from memory all products of two one-digit numbers.
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**MATHEMATICS**

**Solve problems involving the four operations, and identify and explain patterns in arithmetic.**

3.OA.8	Solve two-step word problems using the four operations. Represent these problems using equations with a letter or a symbol, which stands for the unknown quantity. Assess the reasonableness of answers using mental computation and estimation strategies including rounding. This standard is limited to problems posed with whole numbers and having whole number answers. Students may use parentheses for clarification since algebraic order of operations is not expected.
3.OA.9	Identify arithmetic patterns (including patterns in the addition table or multiplication table), and explain them using properties of operations. <i>For example, observe that 4 times a number is always even, and explain why 4 times a number can be decomposed into two equal addends.</i>

**Numbers and Operations in Base Ten**

**Use place value understanding and properties of operations to perform multi-digit arithmetic. A range of strategies and algorithms may be used.**

3.NBT.1	Use place value understanding and properties of operations to perform multi-digit arithmetic. A range of strategies and algorithms may be used.
3.NBT.2	Fluently add and subtract within 1,000 using strategies and algorithms <sup>G</sup> based on place value, properties of operations, and/or the relationship between addition and subtraction.
3.NBT.3	Multiply one-digit whole numbers by multiples of 10 in the range 10-90, e.g., $9 \times 80$ , $5 \times 60$ using strategies based on place value and properties of operations.

**Numbers and Operations – Fractions**

**Develop understanding of fractions as numbers. Grade 3 expectations in this domain are limited to fractions with denominators 2, 3, 4, 6, and 8.**

3.NF.1	Understand a fraction $\frac{1}{b}$ as the quantity formed by 1 part when a whole is partitioned into $b$ equal parts; understand a fraction $\frac{a}{b}$ as the quantity formed by $a$ parts of size $\frac{1}{b}$ .
3.NF.2	Understand a fraction as a number on the number line; represent fractions on a number line diagram <sup>G</sup> . a. Represent a fraction $\frac{1}{b}$ on a number line diagram by defining the interval from 0 to 1 as the whole and partitioning it into $b$ equal parts. Recognize that each part has size $\frac{1}{b}$ and that the endpoint of the part based at 0 locates the number $\frac{1}{b}$ on the number line. b. Represent a fraction $\frac{a}{b}$ (which may be greater than 1) on a number line diagram by marking off a lengths $\frac{1}{b}$ from 0. Recognize that the resulting interval has size $\frac{a}{b}$ and that its endpoint locates the number $\frac{a}{b}$ on the number line.

## MATHEMATICS

- 3.NF.3 Explain equivalence of fractions in special cases, and compare fractions by reasoning about their size.
- Understand two fractions as equivalent (equal) if they are the same size or the same point on a number line.
  - Recognize and generate simple equivalent fractions, e.g.,  $\frac{1}{2} = \frac{2}{4}$ ,  $\frac{4}{6} = \frac{2}{3}$ . Explain why the fractions are equivalent, e.g., by using a visual fraction model<sup>6</sup>.
  - Express whole numbers as fractions, and recognize fractions that are equivalent to whole numbers. *Examples: Express 3 in the form  $3 = \frac{3}{1}$ ; recognize that  $\frac{6}{1} = 6$ ; locate  $\frac{4}{4}$  and 1 at the same point of a number line diagram.*
  - Compare two fractions with the same numerator or the same denominator by reasoning about their size. Recognize that comparisons are valid only when the two fractions refer to the same whole. Record the results of comparisons with the symbols  $>$ ,  $=$ , or  $<$ , and justify the conclusions, e.g., by using a visual fraction model.

### Measurement and Data

#### Solve problems involving money, measurement, and estimation of intervals of time, liquid volumes, and masses of objects.

- 3.MD.1 Work with time and money.
- Tell and write time to the nearest minute. Measure time intervals in minutes (within 90 minutes). Solve real-world problems involving addition and subtraction of time intervals (elapsed time) in minutes, e.g., by representing the problem on a number line diagram or clock.
  - Solve word problems by adding and subtracting within 1,000, dollars with dollars and cents with cents (not using dollars and cents simultaneously) using the \$ and ¢ symbol appropriately (not including decimal notation).
- 3.MD.2 Measure and estimate liquid volumes and masses of objects using standard units of grams, kilograms, and liters. Add, subtract, multiply, or divide whole numbers to solve one-step word problems involving masses or volumes that are given in the same units, e.g., by using drawings (such as a beaker with a measurement scale) to represent the problem. Excludes multiplicative comparison problems involving notions of "times as much"; see [Table 2, page 18](#).

#### Represent and interpret data.

- 3.MD.3 Create scaled picture graphs to represent a data set with several categories. Create scaled bar graphs to represent a data set with several categories. Solve two-step "how many more" and "how many less" problems using information presented in the scaled graphs. *For example, create a bar graph in which each square in the bar graph might represent 5 pets, then determine how many more/less in two given categories*
- 3.MD.4 Generate measurement data by measuring lengths using rulers marked with halves and fourths of an inch. Show the data by creating a line plot<sup>6</sup>, where the horizontal scale is marked off in appropriate units—whole numbers, halves, or quarters.



**MATHEMATICS**

**Identify, describe, and compare measurable attributes.**

3.MD.5	<p>Recognize area as an attribute of plane figures and understand concepts of area measurement.</p> <ul style="list-style-type: none"> <li>a. A square with side length 1 unit, called “a unit square,” is said to have “one square unit” of area, and can be used to measure area.</li> <li>b. A plane figure which can be covered without gaps or overlaps by <math>n</math> unit squares is said to have an area of <math>n</math> square units.</li> </ul>
3.MD.6	<p>Measure areas by counting unit squares (square cm, square m, square in, square ft, and improvised units).</p>
3.MD.7	<p>Relate area to the operations of multiplication and addition.</p> <ul style="list-style-type: none"> <li>a. Find the area of a rectangle with whole number side lengths by tiling it, and show that the area is the same as would be found by multiplying the side lengths.</li> <li>b. Multiply side lengths to find areas of rectangles with whole number side lengths in the context of solving real-world and mathematical problems, and represent whole number products as rectangular areas in mathematical reasoning.</li> <li>c. Use tiling to show in a concrete case that the area of a rectangle with whole number side lengths <math>a</math> and <math>b + c</math> is the sum of <math>a \times b</math> and <math>a \times c</math> (represent the distributive property with visual models including an area model).</li> <li>d. Recognize area as additive. Find the area of figures composed of rectangles by decomposing into non-overlapping rectangles and adding the areas of the non-overlapping parts, applying this technique to solve real-world problems.</li> </ul>

**Geometric measurement: recognize perimeter as an attribute of plane figures and distinguish between linear and area measures.**

3.MD.8	<p>Solve real -world and mathematical problems involving perimeters of polygons, including finding the perimeter given the side lengths, finding an unknown side length, and exhibiting rectangles with the same perimeter and different areas or with the same area and different perimeters.</p>
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**Geometry**

**Reason with shapes and their attributes.**

3.G.1	<p>Draw and describe triangles, quadrilaterals (rhombuses, rectangles, and squares), and polygons (up to 8 sides) based on the number of sides and the presence or absence of square corners (right angles).</p>
3.G.2	<p>Partition shapes into parts with equal areas. Express the area of each part as a unit fraction of the whole. <i>For example, partition a shape into 4 parts with equal area, and describe the area of each part as <math>\frac{1}{4}</math> of the area of the shape.</i></p>

## PHYSICAL EDUCATION

**Instructional Supports:**  
Ohio's Learning Standards for Physical Education

Code	Standard
<b>Standard 1</b>	<b>Demonstrates competency in a variety of motor skills and movement patterns.</b>
<b>Benchmark A: Combine locomotor and non-locomotor skills into movement patterns.</b>	
<b>Locomotor and non-locomotor combined skills</b>	
1	Perform a sequence of movements (e.g., dance, gymnastics, jump rope) with a beginning, middle and end.
2	Jump rope demonstrating a variety of footwork skills.
3	Balance on different bases of support and on apparatus demonstrating different levels, shapes and patterns.
4	Perform teacher-selected and developmentally appropriate dance steps and movement patterns.
<b>Benchmark B: Apply the critical elements of fundamental manipulative skills in a variety of physical activities.</b>	
<b>Application of skills</b>	
1	Throw overhand with force using appropriate critical elements.
2	Catch a variety of objects in dynamic conditions using the critical elements.
3	Strike an object with an implement using the critical elements.
4	Kick a ball with the inside of the foot to a target using the critical elements.
5	Dribble and maintain control while moving through space using the critical elements.
6	Send (e.g., pass, roll) an object to a target using critical elements in a stable environment.

**PHYSICAL EDUCATION**

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

**Benchmark A: Demonstrate and apply basic tactics and principles of movement.**

**Strategies and tactics**

- |   |  |
|---|--|
| 1 | Modify movement to meet the demands of a task (e.g., throw with more or less force to reach a target or teammate).     |
| 2 | Explain how the characteristics of an object (e.g., size, material, weight) affect performance of manipulative skills. |
| 3 | Recognize offensive and defensive situations.  |
| 4 | Identify the choices to make (e.g., shoot, pass, dribble) to score a goal or point.                                    |

**Benchmark B: Demonstrate knowledge of critical elements for more complex motor skills.**

**Principles and critical elements**

- |   |  |
|---|--|
| 1 | Describe the critical elements of the manipulative skills (e.g., throw, catch, kick, strike) and activity-specific skills. |
| 2 | Explain how appropriate practice improves performance.   |

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

**Benchmark A: Describes current level of physical activity and identifies additional physical activity opportunities to create calorie balance.**

**Physical activity knowledge**

- |   |   |
|---|---|
| 1 | Identify school, home and community physical activity opportunities to meet physical activity guidelines. |
|---|---|

**Evaluate level of physical activity**

- |   |   |
|---|---|
| 2 | Track physical activity minutes inside and outside of school to determine progress toward daily recommendation. |
|---|---|

**Healthy habits in relation to physical activity**

- |   |  |
|---|--|
| 3 | Identify a variety of nutritious food choices from each food group that will help balance the body with physical activity. |
|---|--|

**PHYSICAL EDUCATION**

**Benchmark B: Understand the principles, components and practices of health-related physical fitness to maintain and improve one’s level of fitness.**

**Health-related fitness knowledge**

1 Identify a variety of nutritious food choices from each food group that will help balance the body with physical activity.

**Cardio**

2 Assess heart rate during physical activity and exercise.

**Muscular strength and endurance**

3 Identify activities to improve muscular strength and endurance in the core area.

**Flexibility**

4 Recognize the importance of warm-up and cool-down activities.

**Planning (FITT and other principles)**

5 Analyze the results of a fitness assessment to determine areas in a healthy fitness zone (HFZ).

6 Identify the frequency and type of exercise in relationship to the FITT principle.

**Standard 4 Exhibits responsible personal and social behavior that respects self and others**

**Benchmark A: Understand the purpose of and apply appropriate rules, procedures and safe practices in physical activity settings.**

**Self-direction**

1 Follow rules, safe practices and engage in class activities.

**Safety**

2 Identify equipment-specific safety rules and follow them.

3 Recognize characteristics of the equipment and environment that affect safe play.

**PHYSICAL EDUCATION**

**Benchmark B: Interact and communicate positively with others.**

**Cooperation**

1	Work cooperatively with a partner in the development of an activity, dance sequence or game.
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**Respect**

2	Cooperate with a partner or small group by taking turns and sharing equipment.
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**Resolving conflict**

3	Demonstrate acceptance of skill and ability of others through verbal and non-verbal behavior.
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4	Demonstrate cooperation with others when resolving conflict.
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**Standard 5 Recognizes the value of physical activity for health, enjoyment, challenge, self-expression and/or social interaction.**

**Benchmark A: Identifies multiple, specific health benefits as a reason to value physical activity.**

**Health reasons to be physically active**

1	Identify two health benefits from different dimensions (e.g., physical, emotional, intellectual) by participation in physical activity.
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**Benchmark B: Expresses multiple, specific reasons (enjoyment, challenge, social) to participate in physical activity.**

**Values physical activity through various means**

1	Identify reasons for enjoying a selected physical activity.
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2	Identify the feelings that come with the challenge of learning a new physical activity.
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3	Recognize that physical activity provides opportunities for social interaction.
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## SCIENCE

**Instructional Supports:**

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

Code	Standard
<b>Earth science</b>	
3.ESS.1	Earth's nonliving resources have specific properties.
3.ESS.2	Earth's resources can be used for energy.
3.ESS.3	Some of Earth's resources are limited.
<b>Physical science</b>	
3.PS.1	All objects and substances in the natural world are composed of matter.
3.PS.2	Matter exists in different states, each of which has different properties.
3.PS.3	Heat, electrical energy, light, sound and magnetic energy are forms of energy.
<b>Life science</b>	
3.LS.1	Offspring resemble their parents and each other.
3.LS.2	Individuals of the same kind of organism differ in their inherited traits. These differences give some individuals an advantage in surviving and/or reproducing.
3.LS.3	Plants and animals have life cycles that are part of their adaptations for survival in their natural environments.

**SOCIAL STUDIES**

**Instructional Supports:**  
[Ohio's Learning Standards for Social Studies](#)  
[Grade 3 Social Studies Model Curriculum](#)

Code	Standard
<b>History Strand</b>	
<b>Historical thinking and skills</b>	
1	Events in local history can be shown on timelines organized by years, decades and centuries.
2	Primary and secondary sources can be used to show change over time.
<b>Heritage</b>	
3	Local communities change overtime
<b>Geography Strand</b>	
<b>Spatial thinking and skills</b>	
4	Physical and political maps have distinctive characteristics and purposes. Places can be located on a map by using the title, key, alphanumeric grid and cardinal directions.
<b>Places and regions</b>	
5	Daily life is influenced by the agriculture, industry and natural resources in different communities.
<b>Human systems</b>	
6	Evidence of positive and negative human modification of the environment can be observed in the local community.
7	Systems of transportation and communication move people, products and ideas from place to place.
8	Communities may include diverse cultural groups.

**SOCIAL STUDIES**

**Government Strand**

**Civic participation and skills**

9	Members of local communities have rights and responsibilities.
10	Individuals make the community a better place by taking action to solve problems in a way that promotes the common good.

**Rules and laws**

11	Laws are rules which apply to all people in a community and describe ways people are expected to behave. Laws promote order and security, provide public services and protect the rights of individuals in the local community.
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**Roles and systems of government**

12	Governments have authority to make and enforce laws.
13	The structure of local governments may differ from one community to another.

**Economics Strand**

**Economic decision making and skills**

14	Line graphs are used to show changes in data over time.
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**Scarcity**

15	Both positive and negative incentives affect individuals' choices and behaviors.
16	Individuals must make decisions because of the scarcity of resources. Making a decision involves a trade-off.

**Production and consumption**

17	A consumer is a person whose wants are satisfied by using goods and services. A producer makes goods and/or provides services.
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**Markets**

18	A market is where buyers and sellers exchange goods and services.
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## SOCIAL STUDIES

### Financial literacy

19	Making decisions involves weighing costs and benefits.
20	A budget is a plan to help people make personal economic decisions for the present and future and to become more financially responsible.

## TECHNOLOGY

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

Code	Standard
<b>Information and Communications Technology</b>	
<b>Topic 1: Identify and use appropriate digital learning tools and resources to accomplish a defined task.</b>	
3-5.ICT.1.a.	With guidance, identify and use digital learning tools or resources to support planning, implementing and reflecting upon a defined task.
3-5.ICT.1.b.	Explain the use of selected digital learning tools and resources to support productivity and learning.
<b>Topic 2: Use digital learning tools and resources to locate, evaluate and use information.</b>	
3-5.ICT.2.a.	Identify questions related to a topic of interest to broaden or narrow the topic as needed.
3-5.ICT.2.b.	Use appropriate search techniques to locate needed information using digital learning tools and resources.
3-5.ICT.2.c.	Use multiple criteria developed with guidance to differentiate between relevant and irrelevant information found with digital learning tools and resources.
3-5.ICT.2.d.	Explain basic ideas of plagiarism and copyright.
3-5.ICT.2.e.	Use digital citation tools to cite sources with appropriate guidance.
<b>Topic 3: Use digital learning tools and resources to construct knowledge.</b>	
3-5.ICT.3.a.	Gather, organize and summarize information from multiple digital learning tools and resources to build knowledge of a topic.
3-5.ICT.3.b.	Interpret images, diagrams, maps, graphs, infographics, videos, animations, interactives, etc., in digital learning tools and resources to clarify and add to knowledge.
3-5.ICT.3.c.	Organize observations and data collected during student explorations to determine if patterns are present.
3-5.ICT.3.d.	Create artifacts using digital learning tools and resources to demonstrate knowledge.

**TECHNOLOGY**

**Topic 4: Use digital learning tools and resources to communicate and disseminate information to multiple audiences.**

3-5.ICT.4.a.	With guidance, discuss and identify communication needs considering goals, audience and content.
3-5.ICT.4.b.	With guidance, select media formats appropriate to content and audience.
3-5.ICT.4.c.	Evaluate the features of digital learning tools and resources based on the characteristics of a specific audience.
3-5.ICT.4.d.	Produce and publish information appropriate for a target audience using digital learning tools and resources.

**Society and Technology**

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

3-5.ST.1.a.	Demonstrate appropriate use of technology and explain the importance of responsible and ethical technology use.
3-5.ST.1.b.	Identify positive and negative impacts one’s use of personal technology and technology systems (e.g., agriculture, transportation, energy generation, water treatment) can have on one’s community.
3-5.ST.1.c.	Describe legal and responsible practices when utilizing technology.

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

3-5.ST.2.a.	Create a plan and select collaboration and/or communication tools to complete a given task.
3-5.ST.2.b.	Exercise digital etiquette when communicating and collaborating.
3-5.ST.2.c.	Identify the positive and negative impact the use of technology can have on relationships, communities and self.

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

3-5.ST.3.a.	Describe the advantages and disadvantages of technology (past, present, future) to understand the relationship between technology, society and the individual.
3-5.ST.3.b.	Demonstrate how technology innovations/inventions can have multiple applications.
3-5.ST.3.c.	Identify and discuss how the use of technology affects self and others in various ways.
3-5.ST.3.d.	Identify the components of one’s digital identity and one’s digital footprint.
3-5.ST.3.e.	Identify and discuss laws and rules that apply to digital content and information.

**TECHNOLOGY**

**Design and Technology**

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

3-5.DT.1.a.	Demonstrate how applying human knowledge using tools and machines extends human capabilities to meet our needs and wants.
3-5.DT.1.b.	Give examples of how requirements for a product can limit the design possibilities for that product.
3-5.DT.1.c.	Describe a process as a series of actions and how it is used to produce a result.
3-5.DT.1.d.	Identify and describe examples of technology products and processes.
3-5.DT.1.e.	Explain how controls use information to cause systems to change, like a home thermostat turning on the heat based on the low temperature of a room.

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

3-5.DT.2.a.	Critique needs and opportunities for designing solutions.
3-5.DT.2.b.	Plan and implement a design process: identify a problem, think about ways to solve the problem, develop possible solutions, test and evaluate solution(s), present a possible solution, and redesign to improve the solution.
3-5.DT.2.c.	Generate, develop and communicate design ideas and decisions using appropriate terms and graphical representations.

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

3-5.DT.3.a.	Design a product with multiple components and describe how the components interact to form a system.
3-5.DT.3.b.	Explore and document connections between technology and other fields of study.
3-5.DT.3.c.	Identify a product and describe how people from different disciplines combined their skills in the design and production of the product.

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

3-5.DT.4.a.	Use criteria developed with guidance to evaluate a new or improved product for its functional, aesthetic and creative elements.
3-5.DT.4.b.	Examine a familiar product or process and suggest improvements to its design.

**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 levels for K-6 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
<b>Interpretive intercultural communication (E.INT-C)</b>			
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.
<b>Interpretive literacy (E.INT-LIT)</b>			
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.
<b>Interpersonal intercultural communication (E.INP-C)</b>			
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.

**WORLD LANGUAGES AND CULTURES**

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.
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.
<b>Interpersonal literacy (E.INP-LIT)</b>			
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.

**WORLD LANGUAGES AND CULTURES**

**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.
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.



**WORLD LANGUAGES AND CULTURES**

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.