

For 6th Science you will need to paste, at the end of this document, Earth, Life or Physical Science depending on which your school teaches at the 6th level –

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Alliance for Curriculum Enhancement

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Under the direction of the ACE Board, this booklet has been developed as a reference guide in order to inform ACE member schools, Board of Trustees, administrators, teachers, parents, and students as to the minimum standards and abilities required in Communication Arts (including Reading), Math, Social Studies and Science. Other subject areas and grade levels are available on the ACE website: www.mtace.org., under the Curriculum link.

MISSION STATEMENT:

Through cooperative efforts of participating schools, the ACE consortium will develop and implement a meaningful curriculum and related assessments that meet the academic needs of our students, and the state and national requirements.

The ACE consortium will provide training and direction to promote curriculum development and assessment that maximizes student learning.

Goals:

The ACE consortium will promote and provide training opportunities that focus on areas of curriculum, assessment, and best practice methods that maximize student learning.

Through cooperative efforts of the participating schools, the ACE consortium will provide curriculum templates that align with state and national standards.

Through cooperative efforts of the participating schools, the ACE consortium will provide rubric, performance assessment and other assessment models that relate to the curriculum templates and fulfill the state and national requirements.

The ACE consortium will provide centralized resources for participating schools that include, but are not limited to, best practice materials, textbook resources, human resources, and professional development materials.

The ACE consortium will consistently evaluate and re-evaluate past practices, national and state requirements, and school improvement methods in an effort to provide its member schools with timely and reliable resources, which maximize student learning.

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Sixth Grade Communication Arts

State Standards

Speaking and Listening

Standard 1: Students know and understand the role of the communication process and demonstrate effective speaking and listening skills.

Reading

Standard 2: Students read by applying foundational skills and strategies to comprehend, interpret, analyze, and evaluate texts.

Literature

Standard 3: Students select, interpret, and respond to a range of literature

Media Literacy

Standard 4: Students effectively evaluate and create media messages.

Writing

Standard 5: Students will write to communicate effectively for a variety of purposes and audiences.

Course Abilities for Sixth Grade Communication Arts (Apply the following to each content standard).

Develop abilities in Communication Arts.

1. Higher thinking (analyze, evaluate, classify, predict, decide, generalize, solve, relate, interpret, simplify).
2. Communications (present, persuade, collaborate, explain, recommend).
3. Goal setting/attainment (brainstorm, envision, research, plan, organize, persist).
4. The quality process (plan, draft, analyze, revise) when producing products.

Read, write, speak, and listen for a variety of purposes.

1. Read and discuss literature (poetry, narratives).
2. Use mass media (newspapers, magazines, radio, television, movies, internet, current technology).
3. Conduct research (locate, observe/gather, analyze, conclude).
4. Possess technical skills:
 - Read/write/present: instructions, table, chart, thank you letter, letter of request, letter of response, inquiry, proposal, lab report checklist, research report, summary.
 - Use technology: word processing, database, desktop publishing Internet, current technology.

Course Content for Sixth Grade Communication Arts

Sixth Grade Comm. Arts by Standards/Benchmarks & ELEs

(Essential Learner Expectations)

CONTENT STANDARD 1: Speaking and Listening —Students know and understand the role of the communication process and demonstrate effective speaking and listening skills.

Analyze and explain how the components of the communication process affect communication.

1. Give examples of an effective speaker and identify the characteristics of the speaker and their effects on the communication process.
2. Give examples of an effective listener and identify the characteristics of the listener and their effects on the communication process.
3. Explain how a speaker can use feedback to change his/her communication.
4. Give examples of the effect of interference on the listener's ability to understand the message.

Essential Vocabulary: effective

Analyze and explain how the components of the communication process affect communication.

1. Adjust vocal expression to convey a range of emotion.
2. Adjust body language to match communication situation (i.e.: hand gestures, facial expressions, body movement).

Essential Vocabulary: convey

Apply effective listening strategies to fit the purpose, situation, and setting of the communication.

1. Apply appropriate listening strategies for informative messages in formal classroom situations.
2. Practice applying listening strategies in a variety of media messages.

Essential Vocabulary: media messages

Select and narrow topics for specific occasions and develop an appropriate introduction, body and conclusion to deliver speeches.

1. Select and narrow topics to effectively present claims and findings, and descriptions relevant to the specific occasion of a speech.
2. Present an introduction that has an attention-getter.
3. Organize the body sequencing main ideas logically.
4. Present a conclusion that summarizes the information.

Adapt communication to a variety of formal and informal audiences, settings and purposes.

1. Adapt communication to audience – peer groups, younger students, older students and adults.
2. Adapt communication to setting – classroom, grade level and school.

3. Adapt communication to purpose – inform and discuss.

Use feedback to monitor and adjust speaking and listening effectiveness.

1. Gauge the level of audience attentiveness by the nature of questions and responses and adjust accordingly.
2. Review ideas expressed and demonstrate understanding through reflection and paraphrasing.
3. Pose and respond to questions with elaboration and detail by making comments that contribute to the discussion.

Essential Vocabulary: pose, paraphrasing, gauge

Compare and contrast the verbal and nonverbal aspects of storytellers, the behaviors of audiences, and the settings and purposes of stories in the oral traditions of different cultures, including Montana American Indians.

1. Observe and name verbal and nonverbal aspects of storytellers.
2. Explain expected behaviors of audiences in different cultures', including Montana American Indians, oral traditions (e.g. passive vs. active participation, audience gender roles, choral responses, use of rhythmic responses, use of props, applause, talking sticks,
3. Describe formal and informal uses of oral storytelling.

Explain the importance of communicating ethically, including effectively referencing sources and displaying respectful communication to individuals and groups.

1. Research, cite and explain consequences of plagiarism when sources were not referenced properly.
2. Read and discuss examples of respectful communication.

Essential Vocabulary: cite

CONTENT STANDARD 2: Reading— Students read by applying foundational skills and strategies to comprehend, interpret, analyze, and evaluate texts.

Apply knowledge of word and sentence structure, analysis of word parts and context to decode unknown words.

1. Use knowledge of word part analysis to decode unknown words: affixes, roots.
2. Use knowledge of sentence structure and parts of speech (noun, verb, adjective, adverb, interjection, pronoun, conjunctions, prepositions) to decode unknown words.
3. Use context to decode unknown words.

Essential Vocabulary: word parts (prefix, suffix, roots) parts of speech (noun, verb, adjective, adverb, interjection, pronoun, conjunctions, prepositions), fluency, literal questions, inferential questions, signal words key words, prioritize, summary, inference, sequential, problem-solution, cause-effect, order of importance, spatial, literary elements, affixes

Expand and apply general and specialized vocabulary through the use of context clues, analysis of word parts, and reference sources.

1. Use context clues to determine word meaning.
2. Use word parts (affixes and roots) to develop general and content specific vocabulary.
3. Use reference sources (dictionary, thesaurus) to develop general and content specific vocabulary.

Adjust fluency based on purpose and content.

1. Read grade level text fluently with expression.
2. Adjust fluency (reading rate) to match difficulty of text and purpose for reading.

Essential Vocabulary: fluency

Identify when comprehension breaks down, analyze causes and self correct using effective strategies.

1. Monitor comprehension and identify when comprehension breaks down.
2. Determine the cause of the breakdown.
3. Use appropriate strategies to improve comprehension (e.g., reread, read ahead, previewing strategies for word meaning).
4. Apply knowledge of text features to increase comprehension (e.g. title, graphs, charts, maps, headings, subheadings, italic, bold-faced print, index, captions, illustrations, photographs, diagrams).

Activate prior knowledge to connect text to self, text to text, and text to world.

1. Activate prior knowledge to make self-to-text connections.
2. Activate prior knowledge to make text-to-text connections between two selections.
3. Activate prior knowledge to make text-to world connections.

Make, revise, and explain predictions.

1. Use prior knowledge to make predictions based on text.
2. Identify context clues and/or background knowledge used to make predictions.
3. Use text to confirm or revise predictions.
4. Explain why prediction was made or revised.

Generate and answer literal, inferential, critical, and interpretive questions.

1. Locate key information from the text and text features (see 2.4) to answer questions.
2. Generate literal questions to clarify text.
3. Generate and answer inferential questions based on prior knowledge and text clues.

Essential Vocabulary: literal questions, inferential questions

Recall and explain a series of events or the sequence of information to draw conclusions.

1. Identify main events and/or key concepts.
2. Sequence the main events and/or key concepts using key words (signal words) in the text and explain the process.

Essential Vocabulary: signal words, keywords

Summarize by stating main ideas and supporting details.

1. Identify multiple main ideas in a text.
2. Identify the details that support each main idea.
3. Prioritize the supporting details.
4. Apply knowledge of main ideas and supporting details to create a summary.

Essential Vocabulary: prioritize, summarize

Make and justify inferences based on context clues and/or background knowledge.

1. Make inferences based on both prior knowledge and context clues.
2. Select information from the text that supports inferences.
3. Explain the context clues and prior knowledge used to develop the inference.

Essential Vocabulary: inference

Analyze text features to enhance comprehension.

1. Apply knowledge of text features to enhance comprehension.

Identify and explain the impact of the organizational structure of a selection, including order of importance, spatial, problem-solution, and cause-effect.

1. Identify the organizational structures of informational text: sequential, problem-solution, cause-effect, order of importance, spatial
2. Identify the organizational structures of various genres (e.g.: poem, play, tall tale, legend, fairy tale, journal, how-to, traditional literature{including selections by and about Montana American Indians}).

Essential Vocabulary: literary elements

Compare and contrast information to explain relationships and draw conclusions within and/or across texts.

1. Compare and contrast information within and across text:

| | |
|-----------|-------------------|
| Character | Text organization |
| Setting | Genre |
| Plot | |
| Main idea | |

2. Explain the similarities and differences of literary elements, organizational structures **and main ideas within and across texts.**

Essential Vocabulary: literary elements

Analyze author's purpose, point of view, language use, and credibility in culturally diverse texts, including those by and about Montana American Indians.

1. Read a variety of culturally diverse texts including those by and about Montana American Indians.
2. Explain author's purpose: entertain, inform, persuade.
3. Explain point of view: first person, third person.
4. Participate in teacher-led discussions about author's perspective.
5. Explain how author's word choice is influenced by culture.

Set and monitor goals and reading progress.

1. Identify reading strengths and weaknesses (e.g., fluency, word learning skills, lack of practice, vocabulary, comprehension).
2. Select targets for improvement.
3. Monitor and record progress toward reaching goals.

CONTENT STANDARD 3: Literature — Students select, interpret, and respond to a range of literature.

63.1 Compare and contrast the literary elements (setting, plot, character, conflict, resolution, point of view, mood) across texts).

- A. Compare and contrast character, setting, plot, conflict/resolution across increasingly complex texts.
- B. Identify author's point of view and perspective in literature.

Essential Vocabulary: point of view, perspective

63.2 Analyze how authors' choices of words, uses of figurative language and stylistic devices contribute to the meaning of literary works.

- A. Explain how the author's choice of words and literary devices enhance the meaning of the story.
- B. Identify author's use of repetition and sensory detail in literature.
- C. Determine how figurative language enhances the meaning of increasingly difficult text (similes, metaphor, onomatopoeia and

Essential Vocabulary: figurative language, repetition, sensory detail, stylistic devices

63.3 Understand and define the characteristics of literary genres.

- A. Identify the characteristics of newspaper articles, content specific texts, poetry (e.g., free verse, ballad).

Essential Vocabulary: free verse, ballad

63.4 Interpret how literature influences societies and, conversely, how factors such as history and culture influence literature, including works of Montana American Indians.

- A. Explain how society, culture and history influence literature including works by and about Montana American Indians.

Essential Vocabulary: society

63.5 Compare and contrast a variety of perspectives among culturally diverse literary works, including the works of Montana American Indians.

- A. Explain cultural perspectives in culturally diverse literary works including those by and about Montana American Indians.

Essential Vocabulary: culturally diverse literature

Express personal ideas and feelings generated as a result of engaging with literature and offer justification.

1. Identify feelings and generate personal ideas as a result of engaging with text.

CONTENT STANDARD 4: Media Literacy — Students effectively evaluate and create media messages.

Interpret and differentiate how techniques and technologies impact media messages.

1. View media messages presented in a variety of technologies.
2. Identify techniques and technologies used in media messages for specific purposes.
3. Discuss techniques and technologies used in media messages for specific purposes.

Analyze the credibility of the sources of media messages.

1. Determine that the media message is relevant, appropriate, detailed, current, authoritative, or biased.

Analyze the purpose of and recognize the effects of fact, fiction, opinion, bias and stereotypes in media messages on diverse groups of people, including Montana American Indians.

1. Determine the purpose of fact, fiction, and opinion in media messages.
2. Determine the effects of fact, fiction, and opinion in media messages.

Apply appropriate norms, rules, laws and etiquette in the use and creation of media messages.

1. Use District Policy and Technology Use Agreements in the creation of media messages.

Analyze the inherent consequences to self and others in the use and creation of media messages.

1. Examine the consequences of same media message on different audiences.

Create and analyze media messages for specific audiences and purposes.

1. Create media messages for specific audiences.

2. Create media messages for specific purposes.
3. Analyze the created messages for audience appropriateness.

Identify how media messages embed values and influence individuals, cultures and societies.

1. Identify how sources embed values in media messages.

CONTENT STANDARD 5: Writing — Students will write to communicate effectively for a variety of purposes and audiences.

Essential Vocabulary: thesis statement, ambiguous, antecedents, slander, libel

Apply the steps of the writing process in a variety of written work.

1. Produce written arguments, informative/explanatory and narrative/creative works using the steps of the writing process.
2. Use writing techniques to develop ideas (i.e.: brainstorming, outlining, graphic organizers, etc).
3. Seek feedback from a variety of sources.
4. Determine relevancy of feedback from a variety of sources.
5. Use a variety of revision techniques.

Select appropriate topics and generate thesis statements that indicate the writer's purpose for writing.

- A. Determine and narrow topic according to purpose.
- B. Generate a basic thesis statement.

Essential Vocabulary: thesis statement

65.3 Generate and develop main ideas using a variety of relevant supporting details.

1. Develop the topic with relevant facts, definitions, concrete details, quotations or other information and examples related to the topic.
2. Use a variety of techniques such as dialogue and description to develop narrative writing.
3. Support claims with clear reasons and relevant evidence to persuade an audience.

Organize writing using transitions and a logical progression of ideas.

1. Introduce claims and organize reasons and evidence clearly (e.g.: paragraphs).
2. Organize ideas, concepts and information using strategies such as definition, classification, comparison/contrast, cause and effect.
3. Use a variety of transitional words, phrases, and clauses to convey sequence and signal shifts in time or setting.
4. Offer a conclusion that is derived from information.

Demonstrate knowledge of language choices and their impact on writing through control of voice, strong sentence fluency, and effective word

choice.

1. Demonstrate an awareness of variations in word meanings i.e., denotation, connotation, shades of meaning
2. Select powerful words and begin to use figurative language.
4. Write using simple, compound, and complex sentences.
5. Develop techniques to show voice in writing.

Apply conventions of standard written English (e.g., usage, punctuation, spelling) appropriate for purpose, audience, and form.

1. Write legibly in manuscript and cursive.
2. Practice keyboarding skills.
3. Construct simple, compound, and complex sentences with appropriate punctuation.
4. Use commas, quotations marks, apostrophes, and colons correctly.
5. Apply knowledge of parts of speech to own writing.
6. Use correct spelling
7. Recognize and correct pronoun use for shifts in number and persons and ambiguous antecedents

Essential Vocabulary: ambiguous, antecedents**Identify and describe the purpose, audience, format, and tone in one's own writing.**

1. Write using various formats for a variety of purposes and audiences.
2. Identify the format, purpose, and audience in one's own writing.

Analyze the characteristics of different writing forms and genres and write in a variety of forms and genres.

1. Identify characteristics of different forms/genres/mode in text.
2. Write argument, informative/explanatory and narrative/creative texts in a variety of forms.
3. Write routinely single sitting or extended time frames (time for research, reflection, revision) and shorter time frames (single sitting or a day or two) for a range of discipline specific tasks, purposes and audiences.

Compose written works demonstrating ability to sustain focus throughout a variety of forms and genres.

1. Establish and maintain focus when writing extended works in a variety of forms and genres.
2. Select appropriate organizational patterns to establish and maintain focus.
3. Use guided revision strategies to correct and maintain focus.

Use information problem solving process to collect and utilize information to research a topic.

1. Identify the research task.
2. Generate research questions.
3. Construct a list of possible resources.

4. Gather relevant information from multiple print and digital sources.
5. Determine the credibility of sources.
6. Quote or paraphrase the data and conclusions of others and cite appropriately.
7. Share results of the research with others.

Obtain and use information legally and respectfully, and appropriately credit ideas and works of others, including those of Montana American Indians.

1. Properly credit sources in written work.
2. Understand slander.
3. Understand libel.

Essential Vocabulary: slander, libel

Set goals, seek feedback and monitor writing progress.

1. Set appropriate goals for writing progress.
2. Consider time constraints when setting goals.
3. Seek feedback to determine appropriateness of goals.
4. Seek feedback to monitor progress toward goals.

Use writing as a means of clarifying thought and reflecting on learning.

1. Use guided writing activities to clarify and check comprehension of new concepts and ideas.
2. Use writing activities to reflect on learning.
3. Use writing to reflect on personal experiences.

Sixth Grade Math

State Standards

Standard 1: Number Sense and Operation – A student, applying reasoning and problem solving, will use number sense and operations to represent numbers in multiple ways, understand relationships among numbers and number systems, make reasonable estimates, and compute fluently within a variety of relevant cultural contexts, including those of Montana American Indians.

Standard 2: Data Analysis Mathematics – A student, applying reasoning and problem solving, will use data representation and analysis, simulations, probability, statistics, and statistical methods to evaluate information and make informed decisions within a variety of relevant cultural contexts, including those of Montana American Indians.

Standard 3: Geometric Reasoning – A student, applying reasoning and problem solving, will understand geometric properties, spatial relationships, and transformation of shapes, and will use spatial reasoning and geometric models to analyze mathematical situations within a variety of relevant and cultural contexts, including those of Montana American Indians.

Standard 4: Algebraic and Functional Reasoning – A student, applying reasoning and problem solving, will use algebraic concepts and procedures to understand processes.

Course Abilities for Sixth Grade to be applied to Content Standards as appropriate to grade level:

Develop abilities in math.

1. Higher thinking (analyze, evaluate, classify, predict, decide, estimate, generalize, solve, relate, interpret, simplify).
2. Communications (present, persuade, collaborate, explain, recommend).
3. Goal setting/attainment (brainstorm, envision, research, plan, organize, persist).
4. The quality process (plan, draft, analyze, and revise when producing products).
5. To use and understand vocabulary words and symbols.

Apply math knowledge and skills to a variety of purposes.

1. Solve multi-step problems using a step-by-step problem-solving method (gather/evaluate/process information, plan operations, solve, check for common sense).
2. Conduct research (locate, observe/gather, analyze, conclude).
3. Use calculators, computers, and other technology to assist in problem-solving (safely, effectively, efficiently, accurately) and to create, evaluate, and solve problems with graphs, charts, and tables.

4. Possess technical skills: (at level where applicable)
 - read/write/present: instructions, table, chart, lab report, specifications, proposal, letters (complaint, recommendation), manual, form, checklist, technical research, bid, technical analysis, summary
 - technology: word processing, spreadsheet, database desktop publishing, Internet, search tools, SmartBoard, PowerPoint, etc.

Course Content for Sixth Grade Math

Sixth Grade Math by Standards/Benchmarks & ELEs **(Essential Learner Expectations)**

CONTENT STANDARD 1: Number Sense and Operation – A student, applying reasoning and problem solving, will use number sense and operations to represent numbers in multiple ways, understand relationships among numbers and number systems, make reasonable estimates, and compute fluently within a variety of relevant cultural contexts, including those of Montana American Indians.

Essential Vocabulary: terminating decimal, repeating decimal, least common multiple, greatest common factor, order of operations, distributive property, parentheses, kilometer, ratio, rate, unit rate, ratio table, prime factorization, integer, proper fraction, improper fraction, quotient, cup, pint, quart, gallon, mass, meter, cm, mm, km, gram, kg, ft, yd, measure, acre, exponential form

Rational Number Relationships: Recognize, model, and compare different forms of integers and rational numbers including percents, fractions, decimals, and numbers using exponents and scientific notation.

1. Use a model to represent percent.
2. Convert between fractions and decimals in order to solve problems.

Estimation and Reasonableness: Select and apply appropriate estimation strategies to judge the reasonableness of solutions to problems including those computed on a calculator. Demonstrate correct use of order of operations.

1. Use estimation strategies to judge the reasonableness of operations on fractions and decimals.
2. Use correct order of operations with whole number with no more than one level of parentheses.

Number Theory: Use number theory concepts such as prime factorization, greatest common factor, and least common multiple in problem situations.

1. Solve problems using least common multiple and greatest common factor and check the reasonableness of the solution.

2. Solve problems using prime factorization.

Rational Number Operations: Compute fluently and solve multi-step problems using integers, fractions, decimals, and numbers in exponential form.

1. Justify strategies for multiplying and dividing fractions, mixed numbers and decimals.
2. Multiply and divide fractions fluently.
3. Solve contextual problems using multiplication and division of fractions and decimals.
4. Solve problems solving exponential form.

Metric and Standard Measurement: Use metric and standard units of measurement in relevant scientific and cultural situations, including those of Montana American Indians, compare and convert within systems, and use appropriate technology.

1. Compare and convert units of measure within the same system of measurement, including length, capacity, mass and time; and label appropriately.
2. Use scientific and cultural situations, including those of Montana American Indians, to solve measurement problems.

Proportional Reasoning: Understand and apply proportional relationships to model real world situations and to solve problems involving rates, ratios, proportions, percents, and direct variation.

1. Identify ratios (part-part, part-whole, rates as ratios) and unit rates in various contexts.
2. Write equivalent ratios using multiplication or division strategies.
3. Use multiplicative reasoning to solve ratio and rate problems and explain the answer (e.g., Terry can run 4 laps in 12 minutes, and Susan can run 2 laps in 5 minutes, who is the faster runner?).

CONTENT STANDARD 2: Data Analysis Mathematics – A student, applying reasoning and problem solving, will use data representation and analysis, simulations, probability, statistics, and statistical methods to evaluate information and make informed decisions within a variety of relevant cultural contexts, including those of Montana American Indians.

Essential Vocabulary: stem and leaf, scatter plots, ordered pairs, xy plots, coordinate grid, histogram, box plots, mean, measures of central tendency, measures of center, tree diagram, sample space, circle graph, horizontal axis, vertical axis, mean, median, mode, range, maximum, minimum

Representing and Comparing Data: Collect data from a variety of contexts (e.g., science, history, and culture, including Montana American Indians). Organize and represent data in box plots, scatter

plots, histograms, and circle graphs using technology when appropriate.

1. Use the appropriate representation of data collected from a variety of contexts (e.g., science, history, and culture, including those of Montana American Indians).

Evaluating Data and Making Conjectures: Interpret, analyze, and evaluate data using mean, median, range, and quartiles to identify trends and make decisions and predictions about data within scientific and cultural contexts, including those of Montana American Indians

1. Interpret and analyze one set of data using measures of center (median, mean, mode) and variability (maximum, minimum, range).

Finding Probability and Predicting: Create sample spaces and simulations from events found in different cultures, including those of Montana American Indians, determine experimental and theoretical probabilities, and use probability to make predictions.

1. Determine the experimental probability of two independent events using a simple experiment (e.g., probability of outcomes when rolling a six-sided die twice).
2. Determine the theoretical probability of two independent events by using a tree diagram, list, or table (e.g., flip a coin and roll a die).

CONTENT STANDARD 3: Geometric Reasoning – A student, applying reasoning and problem solving, will understand geometric properties, spatial relationships, and transformation of shapes, and will use spatial reasoning and geometric models to analyze mathematical situations within a variety of relevant and cultural contexts, including those of Montana American Indians.

Essential Vocabulary: rectangular, 3 dimensional, quadrilateral, triangular prism, circumference, diameter, formulas, clockwise, counter-clockwise, rotational symmetry, symmetry, congruence, supplementary, complimentary, vertical, adjacent, pentagonal, orthogonal, hexagonal

Properties of Solids and Figures: Define, classify and compare properties of solids and plane figures, including lines and angles.

1. Describe and compare a variety of pyramids and prisms (e.g., pentagonal, hexagonal).
2. Deconstruct a prism and pyramid into a net and compose a net into a prism or pyramid.
3. Draw orthogonal views of a three-dimensional block structure.

Congruence and Similarity: Use spatial reasoning to determine congruence, similarity, and symmetry of objects in mathematics, art, science, and culture, including Montana American Indians.

1. Describe if a 2-dimensional figure has rotational symmetry and

congruence.

Transformations including Dilations: Define, identify, and execute transformations including translations, rotations, reflections, and dilations with appropriate technology.

1. Identify and execute coordinate transformations, rotations, flips

Angles, Surface Area, and Volume: Measure and compute angles, perimeter, area, surface area, and volume including the use of formulas and choosing appropriate units.

1. Use area and volume formulas to solve problems with decimal and fractional dimensions.
2. Solve for the unknown piece of information regarding areas of rectangles, parallelograms and triangles or volume of rectangular prisms.

Justifying Relationships: Develop informal arguments to verify geometric relationships and solve problems such as an informal justification of the Pythagorean Theorem in a variety of contexts.

1. Use models to determine and justify a formula for the volume of a rectangular prism.
2. Use models to determine and justify a formula for the circumference of a circle (e.g., the ratio of circumference to diameter equals π).

CONTENT STANDARD 4: Algebraic and Functional Reasoning – A student, applying reasoning and problem solving, will use algebraic concepts and procedures to understand processes involving number, operation, and variables and will use procedures and function concepts to model the quantitative and functional relationships that describe change within a variety of relevant cultural contexts, including those of Montana American Indians.

Essential Vocabulary: equations, expressions, commutative property, associative property, additive identity, multiplicative identity, inverse operations, linear expressions, equivalent

Representing and Generalizing Patterns: Create and use tables, graphs or diagrams, symbolic expressions, and verbal descriptions to represent, analyze, and generalize a variety of patterns involving numbers and operations.

1. Describe patterns and relationships using words, tables, graphs, diagrams, and mathematical sentences.
2. Demonstrate fluency between two various representations (tables, graphs, verbal descriptions, symbolic expressions) of a linear pattern.

Linear Functions: Identify linear and non-linear functional relationships and contrast their properties using tables, graphs, or equations with appropriate technology.

1. Use tables and graphs to describe a functional relationship between two quantities.

Multi-step equations and inequalities: Use number properties and inverse operations to solve multi-step equations and inequalities involving a single variable.

1. Write and evaluate mathematical expressions and equations for a given situation.
2. Solve and justify one-step equations using number sense and properties of operations.

Equivalent Algebraic Expressions: Recognize, simplify, and generate equivalent forms of algebraic expressions, justifying each step with properties of operations.

1. Apply the commutative, associative, distributive properties and order of operations to show that two numeric expressions are equivalent.

Sixth Grade Social Studies (World History)

State Standards

Content Standard 1—Students access, synthesize, and evaluate information to communicate and apply social studies knowledge to real world situations.

Content Standard 2—Students analyze how people create and change structures of power, authority, and governance to understand the operation of government and to demonstrate civic responsibility.

Content Standard 3—Students apply geographic knowledge and skills (location, place, human/environment interactions, movement, and regions).

Content Standard 4—Students demonstrate an understanding of the effects of time, continuity, and change on historical and future perspectives and relationships.

Content Standard 5—Students make informed decisions based on an understanding of the economic principles of production, distribution, exchange, and consumption.

Content Standard 6—Students demonstrate an understanding of the impact of human interaction and cultural diversity on societies.

Course Abilities for Sixth Grade Social Studies (Apply the following to each content standard.)

Develop abilities in social studies.

1. Higher thinking (analyze, evaluate, classify, predict, estimate, generalize, solve, decide, relate, interpret, simplify).
2. Communications (present, demonstrate, persuade, collaborate, explain, defend, recommend).
3. Goal setting/attainment (brainstorm, envision, research, plan, organize, persist).
4. The quality process (plan, draft, analyze, revise) when producing products.

Apply social studies knowledge and skills to a variety of purposes.

1. Support positions in a responsible manner (specific research)
2. Relate social studies to your life.
View life from other perspectives and others' point of view.
Understand key forces (inventions, discoveries, people, events, moments) which have shaped our world.
3. Explain the causes and effects key forces have on you, the present, the futures use, the past and present (other cultures, other situations, different places) to solve problems, make decisions, and predict the future.
4. Relate current events to your life (be conversant, know sources related to current events, conduct research).

Use technical skills to support read/write/research and present.

1. Assess the quality of information.
2. Use technology: word processing, database, desktop publishing, Internet, current technology.

Course Content for Sixth Grade Social Studies

Understand key influences that shaped and still shape the world.

1. Explain how, when, where, and why key civilizations were formed.
2. Tell about key world cultures throughout history.
3. Explain the daily life of people at various points in world history.
4. Tell about key people, events, inventions, and discoveries in the world, including motivation and impact.

Possess a chronological perspective of world history.

1. Place key influences on a timeline.
2. Relate key influences to what was happening just before, during, and after the key influences.
3. Possess a logical sense of progression of early United States' history.

Make and interpret maps and charts of the world.

Tell about the purposes of various governments around the world.

**ADD the 6th grade science
that your school teaches
here – delete this text box**