Mathletics
Missouri Program of Studies
Skill Quests

Grades 1 – 2

January, 2023

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Grade 1

1 Relationships and Algebraic Thinking

1.1 Represent and solve problems involving addition and subtraction

Outcome	Quests	Content
Use addition and subtraction within 20 to solve problems.	Add & subtract within 20, word problems	Creating addition & subtraction word problems
Solve problems that call for addition of three whole numbers whose sum is within 20.	Add 3 single-digit numbers	Adding 3 single-digit numbers

1.2 Understand and apply properties of operations and the relationship between addition and subtraction

Outcome	Quests	Content
Use properties as strategies to add and subtract.	Apply properties to add & subtract	Using the commutative property of addition

1.3 Add and subtract within 20

Outcome	Quests	Content
Add and subtract within 20.	Add & subtract within 20	Subtracting numbers within 20
		Adding & subtracting zero within 20
		Adding doubles to 20
		Adding by making 10
		Subtracting using doubles
		Adding & subtracting with fact families
Demonstrate fluency with addition and subtraction within 10.	Add and subtract within 10 fluently	Adding & subtracting within 10 fluently

1.4 Represent and solve problems involving addition and subtraction

Outcome	Quests	Content
Develop the meaning of the equal sign and determine if equations involving addition and subtraction are true or false.	Recognize equality & inequality	Recognizing equality & inequality
Determine the unknown whole number in an addition or subtraction equation relating three whole numbers.	Find the unknown number in an equation	Finding the unknown: addition/subtraction equation

2 Number Sense

2.1 Understand and use numbers up to 120

Outcome	Quests	Content
Count to 120, starting at any number less than 120.	Count within 100	Counting within 100
Read and write numerals and represent a number of objects with a written numeral.	Read & write 2-digit numerals	Reading & writing 2-digit numerals
		Representing 2-digit objects as numerals
Count backward from a given number between 20 and 1.	Count forward & backward from 20	Counting forward & backward from 20
Count by 5s to 100 starting at any multiple of 5.	Count by 5s	Counting by 5s

3 Number Sense and Operations in Base Ten

3.1 Understand place value of two-digit numbers

Outcome	Quests	Content
Understand that 10 can be thought of as a bundle of 10 ones – called a "ten".	Count in groups of ten	Counting in groups of ten
Understand two-digit numbers are composed of ten (s) and ones (s).	Understand tens & ones	Understanding tens & ones
Compare two two-digit numbers using the symbols >, = or <.	Compare 2-digit numbers	Comparing 2-digit numbers
Count by 10s to 120 starting at any number.	Count by 10s	Counting by 10s

3.2 Use place value understanding to add and subtract

Outcome	Quests	Content
Add within 100.	Add within 100	Adding a 2-digit number & a 1-digit number, models
		Adding a 2-digit number & a 1-digit number
		Adding a 2-digit number & a multiple of 10
Calculate 10 more or 10 less than a given number mentally without having to count.	Find 10 more or 10 less	Finding 10 more or 10 less

4 Geometry and Measurement

4.1 Measure lengths in non-standard units

Outcome	Quests	Content
Order three or more objects by length.	Order & compare objects by length	Comparing & ordering lengths
Compare the lengths of two objects indirectly by using a third object.	Express the length of an object	Expressing the length of an object
Demonstrate the ability to measure length or distance using objects.	Measure lengths: uniform informal units	Measuring lengths: uniform informal units

4.2 Work with time and money

Outcome	Quests	Content
Tell and write time in hours and half-hours using analog and digital clocks.	Tell time	Telling time with analog clocks
		Telling time with digital clocks

4.3 Reason with shapes and their attributes

Outcome	Quests	Content
Distinguish between defining attributes versus non-defining attributes; build and draw shapes that possess defining attributes.	Sort shapes based on attributes	Sorting shapes based on attributes
Compose and decompose two- and three-dimensional shapes to build an understanding of part-whole relationships and the properties of the original and composite shapes.	Composite shapes: 2-D & 3-D	Composite shapes: 2-D & 3-D

5 Data and Statistics

5.1 Represent and interpret data

Outcome	Quests	Content
Collect, organize and represent data with up to three categories.	Organize, represent & interpret data	Introducing & reading data in tables
		Representing data in graphs
		Interpreting tally charts & picture graphs
Draw conclusions from object graphs, picture graphs, T-charts and tallies.	Draw conclusions from graphs & tallies	Drawing conclusions from graphs & tallies

Grade 2

1 Number Sense and Operations in Base Ten

1.1 Represent and solve problems involving addition and subtraction

Outcome	Quests	Content
Write and solve problems involving addition and subtraction within 100.	Add & subtract within 100, word problems	Creating addition & subtraction word problems

1.2 Understand place value of three digit numbers

Outcome	Quests	Content
Understand three-digit numbers are composed of hundreds, tens and ones.	Understand hundreds, tens & ones	Understanding hundreds, tens & ones
Count within 1000 by 1s, 10s and 100s starting with any number.	Skip-count within 1000	Skip-counting by 10s
		Skip-counting by 5s
		Skip-counting by 100s
		Counting within 1000
Read and write numbers to 1000 using number names, base-ten numerals and expanded form.	Read & write numbers to 1000	Reading & writing numbers to 1000
Compare two three-digit numbers using the symbols >, = or <.	Compare 3-digit numbers	Comparing 3-digit numbers

1.3 Use place value understanding and properties of operations to add and subtract

Outcome	Quests	Content
Demonstrate fluency with addition and subtraction within 100.	Add & subtract within 100	Using strategies to add & subtract within 100
		Adding & subtracting using a 100 chart
Add up to four two-digit numbers.	Add 2-digit numbers, strategies	Adding 2-digit numbers, strategies
Add or subtract within 1000, and justify the solution.	Add & subtract within 1000	Adding within 1000
		Subtracting within 1000

Add or subtract mentally 10 or 100 to or from a given number within 1000.	Add & subtract 10 or 100 mentally	Adding & subtracting 10 or 100 mentally

2 Relationships and Algebraic Thinking

2.1 Add and subtract within 20

Outcome	Quests	Content
Demonstrate fluency with addition and subtraction within 20.	Add & subtract within 20	Fluently adding & subtracting within 20
		Adding & subtracting two 1-digit numbers

2.2 Develop foundations for multiplication and division

Outcome	Quests	Content
Determine if a set of objects has an odd or even number of members.	Odd & even numbers	Odd & even numbers up to 20
		Skip counting by 2s
Find the total number of objects arranged in a rectangular array with up to 5 rows and 5 columns, and write an equation to represent the total as a sum of equal addends.	Connect addition & arrays	Connecting addition & arrays

3 Geometry and Measurement

3.1 Measure and estimate lengths in standard units

Outcome	Quests	Content
Measure the length of an object by selecting and using appropriate tools.	Select units of measure: m, cm	Selecting units of measure: m, cm

3.2 Relate addition and subtraction to length

Outcome	Quests	Content
Use addition and subtraction within 100 to solve problems involving lengths that are given in the same units.	Addition & subtraction length problems	Solving addition & subtraction length problems

3.3 Work with time and money

Outcome	Quests	Content
Tell and write time from analog and digital clocks to the nearest five minutes, using a.m. and p.m.	Tell time	Telling time to the quarter hour, analog & digital
Describe a time shown on a digital clock as representing hours and minutes, and relate a time shown on a digital clock to the same time on an analog clock.	Tell time to minutes, analog and digital	Telling time to 5 minutes, analog & digital
		Using am & pm notation
Find the value of combinations of dollar bills, quarters, dimes, nickels and pennies, using $ and ¢ appropriately.	Money	Recognizing bills & coins
Find combinations of coins that equal a given amount.	Solve money word problems	Solving money word problems

3.4 Reason with shapes and their attributes

Outcome	Quests	Content
Recognize and draw shapes having specified attributes, such as a given	Recognize & identify shapes	Identifying & sorting shapes
		Identifying quadrilaterals

number of angles or sides. Identify triangles, quadrilaterals, pentagons, hexagons, circles and cubes.		Identifying pentagons
		Identifying hexagons
		Identifying cubes
Identify the faces of three-dimensional objects.	Introduce faces of 3-dimensional shapes	Introducing faces of 3-dimensional shapes

4 Data and Statistics

4.1 Represent and interpret data

Outcome	Quests	Content
Create a line plot to represent a set of numeric data, given a horizontal scale marked in whole numbers.	Introduction to line plots	Reading line plots
Draw a picture graph or a bar graph to represent a data set with up to four categories.	Picture graphs & bar graphs	Picture graphs
		Bar graphs

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