



KCDS Mathematics: Kindergarten

A student's kindergarten experience lays the foundation for their future mathematical understanding and knowledge. It should be a joyful, play-oriented, and experiential educational experience for all students – and should engage students in active inquiry, discourse, interaction, and authentic problem solving. The kindergarten curriculum, therefore, emphasizes a series of spiraling (i.e. “revisitable” big ideas that should underlie the learner’s introductory experiences with mathematics.

The kindergarten standards place emphasis on developing the concept of number by counting, combining, sorting, and comparing sets of objects; recognizing and describing simple repeating patterns; and recognizing shapes and sizes of figures and objects. Students will investigate nonstandard measurement, collect data, and create graphs. The idea of fractions will be introduced. There are five spiraling ideas which repeat each quarter. They are: 1) Describing space and developing spatial sense, 2) Counting and comparing, 3) Building number sense, 4) Exploring patterns, 5) Building a beginning understanding of addition and subtraction.

The Core Building Blocks of Kindergarten Mathematics

Big Idea 1: Counting and Comparing

Students will build an understanding of the relationship between numbers and quantities. They will develop an understanding of the “ten” in our number system. They will also develop strategies for counting and comparing numbers

Big Idea 2: Building a Beginning Understanding of Addition and Subtraction:

Students will understand addition as a concept of putting together or combining. They will also understand subtraction as taking apart or finding how groups of objects are different through the use of equations and story problems.

Big Idea 3: Building Number Sense

Students will have an understanding of the meaning of number and quantity. They will develop an understanding of the relative size of numbers and how numbers can be represented in different ways.

Big Idea 4: Exploring Patterns

Students will recognize, describe, extend, and create growing and repeating patterns. Specific pattern categories include shapes, colors, symbols, numbers, and letters.

Big Idea 5: Describing Space and Developing Spatial Sense:

Students will describe shapes in their everyday lives. They will describe and analyze how shapes and people are oriented in their space. They will describe and compare measurable attributes.

KCDS Kindergarten Grade: Mathematics (Grade Level at a Glance)

1st Trimester

<p><u>Unit 1: One to Five (1-2 weeks)</u></p> <ul style="list-style-type: none"> • Number uses • Classification • Representation 	<p><u>Unit 2: Comparing and Ordering 0 to 10 (1-2 weeks)</u></p> <ul style="list-style-type: none"> • Numbers • The number line • The base-ten numeration system • Comparison and relationships 	<p><u>Unit 3: Numbers to 20 (1 week)</u></p> <ul style="list-style-type: none"> • Patterns • Relations • Functions 	<p><u>Unit 4: Numbers to 100 (2 weeks)</u></p> <ul style="list-style-type: none"> • Practices • Processes • Counting and comparing 	<p><u>Unit 5: Understanding Addition (2-3 weeks)</u></p> <ul style="list-style-type: none"> • Operation meanings • Connections • Number sense • Story problems
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2nd Trimester

<p><u>Unit 6: Understanding Subtraction (2-3 weeks)</u></p> <ul style="list-style-type: none"> • Operation meanings • Relationships • Connections • Number sense • Story problems 	<p><u>Unit 7: Composing and Decomposing Numbers to 10 (1-2 weeks)</u></p> <ul style="list-style-type: none"> • Practices • Processes • Proficiencies • Connections to real-life applications 	<p><u>Unit 8: Composing Numbers 11 to 20 (2 week)</u></p> <ul style="list-style-type: none"> • Number uses • Classification • Representation 	<p><u>Unit 9: Decomposing Numbers 11-20 (2-3 weeks)</u></p> <ul style="list-style-type: none"> • Subtraction facts to 20 • Addition facts to 20 • Story problems
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3rd Trimester

<p><u>Unit 10: Measurement (2-3 weeks)</u></p> <ul style="list-style-type: none"> • Comparison • Relationships • Story problems 	<p><u>Unit 11: Sorting, Classifying, Counting, and Categorizing Data (1-2) Weeks</u></p> <ul style="list-style-type: none"> • Geometric figures • Data collection and representation • Practices, processes, and proficiencies • Analyzing charts 	<p><u>Unit 12: Identifying and Describing Shapes (2-3 weeks)</u></p> <ul style="list-style-type: none"> • Comparisons • Relationships • Connections to real-life applications 	<p><u>Unit 13: Position and Location of Shapes (1-2 weeks)</u></p> <ul style="list-style-type: none"> • Geometric models • Angles • Connections • Patterns 	<p><u>Unit 14: Step Up (2-3 weeks)</u></p> <ul style="list-style-type: none"> • Money • Telling time • Story problems • Calendar
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