

Music



By the end of **4th grade**, students will be able to...

- Sing independently and in a group.
- Play instruments independently and in a group.
- Create and improvise (melodies, ostinato, accompaniments, rhythm patterns).
- Identify music notation, symbols and terminology, and listen to, analyze and describe elements of music within historical periods and cultures.

Characteristics of 4th Graders

Intellectual Development

Fourth graders are somewhat self-conscious and prefer group activities to working alone. They also are beginning to understand abstractions as well as cause-and-effect relationships, but need real experiences in social settings.

Social Characteristics

- Fourth graders have become distinct individuals and want everyone to know it.
- Friends are definitely more important than teachers now.
- Suddenly, school becomes much more real: more memory work and attention to writing, style, and meaning.
- They are more absorbed and competitive, with a strong need to improve upon past accomplishments.
- Since the classroom has become a demanding, competitive place, cheating can begin to be a real problem.
- The division between boys and girls is strong. Girls walk in small packs, and boys reach their warmongering peak.

For more information contact:

Joy Waddell
Assistant Superintendent
Missouri School for the Blind
3815 Magnolia Avenue
St. Louis MO 63110

Phone: 314-776-4320 ext. 1140

Fax: 314-776-1875

Email: joyce.waddell@msb.dese.mo.gov
msb.dese.mo.gov

Missouri School for the Blind

What to expect in 4th Grade

◆ Communication Arts

- **Reading**
- **Writing**
- **Listening and Speaking**
- **Information Literacy**

◆ Mathematics

◆ Science

◆ Social Studies

◆ Visual Arts

◆ Music

◆ Health & Physical Education

Communication Arts

By the end of **4th grade** students will be able to...

Reading

- Apply decoding strategies to “problem-solve” unknown words.
- Read grade-level instructional text with fluency, accuracy and expression, and adjust reading rate to difficulty and type of text.
- Develop vocabulary through text, using root words and affixes, synonyms and antonyms, context clues and glossary and dictionary.
- Apply pre-reading strategies to aid comprehension by accessing prior knowledge, previewing, predicting, and setting a purpose for reading
- Utilize strategies to self-question and correct, infer, visualize, predict and check using cueing systems (meaning, structure, visual/tactual).
- Apply post-reading skills to comprehend text by questioning to clarify, reflecting, analyzing, drawing conclusions, summarizing, and paraphrasing Identify and explain connections between text ideas - information and relationships, various fiction and non-fiction works, text ideas and own experiences, text ideas and the world by demonstrating awareness that literature reflects a cultural and historic timeframe.
- Locate, interpret and apply information in title, table of contents and glossary, and recognize the text features of fiction, poetry and drama in grade-level text.
- Explore examples of sensory details and figurative language within the context of poetry and prose.
- Use details from text to make inferences about setting, character traits, problem and solution and story events; make predictions; draw conclusions; identify cause and effect; compare/ contrast elements; identify author’s purpose.



- Apply information in illustrations (describe), title, chapter headings, and table of contents, glossary, charts, diagrams, graphs, glossary, captions and maps to comprehend text..
- Explain examples of details and figurative language within the context of nonfiction text .
- Using details from text to retell main ideas; organize a sequence; of events; identify cause and effect; draw conclusions; compare and contrast text; make predictions; make inferences; distinguish between fact and opinion; identify and explain author’s purpose; make inferences about problems and solutions.
- Read and follow three- and four-step directions to complete a task.

Writing

- Follow writing process to independently use a simple graphic organizer in prewriting, generate a draft, routinely revise, edit and proofread, independently publish writing.
- Use conventions of capitalization in written text, holidays, names of counties and countries.
- In composing text, use comma in a series, commas between city and state, apostrophe in contractions, apostrophe in singular possessives, with assistance.
- Use parts of speech correctly in written text: verbs that agree with compound subject, connecting words to link ideas.
- Use correct spelling of grade-level words, spelling strategies and patterns, classroom resources and dictionary to verify spelling.
- Use complete declarative, interrogative, imperative and exclamatory sentences; identify and write compound sentences.
- Write narrative text that moves through logical sequence of events including details to develop plot, characters and setting.
- Identify concepts and ideas in written text to complete an organizer.

Communication Arts (cont.)

- Write expository and persuasive paragraphs with main idea or point to prove, three or more supporting details, and a concluding sentence.
- Write informational reports, diary/journal entries, organized friendly letter, thank-you letters and invitations in format appropriate to intended audience/purpose.

Listening and Speaking

- Listen for enjoyment, information, directions, to identify tone, mood and emotion . (Described or demonstrated physically, as appropriate). Demonstrate listening behaviors, i.e. prepare to listen, listen without interruption, maintain eye contact.
- Present ideas in logical sequence, identify and apply appropriate speaking techniques such as volume, control, pace and eye contact..
- Give clear and concise three-four step directions

Information Literacy

- Formulate and research keywords and questions to establish focus and purpose for inquiry.
- Locate and use various resources to find information on keywords and questions.
- Identify relevant information and record main ideas and important details in own words.
- Informally give credit for others' ideas, images and information found in various resources.
- Identify and explain intended messages through oral and visual media.

Mathematics

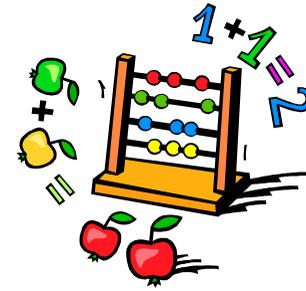
By the end of 4th grade students will be able to...

Number and Operations

- Read, write and compare decimals to hundredths place and whole numbers up to six digits.

- Use models, benchmarks – 0, 1/2 and 1 – and equivalent forms to judge the size of fractions.

- Recognize equivalent representations for same number and generate them by decomposing/composing numbers.



- Classify and describe numbers by their characteristics including odd, even and multiples.

- Represent and recognize multiplication using various models including sets and arrays.

- Apply commutative and identity properties of multiplication to whole numbers

- Represent mental strategy to compute multiplication problem – up to 2digit by 2 digit multiple.

- Demonstrate fluency by basic number relationships – 12 X 12 – of multiplication and division.

- Apply and describe strategy to compute a given: Multiplication problem up to a 2 digit by 2 digits, division problem up to 3 digit by 1 digit.

- Estimate and justify results of multiplication of whole numbers

Algebraic Relationships

- Describe geometric and numeric patterns.

- Analyze patterns using words, tables, graphs.

- Represent mathematical situation as an expression or number sentence.

- Apply commutative property of multiplication of whole numbers.

- Model problem situations using representations such as graphs, tables or number sentences

- Describe mathematical relationships in terms of constant rates of change.

- Evaluate constructive processes or methods for resolving conflicts by using a problem-solving organizer

Tools of Social Science Inquiry

- Identify, select and use visual and auditory aids

- Use and evaluate primary and secondary sources (diaries, letters, people, interviews, journals and photos)

- Identify and use library and media resources- electronic resources, dictionaries, encyclopedias, videos, periodicals, atlases, telephone directories and books

- Identify and create artifacts-building structures and materials, works of art representative of cultures, fossils, pottery, tools, clothing, musical instruments

- Create maps, timelines, diagrams and cartoons to enhance studies in civics, history, economics and geography

Visual Arts

By the end of 4th grade students will be able to...

- Work on projects using different tools and supplies

- Work on projects using knowledge of directional cues and basic art terminology (e.g. vertical, edge, horizontal, parallel, positive-negative)

- Identify and use basic two-dimensional shapes and three-dimensional forms made from these shapes. Understand how these shape our world.

- Create projects using textures.

- Create art project inspired by the natural world.

- Create art project inspired by art/craft from another culture.

Health and PE

By the end of 4th grade students will be able to...

- Demonstrate willingness to positively participate in individual, partner and group movement activities and games.

- Perform correctly locomotor skills using elements of time, space, level, direction, force and exhibit body control while participating in various games and activities.

- Recognize rules and strategies used in simple games and activities.

- Demonstrate acceptable level of fitness as measured through fitness testing and physical activity.

- Participate in physical activity for the purpose of improving skillful performance and physical fitness.

- Participate in a wide variety of activities using various equipment to develop the skill of aiming.

- Recognize sports terms, scoring, rules of play, safety principles and basic strategies for the sports and activities covered.

- Demonstrate ability to perform beginning fundamental skills of team sports.

- Demonstrate ability to perform beginning fundamental skills of individual/dual sports or recreational activities.

- Combine various travel patterns, change speeds and directions with and without use of equipment.

- Identify motor muscles, major bones, and effects of exercise on them.



Social Studies

By the end of 4th grade, students will be able to..

Principles of Constitutional Democracy

- Identify and explain why Missouri has constitution and why state makes and enforces laws.
- Identify rights included in Bill of Rights, including freedoms of religion, speech, press, to assemble peacefully, to petition government and to be treated fairly by government.
- Explain major purpose of Constitution and Bill of Rights.

Missouri, United States and World History

- Identify and describe significance of individuals from Missouri who have made contributions to state and national heritage, including Lewis and Clark, Mary Easton Sibley, John Berry Meacham, George Washington Carver, Laura Ingalls Wilder, Mark Twain, Harry S Truman and Thomas Hart Benton.
- Summarize the events in westward expansion, including people's motivation, their hardships and Missouri as a jumping-off point to the West.
- Explain Missouri's role in the Civil War.
- Describe changes in Missouri since Civil War in education, transportation and communication.
- Describe contributions of Thomas Jefferson: Sequence and describe importance of the Louisiana Purchase, Lewis and Clark Expedition.
- Evaluate impact of westward expansion on Native Americans in Missouri.

Principles and Process of Governance Systems

- Describe how authoritative decisions are made, enforced and interpreted in state government.
- Identify and explain functions of the three branches of state government.

Economic Concepts and Principles

- Compare saving and financial investment.
- Explain supply and demand.
- Interpret past, explain present and predict future consequences of economic decisions.
- Explain how state gets funds needed to provide goods and services, especially by the collection of sales taxes.
- Explain how decisions of households, businesses and governments affect one another.

Elements of Geographical Study and Analysis

- Construct and interpret maps.
- Locate Kansas City, Springfield, St. Louis, Jefferson City, Columbia and St. Joseph.
- Describe human characteristics of a place, (such as population composition, architecture, kinds of economic and recreational activities, transportation and communication networks, etc.).
- Describe how people are affected by, depend on, adapt to and change their environments.
- Describe how changes in communication and transportation technologies affect people's lives.
- Compare regions (e.g., explain how life in a city region is different from life in a rural region or how landscapes in mountainous regions look different from landscapes in plains regions).
- Use geography to interpret the past (e.g., why rivers have played an important role in human transportation) and predict future consequences (e.g., what will likely happen if the population of a city increase considerably).

Relationships of Individual and Groups to Institutions and Traditions

- Analyze how needs are met by groups and organizations including governments, businesses, schools, religious institutions, charitable organizations.

Geometric and Spatial Relationships

- Identify and describe attributes of two– and three-dimensional shapes - prisms, cones, parallelism, perpendicularity.
- Describe results of subdividing, combining and transforming shapes.
- Describe movement using common language and geometric vocabulary – forward, backward, left, right, north, south, east, and west.
- Predict results of sliding/translating/ flipping/ reflecting or turning/rotating around center point of polygon.
- Construct figure with multiple lines of symmetry and identify the lines of symmetry.
- Identify shapes of faces of prism.

Measurement

- Identify and justify unit of linear measure including perimeter and customary metric.
- Identify equivalent linear measures within system of measurement.
- Tell time to nearest minute.
- Determine change from \$10; add and subtract money values to \$10.
- Select and use benchmarks to estimate measurements – linear, capacity, weight.
- Select and use benchmarks to estimate measurements of zero-, 45-, 90- degree angles.
- Determine the area of polygon on rectangular grid.

Data and Probability

- Collect data using observations, surveys and experiments.
- Create tables or graphs to represent categorical or numerical data including line plots.

- Describe important features of data set.
- Given a data set, propose and justify conclusions based on data.

Science

By the end of 4th grade, students will be able to...

Matter and Energy

- Describe and compare masses of objects to nearest gram using balances.
- Describe and compare volumes of objects using graduated cylinder.
- Recognize no two objects can occupy same space at same time - e.g., water level rises when an object or substance is placed in a quantity of water.
- Classify types of materials (e.g., water, salt, sugar, iron filings, salt water) into substances (materials that have specific physical properties) or mixtures of substances by using their characteristic properties.
- Identify water as solvent that dissolves materials.
- Observe and describe how mixtures are made by combining solids or liquids or combination of these.
- Distinguish between components in a mixture (e.g., trail mix, conglomerate rock, salad).
- Describe ways to separate components of mixture by their properties (i.e., sorting, filtration, magnets, screening).
- Recognize that total mass of a material remains constant whether it is together, in parts or in a different state.
- Construct and diagram complete electric circuit by using source (e.g., battery), means of transfer (e.g., wires), and receiver (e.g., resistance bulbs, motors, fans).
- Observe and describe evidence of energy transfer in a closed series circuit (e.g., lit bulb, moving motor, fan).

Science (cont.)

- Classify materials as conductors or insulators of electricity when placed within circuit (e.g., wood, pencil lead, plastic, glass, aluminum foil, lemon juice, air, water).



- Identify evidence of energy transformations - temperature change, light, sound, motion and magnetic effects - that occur in electrical circuits.

Principles and Properties of Force and Motion

- Classify different types of motion (straight line, curved, back and forth).
- Describe object's motion in terms of time and distance.
- Identify forces acting on motion of objects traveling in straight line.
- Recognize friction as force that slows down/stops moving object that is touching another object or surface.
- Compare forces (measured by a spring scale in Newton's) required to overcome friction when an object moves over different surfaces (i.e., rough/smooth).
- Determine the gravitational pull of the Earth on an object (weight) using a spring scale.
- Recognize that balanced forces do not affect an object's motion.
- Describe how unbalanced forces acting on an object change its speed (faster/slower), direction of motion, or both.
- Explain how increasing/decreasing amount of force on an object affects the motion of that object.
- Explain how mass of object (e.g., car, marble, rock, boulder) affects force required to move it.

- Predict how change in speed of object (i.e., faster/slower/remains the same) is affected by amount of force applied to object and its mass.
- Predict effects of electrostatic force (static electricity) on motion of objects (attract/repel).

Changes in Ecosystems and Interactions of Organisms with their Environments

- Identify ways specific organism may interact with other organisms or with environment (e.g., pollination, shelter, seed dispersal, camouflage, migration, hibernation, defensive mechanism).
- Recognize how different environments support the life of different types of plants and animals.
- Identify examples in Missouri where human activity has had beneficial or harmful effect on other organisms.
- Classify populations of organisms as producers, consumers, or decomposers by the role they serve in the ecosystem.
- Differentiate between the three types of consumers (herbivore, carnivore, omnivore).
- Categorize organisms as predator or prey in given ecosystem.
- Compare/contrast common Missouri fossils (i.e. trilobites, ferns, crinoids, gastropods, bivalves, fish, mastodons) to organisms present today.
- Identify specialized structures and describe how they help plants survive (e.g., root, cactus needles, thorns, winged seed, waxy leaves).
- Identify specialized structures and senses, describe how they help animals survive (e.g., antennae, body covering, teeth, beaks, whiskers, appendages).
- Recognize internal cues (e.g., hunger) and external cues (e.g., changes in the environment) that cause organisms to behave in certain ways (e.g., hunting, migration, hibernation).
- Predict which plant or animal will be able to survive in a specific environment based on its special structures or behaviors.

Processes and Interactions of Earth's Systems - Geosphere, Atmosphere, Hydrosphere

- Identify and describe components of soil (e.g., plant roots and debris, bacteria, fungi, worms, types of rock) and properties (e.g., odor, color, resistance to erosion, texture, fertility, relative grain size, absorption rate).
- Compare physical properties (i.e., size, shape, color, texture, layering, presence of fossils) of rocks (mixtures of different Earth materials).
- Observe/describe breakdown of plant/animal material into soil through decomposition processes (i.e., decay, rotting, composting, digestion).
- Identify major landforms on Earth (i.e., mountains, plains, oceans, river valleys, coastlines, canyons).
- Describe how weathering agents (e.g., water, chemicals, temperature, wind, plants) cause surface changes that create and/or change Earth's surface materials and/or landforms.
- Describe how erosional processes (gravity, waves, wind, rivers, glaciers) cause surface changes that create and/or change Earth's surface materials and/or landforms.
- Identify how humans affect erosion and deposition of Earth's materials (e.g., clearing of land, planting vegetation, paving land, construction of buildings).
- Propose ways to solve simple environmental problems that result from human activity - recycling, composting, ways to decrease soil erosion.

Scientific Inquiry

- Formulate testable questions and explanations (hypotheses).
- Recognize characteristics of fair and unbiased test and conduct fair test to answer question.
- Make qualitative observations using five senses.
- Make observations using tools and equipment (i.e. hand lenses, magnets, thermometers, metric rulers, balances, graduated cylinders, spring scales).

- Measure length to nearest centimeter, mass in grams, temperature in degrees Celsius, volume to nearest milliliter, weight to nearest Newton.
- Compare amounts/measurements.
- Judge if measurements and computation of quantities are reasonable.
- Use quantitative and qualitative data to support reasonable explanations.
- Use data to support observed patterns and relationships and to make predictions to be tested.
- Evaluate reasonableness of an explanation.
- Analyze if evidence supports proposed explanations.
- Communicate procedures and results of investigations and explanations through oral presentations, drawings and maps, data tables, graphs (bar, single line, pictograph), writings.

Impact of Science, Technology and Human Activity

- Design and construct electrical device using materials and/or existing objects.
- Describe how new technologies have helped scientists make better observations and measurements for investigations (e.g., telescopes, magnifiers, balances, microscopes, computers, stethoscopes, thermometers).
- Identify how effects of inventions or technological advances (e.g., different types of light bulbs, semiconductors/integrated circuits and electronics, satellite imagery, robotics, communication, transportation, generation of energy, renewable materials) may be helpful, harmful, or both.
- Research biographical information about various scientists and inventors from different gender and ethnic backgrounds, and describe how their work contributed to science and technology.
- Identify a question that was asked, or could be asked, or a problem that needed to be solved when given a brief scenario (fiction or nonfiction of people working alone or in groups solving everyday problems or learning through discovery).
- Work with group to solve a problem, giving due credit to contributions of each group member.