

Welcome to First Grade

Curriculum performance standards were developed for each grade level that will lead students to specific fourth grade academic goals. In first grade, students will learn a variety of strategies and word recognition skills, including rereading, finding on text clues, applying their knowledge of letter-sound relationships, and analyzing word structure.

Students will create or produce writing to communicate with different audiences for a variety of purposes and write non-fiction and technical pieces (summaries, messages, informational essays, basic directions, instructions, simple reports) that convey essential details and facts and provide accurate representations of events and sequences. They will develop their vocabulary of words, phrases, and idioms as a means of improving communication.

Students will learn about geography through the study of the relationships among people, places and environments. Students gain geographical perspective on the world by studying the earth and the interactions of people with places where they live, work and play.

Students will learn about the history of Wisconsin, the United States and the world, examining change and continuity over time in order to develop historical perspective, explain historical relationships and analyze issues that affect the present and the future.

They will also learn about political science and acquire the knowledge of political systems necessary for developing individual civic responsibility by studying the history and contemporary uses of power, authority and governance. Knowledge about the structures of power, authority and governance and their evolving functions in contemporary society is essential if young citizens are to develop civic responsibility. They will study the economy and production, distribution, exchange and consumption so that they can make informed economic decisions.

Students will learn about the behavioral sciences by exploring concepts from the discipline of sociology, the study of the interactions among individuals, groups and institutions; the discipline of psychology, the study of factors that influence individual identity and learning; and the discipline of anthropology, the study of cultures in various times and settings. Learning about the behavioral sciences helps students to understand people in various times and places.

Science is a system and should be seen as a single discipline rather than a set of separate disciplines. Students will understand science better when they connect and integrate these unifying themes into what they know about themselves and the world around them. Students will understand that science is ongoing and inventive, and that scientific understandings have changed over time as new evidence is found.

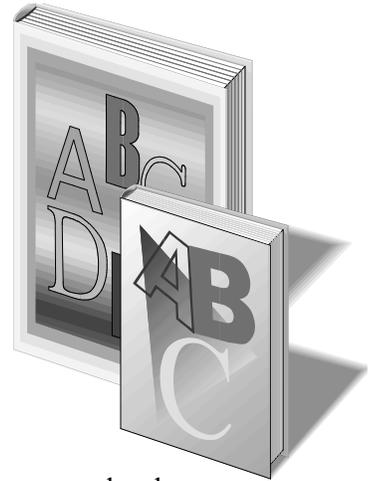
Students will draw on a broad body of mathematical knowledge and apply a variety of mathematical skills and strategies, including reasoning, oral and written communication and the use of appropriate technology, when solving mathematical, real-world and non-routine problems. Number sense is a matter of necessity, not only in one's occupation but also in the conduct of daily life, such as shopping, cooking, planning a budget or analyzing information reported in the media. Students will be able to use geometric concepts, relationships and procedures to interpret, represent and solve problems. Through algebra and the use of variables and functions, mathematical models can be built which are essential to personal, scientific, economic, social, medical, artistic and civic fields of inquiry.

Language Arts

Reading and Literature

Students will

- Reread to clarify/verify the meaning of the story, read an unknown word, make connections, increase fluency.
- Use context clues to read an unknown word.
- Use letter/sound relationship to read words.
- Use grade appropriate sight vocabulary when reading.
- Use some phonograms to read words.
- Use long and short vowels.
- Use endings to read/understand words.
- Recognize and read simple contractions.
- Infer the meaning of unfamiliar words in the context of a passage by examining known words, phrases and structures.
- Choose a word that makes sense in the context of a sentence or story.
- Demonstrate phonemic awareness by using letter/sound relationships as aids to pronouncing and understanding unfamiliar words and text.
- Identify consonant sounds in all positions.
- Identify multiple sounds for consonants.
- Understand and use the digraph th, ch, sh, wh and ck.
- Know the short and long vowel sounds.
- Know grade appropriate vowel pairs.
- Read grade appropriate phonograms.
- Clap syllables.
- Match grade appropriate consonant blends with their sounds.
- Identify rhyming words by sound and like spelling patterns.
- Hear all sounds in sequential order in a grade appropriate word.
- Comprehend reading by using strategies such as activating prior knowledge, establishing purpose, self-correcting and self-monitoring, re-reading, making predictions, finding context clues, developing visual images, applying knowledge of text structures, and adjusting reading rate according to purpose and difficulty.
- Use picture context to make predictions.
- Make predictions while reading.
- Use prior knowledge to make connections to the text.
- Self-correct and self-monitor while reading.
- Re-read to clarify.
- Read aloud with age-appropriate fluency, accuracy, and expression.
- Discern how written texts and accompanying illustrations connect to convey meaning.
- Use picture clues to determine the meaning of an unknown word.
- Recognize that pictures enhance the written text.
- Identify and use organizational features of texts, such as headings, paragraphs, and format, to improve understanding.
- Locate a given page.
- Identify author and illustrator.
- Identify a purpose for reading, such as gaining information, learning about a viewpoint, and appreciating literature.
- Read, interpret, and critically analyze literature.
- Recognize and recall elements and details of story structure, such as sequence of events, character, plot, and setting, in order to reflect on meaning.
- Re-tell stories in the correct sequence.
- Identify story elements – character, setting, problem and solution.
- Draw upon a reservoir of reading materials, including fairy tales, fables, and narratives from the United States and cultures world-wide, to understand plots, make predictions and relate reading to prior knowledge and experience.
- Draw upon a reservoir of reading materials to make predictions and relate reading to prior knowledge and experience at an age-appropriate level.



- Summarize ideas drawn from stories, identifying cause-and-effect relationships, interpreting events and ideas, and connecting different works to each other and to real-life experiences.
- Relate different works to each other and to real-life experiences.
- Summarize events in simple stories.
- Extend the literal meaning of a text by making inferences, and evaluate the significance and validity of texts in light of prior knowledge and experience.
- Use background knowledge and personal experience to help understand the reality of a text.
- Read and discuss literary and nonliterary texts in order to understand human experience.
- Demonstrate the ability to integrate general knowledge about the world and familiarity with literary and nonliterary texts when reflecting upon life's experiences.
- Identify and summarize main ideas and key points from literature, informational texts, and other print and non-print sources.
- Identify key points from literature and non-print sources.
- Distinguish fiction from non-fiction, realistic fiction from fantasy, biography from autobiography, and poetry from prose.
- Select a variety of materials to read for discovery, appreciation, and enjoyment, summarize the readings, and connect them to prior knowledge and experience.
- Read to acquire information.
- Summarize key details of informational texts, connecting new information to prior knowledge.
- Re-tell key details of informational texts, connecting new information to prior knowledge.
- Identify a topic of interest then seek information by investigating available text resources.
- Identify a topic of interest and make a book selection.

Writing

Students will:

- Write simple messages using three complete sentences.
- Write three complete sentences in response to teacher selected topics and stay on the topic.
- Write a three sentence nonfiction piece using correct sequence.
- Write and follow one direction.
- Write expressive pieces in response to reading, viewing, and life experiences (narratives, reflections, and letters) employing descriptive detail and a personal voice.
- Write personal stories in their journals.
- Write letters, cards, notes, captions, labels, invitations, etc.
- Write creative pieces (poetry, fiction, and plays employing basic aesthetic principles appropriate to each genre.
- Write and illustrate rhymes.
- Write three-sentence fictional stories.
- Write in a variety of situations (timed and untimed, at school and at home) and adapt strategies, such as revision and the use of reference materials, to the situation.
- Write constructed response type answers for questions in all subjects.
- Write for ten minutes.
- Write untimed piece on self-selected topic.
- Write in a variety of settings.
- Write revisions with teacher's guidance.
- Write using picture dictionaries or other reference materials provided by the teacher.
- Use a variety of writing technologies, including pen and paper as well as computers.
- Write for a variety of readers, including peers, teachers, and other adults, adapting content, style and structure to audience and situation.
- Plan, revise, edit, and publish clear and effective writing.
- Produce multiple drafts, including finished pieces, that demonstrate the capacity to generate, focus, and organize ideas and to revise the language, organization, and content of successive drafts in order to fulfill a specific purpose for communicating with a specific audience.
- Generate ideas through brainstorming and story mapping.
- Use first, next and last when writing stories.

- Produce first draft and an edited final copy.
- Participate in group writing.
- Explain the extent and reasons for revision in conference with a teacher.
- Understand that writings can be improved through changes.
- Use teacher suggestions to improve writing.
- Given a writing assignment to be completed in a limited amount of time, produce a well-developed, well organized, and effective response in correct English and an appropriate voice.
- Complete written assignments in a limited amount of time which stays focused on the topic or main idea.
- Understand the function of various forms, structures, and punctuation marks of standard American English and use them appropriately in communications.
- Understand and use parts of speech effectively, including nouns, pronouns, and adjectives.
- Write stories using nouns and adjectives.
- Begin to understand how adjectives describe nouns.
- Use adverbials effectively, including words and phrases.
- Write stories using nouns and verbs to make complete sentences.
- Understand that verbs can describe action.
- Understand present, past and future tense.
- Recognize contractions.
- Employ principles of agreement related to number, gender, and case.
- Use pronouns such as he for males and she for females.
- Use regular singular and plural nouns correctly.
- Capitalize proper nouns, titles, and initial words of sentences.
- Use capital letters at the beginning of names and at the beginning of sentences.
- Use punctuation marks and conjunctions, as appropriate, to separate sentences and connect independent clauses.
- Use punctuation marks to separate sentences.
- Use commas correctly to punctuate appositives and lists.
- Use commas to punctuate lists.
- Spell grade level high frequency words correctly.
- Use word walls as a reference when spelling words.
- Spell phonetically regular grade level words correctly.
- Use word order and punctuation marks to distinguish statements, questions, exclamations and commands.
- Use periods on telling sentences (statements).
- Use question marks on asking sentences (questions).
- Use exclamation marks to show excitement.

Oral Language

- Orally communicate information, opinions, and ideas effectively to different audiences for a variety of purposes.
- Identify and discuss criteria for effective oral presentations including such factors as eye contact, projection, tone, volume, rate, and articulation.
- Share personal experiences and stories using correct volume, articulation and rate.
- Have eye contact with the audience.
- Read aloud effectively from previously-read material.
- Model appropriate expression when reading aloud from previously read materials.
- Speaking from notes or a brief outline, communicate precise information and accurate instructions in clearly organized and sequenced detail.
- Stay on topic when presenting a thought.
- Present autobiographical or fictional stories that recount events effectively to large and small audiences.
- Participate in group readings, such as choral, echo, and shadow reading.
- Perform dramatic readings and presentations.
- Role play fairy tales or personal experiences.
- Distinguish between fact and opinion and provide evidence to support opinions.
- Identify a statement as a fact or an opinion.
- Listen to and comprehend oral communications.
- Follow basic directions.

- Listen to and perform three-step oral directions.
- Identify and summarize key points of a story or discussion.
- Listen to and identify the key points of a story or discussion.
- Retell stories and reports of events in proper sequence.
- Follow sequence in plot and character development, predict outcomes, and draw conclusions.
- Predict outcomes, determine sequence and discuss characters' feelings.
- Recall the content of stories after hearing them, relate the content to prior knowledge, and answer various types of factual and interpretive questions about the stories.
- Listen to a story, relate story ideas to prior knowledge and answer questions appropriately.
- Distinguish fact from fantasy and fact from opinion.
- Determine if a selection is realistic or fantasy.
- Understand increasingly complex sentence structures.
- Understand a variety of word structures and forms, such as affixes, roots, homonyms, antonyms, synonyms, and word analogies.
- Understand antonyms and synonyms, simple homonyms, and the suffixes: -s, -ed, -ing.
- Participate effectively in discussion
- Volunteer relevant information, ask relevant questions, and answer questions directly.
- Use appropriate eye contact and other nonverbal cues.
- Use appropriate strategies to keep a discussion going.
- Take their turn during discussions.
- Raise their hand to participate in discussions.
- Reflect on the ideas and opinions of others and respond thoughtfully.
- Respond courteously and thoughtfully to the statements of peers.
- Ask for clarification and explanation of unfamiliar words and ideas.
- Summarize information conveyed through discussion.
- Tell what they learned from a discussion.

Language

Students will:

- Use word walls to spell words correctly.
- Use their knowledge of roots, prefixes, and suffixes to interpret and convey the meaning of words.
- Use their knowledge of the suffixes, -s, -es, -ed, -ing, to interpret the meaning of words.
- Identify common figures of speech and use them appropriately.
- Identify various styles and purposes of oral and written language and learn to communicate effectively in commonly occurring situations.
- Use language appropriate to the school setting.
- Describe and give examples of variations in American English that appear in different social, cultural regional, and professional environments.
- Understand the need for recognizing and using variations in American English in different social and cultural situations.

Media & Technology

Students will:

- Operate common computer hardware and software.
- Demonstrate correct use of hardware components (i.e. keyboard, mouse, monitor).
- Use basic word-processing, graphics, and drawing programs.
- Create a word processing document.
- Create, store, and retrieve electronic files.
- Access information using electronic reference resources, such as library catalog, encyclopedias, almanacs, and indexes.
- View information from electronic resources.
- Generate, send, and retrieve electronic messages
- Make informed judgements about media and products.
- Identify the intent or appeal behind products and messages promoted via media.
- Recognize basic propaganda techniques.

- Identify images and symbols central to particular messages.
- Identify common environmental print.
- Create products appropriate to audience and purpose.
- Write news articles appropriate for familiar media.
- Write daily news articles using shared writing.
- Create simple advertising messages and graphics appropriate for familiar media.
- Prepare a simple advertising poster.
- Prepare, perform, and tape simple radio and television scripts.
- Participate in classroom dramatizations.
- Prepare and perform school announcements and programs scripts.
- Participate in class plays and choral reading.
- Demonstrate a working knowledge of media production and distribution.
- Make distinctions between messages presented on radio, television, and in print.
- Compare books and movies.
- Recognize how messages are adjusted for different audiences.
- Identify the targeted audience of various messages in a large group setting.
- Identify sales approaches and techniques aimed at children.
- Analyze and edit media work as appropriate to audience and purpose.
- Generate and edit media work as appropriate to audience and purpose, sequencing the presentation effectively and adding or deleting information as necessary to achieve desired effects.
- Generate media work as appropriate to audience and purpose, sequencing the presentation effectively.
- Provide feedback to (and receive it from) peers about the content, organization, and overall effect of media work.
- Provide feedback to peers about the content and overall effect during group writing.

Research and Inquiry

- Conduct research and inquiry on self-selected or assigned topics, issues, or problems and use an appropriate form to communicate their findings.
- Propose research by formulating initial questions, narrowing the focus of a topic, identifying prior knowledge, and developing a basic plan for gathering information.
- Identify, as a group, the information problem, determine what is already known, and formulate questions that will determine what other information is needed.
- Brainstorm a basic plan for gathering information.
- Conduct research by identifying, locating, exploring, and effectively using multiple sources of information appropriate to the inquiry, including print, non-print, and electronic sources.
- Identify basic reference sources.
- Identify the computer as a source of information (CDs, electronic encyclopedia, websites).
- Conduct research, as a group, to answer specific questions.
- Recognize, record, organize, and acknowledge information pertinent to a project, accurately blending discoveries into answers.
- As a group, record and organize pertinent information.
- Present the results of inquiry, reporting and commenting on the substance and process of learning, orally and in writing, using appropriate visual aids.
- Demonstrate what they learned by presenting information orally, through drawings, and/or using developmental spelling.

Social Studies

Geography: People, Places and Environments

Students will:

- Use reference points, latitude and longitude, direction, size, shape and scale to locate positions on various representations of the earth's surface
- Use vocabulary such as north, south, east, west and equator to locate places on a map and globe.
- Locate and distinguish between various landforms and geographic features such as mountains, rivers, islands and oceans.

- Locate on a map or globe physical features such as continents, oceans, mountain ranges, and landforms; natural features such as resources, flora, and fauna; and human features such as cities, states, and national borders
- Locate Wisconsin on a map of North America.
- Differentiate between a world and United States map.
- Construct a map of the world from memory, showing the location
- Cooperatively construct a map of the school.
- Construct a map of their home showing two fire escape routes.
- Construct a map of their room.
- Describe and give examples of ways in which people interact with the physical environment, including use of land, location of communities, methods of construction and design of shelters
- Describe three ways farmers interact with the physical environment to provide goods and services for our community.
- Define their physical environment (housing - suburban, rural, city).
- Compare and contrast the various types of past Native American homes.
- Use atlases, databases, grid systems, charts, graphs, and maps to gather information about the local community, Wisconsin, the United States, and the world
- Determine the compass direction from one place to another on a map.
- Gather and interpret information to make graphs about the classroom community.
- Identify and distinguish between predictable environmental changes, such as weather patterns and seasons, and unpredictable changes, such as floods and droughts, and describe the social and economic effects of these changes
- Describe different climates in terms of rainfall and temperature and identify the types of plants and animals associated with each.
- Keep a daily record of temperature, precipitation and other data to draw simple inferences about weather patterns.
- Identify connections between the local community and other places in Wisconsin, the United States, and the world
- Explain why they have local and state designation as part of their home address.
- Sequence the production of milk from a local dairy to the grocery store in Milwaukee.
- Identify major changes in the local community that have been caused by human beings, such as a construction project, a new highway, a building torn down, or a fire; discuss reasons for these changes; and explain their probable effects on the community and the environment
- Give examples to show how scientific and technological knowledge has led to environmental changes, for example, pollution prevention measures, air-conditioning, solar heating and conservation of resources.
- Discuss how people can use technology to solve problems such as transportation, communication or homemaking.
- Give examples of one way science and technology have changed the lives of people they know.

History: Time, Continuity and Change

Students will:

- Identify and examine various sources of information that are used for constructing an understanding of the past, such as artifacts, documents, letters, diaries, maps, textbooks, photos, paintings, architecture, oral presentations, graphs, and charts
- Recount events from their history using concrete artifacts such as photographs to aid in storytelling.
- Describe history as a record of past events.
- Use a timeline to select, organize, and sequence information describing eras in history.
- Compare and contrast families today and yesterday. (example: Thanksgiving with Pilgrims and Today)
- Order events experienced during the day in a proper sequence.
- Differentiate between a correct and incorrect narrative account of an event they have witnessed.
- Examine biographies, stories, narratives, and folk tales to understand the lives of ordinary and extraordinary people, place them in time and context, and explain their relationship to important historical events.
- Listen, read and examine biographies, stories and narratives as an introduction to the lives of famous people.
- Recall specific facts about the personal life story of a grandparent or family friend.
- Compare and contrast changes in contemporary life with life in the past by looking at social, economic, political, and cultural roles played by individuals and groups
- Compare/contrast their daily life with that of an elder family member or historical figure.
- Identify the historical background and meaning of important political values such as freedom, democracy, and justice.
- Explain and demonstrate fairness and choice.

- Explain the significance of national and state holidays, such as Independence Day and Martin Luther King, Jr. Day, and national and state symbols, such as the United States flag and the state flags.
- Introduced to Martin Luther King, Jr.
- Explain why it is customary to stand for the Pledge of Allegiance and national anthem.
- Identify and describe important events and famous people in Wisconsin and United States history
- Know the names and simple facts about prominent figures from history and the events they were associated with.
- Compare past and present technologies related to energy, transportation, and communications, and describe the effects of technological change, either beneficial or harmful, on people and the environment.
- Draw upon photographs, illustrations and models to describe changes in transportation over time.
- Identify that inventions and discoveries may be beneficial or harmful to people and the environment.
- Describe examples of cooperation and interdependence among individuals, groups, and nations
- Explain that in most cases people working together on a common task can accomplish more than a person working alone.
- Explain the history, culture, tribal sovereignty, and current status of the American Indian tribes and bands in Wisconsin
- Discuss Native American culture from the past and present.
- Compare/contrast the immigrant and Native American perspective regarding Christopher Columbus or Thanksgiving.
- Introduced to Christopher Columbus.

Political Science and Citizenship

Power, Authority, Governance and Responsibility

Students will:

- Identify and explain the individual's responsibilities to family, peers, and the community, including the need for civility and respect for diversity
- Describe responsibilities first graders have within their family.
- Describe the community in which they live.
- List responsibilities the student and his/her family have within the community.
- Identify the documents, such as the Declaration of Independence, the Constitution, and the Bill of Rights, in which the rights of citizens in our country are guaranteed.
- Explain how families, schools, and other groups develop, enforce, and change rules of behavior and explain how various behaviors promote or hinder cooperation
- Recognize consequences of breaking rules at home, school and in the community.
- Explain the basic purpose of government in American society, recognizing the three levels of government.
- Identify our nation's president and their role within our government's structure.
- Propose one specific action they would take if they were president.
- Explain how various forms of civic action such as running for political office, voting, signing an initiative, and speaking at hearings, can contribute to the well-being of the community
- Participate in a classroom vote and discuss the importance of voting in our system of government.
- Locate, organize, and use relevant information to understand an issue in the classroom or school, while taking into account the viewpoints and interests of different groups and individuals.
- Discuss reasons another student may have a different answer or opinion.

Economics

Production, Distribution, Exchange, Consumption

Students will:

- Describe and explain the role of money, banking, and savings in everyday life
- Explain that money can be used to buy goods and services.
- Discuss the role of money in their everyday life.
- Set up store in classroom during money unit.
- Identify situations requiring an allocation of limited economic resources and appraise the opportunity cost (for example, spending one's allowance on a movie will mean less money saved for a new video game)
- Identify the basic needs for all people in the world.

- Recognize and recycle to help the shortage of resources and the rainforest.
- Identify local goods and services that are part of the global economy and explain their use in Wisconsin
- List goods and services produced throughout our community.
- Give examples to explain how businesses and industry depend upon workers with specialized skills to make production more efficient.
- Examine various careers and how they contribute to society.
- Distinguish between private goods and services (for example, the family car or a local restaurant) and public goods and services (for example, the interstate highway system or the United States Postal Service).
- Identify the economic roles of various institutions, including households, businesses, and government.
- Recognize that households are made up of individuals who work to earn resources to buy goods and services for others.
- Describe how personal economic decisions, such as deciding what to buy, what to recycle, or how much to contribute to people in need, can affect the lives of people in Wisconsin, the United States, and world.
- Compare and contrast different implications of purchasing environmentally friendly goods and services.

Behavioral Sciences

Individuals, Institutions and Society

Students will:

- Explain the influence of prior knowledge, motivation, capabilities, personal interests, and other factors on individual learning
- Describe how something that happened in the past will influence what they do today or in the future.
- Describe a capability or personal interest.
- Explain the influence of factors such as family, neighborhood, personal interests, languages, likes and dislikes, and accomplishments on individual identity and development.
- Share a specific family tradition.
- Describe how families are alike and different, comparing characteristics such as size, hobbies, celebrations, where families live, and how they make a living.
- Discuss how families celebrate different holidays and traditions.
- Discuss similarities and differences among the class's family make up, stressing acceptance and respect for all types of families.
- Describe the ways in which ethnic cultures influence the daily lives of people.
- Explore the lifestyle of an ethnic culture focusing on food, shelter, clothing, art, music, dance or folk literature.
- Identify and describe institutions such as school, church, police, and family, and describe their contributions to the well being of the community, state, nation, and global society.
- Identify, list and describe how community helpers benefit individuals.
- Give examples of group and institutional influences such as laws, rules, and peer pressure on people, events, and culture
- Discuss how peer pressure can influence a personal decision.
- Explain the reasons why individuals respond in different ways to a particular event and the ways in which interactions among individuals influence behavior
- Discuss the ways family and friends help influence an individual's likes and dislikes.
- Describe and distinguish among the values and beliefs of different groups and institutions
- Discuss the values and beliefs of different cultural groups.
- Explain how people learn about others who are different from themselves
- Identify and explain how cultures can be different and how we can learn from them.
- Give examples and explain how the media may influence opinions, choices, and decisions
- Give examples and explain how language, stories, folk tales, music, and other artistic creations are expressions of culture and how they convey knowledge of other peoples and cultures
- Identify ways in which culture is passed on from one generation to another such as stories, folk tales, music or artistic artifacts.
- Give examples of important contributions made by Wisconsin citizens, United States citizens, and world citizens
- Read and discuss the biography of a significant citizen.
- Read material and discuss the life of J.I. Case and discuss his contribution to the field of agriculture.
- Investigate and explain similarities and differences in ways that cultures meet human needs
- List and describe ways all cultures are alike in meeting basic human needs.

- Describe how differences in cultures may lead to understanding or misunderstanding among people
- Describe instances of cooperation and interdependence among individuals, groups, and nations, such as helping others in famines and disasters
- Identify and recognize staff and volunteers or aides in their school building and the important roles they play in helping students learn.

Science Connections

Students will:

- When conducting science investigations, ask and answer questions that will help decide the general areas of science being addressed.
- Understand how the following science themes can be applied to the natural world: measurement, change (plant cycle, states of matter), order (patterning), energy (push and pull), organization (animal families/types, properties of rocks, sequencing), constancy (day and night), model (globe), evidence (observations), and explanation with teacher guidance.
- When faced with a science-related problem, decide what evidence, models, or explanations previously studied can be used to better understand what is happening now.
- Decide what evidence, observations, or previous experiences can be used to better understand what is happening now. (i.e. how simple machines help us improve our daily lives or make work easier).
- When investigating a science-related problem, decide what data can be collected to determine the most useful explanations.
- Work as a group to determine what data to collect when seeking an answer to a specific question. (i.e. food choices, weather, birthdays, lost teeth, favorites).
- When studying science-related problems, decide which of the science themes are important.
- Recognize when measurement, change (plant cycle, states of matter), order (patterning), energy (push and pull), organization (animal families/types, properties of rocks, sequencing), constancy (day follows night), model (globe), evidence (observations) and explanation themes apply.
- When studying a science-related problem, decide what changes over time are occurring or have occurred.
- Identify things that change over time. (i.e. caterpillars to butterflies, seeds to plants, baby to adult, formation and weathering of rocks).

Nature of Science

Students will:

- Use encyclopedias, source books, texts, computers, teachers, parents, other adults, journals, popular press, and various other sources, to help Answer science-related questions and plan investigations.
- Begin to transition from teacher guided to independent use of resources (i.e. books, web sites, videos, periodicals, encyclopedias, games/kits etc.)
- Work as a group to plan investigations.
- Participate in teacher guided investigations.
- Recognize that learning can come from careful observations and simple experiments.
- Acquire information about people who have contributed to the development of major ideas in the sciences and learn about the cultures in which these people lived and worked.
- Learn about scientific contributors by sharing science-related current events from magazines, newspapers, television and hearing others talking about events. (George Washington Carver)
- Understand that in science it is helpful to work with a team and share your findings with others.
- Show how the major developments of scientific knowledge in the earth and space, life and environmental, and physical sciences have changed over time.
- Recognize that there have been changes in scientific knowledge that have improved and influenced our lives (i.e. improved dental hygiene, environmental issues, fitness, medicine, Columbus [flat vs. round earth]).
- Know that the same scientific investigations generally work the same way in different places and normally produce results that are the same.

Science Inquiry

Students will:

- Use the vocabulary of the unifying themes to ask questions about objects, organisms, and events being studied.
- Work as a group to identify examples of order, organization, form and function and equilibrium while studying grade level science topics (i.e. animal families - order and organization; animal structure - form and function; and plants and animals depending on each other - equilibrium).
- Use the science content being learned to Ask questions, plan investigations, make observations, make predictions, and offer explanations.
- Work as a group to plan an investigation, record observations, make predictions and develop explanations. The focus could be on seasonal changes, states of matter, or plant growth.
- Select multiple sources of information to help Answer questions selected for classroom investigations .
- Use printed materials, audio-visual materials and observations to answer questions related to science topics.
- Use technology to search (internet, CD-ROMs, etc.) for answers to questions.
- Use simple science equipment safely and effectively, including rulers, balances, graduated cylinders, hand lenses, thermometers, and computers, to Collect data relevant to questions and investigations.
- Use simple science equipment (balance scale, hand lens, thermometer, standard and metric rulers, and computers) to collect data.
- Work as a group to determine what science equipment is necessary for an activity.
- Use data they have collected to Develop explanations and answer questions generated by investigations.
- Work as a group to use weather data that has been graphed to develop explanations about weather patterns and seasonal changes.
- Work as a group to use data from a wind-related investigation to tell why certain objects move farther in the wind.
- Work as a group to use data to explain changes in the states of matter
- Communicate the results of their investigations in ways their audiences will understand by using charts, graphs, drawings, written descriptions, and various other means, to display their answers.
- Communicate the results of invest gations by using age appropriate charts, graphs, drawings, verbal and written descriptions, and various other means, to display their answers.
- Support their conclusions with logical arguments
- Practice supporting conclusions with logical arguments.
- Ask additional questions that might help focus or further an investigation
- Following an investigation, students will work as a group to develop additional questions that could be investigated further.

Physical Science

Students will:

- Understand that objects are made of more than one substance, by observing, describing and measuring the properties of earth materials, including properties of size, weight, shape, color, temperature, and the ability to react with other substances.
- Collect, sort, and classify earth materials according to the properties of size, weight, shape, and color.
- Use equipment (e.g., rulers, balances, and hand/magnifying lenses) to collect information and make observations about earth materials.
- Know that objects are made up of many different types of materials and have many different observable properties.
- Group and/or classify objects and substances based on the properties of earth materials.
- Classify objects according to properties.
- Understand that substances can exist in different states-solid, liquid, gas.
- Identify and describe solids, liquids and gases.
- Identify three states of water.
- Know that water can be changed from a solid to a liquid and a gas and the amount of material remains the same.
- Observe and describe changes in form, temperature, color, speed, and direction of objects and construct explanations for the changes.
- Observe, describe, and explain changes associated with seasons (temperature changes and changes in plants).
- Construct simple models of what is happening to materials and substances undergoing change, using simple instruments or tools to aid observations and collect data.
- Draw a picture or make a model to explain substances undergoing physical changes (i.e. water in 3 states of matter).

- Observe and describe physical events in objects at rest or in motion.
- Identify when an object is in motion or at rest.
- Explain the difference between pushing and pulling an object.
- Know that the position and motion of an object can change by pushing or pulling the object.
- Observe and describe physical events involving objects and develop record-keeping systems to follow these events by measuring and describing changes in their properties, including position relative to another object, motion over time, and position due to forces.
- Measure the distance an object has traveled, using a predetermined unit (i.e., simple machines use inclined planes of various heights to affect an object's speed).
- Ask questions and make observations to discover the differences between substances that can be touched (matter) and substances that cannot be touched (forms of energy, light, heat, electricity, sound, and magnetism)
- Identify substances that can be touched (i.e. five senses unit) and describe the substance.
- Work as a group to identify the human senses that could be used to identify differences in substances.

Earth and Space Science

Rocks and Soils

Investigate rocks, minerals, and soils and use the scientific vocabulary for rocks, minerals and soils during these investigations. Investigate that earth materials are composed of rocks and soils and correctly use the vocabulary for rocks, minerals, and soils during these investigations.

- Describe the characteristics of rocks and soil.
- Describe the physical properties of a rock using the terms color, size, shape, texture, hardness, shiny, dull.
- Know that rocks come in many different shapes and sizes.

Physical and Chemical Properties of Earth Materials

Show that earth materials have different physical and chemical properties, including the properties of soils found in Wisconsin.

- Identify earth materials (rocks, soil, water, air).
- Describe differences between several earth materials (rocks, water, soil).
- Group rocks and minerals based on their properties.

Describing the Earth

Develop descriptions of the land and water masses of the earth and of Wisconsin's rocks and minerals, using the common vocabulary of earth and space science.

- Explain the basic differences between bodies of water (pond, lake, river, ocean).
- Know that the earth is made up of land (mountains, plains and valleys) and water (ponds, lakes, rivers and oceans)

Celestial Objects

Identify celestial objects (stars, sun, moon, planets) in the sky, noting changes in patterns of those objects over time.

- Illustrate pictures of the sun, moon, and stars.
- Describe differences between day and night.

Wisconsin Weather

Describe the weather commonly found in Wisconsin in terms of clouds, temperature, humidity, and forms of precipitation, and the changes that occur over time, including seasonal changes.

- Collect data related to daily temperature, precipitation (snow, rain, stormy), and degree of cloudiness (cloudy, sunny, partly cloudy) and graph the data.
- Describe how the weather changes from season to season.

Earth Patterns and Cycles

Using the science themes, find patterns and cycles in the earth's daily, yearly, and long-term changes.

- Identify daily changes (light and dark) and seasonal changes in Wisconsin (i.e. calendar).

Use of Resources

Using the science themes, describe resources used in the home, community, and nation as a whole.

- Identify resources used by plants and animals to live.
- Compare the needs of animals and plants to the needs of people.

Human Resources

Illustrate resources humans use in mining, forestry, farming, and manufacturing in Wisconsin and elsewhere in the world.

- Give examples of resources humans use for farming (Soil, water, fertilizer).

Life and Environmental Sciences

Survival Needs

Discover how each organism meets its basic needs for water, nutrients, protection, and energy in order to survive.

- Identify the functions of the human heart, bones and muscles.
- Describe the basic needs of plants and animals (e.g., air, water, nutrients, light or food, shelter).
- Describe the needs of plants and animals and how they differ.
- Know that plants and animals have characteristics that help them live in different environments.

Internal and External Cues

Investigate how organisms, especially plants, respond to both internal cues (the need for water) and external cues (changes in the environment)

- Observe the growth of a seed to a plant and illustrate the changes that take place with a drawing.
- Recognize that humans grow and change as they mature.
- Know that plants and animals need resources for energy and growth.

Life Cycles of Organisms

Illustrate the different ways that organisms grow through life stages and survive to produce new members of their type.

- Recognize that animals and plants closely resemble their parents.
- Give examples of adult animals and their offspring (i.e. calf & cow, piglet & sow).
- Describe life stages/life cycles that animals go through (i.e. caterpillar to butterfly, tadpole to frog).

Living and Non-living Things

Using the science themes, Develop explanations for the connections among living and non-living things in various environments.

- Identify differences between living and non-living things.
- Know that living things eat and grow.
- Know that non-living things do not eat, move or grow.
- Be able to tell living and non-living things apart.

Categorization of Living Things

- Know that there are similarities and differences in the appearance and behavior of plants and animals.
- Be able to put plants in groups by what they have in common.

Science Applications

Technology

- Give examples of tools that people use to do their jobs.

Technology and Careers

- Identify tools that are used in different careers.

Workplace Technology

- Give an example of how technology has changed the workplace.

Simple Machines

- Identify simple machines and how they work (i.e. lever, inclined plane, pulley, wheel and axle, gears)
- Give examples of simple machines that assist us in the workplace.
- Ask questions to find answers about how devices and machines were invented and produced.

Science in Social and Personal Perspectives

Progress Through Science and Technology

- Describe changes in how people get food (farm unit) and health care (nutrition and dental health/social studies) today as compared to the past.

Science and Issues/Problems

- Work as a group to identify how science and technology have affected different types of local and state issues (i.e. pollution, discoveries, environmental issues, etc.).

Science and Personal Needs

- Work as a group to identify examples of how our personal needs have benefited from hygiene, nutrition, exercise, safety, and health care.

Science and Decision Making

Develop a list of issues that citizens must make decisions about and describe a strategy for becoming informed about the science behind these issues.

MATH

Mathematical Processes

- Students will use reasoning abilities to:
 - perceive patterns
 - identify relationships
 - formulate questions for further exploration
 - justify strategies
 - test reasonableness of results
- Explain solutions to problems clearly and logically in oral and written work and support solutions with evidence.
 - Create and extend patterns.
 - Use comparative vocabulary to express relationships of size, amount and position.
 - Use the problem solving process (understand, plan, solve, check).
- Apply the following problem-solving strategies:
 - choose an operation
 - use manipulatives
 - use a calculator
 - draw a picture
 - guess and check
 - identify needed/extra information
- Justify strategies and solution through oral and written explanation.
- Communicate mathematical ideas in a variety of ways, including words, numbers, symbols, pictures, charts, graphs, tables, diagrams and models.
- Connect mathematical learning with other subjects, personal experiences, current events, and personal interests.
 - see relationships between various kinds of problems and actual events
 - use mathematics as a way to understand other areas of the curriculum (e.g., measurement in science, map skills in social studies)
- Connect mathematical learning with personal experiences, personal interests and other subjects.
- Use appropriate mathematical vocabulary, symbols and notation with understanding based on prior conceptual work.

Number Operations and Relationships

- Whole Numbers: Represent and explain whole numbers, decimals and fractions with:
 - physical materials
 - number lines and other pictorial models
 - verbal descriptions
 - place-value concepts and notation
 - symbolic renaming (e.g., $43=40+3=30+13$)

Students will:

- Use and interpret number lines 0 to 20 and pictorial models.
- Identify 1s and 10s place value.
- Represent and explain whole numbers 0-100 with physical materials and verbal descriptions.
- Symbolically rename numbers (i.e., 5 tens + 3 ones = 53, $10+3=13$).
- Read, write and order whole numbers to 100.
- Analyze the use of numbers in real-life situations (newspaper articles, cereal box, catalogs...)

Decimals

- Represent and explain whole numbers, decimals and fractions with:
 - physical materials
 - number lines and other pictorial models
 - verbal descriptions
 - place-value concepts and notation
 - symbolic renaming (e.g., $43=40+3=30+13$)
- In problem-solving situations involving money, add and subtract decimals.

Number Operations and Relationships

Fractions

- Represent and explain fractions.
- Read, write and order simple fractions and commonly used decimals.
- Identify and represent equivalent fractions for halves, thirds, fourths, fifths, sixths, eighths, tenths, sixteenths.
- Add and subtract fractions with like denominators.

Students will:

- Compare and contrast equal and unequal parts.
- Represent and identify fractions ($1/2$, $1/4$, $1/3$).
- Compare and contrast fractions ($1/2$, $1/4$).
- Manipulate real-life objects to show equal parts.
- In problem-solving situations involving whole numbers, select and efficiently use appropriate computational procedures such as:
 - recalling the basic facts of addition, subtraction, multiplication and division
 - using mental math (e.g., $37+25$, 40×7)
 - estimation
 - selecting and applying algorithms for addition, subtraction, multiplication and division
 - using a calculator
 - Recall basic facts of addition and subtraction through 12.
 - Solve basic mental math problems.
 - Use a calculator for problem-solving activities.
 - Solve one-step story problems.
 - Practice writing a number sentence to show a solution.

Number Operations and Relationships

- Determine the number of things in a set by:
 - grouping and counting (e.g., by threes, fives, hundreds)
 - combining and arranging (e.g., all possible coin combinations amounting to thirty cents)
 - estimation, including rounding
- Determine the number of items in a set by counting and estimating quantities (up to 100).
- Apply estimation skills to solve real-life problems.
- Count by 1s to 100.
- Count by 2s, 5s, 10s.
- Identify penny, nickel, dime, quarter and half-dollar.
- Identify and use the cent and dollar symbols.
- Combine and arrange coin combinations (=30 cents).
- Demonstrate the appropriate use of ordinal numbers (first, second, third...tenth).

Geometry

- Describe two-and three-dimensional figures (e.g., circles, polygons, trapezoids, prisms, spheres) by:
 - naming them
 - comparing, sorting and classifying them
 - drawing and constructing physical models to specifications
 - identifying their properties (e.g., number of sides or faces, two- or three-dimensionality, equal sides, number of right angles)
 - predicting the results of combining or subdividing two-dimensional figures
 - explaining how these figures are related to objects in the environment
 - employing appropriate grade level technology
- Identify and draw circles, squares, rectangles, triangles, ovals and diamonds.
- Sort objects according to size and shape.
- Identify polygon properties using number of sides and corners.
- Identify and differentiate cubes, cones, cylinders and spheres.
- Explain how shapes are related to objects in the environment.
- Use physical materials and motion geometry (such as slides, flips and turns) to identify properties and relationships, including but not limited to:
 - symmetry
 - congruence
 - similarity
- Identify similar and congruent shapes and/or segments.
- Show how a shape can be constructed based on the use of symmetry (heart).
- Identify properties and relationships using motion geometry (slides, flips and turns).
- Identify and use relationships among figures, including, but not limited to:
 - location (e.g., between, adjacent to, interior of)
 - position (e.g., parallel, perpendicular)
 - intersection (of two-dimensional figures)
- Locate and identify relationships among figures (e.g., above, below, on, off, front, back, adjacent to, between, interior of, exterior of).
- Demonstrate locations using concrete materials. (e.g., The red square is above the blue square...).
- Apply appropriate vocabulary in real-life situations.
- Use simple two-dimensional coordinate systems to find locations on maps and to represent points and simple figures.
- Employ technology to place and locate points on a two-dimensional grid where grade appropriate.

Measurement

- Recognize and describe measurable attributes, such as length, liquid capacity, time, weight (mass), temperature, volume, monetary value and angle size, and identify the appropriate units to measure them.
- Develop language skills to compare and contrast liquid capacity, weight, temperature, time, length and monetary values (more, less, greater, bigger, smaller, long, short, warm, cool)
- Solve classroom problems using length, time, weight, and money.
- Demonstrate understanding of basic facts, principles and techniques of measurement, including:
 - appropriate use of arbitrary and standard units (metric and US customary)
 - appropriate use and conversion of units within a system (such as yards, feet and inches; kilograms and grams; gallons, quarts, pints and cups)
 - judging the reasonableness of an obtained measurement as it relates to prior experience and familiar benchmarks
 - employment of appropriate grade level technology
- Use standard and non-standard units to compare, contrast, and estimate lengths, weights and capacity.
- Apply logical reasoning to solve length, weight, and capacity problems.
- Read and interpret measuring instruments (e.g., rulers, clocks, thermometers).
- Determine measurements directly by using standard tools to these suggested degrees of accuracy
 - length to the nearest half-inch or nearest centimeter
 - weight (mass) to the nearest ounce or nearest 5 grams
 - temperature to the nearest 5 degrees

- time to the nearest minute
- monetary value to dollars and cents
- liquid capacity to the nearest fluid ounce
- Identify and explain the use of measurement tools including ruler, scale, thermometer, clock, calendar and coins.
- Determine measurements to the following degrees of accuracy:
 - length to the nearest inch and centimeter
 - weight to the nearest pound
 - temperature to the nearest 5 degrees
 - time to the nearest hour and half-hour
 - monetary value to \$0.30
- Name and order the days of the week and months of the year.
- Describe a set of a data using
 - high and low values and range
 - most frequent value (mode)
 - middle value of a set of ordered data (median)
- Describe orally and in a graphic a set of data using:
 - most frequent values
 - high and low values
- In problem-solving situations, read, extract and use information presented in graphs, tables or charts.

Statistics and Probability

- Identify and explain information in problem-solving situations using:
 - bar graphs
 - pictographs
 - tables
 - charts
- Determine if future events are more, less or equally likely, impossible or certain to occur.
- Experience the likelihood of future events by observation of simple activities.
- Predict outcomes of future events and test predictions using data from a variety of sources.
- Predict simple outcomes using a variety of sources.

Algebraic Relationships

- Use letters, boxes or other symbols to stand for any number, measured quantity or object in simple situations
- Use the vocabulary, symbols and notation of algebra accurately
- Recognize and use generalized properties and relationships of arithmetic (e.g., commutativity, addition, inverse relationships of multiplication and division).
- Use vocabulary, symbols and connotation of algebra correctly
- Read, write and solve number sentences.
- Recognize and use basic properties of arithmetic:
 - Order
 - Zero property for \pm $11+0=11/11-0=11$).
 - Associative property for $+$ $[5+(3+2)$ or $(5+3)+2]$.
- Provide the missing number in an addition or subtraction sentence
- Show the relationship between \pm functions by completing “fact family” equations.
- Work with simple linear patterns and relationships in a variety of ways, including:
 - recognizing and extending number patterns
 - describing them verbally
 - representing them with pictures, tables, charts, graphs
 - recognizing that different models* can represent the same pattern or relationship
 - using them to describe real-world phenomena
 - employment of appropriate grade level technology
- Represent a pattern in multiple ways (objects, shapes, colors).
- Recognize and extend a basic number pattern.

- Verbally describe a pattern.
- Make and interpret pictures, pictographs, bar graphs, tables, charts and note patterns/relationships of the data.
- Compare the same set of data shown on different models (pictures, graphs, charts).
- Recognize variability in simple functional relationships by describing how a change in one quantity can produce a change in another
- Use pictures or objects to show changing relationships and quantities.
- Interpret simple charts.
- Use number line to count up or down.
- Use simple equations and inequalities in a variety of ways, including:
 - using them to represent problem situations
 - solving them by different methods
 - recording and describing solution strategies
- Use simple equations to represent basic math problems.
- Use manipulatives to act out problem situations.
- Understand how to set up simple problems to find an answer in story problems.
- Understand and recognize key words like “in all,” “altogether,” “left,” and “difference” in order to apply appropriate algebraic operation.

Health

Mental and Emotional Health

- Explain the difference between health behaviors and risk behaviors
- Demonstrate the ability to make responsible decisions and use the proper refusal skills
- Identify responsible health behaviors
- Identify stress management and suicide prevention skills

Family Living

- Describe characteristics needed to be a responsible friend and family member
- Demonstrate ways to communicate care, consideration, and respect of self and others
- Identify causes of conflict within family, school, and community environments

Growth and Development

- Develop awareness of personal health needs
- Demonstrate strategies to improve or maintain personal health
- Describe and analyze all human body systems
- Demonstrate needs, wants, and feelings appropriately
- Identify and accept physical uniqueness

Nutrition

- Recognize the six types of nutrients
- Analyze food selections that reduce the risk of illness and disease
- Identify the dietary guidelines
- Recognize how culture influences personal food choices and eating habits

Personal Growth

- Demonstrate a desirable level of physical fitness and personal health
- Recognize injuries and illnesses that can be prevented and treated
- Identify personal health goals and make progress toward achieving those goals

Alcohol, Tobacco, and Other Drugs

- Recognize how to use over-the-counter and prescription drugs in a responsible way
- Demonstrate how to cooperate with health and safety officials
- Identify behaviors that are safe, risky, or harmful to self and others

- Demonstrate proper use of refusal skills
- Identify factors that determine the reliability of health information, products, and services
- Identify a variety of resources from the home, school, and community that provide reliable health information
- Recommend the importance of avoiding the misuse or abuse of controlled substances

Communicable and Chronic Diseases

- Identify behaviors that reduce the risk of infection related to communicable diseases
- Recognize that many injuries and illnesses can be prevented and treated
- Analyze the most common health problems with children
- Differentiate between communicable and non-communicable diseases
- Analyze family history of disease

Injury Prevention and Safety

- Demonstrate techniques to avoid threatening situations
- Explain how to get assistance in threatening situations
- Recognize techniques involved in self-protection
- Distinguish between threatening and non-threatening circumstances
- Demonstrate the ability to follow safety rules at home
- Demonstrate the ability to follow safety guidelines for different weather conditions and natural disasters

Consumer and Community Health

- Demonstrate the ability to locate school and community health helpers.
- Identify agencies that advocate community health.
- Describe ways that technology can influence health.
- Identify factors that determine the reliability of health sources.
- Describe media influences on health behaviors.
- Explain the impact of advertising on the selection of health products and services.

Environmental Health

- Identify the impact of the environment on personal health.
- Identify methods of health promotion.
- Identify agencies that advocate for a healthy community.
- Express ideas and opinions on health issues.
- Demonstrate the ability to influence and support others in making positive health choices.