

CORRELATION



Number Worlds

to

California Mathematics

Content Standards

SRA Number Worlds
correlation to
California Mathematics Content Standards

About Number Worlds

Number Worlds is an intensive intervention program targeting students who are one or more grade levels behind in elementary mathematics. It provides all the tools teachers need to assess students' abilities, individualize instruction, build foundational skills and concepts, and make learning fun.

Intervention Levels D–J can be used in two different ways:

- **Intensive intervention** for students who are 1–2 years behind their peers in mathematics
- **Supplemental intervention** for students who have not responded to reteaching provided with the basal mathematics program

Targeted units provide scientifically-based math instruction that emphasizes the five critical elements of mathematics proficiency: computing, understanding, reasoning, applying, and engaging.

Additionally, **eMathTools** and **Building Blocks** software provide interactive tools and activities to help illustrate and reinforce essential math concepts. **eMathTools** are electronic tools that students can use to solve problems, test solutions, explore concepts, or demonstrate understanding. **Building Blocks** activities are designed to reinforce key concepts and develop understanding. These technology tools can be used with every lesson to reinforce the lesson objective and to extend instruction.

Using the Correlation

The following correlation shows how *Number Worlds* may be used as supplemental intervention for California Mathematics Content Standards, including those standards that are not considered intervention standards. The left column of the correlation lists each content standard. The right columns of the correlation list *Number Worlds* lessons that provide a way to teach the skills required by the given standard.

By using the information in this correlation, *Number Worlds* can be used to provide focused, explicit instruction in essential mathematics concepts and skills that build the foundation for continued learning.

*Students who frequently require teaching of prerequisite skills should be placed exclusively in the **Number Worlds** program using the **Placement Tests**.*

Grade 6 Standards	Number Worlds			
	Level	Unit	Week	Lesson(s)
Number Sense				
1.0 Students compare and order positive and negative fractions, decimals, and mixed numbers. Students solve problems involving fractions, ratios, proportions, and percentages:	I	2	2	2, 3, 4
1.1 Compare and order positive and negative fractions, decimals, and mixed numbers and place them on a number line.	I	1	3	3, 4
	I	1	4	3, 4
1.2 Interpret and use ratios in different contexts (e.g., batting averages, miles per hour) to show the relative sizes of two quantities, using appropriate notations (a/b , a to b , $a:b$).	I	3	2	1, 2, 3, 4
1.3 Use proportions to solve problems (e.g., determine the value of N if $4/7 = N/21$, find the length of a side of a polygon similar to a known polygon). Use cross-multiplication as a method for solving such problems, understanding it as the multiplication of both sides of an equation by a multiplicative inverse.	I	3	1	2, 4
	I	3	3	1, 2, 3, 4
1.4 Calculate given percentages of quantities and solve problems involving discounts at sales, interest earned, and tips.	I	3	1	2, 3, 4
2.0 Students calculate and solve problems involving addition, subtraction, multiplication, and division:	H	1	1	4
	H	3	1–4	1–4
	H	4	1–4	1–4
2.1 Solve problems involving addition, subtraction, multiplication, and division of positive fractions and explain why a particular operation was used for a given situation.	I	2	2	1, 2, 3, 4
	I	2	3	1, 2, 3, 4
2.2 Explain the meaning of multiplication and division of positive fractions and perform the calculations (e.g., $5/8 \div 15/16 = 5/8 \times 16/15 = 2/3$).	I	2	3	1, 2, 3, 4

Grade 6 Standards	Number Worlds			
	Level	Unit	Week	Lesson(s)
2.3 Solve addition, subtraction, multiplication, and division problems, including those arising in concrete situations, that use positive and negative integers and combinations of these operations.	I	2	1	2, 3, 4
	I	1	1	4, 3
	I	1	2	4
2.4 Determine the least common multiple and the greatest common divisor of whole numbers; use them to solve problems with fractions (e.g., to find a common denominator to add two fractions or to find the reduced form for a fraction).	I	2	3	1
Algebra and Functions				
1.0 Students write verbal expressions and sentences as algebraic expressions and equations; they evaluate algebraic expressions, solve simple linear equations, and graph and interpret their results:	I	4	4	1, 2, 3
1.1 Write and solve one-step linear equations in one variable.	I	4	3	2, 3, 4
	I	4	4	3
1.2 Write and evaluate an algebraic expression for a given situation, using up to three variables.	I	4	4	1, 2
1.3 Apply algebraic order of operations and the commutative, associative, and distributive properties to evaluate expressions; and justify each step in the process.	H	2	3	4
	H	2	4	1, 2, 3
	J	2	1	3
1.4 Solve problems manually by using the correct order of operations or by using a scientific calculator.	I	4	3	1, 2, 3, 4
	I	4	4	3

Grade 6 Standards	Number Worlds			
	Level	Unit	Week	Lesson(s)
2.0 Students analyze and use tables, graphs, and rules to solve problems involving rates and proportions:	H	2	1–3	1–4
	I	3	3	3, 4
	I	3	4	1, 2, 3, 4
	J	5	2	2
2.1 Convert one unit of measurement to another (e.g., from feet to miles, from centimeters to inches).	I	4	4	4
	J	5	1	1, 2, 3, 4
2.2 Demonstrate an understanding that <i>rate</i> is a measure of one quantity per unit value of another quantity.	I	3	4	1, 2
	J	5	2	1
2.3 Solve problems involving rates, average speed, distance, and time.	I	3	4	3, 4
3.0 Students investigate geometric patterns and describe them algebraically:	H	5	2	1, 2, 3, 4
	I	5	2	2
	J	5	4	1
3.1 Use variables in expressions describing geometric quantities (e.g., $P = 2w + 2l$, $A = 1/2bh$, $C = pd$ - the formulas for the perimeter of a rectangle, the area of a triangle, and the circumference of a circle, respectively).	I	5	4	1
	I	5	2	1
3.2 Express in symbolic form simple relationships arising from geometry.	H	5	2	1, 2, 3, 4
	I	5	2	2

Grade 6 Standards	Number Worlds			
	Level	Unit	Week	Lesson(s)
Measurement and Geometry				
1.0 Students deepen their understanding of the measurement of plane and solid shapes and use this understanding to solve problems:	I	5	2	4
	I	5	3	1
	I	5	4	1, 3, 4
1.1 Understand the concept of a constant such as π ; know the formulas for the circumference and area of a circle.	I	5	4	1, 2, 3, 4
1.2 Know common estimates of π (3.14; 22/7) and use these values to estimate and calculate the circumference and the area of circles; compare with actual measurements.	I	5	4	1, 2
1.3 Know and use the formulas for the volume of triangular prisms and cylinders (area of base \times height); compare these formulas and explain the similarity between them and the formula for the volume of a rectangular solid.	I	5	4	4
2.0 Students identify and describe the properties of two-dimensional figures:	I	5	1	3
2.1 Identify angles as vertical, adjacent, complementary, or supplementary and provide descriptions of these terms.	I	5	1	2
2.2 Use the properties of complementary and supplementary angles and the sum of the angles of a triangle to solve problems involving an unknown angle.	I	5	1	2, 4
2.3 Draw quadrilaterals and triangles from given information about them (e.g., a quadrilateral having equal sides but no right angles, a right isosceles triangle).	I	5	1	3, 4
Statistics, Data Analysis, and Probability				
1.0 Students compute and analyze statistical measurements for data sets:	I	6	1	1
	I	6	2	3

Grade 6 Standards	Number Worlds			
	Level	Unit	Week	Lesson(s)
1.1 Compute the range, mean, median, and mode of data sets.	I	6	1	3.4
	I	6	2	1
	J	6	1	1, 3
1.2 Understand how additional data added to data sets may affect these computations of measures of central tendency.	I	6	1	3
1.3 Understand how the inclusion or exclusion of outliers affects measures of central tendency.	I	6	1	4
	J	6	2	2
1.4 Know why a specific measure of central tendency (mean, median) provides the most useful information in a given context.	I	6	1	4
2.0 Students use data samples of a population and describe the characteristics and limitations of the samples:	I	6	3	2
2.1 Compare different samples of a population with the data from the entire population and identify a situation in which it makes sense to use a sample.	I	6	3	2. 4
2.2 Identify different ways of selecting a sample (e.g., convenience sampling, responses to a survey, random sampling) and which method makes a sample more representative for a population.	I	6	3	2, 3, 4
2.3 Analyze data displays and explain why the way in which the question was asked might have influenced the results obtained and why the way in which the results were displayed might have influenced the conclusions reached.	J	6	1	1–4
2.4 Identify data that represent sampling errors and explain why the sample (and the display) might be biased.	H	6	2	3
	H	6	3	2

Grade 6 Standards	Number Worlds			
	Level	Unit	Week	Lesson(s)
2.5 Identify claims based on statistical data and, in simple cases, evaluate the validity of the claims.	J	6	1	3–4
3.0 Students determine theoretical and experimental probabilities and use these to make predictions about events:	I	6	4	1, 2, 3, 4
	J	6	3	1, 3, 4
	J	6	4	4
3.1 Represent all possible outcomes for compound events in an organized way (e.g., tables, grids, tree diagrams) and express the theoretical probability of each outcome.	H	6	4	4
	J	6	3	2
	J	6	4	2
3.2 Use data to estimate the probability of future events (e.g., batting averages or number of accidents per mile driven).	I	6	4	4
	J	6	3	3
3.3 Represent probabilities as ratios, proportions, decimals between 0 and 1, and percentages between 0 and 100 and verify that the probabilities computed are reasonable; know that if P is the probability of an event, $1 - P$ is the probability of an event not occurring.	I	6	4	3
3.4 Understand that the probability of either of two disjoint events occurring is the sum of the two individual probabilities and that the probability of one event following another, in independent trials, is the product of the two probabilities.	J	6	4	2, 3, 4
3.5 Understand the difference between independent and dependent events.	J	6	3	2
	J	6	4	1
Mathematical Reasoning				

Grade 6 Standards	Number Worlds			
	Level	Unit	Week	Lesson(s)
1.0 Students make decisions about how to approach problems:	I	2	2	2
	I	2	3	1
1.1 Analyze problems by identifying relationships, distinguishing relevant from irrelevant information, identifying missing information, sequencing and prioritizing information, and observing patterns.	I	3	2	4
	I	3	3	1, 4
	I	4	1	1, 3
	I	4	3	1
	i	4	4	1, 2
1.2 Formulate and justify mathematical conjectures based on a general description of the mathematical question or problem posed.	I	4	4	4
1.3 Determine when and how to break a problem into simpler parts.	I	2	1	3
	I	3	3	2
	I	3	4	1, 2
	I	5	3	2, 3
2.0 Students use strategies, skills, and concepts in finding solutions:	I	2	3	2
2.1 Use estimation to verify the reasonableness of calculated results.	I	2	4	3
2.2 Apply strategies and results from simpler problems to more complex problems.	I	1	2	4
	I	2	4	3

Grade 6 Standards	Number Worlds			
	Level	Unit	Week	Lesson(s)
	I	3	1	3
	I	5	3	4
	I	6	4	4
2.3 Estimate unknown quantities graphically and solve for them by using logical reasoning and arithmetic and algebraic techniques.	I	2	1	2, 4
2.4 Use a variety of methods, such as words, numbers, symbols, charts, graphs, tables, diagrams, and models, to explain mathematical reasoning.	I	1	3	3
	I	2	2	1
	I	4	1	4
	I	5	1	3
	I	6	4	3
2.5 Express the solution clearly and logically by using the appropriate mathematical notation and terms and clear language; support solutions with evidence in both verbal and symbolic work.	I	1	3	4
	I	1	4	4
	I	5	1	4
2.6 Indicate the relative advantages of exact and approximate solutions to problems and give answers to a specified degree of accuracy.	I	2	2	3
	I	5	4	1, 2
2.7 Make precise calculations and check the validity of the results from the context of the	I	2	2	4

Grade 6 Standards	Number Worlds			
	Level	Unit	Week	Lesson(s)
problem.	I	3	1	4
	I	6	3	3
3.0 Students move beyond a particular problem by generalizing to other situations:	I	6	1	4
	I	6	3	2
3.1 Evaluate the reasonableness of the solution in the context of the original situation.	I	3	4	4
	I	6	1	3
	I	6	4	1, 2
3.2 Note the method of deriving the solution and demonstrate a conceptual understanding of the derivation by solving similar problems.	I	2	3	4
	I	3	1	2
	I	3	2	2, 3
	I	4	4	3
	I	5	2	1, 3, 4
3.3 Develop generalizations of the results obtained and the strategies used and apply them in new problem situations.	I	1	1	4
	I	3	4	3
	I	4	3	4
	I	6	1	2