



## ISS Curriculum Document – Standards and Learning Objectives

- Grade: 4
- Subject: Math
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Standard 1.1 – Numbers and Operations – Understand numbers, ways of representing numbers, relationships among numbers and number systems. –

### Learning Objectives

- Write whole numbers from word names or expanded form.
- Identify the value of a given digit.
- Round whole numbers.
- Order whole numbers from least to greatest or greatest to least.
- Add and subtract mentally using place value.
- Recognize and use “properties and rules” for addition and subtraction.
- Add up four addends with 2, 3, or 4 digits.
- Subtract three or four digit numbers from a three or four digit number with zeros.
- Will relate multiplication to repeated addition.
- Writes related multiplication and addition sentences.
- Knows multiplication facts through the 12s
- Can find factors and multiples of given numbers.
- Multiply one digit by four digit numbers.
- Multiply two and three digit numbers by multiples of 10.
- Use estimation to find products and see if answers are reasonable.
- Divide three and four digit dividends by one digit divisors.
- Find the average a set of numbers.
- Divide two and three digit dividends by two digit divisors resulting in two digit quotients.
- Use estimation strategies to find quotients.
- Use and understand remainders.
- Write fractions from shaded parts of a whole.

- Recognize and generate equivalent fractions.
- Compare and order up to four fractions.
- Find a fraction of a whole number.
- Write fractions in their simplest form.
- Add and subtract like fractions.
- Add or subtract fractions where one denominator is a multiple of another.
- Add and subtract two like mixed numbers.
- Write the value of an underlined digit in a decimal greater than one.
- Order up to four decimals through hundredths.
- Add up to three decimals through hundredths.
- Subtract decimals through hundredths.
- Relate decimals to fractional amounts.



## ISS Curriculum Document – Standards and Learning Objectives

- Grade:
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Standard 1.2 – Numbers and Operations – Understand meanings of operations and how they relate to one another.

Learning Objectives



## ISS Curriculum Document – Standards and Learning Objectives

- Grade:
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Standard 1.3 – Numbers and Operations – Compute fluently and make reasonable estimates.

Learning Objectives

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## ISS Curriculum Document – Standards and Learning Objectives

- Grade:
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Standard 2.1 – Algebra – Understand patterns, relations, and functions.

Learning Objectives

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## ISS Curriculum Document – Standards and Learning Objectives

- Grade:
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Standard 2.2 – Algebra – Represent and analyze mathematical situations and structures using algebraic symbols.

Learning Objectives

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## ISS Curriculum Document – Standards and Learning Objectives

- Grade:
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Standard 2.3 - Algebra – Use mathematical models to represent and understand quantitative relationships.

Learning Objectives

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## ISS Curriculum Document – Standards and Learning Objectives

- Grade:
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Standard 2.4 – Algebra – Analyze change in various concepts.

Learning Objectives

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## ISS Curriculum Document – Standards and Learning Objectives

- Grade:
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**Standard 3.1 – Geometry – Analyze characteristics and properties of two- and three-dimensional geometric shapes and develop mathematical arguments about geometric relationships.**

### Learning Objectives

- Identify and describe characteristics of right angles.
- Identify and draw slides
- Plot points on a grid from ordered pairs.
- Find the area of a figure.
- Identify mirror images and congruent shapes.
- Define the line of symmetry.
- Define and find the radius and diameter of a circle.
- Identify and name solids.



## ISS Curriculum Document – Standards and Learning Objectives

- Grade:
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Standard 3.2 – Geometry – Specify locations and describe spatial relationships using coordinate geometry and other representational systems.

Learning Objectives

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## ISS Curriculum Document – Standards and Learning Objectives

- Grade:
- Subject: Math

Standard 3.3 – Geometry – Apply transformations and use symmetry to analyze mathematical situations.

Learning Objectives

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## ISS Curriculum Document – Standards and Learning Objectives

- Grade:
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Standard 3.4 – Geometry – Use visualization, spatial reasoning, and geometric modeling to solve problems.

Learning Objectives

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## ISS Curriculum Document – Standards and Learning Objectives

- Grade:
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Standard 4.1 – Measurement – Understand measurable attributes of objects and the units, systems, and process of measurement.

### Learning Objectives

- Define perimeter and area.
- Find the perimeter in inches, centimeters, feet, or meters.
- Measure a line segment to the nearest centimeter or millimeter.
- Choose the best estimate for the length, capacity, weight, or mass of a given object.
- Read and record Fahrenheit or Celsius temperature.
- Determine elapsed time between two given times.



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- Grade:
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Standard 4.2 – Measurement – Apply appropriate techniques, tools, and formulas to determine measurements.

Learning Objectives

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## ISS Curriculum Document – Standards and Learning Objectives

- Grade:
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Standard 5.1 – Data Analysis and Probability – Formulate questions that can be addressed with data and collect, organize, and display relevant data to answer them.

### Learning Objectives

- Analyze data in bar graphs, pictographs, line graphs, and circle graphs.
- Generate bar graphs, pictographs, line graphs, or circle graphs to represent data.
- Express the probability of an event; e.g. “3 out of 4”



## ISS Curriculum Document – Standards and Learning Objectives

- Grade:
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Standard 5.2 – Data Analysis and Probability – Select and use appropriate statistical methods to analyze data.

Learning Objectives

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## ISS Curriculum Document – Standards and Learning Objectives

- Grade:
- Subject: Math

Standard 5.3 – Data Analysis and Probability – Develop and evaluate inferences and predictions that are based on data.

Learning Objectives

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## ISS Curriculum Document – Standards and Learning Objectives

- Grade:
- Subject: Math

Standard 5.4 – Data Analysis and Probability – Understand and apply basic concepts of probability.

Learning Objectives

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## ISS Curriculum Document – Standards and Learning Objectives

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Standard 6.1 – Problem Solving – Build new mathematical knowledge through problem solving.

### Learning Objectives

- Use diagrams in problem solving.
- Solve problems by comparing more/less likely, most/least likely.
- Use the strategy, make a list, to solve problems.
- Use estimates when solving problems.



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Standard 6.2 - Problem Solving – Solve problems that arise in mathematics and in other contexts.

Learning Objectives

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## ISS Curriculum Document – Standards and Learning Objectives

- Grade:
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Standard 6.3 – Problem Solving – Apply and adapt a variety of appropriate strategies to solve problems.

Learning Objectives

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## ISS Curriculum Document – Standards and Learning Objectives

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Standard 6.4 – Problem Solving – Monitor and reflect on the process of mathematical problem solving.

Learning Objectives

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## ISS Curriculum Document – Standards and Learning Objectives

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Standard 7.1 – Reasoning and Proofs - Recognize reasoning and proof as fundamental aspects of mathematics.

Learning Objectives

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- Grade:
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Standard 7.2 – Reasoning and Proofs – Make and investigate mathematical conjectures.

Learning Objectives

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## ISS Curriculum Document – Standards and Learning Objectives

- Grade:
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Standard 7.3 – Reasoning and Proofs – Develop and evaluate mathematical arguments and proofs.

Indicators

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## ISS Curriculum Document – Standards and Learning Objectives

- Grade:
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Standard 7.4 – Reasoning and Proofs – Select and use various types of reasoning and methods and proof.

Indicators

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## ISS Curriculum Document – Standards and Learning Objectives

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Standard 8.1 – Communication – Organize and consolidate their mathematical thinking through communication.

Indicators

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## ISS Curriculum Document – Standards and Learning Objectives

- Grade:
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Standard 8.2 – Communication – Communicate their mathematical thinking coherently and clearly to peers, teachers, and others.

Indicators

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## ISS Curriculum Document – Standards and Learning Objectives

- Grade:
- Subject: Math

Standard 8.3 – Communication – Analyze and evaluate the mathematical thinking and strategies of others.

Indicators

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## ISS Curriculum Document – Standards and Learning Objectives

- Grade:
- Subject: Math

Standard 8.4 – Communication – Use the language of mathematics to express mathematical ideas precisely.

Indicators

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## ISS Curriculum Document – Standards and Learning Objectives

- Grade:
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Standard 9.1 – Connections – Recognize and use connections among mathematical ideas.

Indicators

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## ISS Curriculum Document –Standards and Learning Objectives

- Grade:
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Standard 9.2 – Connections – Understand how mathematical ideas interconnect and build on one another to produce a coherent whole.

Indicators

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## ISS Curriculum Document –Standards and Learning Objectives

- Grade:
- Subject: Math

Standard 9.3 – Connections – Recognize and apply mathematics in contexts outside of mathematics.

Indicators

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## ISS Curriculum Document –Standards and Learning Objectives

- Grade:
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Standard 10.1 – Representation – Create and use representations to organize, record, and communicate mathematical ideas.

Indicators

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## ISS Curriculum Document –Standards and Learning Objectives

- Grade:
- Subject: Math

Standard 10.2 – Representation – Select, apply, and translate among mathematical representations to solve problems.

Indicators

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## ISS Curriculum Document –Standards and Learning Objectives

- Grade:
- Subject: Math

Standard 10.3 – Representation – Use representations to model and interpret physical, social, and mathematical phenomena.

Indicators

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