

1st Grade Math in Focus

Chapter 1: Numbers To Ten

Key Learning Objectives

Counting to 10	Comparing Numbers	Number Patterns
In Section 1, students will learn to count, read, and write numbers from 0 to 10. The use of concrete manipulatives and pictures of objects will help to build a strong foundation in the use of numbers, and in the understanding of the concept of zero.	In Section 2, students will learn to compare two sets of objects by using one-to-one correspondence, and comparing numbers abstractly. Concrete manipulatives and pictures help students to visualize the one-to-one matching process, and thus, deepen their understanding of the concepts	In Section 3, students will learn to find 1 more or 1 less than a number, exploring the relationships between numbers. Then, apply that knowledge to complete increasing and decreasing number patterns.

Chapter 2: Addition and Subtraction within Ten

Key Learning Objectives

Making Number Bonds	Ways to Add and Subtract
In Section 1, students will learn to make number bonds for numbers to 10, by using concrete manipulatives to identify the parts and the whole of a number. This forms an important foundation for students when students progress on to addition and subtraction strategies.	In Sections 2 and 5, students will learn various methods and strategies to write number sentences, and perform addition and subtraction fluently. The use of concrete manipulatives will help to build a strong foundation in the understanding of addition and subtraction.
Solving Real-World Problems	Making Fact Families
In Sections 3, 4, 6, and 7, students will learn to make addition and subtraction stories, and solve real-world problems. The use of pictorial representations help students construct number sentences and number bonds. They will then apply the addition and subtraction strategies learned in Sections 2 and 5, to help them solve the problems.	In Section 8, students will learn to make fact families, expanding on their knowledge of number bonds. They will also learn to determine if a number sentence is true or false, by applying the various methods and strategies they have learned in Sections 1 to 7.

Chapter 3: Shapes and Patterns

Key Learning Objectives

Exploring Flat Shapes	Exploring Solid Shapes	Using Shapes to Make Pictures and Models
In Section 1, students will learn to identify, classify, and describe flat shapes by their geometric attributes and properties. They will also learn to divide a flat shape into two and four equal parts, and describe the parts. Students will also learn to describe the whole flat shape as a sum of its parts.	In Section 2, students will learn to identify solid shapes from different perspectives and orientations. They will also learn to classify and sort the solid shapes according to how these shapes can be moved.	In Section 3, students will learn to compose flat shapes to create a picture or a new shape, as well as compose solid shapes to create a model. They will also learn to identify the different flat shapes and solid shapes in a picture and model respectively.
Seeing Shapes Around Us	Using Flat Shapes and Solid Shapes to Make Patterns	
In Section 4, students will learn to identify flat and solid shapes as or on real-life objects.	In Sections 5 and 6, students will apply what they have learned in Sections 1 and 2, and use flat and solid shapes to make patterns.	

Chapter 4: Numbers To Twenty

Key Learning Objectives

Counting to 20	Place Value
In Section 1, students will learn to read and write numbers, and count on from 10 to 20. The use of concrete manipulatives and pictorial representations help students build a strong foundation in counting on from 10.	In Section 2, students will learn to write numbers to 20 in tens and ones and represent these numbers in a place-value chart. Concrete manipulatives and pictorial representations help students to visualize the groups of 10 and deepen their understanding of the place value of numbers.
Comparing and Ordering Numbers	Number Patterns
In Section 3, students will learn to compare numbers up to 20 using the ">" and "<" symbols. They will also learn to order up to three numbers with the help of a place-value chart, applying their knowledge from Section 2.	In Section 4, students will learn to find 2 more or 2 less than a number. Then, apply that knowledge to complete increasing and decreasing number patterns. The use of concrete manipulatives and pictures helps students to visualize and build a strong understanding of the 2 more/less relationships.

Chapter 5: Addition and Subtraction Within Twenty

Key Learning Objectives

Ways to Add and Subtract	Solving Real-World Problems
<p>In Sections 1 and 2, students will learn various methods and strategies to write number sentences and perform addition and subtraction fluently. The use of concrete manipulatives will help to build a strong foundation in the understanding of addition and subtraction. Next, students will move on to add or subtract using pictures or number bonds. The use of pictorial representations and number bonds help them deepen their understanding of the concepts.</p>	<p>In Section 3, students will learn to solve real-world problems by constructing number sentences. They will apply the various methods and strategies of addition and subtraction learned in Sections 1 and 2, and use concrete manipulatives to help them represent and visualize the real-world problems.</p>

Chapter 6: Numbers To 40

Key Learning Objectives

Counting to 40	Place Value	Comparing, Ordering, and Number Patterns
<p>In Section 1, students will learn to count on from 20 to 40. The use of concrete manipulatives and pictorial representations allow students to make and visualize groups of 10. Hence, paving the way for students to master counting numbers by tens and ones.</p>	<p>In Section 2, students will learn to write numbers to 40 in tens and ones and represent these numbers in a place-value chart. Students will start with showing numbers in tens and ones using concrete manipulatives, then progress on to pictorial representations. They will then apply that knowledge to represent numbers in the abstract form of a place-value chart.</p>	<p>In Section 3, students will learn to compare and order numbers up to 40, and deepen their understanding of comparison by finding how many more or how many less. Students will also continue exploring both increasing and decreasing number patterns.</p>

Chapter 7: Calendar and Time

Key Learning Objectives

Using a Calendar	Telling Time to the Hour	Telling Time to the Half Hour
<p>In Section 1, students will learn to read a calendar, the days of the week, months of the year, and seasons of the year. They will also learn how to write the date.</p>	<p>In Section 2, students will learn to use the term “o’clock” to tell time to the hour. They will also learn to read and tell time to the hour on an analog and digital clock.</p>	<p>In Section 3, students will learn to use the term “half past” to tell time to the half hour. They will also learn to read and tell time to the half hour on an analog and digital clock.</p>

Chapter 8: Addition And Subtraction Within 20

Key Learning Objectives

Addition and Subtraction Within 40	Solving Real-World Problems	Getting Ready for Multiplication
<p>In Sections 1 to 4, students will learn various methods and strategies to add and subtract without and then with regrouping. The use of concrete manipulatives and place-value charts will help students build a strong foundation in the regrouping process and deepen their understanding of the vertical form.</p>	<p>In Section 5, students will have opportunities to solve real-world problems by applying the addition and subtraction strategies they have learned in Sections 1 to 4. The use of concrete manipulatives and pictorial representations help students to represent and visualize the word problems</p>	<p>In Section 6, students will explore adding equal groups with concrete manipulatives and pictorial diagrams. Thus, building the foundation for students to relate repeated addition to multiplication.</p>

Chapter 9: Length and Weight

Key Learning Objectives

Comparing Lengths	Measuring Lengths	Comparing and Measuring Weights
<p>In Sections 1 to 3, students will learn to compare lengths of two objects both directly and indirectly. Concrete manipulatives such as connecting cubes are used to allow students to further explore the ideas of taller, longer, and shorter. Students will also learn the importance of using a start line when comparing lengths.</p>	<p>In Sections 4 and 5, students will experience measuring lengths using non-standard units such as paper clips, craft sticks, and more. The use of different non-standard units helps students understand that using different units may give different measurements for the same object.</p>	<p>In Sections 6 to 8, students will learn to compare the weights of two objects using a balance. As with length, students will then progress on to using non-standard units to measure weight. They will then compare the weight of two or more things by comparing the numbers of units used in weighing.</p>

Chapter 10: Numbers To 120

Key Learning Objectives

Counting to 120	Place Value	Comparing, Ordering, and Number Patterns
<p>In Section 1, students will learn to count on from 40 to 120. The use of concrete manipulatives and pictorial representations help students to master counting in tens and ones and allow them to identify and visualize each number.</p>	<p>In Section 2, students will learn to show numbers to 100 in tens and ones and represent these numbers in a place-value chart. They will also learn to decompose and represent 2-digit numbers in different ways both concretely with manipulatives and through pictorial representations.</p>	<p>In Section 3, students will learn to compare and order numbers up to 100. They will also continue exploring both increasing and decreasing number patterns for patterns up to 10 more and 10 less.</p>

Chapter 11: Addition and Subtraction within 100

Key Learning Objectives

Addition Within 100	Subtraction Within 100
In Sections 1 and 2, students will learn various methods and strategies to add without and then with regrouping. The use of concrete manipulatives and place-value charts help students to build a strong foundation of when there is the need for regrouping, that is, when the addition of ones exceeds 9, and deepen their understanding of the vertical form.	In Sections 3 and 4, students will learn various methods and strategies to subtract without and then with regrouping. The use of concrete manipulatives and place-value charts help students to build a strong foundation of when there is the need for regrouping, that is, when the subtraction of ones cannot be carried out because of insufficient ones, and deepen their understanding of the vertical form.

Chapter 12: Graphs

Key Learning Objectives

Simple Picture Graphs	Tally Charts and Picture Graphs
In Section 1, students will learn to collect, organize, and show data as a picture graph. Students will learn to read and understand the data shown in a picture graph.	In Section 2, students will learn to collect data and make a tally chart to organize the data. Then will then show the data in a tally chart as a picture graph.

Chapter 13: Money

Key Learning Objectives

Penny, Nickel, and Dime	Quarter
In Section 1, students learn to recognize, identify, and name a penny, a nickel, and a dime. They understand that “¢” stands for cents and practice counting on to find the value of a group of identical coins. Using manipulatives like coin sets, students experience finding different combinations of coins, less than 25¢, to buy items.	In Section 2, students learn to recognize, identify, and name a quarter. With the coin sets, students explore exchanging a quarter for a set of coins of equal value.
Counting Money	Adding and Subtracting Money
In Section 3, students learn to count money in cents up to \$1 using the “count on” strategy. They further explore using different combinations of coins to show the same value with the coin sets.	In Section 4, students learn to add to find the cost of items and subtract to find the change. This provides students with a strong foundation to progress on to solving real-world problems involving addition and subtraction of money.