Art

- Work on projects using different tools and supplies. Work on projects using knowledge of directional cues and basic art terminology. 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.

Music

- Sing and 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.

Health and PE

- Learn principles of exercise play vital role in establishing personal fitness goals.
- Develop skill through well-guided, informative practice.
- Learn games present opportunity to participate in enjoyable activities while developing physical skills as well as social skills.
- Learn sports and lifetime activities involves cognitively understanding the history, rules, strategies, safety principles and skill development in modified versions of team sports.
- Skill development and practice essential to enjoyment and participation in physical activities.

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Missouri School for the Blind

What to expect in 6th Grade

- **Communication Arts**
  - ***Reading***
  - ***Writing***
  - ***Listening and Speaking***
  - ***Information Literacy***
- **Mathematics**
- **Science**
- **Social Studies**
- **Art**
- **Music**
- **Health & Physical Education**

Communication Arts

By the end of 6th grade students will be able to...

Reading

- Use the appropriate media: regular print, large print or Braille to access print media.
- Apply decoding strategies to problem-solve unknown words when reading.
- Read grade-level instruction text with fluency and expression, adjusting reading rate to difficulty and type of text.
- Develop vocabulary through text, using roots and affixes, context clues, glossary, dictionary and thesaurus.
- Apply pre-reading strategies to aid comprehension, access prior knowledge, preview, predict, set a purpose and rate for reading.
- Orchestrate strategies to self-question and correct, infer, visualize, predict and check using cueing systems: meaning, structure, visual/tactual.
- Apply post-reading skills to comprehend and interpret text: question to clarify, reflect, analyze, draw conclusions, summarize, and paraphrase.
- Compare, contrast and analyze connections between information and relationships in various fiction and non-fiction works, text ideas and own experiences; text ideas and the world by identifying how literature reflects a culture and historic time frame.
- 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.
- Identify and explain figurative language in poetry and prose (emphasize onomatopoeia and alliteration).
- Use details from text to analyze the influence of setting on characters, plot and resolution (conflict and climax), explain cause and effect, identify point of view and mood, and identify the problem-solving processes of characters and the effectiveness of solutions.
- Analyze text features in newspapers and magazines to clarify meaning.
- Identify and explain figurative language in nonfiction text (emphasize onomatopoeia and alliteration).
- Use details from text(s) to paraphrase author's ideas, make predictions, make inferences, evaluate accuracy of information, identify and interpret author's purpose, slant and bias, respond to at least two sources.

- Read and follow multiple step directions to complete complex task.

Writing

- Follow writing process to choose and use an appropriate graphic organizer, apply writing process to write effectively in various forms and types of writing.
- Use conventions of capitalization in written text: proper nouns (team names, companies, schools and institutions), proper adjectives, first word of direct quotations).
- Compose text using apostrophe in irregular and plural possessives, quotation marks in dialogue, with assistance.
- Use parts of speech correctly in written text, prepositional phrases, appositives.
- Write, using correct spelling of grade-level frequently-used words, classroom resources and dictionary to verify correct spelling.
- In composing text, use variety of sentence structures, precise and vivid language.
- Write a personal narrative that chronicles a sequence of three or more events, includes sensory detail and dialogue.
- Use note-taking system to organize information from oral presentations and written text.
- Write expository paragraphs and multi-paragraph essays; (including cause/effect) with strong controlling idea, supporting and concluding sentences, appropriate logical sequence, relevant details, facts and/or examples from one or more source.

Communication Arts (cont.)

- Write summary of text from magazines, newspapers and/or informational articles.
- Summarize information and constructing workplace communication, such as memo or set of simple instructions, appropriate to topic and specific audience.

Listening and Speaking

- Listen for enjoyment, information, directions, to identify and evaluate tone, mood and emotion of verbal and nonverbal communication (described or demonstrated physically, as appropriate).
- Use active-listening behaviors (i.e. ask questions and use body language and facial expressions to indicate agreement, disagreement or confusion).
- In discussions and presentations speak clearly and stay on topic, use appropriate volume, tone of voice, rate of speech, fluency/inflections and eye contact.
- Give clear and concise multi-step directions to complete complex task.

Information Literacy

- Develop questions and statements of purpose to guide research.
- Locate and use multiple resources to acquire information, answer questions, support purpose.
- Record relevant information using a variety of note-taking and organizational formats.
- Define “plagiarism” and document research sources.
- Identify and explain viewpoints conveyed in various media (e.g., videos, pictures, websites, artwork, plays and/or news programs).

Mathematics

By the end of 6th grade students will be able to...

- Compare/order integers, positive rationals, percents, and find approximate location on number line.

Number and Operations

- Recognize and generate equivalent forms of fractions, decimals and percents.
- Recognize equivalent representations for the same number and generate them by decomposing and composing numbers, including expanded notation.
- Use number factors and multiples to describe relationships between/among numbers including whole number common factors and multiples.
- Describe effects of addition and subtraction on fractions and decimals.
- Add and subtract positive rational numbers.
- Estimate and justify results of addition and subtraction of positive rational numbers.
- Solve problems using equivalent ratios.

Algebraic Relationships

- Represent and describe patterns with tables, graphs, pictures, symbolic rules or words.
- Compare various forms of representations to identify pattern.
- Identify functions as linear/nonlinear from table or graph.
- Use variables to represent unknown quantities in expressions.
- Recognize equivalent forms for simple algebraic expressions – associative and distributive properties.
- Model and solve problems using multiple representations such as graphs, tables, expressions and equations.
- Compare situations with constant/varying rates of change.

- Examine and compare the Mayan, Aztec and Incan cultures.
- Investigate African Empires, including agriculture, arts, gold production and the trans-Saharan caravan trade and spread of Islam into Africa.

Governance Systems

- Define limited and unlimited governments (i.e. democratic and authoritarian governments) and how people’s lives vary under these systems.

Economic Concepts and Principles

- Apply economic concepts of scarcity, supply and demand, specialization of regions, nations and individuals (trade), trade-off (opportunity cost), income, wealth and sources of wealth.
- Interpret past, explain present and predict future consequences of economic decisions.
- Identify consequences of personal and public economic decisions.

Geographical Study and Analysis

- Use geographic research sources to acquire and process information to answer, solve problems, and construct maps.
- Locate major cities and nations of the world in historical context; locate continents, oceans and major topographic features as civilizations spread; locate and describe geographic places using absolute and relative locations.
- Describe physical characteristics; describe human characteristics, such as people’s education, language, diversity, economies, religions, settlement patterns, ethnic background and political system.
- Describe major patterns of population distribution, demographics and migrations in the world and the impact of these patterns on cultures and community life.
- Identify world-wide patterns of resource distribution. Identify how technology and culture have influence resources use.

- Identify and explain environment consequences of how people use resources.
- Identify and explain the effects of natural forces upon human activities.
- Describe trade patterns, explaining how supply and demand influence movement of goods and services, human, natural and capital resources.
- Compare regions and predict how human life in one region in the world would differ from that in another.
- Use geography to interpret the past, explain the present and plan for the future.

Relationships of Individual and Groups to Institutions and Traditions

- Evaluate how individuals’ needs are met by families, friends, groups and organizations in other cultures.
- Describe how cultural traditions, human actions and institutions affect people’s behavior.
- Identify how personal and group experiences influence people’s perceptions and judgments of events; describe how ideas, concepts and traditions have changed over time.

Tools of Social Science Inquiry

- Select, investigate and present topic using primary and secondary resources.
- Use maps, graphs, statistical data, timelines, charts and diagrams to interpret, draw conclusions and make predictions. Create maps, graphs, timelines and diagrams to communicate information.
- Use technological tools for research and presentation.
- Distinguish between fact and opinion and recognize bias and points of view.
- Identify, research and defend a point of view/position.

Science (cont.)

- Recognize different kinds of questions suggest different kinds of scientific investigations.
- Make qualitative observations using the five senses.
- Determine appropriate tools and techniques to collect data.
- Use variety of tools and equipment to gather data.
- Measure length to nearest millimeter, mass to nearest gram, volume to nearest milliliter, temperature to nearest degree Celsius, force (weight) to nearest Newton, time to nearest second.
- Compare amounts/measurements.
- Judge whether measurements and computation of quantities are reasonable.
- Use quantitative and qualitative data as support for reasonable explanations (conclusions).
- Use data as support for observed patterns and relationships, and to make predictions to be tested.
- Recognize the possible effects of errors in observations, measurements, and calculations on the formulation of explanations (conclusions).
- Evaluate the reasonableness of an explanation.
- Analyze whether evidence (data) and scientific principles support proposed explanations (hypotheses, laws, theories).
- Communicate procedures and results of investigations and explanations through oral presentations, drawings and maps, data tables, graphs and writings.

Impact of Science, Technology and Human Activity

- Explain how technological improvements, such as those developed for use in space exploration, the military, or medicine, have led to the invention of new products that may improve lives here on Earth.
- Identify link between technological developments and the scientific discoveries made possible through their development.
- Describe how technological solutions to problems (can have both benefits and drawbacks.
- Describe how scientists and inventors representing different cultures, races, and gender have contributed to science, technology and human activity.
- Recognize difficulty science innovators experience as they attempt to break through accepted ideas to reach conclusions that may lead to changes and serve to advance scientific understanding.
- Recognize explanations change due to new evidence.
- Describe ways in which science and society influence one another.
- Identify and evaluate the physical, social, economic, and/or environmental problems that may be overcome using science and technology.

Social Studies

By the end of 6th grade students will be able to…

Constitutional Democracy

- Identify responsibilities governments and citizens need to accept to become effective in a constitutional democracy.
- Define limited government, rule of law, majority rule, minority rights.

World History

- Examine river civilizations including Ancient Egypt in North Africa (pyramids and mathematics), India (religions and culture), Mesopotamia (beginnings of civilization, China (technological advances).
- Distinguish between Greek civilization and Roman Empire re: origins of democracy, rules of law, governmental structures.
- Investigate Europe in the Middle Ages, including rise of kingdoms, feudalism and the Crusades.
- Investigate Feudal Japan, including rise of war lords and art.

Geometric and Spatial Relationships

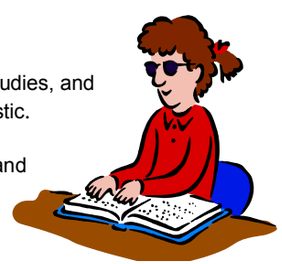
- Identify properties of one-, two-dimensional and three-dimensional shapes using appropriate geometric vocabulary.
- Describe relationships between corresponding angles and length of corresponding sides of similar triangles; whole number scale factors.
- Use coordinates geometry to construct geometric shapes.
- Describe transformation from a given pre-image to its image using the terms; reflection/flips, rotation/turns and translation/slide.
- Use spatial visualization to identify isometric representations of mat plans.
- Draw or use visual or tactile models to represent and solve problems.

Measurement

- Identify and justify an angle as acute, obtuse, straight or right.
- Solve problems involving elapsed time - hours and minutes.
- Estimate measurement using either standard or non-standard units of measurement.
- Select and use benchmarks to estimate measurements of 0-, 45-, 90-, 180-, 360- degree angles.
- Describe how to solve problems involving the area or perimeter of polygons.
- Convert from one unit to another within a system of measurement – mass and weight.

Data and Probability

- Formulate questions, design studies, and collect data about a characteristic.
- Interpret circle graphs, create and interpret stem and leaf plots.



- Find the range and measures of center, including median, mode and mean.
- Compare different representations of same data and evaluate how well each shows important aspects of that data.
- Use observations about differences between two samples to conjecture about populations.
- Use a model, such as a diagram, list, sample space or area model, to illustrate possible outcomes of an event.

Science

By the end of 6th grade students will be able to...

Matter and Energy

- Matter is anything that has mass and volume.
- Describe and compare volumes of objects or substances directly, using graduated cylinder, and/or indirectly, using displacement methods.
- Describe and compare masses of objects to nearest gram using balance.
- Classify types of matter into pure substances or mixtures, using their specific physical properties.
- Describe properties of each component in mixture/solution and their distinguishing properties.
- Describe appropriate ways to separate components of different types of mixtures.
- Predict how various solids behave when mixed with water.
- Recognize evidence that supports theory that matter is comprised of small particles in constant, random motion.

Science (cont.)

- Describe relationship between change in volume of water and change in temperature as it relates to properties of water (i.e., water expands/becomes less dense when frozen).
- Recognize and classify changes in matter as chemical and/or physical.
- Identify chemical changes in common objects as a result of interactions with sources of energy or other matter that form new substances with different characteristic properties.
- Identify physical changes in common objects (i.e. rocks, minerals, wood, water, steel wool, plants) and describe the processes which caused the change (e.g., weathering, erosion, cutting, dissolving).
- Demonstrate and provide evidence that mass is conserved during a physical change.
- Identify sources of visible light (i.e. the Sun and other stars, flint, bulb, flames, lightning).
- Describe evidence that visible light travels in a straight line, using the appropriate tools.
- Compare the reflection of visible light by various surfaces (i.e., mirror, smooth and rough surfaces, shiny and dull surfaces, moon).
- Compare the refraction of visible light passing through different transparent and translucent materials (i.e. prisms, water, lens).
- Predict how different surfaces (transparent, translucent, opaque) and lenses (convex, concave) affect the behavior of visible light rays and the resulting image of an object.
- Identify receivers of visible light energy (i.e. eye, photocell).
- Recognize that an object is “seen” only when the object emits or reflects light to the eye.
- Recognize differences in wavelength and energy levels within range of visible light that can be seen by the human eye are perceived as differences in color.
- Describe how sound energy is transferred by wave-like disturbances that spread away from source through a medium.
- Predict how properties of medium (air, water, rock) affect speed of different types of mechanical waves (earthquake, sound).
- Recognize energy from sun is transferred to Earth in range of wavelengths and energy levels, including visible light, infrared radiation and ultraviolet radiation.
- Recognize sun is source of almost all energy used to produce food for living organisms.

Characteristics and Interactions of Living Organisms

- Describe common life processes necessary to survival of organisms.
- Recognize all organisms are composed of cells which carry on all life processes.
- Recognize most organisms on Earth are unicellular and others, including humans, are multicellular.
- Identify examples of unicellular and multicellular organisms.
- Compare and contract cell membrane, nucleus, cell wall, chloroplast and cytoplasm.
- Recognize chloroplast as cell structure where food is produced in plants and some unicellular organisms.
- Recognize plants use energy from sun to produce food and oxygen through photosynthesis.

Changes in Ecosystems and Interactions of Organisms with Their Environments

- Identify biotic and abiotic factors that comprise ecosystem.
- Identify populations that compete for resources.
- Recognize factors affecting the number and types of organisms an ecosystem can support (e.g., food availability, abiotic factors, temperature and temperature range, soil composition, disease, competitions from other organisms, predation).
- Predict possible effects of changes in number and types of organisms in an ecosystem on populations of other organisms in that ecosystem.
- Describe beneficial and harmful activities of organisms, including humans (deforestation, overpopulation, pollution, global warming, recycling, reintroduction of species, depletion of resources), and explain how they affect organisms.
- Predict the impact (beneficial or harmful) of a natural environmental change (i.e. forest fire, flood) on the organisms in an ecosystem.
- Describe possible solutions to potentially harmful environmental changes within an ecosystem.
- Diagram and describe transfer of energy in aquatic food web and land food web re: producers, consumers, decomposers, scavengers and predator/prey relationships.
- Classify populations of unicellular and multicellular organisms as producers, consumers or decomposers by role they serve in the ecosystem.
- Identify fossils as evidence some organisms now extinct are similar to/different from organisms living today.
- Relate examples of adaptations within species to ability to survive in specific environment (hollow bones/flight, hollow hair/insulation, dense root structure/ compact soil, fins/movement in water).
- Predict how certain adaptations (behavior, body structure, or coloration) may offer survival advantage to an organism.

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

- Describe components of soil and other factors that influence soil texture, fertility and resistance to erosion (i.e. plant roots and debris, bacteria, fungi, worms, rodents).
- Recognize properties of water that make it essential component of Earth system.
- Make inferences about formation of sedimentary rocks from their physical properties; explain how formation of sedimentary rocks depends on weathering and erosion.
- Describe how weathering agents and erosional processes slowly cause surface changes that create and/or change landforms.
- Describe how Earth’s surface and surface materials can change abruptly through activity of floods, rock/mudslides or volcanoes.
- Identify events (earthquakes, volcanic eruptions) and landforms created by them on the Earth’s surface that occur at different plate boundaries.
- Explain types of fossils and processes by which they are formed (i.e., replacement, mold and cast, preservation, trace).
- Use fossil evidence to make inferences about changes on Earth and in its environment (i.e., superposition of rock layers, similarities between fossils in different geographical locations, fossils of seashells indicate the area was once underwater).
- Relate the comparative amounts of fresh water and salt water on the Earth to the availability of water as a resource for living organisms and human activity.
- Describe the affect of human activities (i.e. landfills, use of fertilizers and herbicides, farming, septic systems) on the quality of water.
- Analyze how humans affect erosion and deposition of soil and rock materials (e.g., clearing of land, planting vegetation, paving land, construction of new buildings, building or removal of dams).

Scientific Inquiry

- Formulate testable questions and hypotheses.
- Recognize importance of independent variable, dependent variables, control of constants and multiple trials.
- Design and conduct a valid experiment.
- Evaluate design of an experiment and suggest reasonable improvements or extensions.