

# 4th Grade Math Standards

## **Number and Operations: Multiplication/Division**

4.1.1.1 Demonstrate fluency with multiplication facts

- I can memorize multiplication fact families 1-12 and use them to solve problems

4.1.1.1 Demonstrate fluency with division facts

- I can memorize division fact families 1-12 and use them to solve problems

4.1.1.2 Use an understanding of place value to multiply a number by 10, 100, 1000

- I can multiply numbers by 10, 100, 1000 and apply it to solve larger multiplication problems

4.1.1.3 Multiply multi-digit numbers

- I can use arrays, partial product, and place value to correctly calculate products of 2x2 digit multiplication problems

4.1.1.4 Estimate products & quotients of multi-digit whole numbers (Must teach as a part of 4.1.1.5)

- I can estimate products of multi-digit whole numbers by using rounding
- I can estimate quotients of multi-digit whole numbers by using rounding

4.1.1.5 Solve multi-step real-world and mathematical problems

- I can correctly solve multi-step story problems using addition, subtraction, multiplication, division in a real-world problem

4.1.1.6 Divide multi-digit whole numbers by one or two digit numbers

- I can demonstrate mastery of division of multi-digit numbers by a one or two digit divisors

## **Number and operations: Fractions/Decimals**

4.1.2.1 Represent equivalent fraction models, and use the model to determine equivalent fractions

- I can recognize and generate equivalent fractions based on my knowledge of numerators and denominators

4.1.2.2 Locate fractions on a number line.

- I can locate & place fractions on a number line

4.1.2.2 Order and compare whole numbers and fraction, including mixed numbers and improper fractions

- I can compare fractions, whole numbers, mixed numbers, and improper fractions by using the symbols  $<$ ,  $>$ ,  $=$  and justify the comparison by using models
- I can order fractions, whole numbers, mixed numbers, and improper fractions from least to greatest or greatest to least

4.1.2.3 Use fraction models to add and subtract fractions with like denominators in real-world and mathematical situations.

- I can solve real-world problems involving addition and subtraction of fractions that have like denominators

4.1.2.4 Read and write decimals with words and symbols

- I can read decimals using numerals, words, and in expanded form
- I can write decimals using numerals, words, and in expanded form

4.1.2.5 Compare and order decimals and whole numbers using place value

- I can compare decimals, and whole numbers to the hundredth using the symbols  $<$ ,  $>$ ,  $=$

4.1.2.6 Read and Write tenths and hundredths in decimal and fraction notations using words and symbols, know the fraction and decimal equivalents for halves and fourths

- I can read decimals and fractions using numerals, words, and in expanded form
- I can write decimals and fractions using numerals, words, and in expanded form

4.1.2.7 Round decimals to the nearest tenth

- I can round decimals to the nearest tenth

## **Algebra**

4.2.1.1 Create and use input-output rules involving addition, subtraction, multiplication and division to solve problems in various contexts.

- I can create a number pattern that follows a given rule
- I can notice and point out different features of a pattern once it is created by a rule

4.2.2.1 Understand how to interpret number sentences involving multiplication, division and unknowns.

- I can interpret number sentences involving multiplication, division, and the unknowns

**4.2.2.2** Use multiplication, division and unknowns to represent a given problem solution using a number sentence.

- I can represent a given problem solution using multiplication, division, unknowns and a number sentence

### **Geometry and Measurement**

**4.3.1.1** Describe, classify and sketch triangles

- I can identify triangles by their angles
- I can classify triangles by their angles
- I can create a triangle using their angles
- I can describe triangles by their angles

**4.3.1.2** Describe, classify and draw quadrilaterals

- I can identify quadrilaterals by their sides & angles
- I can classify quadrilaterals by their sides & angles
- I can describe quadrilaterals by their sides & angles
- I can create quadrilaterals using sides & angles

**4.3.2.2** Compare angles according to size.

- I can compare angles according to their size

**4.3.2.3** Understand that the area of a two-dimensional figure can be found by counting the total number of same size square units that cover the shape without gaps or overlaps.

- I can use what I know about area to find the area of a two-dimensional figure without gaps or overlaps

**4.3.2.4** Find the areas of geometric figures and real-world objects that can be divided into rectangular shapes.

- I can use what I know about area to solve real-world problems involving rectangular shapes

**4.3.3.1** Apply translations (slides) to figures.

- I can create translations to any figure

**4.3.3.2** Apply reflections (flips) to figures by reflecting over vertical or horizontal lines and relate reflections to line of symmetry

- I can create reflections to any figure over a line of symmetry

**4.3.3.3** Apply rotations (turns) of 90 degree clockwise or counterclockwise

- I can create a 90° clockwise & counterclockwise to any figure

**4.3.3.4** Recognize that translations, reflections and rotations preserve congruence and use them to show that two figures are congruent.

- I can recognize that translations, reflections & rotations don't change congruence
- I can model congruence of two figures by using translations, reflections & rotations

### **Data Analysis**

**4.4.1.1** Use tables, bar graphs, timelines and venn diagrams to display data sets.

- I can create tables, bar graphs, timelines and venn diagrams to display data sets

# 4th Grade Reading Standards

## Key Ideas and Details

4.1.1.1 Use textual evidence of fictional stories to make inferences

- I can identify details from a story to determine what the text is saying

4.1.2.2 Determine the theme of a story

- I can give examples from the story to determine the theme of the text

4.1.3.3 Describe the depth of a character, setting, or event in a story or drama

- I can explain how an author uses reasons and evidence to support particular points in a text

## Key Ideas and Details

4.2.1.1 Textual evidence of nonfiction text

- I can identify details from a story to determine what the text is saying

4.2.2.2 Determine the main idea of a text

- I can give examples from the story to determine the theme/main idea of the text

4.2.3.3 Explain events, procedures, ideas, or concepts in a historical, scientific, or technical text, including what happened and why, based on specific information in the text

- I can explain events, procedures, ideas or concepts in nonfiction texts

## Craft and Structure

4.1.4.4 Determine the meaning of words and phrases as they are used in a text including those that allude to significant characters found in mythology

- I can construct the meaning of words and phrases as they are used in a text

4.1.5.5 Explain major differences between poems, drama, and prose and refer to the structural elements of poems, and drama

- I can identify characters, plot, and setting to determine the overall story structure of a text

4.1.6.6 Compare and contrast the point of view from which different stories that are narrated

- I can determine the point of view of a story
- I can compare the point of views of different stories

4.2.4.4. Determine the meaning of general academic and domain-specific words or phrases in a text relevant to a grade 4 topic

- I can recognize the meaning of general academic and domain specific words or phrases in a text

4.2.5.5 Describe the overall structure of events, ideas, concepts, or information in a text or part of a text

- I can identify characters, plot, and setting to determine the overall story structure of a text

4.2.6.6 Compare and contrast a 1st and 2nd hand account of the same event or topic

- I can compare & contrast a first & second hand account of the same event or topic

## Reading Foundational Skills

### Phonics and Word Recognition

4.3.0.3 Know and apply grade-level and word analysis skills in decoding words

- I know and can apply grade level and word analysis skills in decoding words

## Language

### Conventions of Standard English

4.10.1.1 Demonstrate command of the conventions of standard English grammar and usage when writing and speaking

- I can demonstrate English grammar when writing and speaking

4.10.2.2 Demonstrate command of the conventions of standard English capitalization, punctuation, and spelling when writing

- I can demonstrate English capitalization, punctuation, and spelling when writing

### Vocabulary Acquisition and use

4.10.4.4 Determine or clarify the meaning of unknown and multiple-meaning words

- I can determine the meaning of unknown and multiple meaning words

4.10.5.5 Determine understanding of figurative language

- I can show that I understand figurative language

### **Writing**

#### **Writing Process: Production and Distribution of Writing**

4.6.4.4 Produce clear and coherent writing

- I can write to inform/explain topics or ideas clearly to others

#### **Research to Build and Present Knowledge**

4.6.7.7 Conduct short research projects that build knowledge through investigation of different aspects of a topic (Social Studies Report/Research Project)

- I can conduct short research projects to help me learn about topics through investigation

4.6.8.8 Recall relevant information from experiences or gather relevant information from print and digital sources

- I can conduct short research projects to help me learn about topics through investigation

4.6.9.9 Draw evidence from literary or informational texts to support analysis, reflection, and research

- I can conduct short research projects to help me learn about topics through investigation

# 4th Grade Social Studies Standards

## Citizenship and Government

4.1.4.6.2 Identify the major roles and responsibilities of elected and appointed leaders in the community

- I can identify the major roles & responsibilities of elected leaders in the community

## Geography

4.3.1.1.1 Create and use various kinds of maps of places in the United States and Canada or Mexico

- I can create & use many kinds of maps of places in the United States and Canada & Mexico

4.3.1.1.2 Use latitude and longitude on maps and globes to locate places in the United States, Canada or Mexico

- I can use latitude & longitude on maps and globes to locate places

4.3.1.2.1 Choose the most appropriate data from maps to answer specific questions about geographic issues in the United States and also Canada

- I can identify the most appropriate data from maps to answer questions about issues

4.3.1.2.2 Use photographs or satellite-produced images to interpret spatial information about the United States, and also Canada or Mexico

- I can use photographs to interpret information about the United States

4.3.2.3.1 Locate and identify the physical and human characteristics of places in the United States, Canada or Mexico

- I can locate & identify the physical & human characteristics of places in the United States

4.3.2.4.1 Name and locate states and territories, major cities and state capitals in the United States.

- I can recite and locate the states, territories and capitals in the United States

4.3.3.5.1 Use data to analyze and explain the changing distribution of population in the United States and Canada over the last century.

- I can use data to analyze & explain the changing population in the United States over the last 100 years

4.3.3.6.1 Explain how geographic factors affect population distribution and the growth of cities in the United States and Canada.

- I can justify how geographic factors affect population distribution and the growth of cities in the United States

4.3.4.9.1 Explain how humans adapt to the physical environment and how they are in turn affected by the adaptations and modifications

- I can make observations on how humans adapt to the physical environment and how they are in turn affected by the adaptations and modifications

4.3.4.10.1 Describe how the location of resources and the distribution of people and their various economic activities has created different regions in the United States and Canada.

- I can describe how the location of resources and the distribution of people and their many economic activities has created the different regions of the United States

4.3.4.10.2 Analyze the impact of geographic factors on the development of modern agricultural regions in Minnesota and the United States.

- I can analyze the impact of geographic factors on the development of modern agricultural regions in Minnesota and the United States

4.4.2.4.1 Identify and locate on a map or globe the origins of people in the local community and state; create a timeline of when different groups arrived; describe why and how they came.

- I can identify & locate on a map or globe of origins of people in the local community and state
- I can construct a timeline of when different groups of people arrived & compare how they came
- I can compare how they came

# 4th Grade Science Standards

## The Practice of Engineering

4.1.2.1.1 Describe the positive and negative impacts that the designed world has on the natural world as more and more engineered products and services are created and used.

- I can describe the positive & negative impacts that the world has on the natural world

4.1.2.2.1 Identify and investigate a design solution and describe how it was used to solve an everyday problem.

- I can identify & investigate a design solution
- I can describe how the solution was used to solve everyday problems

4.1.2.2.2 Generate ideas and possible constraints for solving a problem through engineering design.

- I can create ideas and possible constraints for solving a problem

4.1.2.2.3 Test and evaluate solutions

- I can test & evaluate solutions

## Interactions Among Science, Technology Engineering, Mathematics and Society

4.1.3.3.1 Describe a situation in which one invention led to other inventions

- I can describe a situation in which one invention led to others

## Matter

- I can identify the three states of matter

4.2.1.1.1 Measure temperature, volume, weight, and length using appropriate tools and units

- I can measure temperature, volume, weight, and length using correct tools and units

4.2.1.2.1 Distinguish between solids, liquids, and gases in terms of shape and volume

- I can distinguish between solids, liquids and gases in terms of shape and volume

4.2.1.2.2 Describe how the states of matter change as a result of heating and cooling

- I can explain and model how matter can be changed from one state to another using heating and cooling

4.2.3.1.1 Describe the transfer of heat energy when a warm and a cool object are touching or placed near each other.

- I can describe the transfer of heat energy

## Energy

4.2.3.1.2 Describe how magnets can repel or attract each other and how they attract certain metal objects.

- I can explain how magnets can repel or attract each other
- I can explain how magnets attract certain metal objects

4.2.3.1.3 Compare materials that are conductors and insulators of heat and/or electricity

- I can compare & contrast materials that are conductors and insulators of heat & electricity

4.2.3.2.1 Identify several ways to generate heat energy

- I can list several ways to generate heat energy

4.2.3.2.2 Construct a simple electrical circuit using wires, batteries and light bulbs.

- I can create a simple electrical circuit using wires, batteries and light bulbs

4.2.3.2.3 Demonstrate how an electric current can produce a magnetic force.

- I can demonstrate how an electric current can produce a magnetic force

## Earth Structure and Processes

4.3.1.3.1 Recognize that rocks may be uniform or made of mixtures of different materials

- I can investigate that rocks may be uniform or made of mixtures of different materials

4.3.1.3.2 Describe and classify minerals based on their physical properties

- I can classify minerals based on their physical properties

**4.3.2.3.1** Identify where water collects on Earth, including the atmosphere, ground, and surface water, and describe how water moves through the Earth system using the processes of evaporation, condensation and precipitation.

- I can identify where water collects on Earth
- I can describe how water moves through the Earth system using the processes of evaporation, condensation, precipitation

### **Humans Interactions with Earth Systems**

**4.3.4.1.1** Describe how the methods people utilize to obtain and use water in their homes and communities can affect water supply and quality.

- I can identify the methods people utilize to obtain and use water in their homes and communities can affect water supply & quality

### **Humans interactions with Living Things**

**4.4.4.2.1** Recognize that the body has defense systems against germs, including tears, saliva, skin and blood.

- I can classify the different defense systems the body has against germs, including tears, saliva, skin and blood

**4.4.4.2.2** Give examples of diseases that can be prevented by vaccination

- I can list examples of diseases that can be prevented by vaccinations