### 4th Grade Math Curriculum

In fourth grade, students will be building on their arithmetic abilities with whole numbers into the world of fractions. Fourth graders also are introduced to the standard system of measurement and basic geometry concepts like the point, the line, the plane, and several 2D shapes.

Our goal is to make sure students not only have a strong grasp of the math skills they need to master this year, but also have the confidence they need to explore and think as they continue to learn about the world around them.

A fourth-grade math curriculum usually begins to step outside the arena of whole numbers and into the area of numbers that are between those integers. The following information will explain the steps you should take to meet your child's 4<sup>th</sup> grade math goals.

## What Math Should a 4th Grader Already Know?

A fourth-grade math student should be able to perform all four operations (addition, subtraction, multiplication and division) with whole numbers. Students should also have memorized the multiplication table through 12, so it's easy to move onto the next level in math without getting hung up on basic multiplication.

## What Do 4th Graders Learn in Math?

The major math concepts covered for a fourth-grade curriculum are:

- Multiplication Table (if not memorized yet)
- Operations with Fractions (addition, subtraction, multiplication and division)
- Arithmetic of Mixed Numbers and Improper Fractions
- Representing Word Problems with Math
- Finding the Perimeter and Area of Geometric Shapes
- Measurement in the Standard System

**SCHEDULING TIPS!** Be sure to include a bit of wiggle room in case your student needs extra time with a math topic. Also note that students may do Geometry at any time during the year.

For example, your schedule might look like this for a **Mastery Approach**:

September	October	November	December
Fractions Session #1:	Fractions Session #2:	Fractions Session #3:	Two weeks of extra
(Beginner &	(Beginner &	(Beginner &	practice if needed.
Intermediate)	Intermediate Level)	Intermediate Level)	
January	February	March	April
Fractions Session #4	Fractions Session #5	Geometry #1-3	Fractions Session #6
(Beginner &	(Beginner &		(Beginner &
Intermediate Level)	Intermediate Level)		Intermediate Level)
May	June	July	August
Fractions Session #7	Fraction Review Test	Fractions #1-4:	Fractions #5-7
(Beginner &		Advanced Level Labs	Advanced Level Labs
Intermediate Level)	Math Camp		
			Arithmetic Review

And here's an example of your schedule using a **Spiral Approach**:

September	October	November	December
Fractions Session #1:	Fractions Session #3:	Fractions Session #5:	Fractions Session #7:
(Beginner)	(Beginner)	(Beginner Level)	(Beginner Level)
Fractions Session #2:	Fractions Session #4:	Fractions Session #6:	
(Beginner)	(Beginner)	(Beginner Level)	
January	February	March	April
Fractions Session #1	Fractions Session #3	Geometry #1-3	Fractions Session #5
(Intermediate Level)	(Intermediate Level)		(Intermediate Level)
		Opportunity for any	
Fractions Session #2	Fractions Session #4	make-up work or	Spring Break
(Intermediate Level)	(Intermediate Level)	extra review	
May	June	July	August
Fractions Session #6	Fraction Review Test	Fractions #1-4:	Fractions #5-7
(Intermediate Level)		Advanced Level Labs	Advanced Level Labs
	Math Camp		
Fractions Session #7			Arithmetic Review
(Intermediate Level)			

# 4th Grade Math Lesson Plan (34 weeks) - Spiral Approach

Spiral Approach: Students complete just the Beginner Level (including workbook assignments) and then move onto next concept, returning to go into more depth for the second pass through the content in the Intermediate level. This approach is good for students that are quick to pick up concepts, enjoy variety and need a review on a regular basis to retain information.

#### Summer Term: Review – not included in the 34 weeks count

- Multiplication Table (For numbers 1-12 as needed)
- <u>Arithmetic Review</u> (Review before starting Fractions)

### **Fall Term: Fractions** *Spend two weeks on each of the following:*

- Session #1: Introduction to Fractions (Beginner Level)
- <u>Session #2:</u> Multiplying Fractions (Beginner Level)
- <u>Session #3:</u> Multiplying & Dividing Fractions (Beginner Level)
- <u>Session #4:</u> Addition & Subtraction with Same Denominators (Beginner Level)
- Session #5: Addition & Subtraction with Different Denominators (Beginner Level)
- Session #6: Mixed Numbers & Improper Fractions and Ratios (Beginner Level)
- Session #7: Mixed Numbers & Improper Fractions (Beginner Level)

### **Winter Term: Fractions** *Spend two weeks on each of the following:*

- <u>Session #1:</u> Introduction to Fractions (Intermediate Level)
- Session #2: Multiplying Fractions (Intermediate Level)
- Session #3: Multiplying & Dividing Fractions (Intermediate Level)
- Session #4: Addition & Subtraction with Same Denominators (Intermediate Level)
- Session #5: Addition & Subtraction with Different Denominators (Intermediate Level)
- Session #6: Mixed Numbers & Improper Fractions and Ratios (Intermediate Level)
- Session #7: Mixed Numbers & Improper Fractions (Intermediate Level)

### **Spring Term: Geometry (Join us Live in Spring!)** *Spend 1-2 weeks on each of the following:*

- Session #1: Geometry Basics
- <u>Session #2:</u> Area of Shapes
- <u>Session #3:</u> Composite Figures

# 4<sup>th</sup> Grade Math Lesson Plan (34 weeks) – Spiral Approach

Date	Math Lesson	Level	Week	Workbook / Assignment	Score
	Session #1:		1	#1: Pages 1-12	
	Introduction to Fractions	<u>Beginner</u>	2	#1: Pages 13-25	
			3	#1: Pages 26-36	
	Session #2:	Reginner		#1: Pages 37-42	
	Multiplying Fractions	<u>Beginner</u>	4	#1 TEST: Pages 43-44	
				#2: Pages 1-3	
	Cossion #2.		5	#2: Pages 4-14	
	Session #3:	Poginnor		#2: Pages 15-26	
	Multiplying & Dividing Fractions	<u>Beginner</u>	c	#2: Pages 27-30	
	Fractions		6	Time Lab Part 1	
	Carrier IIA		7	#2: Pages 31-35	
	Session #4:		7	#2: TEST: Pages 36-37	
	Addition & Subtraction	Beginner		#3: Pages 1-16	
	with Same		8	Precision Measurement	
	Denominators				
	Session #5:		9	#3: Pages 17-39	
	Addition & Subtraction			#3: TEST Pages 40-41	
	with Different	<u>Beginner</u>	10	Measuring Curves/Std Units	
	Denominators			,	
	Session #6:	<u>Beginner</u>	11	#4: Pages 1-21	
	Mixed Numbers &		12	Fraction Maze #12	
	Improper Fractions			Fraction Maze #13	
	and Ratios				
	6 : 117	<u>Beginner</u>	13	#4: Pages 22-43	
	Session #7:			#4: TEST Pages 44-45	
	Mixed Numbers &		14	Fraction Skills Practice Test	
	Improper Fractions			Tic Tac Toe #1	
	Session #1:		15	Ice Cream Shop	
	Introduction to	Intermediate	4.5	Scavenger Hunt	
	Fractions		16	Dominoes	
	Session #2: Multiplying Fractions	Intermediate	17	Pizza Place	
				Spoons: Fractions	
			18	Fractions Bingo	
	Session #3: Multiplying & Dividing	<u>Intermediate</u>	19	Bakery (1, 3-8, 10-12, 14-16)	
			-	Fraction LEGOs	
			20	Rocket Race	
	Fractions			Measurement Maze	

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Date	Math Lesson	Level	Week	Workbook / Assignment	Score
	Cossion #4.		21	Bakery (1, 3-8, 10-12, 14-16)	
	Session #4: Addition & Subtraction			Spoons: Reduce	
	with Same	<u>Intermediate</u>	22	Battle Math Ship	
	Denominators			Precision Gauges	
	Denominators			Fractions Maze	
	Session #5:		23	Fraction Fair	
	Addition & Subtraction	Intormodiato	24	LEGO Gear Lab	
	with Different	<u>Intermediate</u>		BINGO: Equivalent	
	Denominators			Fractions Game	
				Fraction Bump!	
	6 . "6		25	Lemonade Stand	
	Session #6:			Going for a Walk	
	Mixed Numbers &	<u>Intermediate</u>		Spoons: Fraction War	
	Improper Fractions and Ratios		26	Fraction Maze #15	
	Ratios		26	Fraction Maze #16	
				3 & 4 in a Row	
	6 : 117	<u>Intermediate</u>	27	Fraction Maze #17	
	Session #7:			Fraction Maze #18	
	Mixed Numbers &		28	Paper Airplane Lab	
	Improper Fractions			Tic Tac Toe #2	
	Fraction Review	All	29	Fraction Final Review/Test	
		All	30	Geometry Pages 1-16	
	Geometry #1:			BINGO: Lines & Rays	
	Basic Concepts			BINGO: Shapes & Figures	
				Biscuits	
	Geometry #2:		31	Geometry Pages 17-31	
	Rectangles,	All	32	Packet #1	
	Parallelograms,			Modeling Area Booklet	
	Triangles & Trapezoids			Floating Paperclip	
	Geometry #3: Composite Shapes	All	33	Geometry Pages 32-36	
				Packet #2	
			34	Area of Shapes Coloring	
				Spin to Ten	
				BINGO Composite Figures	
				Trading Corks	
				Quiz #1	

# 4th Grade Math Lesson Plan (34 weeks) - Mastery Approach

Mastery Approach: Students complete both Beginner and Intermediate Levels before moving to next concept. Good for students that prefer a slower, more in-depth study pace that focuses on just one new concept at a time.

#### Summer Term: Review - not included in the 34 weeks count

- Multiplication Table (For numbers 1-12 as needed)
- Arithmetic Review (Review before starting Fractions)

#### **Fall Term:** Spend two weeks on each of the following

- <u>Session #1:</u> Introduction to Fractions (Beginner Level)
- <u>Session #1:</u> Introduction to Fractions (Intermediate Level)
- Session #2: Multiplying Fractions (Beginner Level)
- Session #2: Multiplying Fractions (Intermediate Level)
- <u>Session #3:</u> Multiplying & Dividing Fractions (Beginner Level)
- <u>Session #3:</u> Multiplying & Dividing Fractions (Intermediate Level)

### Winter / Spring Term: Spend two weeks on each of the following

- Session #4: Addition & Subtraction with Same Denominators (Beginner Level)
- Session #4: Addition & Subtraction with Same Denominators (Intermediate Level)
- Session #5: Addition & Subtraction with Different Denominators (Beginner Level)
- Session #5: Addition & Subtraction with Different Denominators (Intermediate Level)
- Session #6: Mixed Numbers & Improper Fractions and Ratios (Beginner Level)
- Session #6: Mixed Numbers & Improper Fractions and Ratios (Intermediate Level)
- Session #7: Mixed Numbers & Improper Fractions (Beginner Level)
- Session #7: Mixed Numbers & Improper Fractions (Intermediate Level)

#### Spring Term: Geometry (Join us LIVE in Spring!)

- Session #1: Geometry Basics
- Session #2: Area of Shapes
- Session #3: Composite Figures

# 4<sup>th</sup> Grade Math Lesson Plan (34 weeks) – Mastery Approach

Date	Math Lesson	Level	Week	Workbook / Assignment	Score
	Session #1: Introduction to	Doginnor	1	#1: Pages 1-12	
		<u>Beginner</u>	2	#1: Pages 13-25	
		Intermediate	3	Ice Cream Shop	
	Fractions		4	Scavenger Hunt	
			4	Dominoes	
			5	#1: Pages 26-36	
		<u>Beginner</u>	6	#1: Pages 37-42	
	Session #2:			#1 TEST: Pages 43-44	
	Multiplying			#2: Pages 1-3	
	Fractions		7	Pizza Place	
		<u>Intermediate</u>	0	Spoons: Fractions	
			8	Fractions Bingo	
			0	#2: Pages 4-14	
		Doginana	9	#2: Pages 15-26	
	Session #3:	<u>Beginner</u>	10	#2: Pages 27-30	
	Multiplying &		10	Time Lab Part 1	
	Dividing	<u>Intermediate</u>	11	Bakery (1, 3-8, 10-12, 14-16)	
	Fractions			Fraction LEGOs	
			12	Rocket Race	
				Measurement Maze	
			13	#2: Pages 31-35	
				#2: TEST: Pages 36-37	
	Session #4:		14	#3: Pages 1-16	
	Addition &			Precision Measurement	
	Subtraction with		15	Bakery (1, 3-8, 10-12, 14-16)	
	Same		16	Spoons: Reduce & Compare	
	Session #5: Addition & Subtraction with Different Denominators			Battle Math Ship	
				Precision Gauges	
				Fractions Maze	
		Addition & traction with Different	17	#3: Pages 17-39	
			18	#3: TEST Pages 40-41	
				Measuring Curves/Std Units	
			19	Fraction Fair	
			20	LEGO Gear Lab	
		<u>Intermediate</u>		BINGO: Equivalent Fractions	
				Fractions Board Game	

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Date	Math Lesson	Level	Week	Workbook / Assignment	Score
	Socion #6		21	#4: Pages 1-21	
		<u>Beginner</u>	22	Fraction Maze #12	
				Fraction Maze #13	
	Session #6:		23	Fraction Bump!	
	Mixed Numbers			Lemonade Stand	
	& Improper Fractions and			Going for a Walk	
	Ratios	<u>Intermediate</u>	24	Spoons: Fraction War	
	Natios			Fraction Maze #15	
			24	Fraction Maze #16	
				3 & 4 in a Row	
				#4: Pages 22-43	
		Daniman	25	#4: TEST Pages 44-45	
	Session #7:	<u>Beginner</u>	26	Fraction Skills Practice Test	
	Mixed Numbers		26	Tic Tac Toe #1	
	& Improper		27	Fraction Maze #17	
	Fractions	Intermediate	27	Fraction Maze #18	
			20	Paper Airplane Lab	
			28	Tic Tac Toe #2	
	Fraction Review	All	29	Fraction Review Session	
				Geometry Pages 1-16	
	Geometry #1:	Δ11	20	BINGO: Lines & Rays	
	Basic Concepts		30	BINGO: Shapes & Figures	
				Biscuits	
	Geometry #2:		31	Geometry Pages 17-31	
	Rectangles,			Packet #1	
	Parallelograms, Triangle & Trapezoids  Geometry #3: Composite Shapes	All	32	Modeling Area Booklet	
			32	Floating Paperclip	
		ometry #3:	33	Geometry Pages 32-36	
			24	Packet #2	
				Area of Shapes Coloring	
				Spin to Ten	
			34	BINGO Composite Figures	
				Trading Corks	
				Quiz #1	