

Math Thoughtful Play Scope & Sequence

The Approach

The Thoughtful Play math curriculum follows a research-based learning progression model.

Here is how we recommend you approach the units

- Adapt your pace based on where your child is really at, not where you wish they were.
- Take your time. If your child is ready, utilize the extensions within each day.
- Spiraling is part of the learning progressions. Mastery happens over time.
 - If your child is still working on a skill, please know that many skills are weaved throughout the curriculum.
 - If you feel your child needs more time or support through guided instruction, it is entirely okay to spend a few days on one lesson, or to revisit a prior lesson.
- This curriculum incorporates the important mathematical skills and concepts for Kindergarten and many first-grade skills. It aligns with math grade-level standards.

Unit 1: Counting & Building Number Sense

Overview: This unit covers the foundational skills and concepts for numeracy. You might feel that your child already knows how to count; however, consider if they deeply understand how numbers work. It is essential for children to feel ease with these skills and concepts and to be able to share their understandings through math talk.

Skills & Concepts:

- Count aloud by 1's to 100 (K) and 120 (1st)
- Count objects accurately (K)
- Say how many are in a small group of objects without counting (subitize) (K & 1st Grade)
- Number recognition & write numbers up to 9 (K & 1st Grade)
- Count-on from a number other than 1 (K)
- Say the multiples of 5 and of 10 (to 100) & count objects in groups of 5's and 10's (K & 1st)

Unit 2: Foundations of Addition

Overview: This unit creates a solid entryway into addition. The lessons develop an understanding of the actions in addition word problems. It helps children conceptually understand addition and connects counting to addition, thereby advancing children's numeracy skills.

Skill and Concepts

- Use physical movement and objects to represent "joining" and "combining addition word problems (K & 1st Grade)
- Describe the action in addition word problems (K & 1st Grade)
- Connect counting to addition (K & 1st Grade)
- Explore pairs that form a sum of 2 through 9 (e.g., $1+1=2$, $1+2=3$) (K); extend to 20 (1st Grade)
- Solve for an unknown in an addition word problem (1st Grade)
- Explore the meaning of the equal sign and write equations (K & 1st Grade)



Unit 3: Build & Break Apart Numbers

Overview: This unit advances children’s skill set with addition and begins to introduce subtraction. The unit builds flexibility by developing an understanding of how you can put numbers together and take them apart. The unit also attends to fluency through practice and strategies that relate to accuracy and efficiency.

Skill and Concepts:

- Explore the number pairs that make 10 (K)
- Use representations of numbers in a ten frame to help conceptualize addition (K & 1st Grade)
- Learn and apply properties of mathematics (K & 1st Grade)
- Continue to develop an understanding of the equal sign and equations (K & 1st Grade)
- Use visual models and connect them to equations (K & 1st Grade)
- Begin to use mental math (K) or solidify memorization of addition facts (1st Grade)

Unit 4: Connecting Addition & Subtraction

Overview: This unit creates a solid entryway into subtraction. The lessons develop an understanding of the actions in subtraction word problems. It helps children conceptually understand subtraction and connects addition and subtraction, thereby advancing children’s numeracy skills.

Skill and Concepts

- Use physical movement and objects to represent “taking-apart” or “separating” in subtraction word problems (K & 1st Grade)
- Describe the action in subtraction word problems (K & 1st Grade)
- Connect addition to subtraction (K & 1st Grade)
- Create drawings and write equations to represent “taking-apart” or “separating” in subtraction word problems (K & 1st Grade)
- Solve for an unknown in subtraction word problems (1st Grade)

Unit 5: Compare & Measure

Overview: This unit develops children’s understandings of categorizing and comparing. First, we begin with sorting objects into categories and comparing, using greater than (>), less than (<), or equal to (=). This unit also includes solving comparison words problems. Finally, we work on comparing objects based on attributes that can be measured, and learn how to measure the length of an object.

Skill and Concepts

- Sort objects into three categories, represent with tally marks and numerical values, and compare (K)
- Compare single-digit numbers using >, <, or = (K)
- Use objects, drawings and counting to solve comparison word problems (1st Grade)
- Describe and compare objects based on measurable attributes (e.g., height, weight) (K & 1st)
- Learn how to measure objects with whole number length units (1st Grade)

Unit 6: Base Ten & Number Relationships

Overview: This unit builds the foundation for understanding how the base ten number system works. This knowledge is key for accuracy with addition and subtraction. This unit also builds understandings of how numbers are interconnected. Take your time with this unit. Mastery of these concepts is necessary to have success with Unit 8.

Skill and Concepts

- Create models to show that 1 ten is 10 ones (K)
- Use visual models to represent numbers 10-19 (K)
- Write numbers 10 to 20 (K)
- Explore place value locations (ones, tens, hundreds) and what each place means (K & 1st Grade)
- Compare numbers using place value reasoning (K & 1st Grade)
- Mentally add or subtract 10 from a number (1st Grade)
- Add a two-digit number to a one digit number (1st Grade)

Unit 7: Geometry

Overview: This unit builds children’s foundational understandings of geometric figures. It emphasizes the use of children’s language to describe the characteristics of shapes. It offers an exploration into putting together and taking apart shapes to build spatial sense.

Skill and Concepts

- Name shapes regardless of size, color, or position (K)
- Identify objects in the environment using names of shapes (K)
- Identify shapes as 2-dimensional or 3-dimensional (K)
- Describe and compare shapes based on their attributes (K & 1st Grade)
- Put together and take apart shapes to make other shapes (K & 1st Grade)
- Partition circles and rectangles into halves, fourths (quarters), and understand the language of fractions (half of, fourth of) and how this relates to the whole (two of, four parts of).

Unit 8: Time & Money

Overview: In this unit children begin to learn how to tell time and develop an understanding of money, specifically change in the US currency.

Skill and Concepts

- Understand how time is measured (seconds, minutes, hours) (K & 1st Grade)
- Understand how clocks work (K & 1st Grade)
- Begin to read an analog and a digital clock. (K & 1st Grade)
- Develop an understanding of coins in the US currency (1¢, 5¢, 10¢, 25¢) (1st & 2nd Grade)
- Count by 5’s and 10’s to answer questions about “How much money?” (1st & 2nd Grade)