

# Contents

Introduction . . . . .	1
Research on the Benefits of Manipulatives . . . . .	2
How to Use This Book . . . . .	6
A Walk Through a Lesson . . . . .	8
NCTM Correlation Chart . . . . .	10

## Number and Operations 14

---

<b>Lesson 1</b> Counting to 5 and Back . . . . .	16
<b>Lesson 2</b> Groups of 0 to 5 . . . . .	18
<b>Lesson 3</b> Groups of 6 to 10 . . . . .	20
<b>Lesson 4</b> Number Shapes . . . . .	22
<b>Lesson 5</b> Estimate and Count . . . . .	24
<b>Lesson 6</b> Comparing Groups . . . . .	26
<b>Lesson 7</b> Equal Groups . . . . .	28
<b>Lesson 8</b> More and Fewer . . . . .	30
<b>Lesson 9</b> Order of Numbers . . . . .	32
<b>Lesson 10</b> Ordinal Numbers . . . . .	34
<b>Lesson 11</b> Counting On . . . . .	36
<b>Lesson 12</b> Part-Part-Whole . . . . .	38
<b>Lesson 13</b> Joining Problems . . . . .	40
<b>Lesson 14</b> Using the Plus Sign . . . . .	42
<b>Lesson 15</b> Decomposing Numbers . . . . .	44
<b>Lesson 16</b> Separating Problems . . . . .	46
<b>Lesson 17</b> Using the Minus Sign . . . . .	48
<b>Lesson 18</b> Identifying Halves . . . . .	50

## Geometry 52

---

<b>Lesson 1</b> Left and Right . . . . .	54
<b>Lesson 2</b> Attributes of Plane Shapes . . . . .	56
<b>Lesson 3</b> Plane Shapes and Real-Life Objects . . . . .	58

<b>Lesson 4</b> Exploring Shape Attributes . . . . .	60
<b>Lesson 5</b> Shape Attribute Riddles . . . . .	62
<b>Lesson 6</b> Cubes and Spheres . . . . .	64
<b>Lesson 7</b> Geometric Pictures and Designs . . . . .	66
<b>Lesson 8</b> Geometric Problems . . . . .	68
<b>Lesson 9</b> Top, Middle, and Bottom . . . . .	70
<b>Lesson 10</b> Positions in a Line . . . . .	72
<b>Lesson 11</b> Relative Locations . . . . .	74
<b>Lesson 12</b> Inside and Outside . . . . .	76

## Algebra 78

---

<b>Lesson 1</b> Sort by One Attribute . . . . .	80
<b>Lesson 2</b> Sort by Two Attributes . . . . .	82
<b>Lesson 3</b> Determine the Sorting Rule . . . . .	84
<b>Lesson 4</b> Extend Color Patterns . . . . .	86
<b>Lesson 5</b> Extend Shape Patterns . . . . .	88
<b>Lesson 6</b> Extend Growing Patterns . . . . .	90
<b>Lesson 7</b> Translate Patterns . . . . .	92
<b>Lesson 8</b> Three-Object Patterns . . . . .	94
<b>Lesson 9</b> Arranging Sets of Objects . . . . .	96

## Measurement 98

---

<b>Lesson 1</b> Nonstandard Measurement of Height . . . . .	100
<b>Lesson 2</b> Sorting by Height . . . . .	102
<b>Lesson 3</b> Sorting by Length . . . . .	104
<b>Lesson 4</b> Estimating and Measuring Length . . . . .	106
<b>Lesson 5</b> Exploring Perimeter . . . . .	108
<b>Lesson 6</b> Exploring Area . . . . .	110

## **Data Analysis and Probability** **112**

---

<b>Lesson 1</b>	Exploring Pictographs	114
<b>Lesson 2</b>	Exploring Bar Graphs	116
<b>Lesson 3</b>	Graphing Data	118
<b>Lesson 4</b>	Using a Bar Graph	120
<b>Lesson 5</b>	Cube Tallies	122
<b>Lesson 6</b>	Spinner Probabilities	124

## **Blackline Masters**

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<b>BLM 1</b>	Number Cards	126
<b>BLM 2</b>	Number Shapes Worksheet	127
<b>BLM 3</b>	0–10 Number Line	128
<b>BLM 4</b>	Part-Part-Whole Workmat	129
<b>BLM 5</b>	Take-Away Workmat	130
<b>BLM 6</b>	Pattern Blocks Recording Sheet	131
<b>BLM 7</b>	Shape Landscape	132
<b>BLM 8</b>	Ten-Frame Worksheet	133
<b>BLM 9</b>	Area Worksheet	134
<b>BLM 10</b>	Graphing Grid	135
<b>BLM 11</b>	Spinner Pattern	136
Glossary of Manipulatives		137
Index		139

**Objective**

Explore the concept of height using nonstandard units.

**Skills**

- Measurement
- Counting
- Estimation

**NCTM Expectations****Measurement**

- Recognize the attributes of length, volume, weight, area, and time.
- Understand how to measure using nonstandard and standard units.
- Measure with multiple copies of units of the same size, such as paper clips laid end to end.

**Measurement**

# Nonstandard Measurement of Height

Children may be familiar with height. They may have been measuring their growth on a wall at home, comparing their height to that of a family member, or waiting to be tall enough for a certain activity. In this lesson, children will learn to measure height in nonstandard units, which lays a foundation for later being able to use more abstract standard units of measure, such as inches and feet.

**Try It!** Perform the Try It! activity on the next page.

**Talk About It**

Discuss the Try It! activity.

- **Ask:** *What are some things that people measure for height? Help children think of objects, such as buildings, trees, and so on.*
- **Say:** *Explain how you find out how tall something is by using Link 'N' Learn® Links.*

**Solve It**

With children, reread the problem. Have children draw a picture showing how Jordan could measure the height of the jar with Links.

**More Ideas**

For other ways to teach about nonstandard measurements of height—

- Have children work in pairs. Each child will trace his or her partner on a large piece of paper. Then children will attach their outlines to the wall and measure the height using Link 'N' Learn Links.
- Have children work in pairs to play a guessing game. Children choose a classroom object and each child guesses the object's height in Link 'N' Learn Links (or Snap Cubes®). Then children measure the object's height with Links (or Cubes) to see whose guess was closest.

**Standardized Practice**

Have children try the following problem.

*How many Links tall is the milk carton?*



**Try It!** 10 minutes | Pairs

Here is a problem demonstrating how to use nonstandard units to measure height.

*In Jordan's classroom, there is a jar where children put paintbrushes when they are not using them. Jordan's teacher asks the class to find out how tall the jar is. She says that they will measure the jar using Link 'N' Learn® Links. How can Jordan find out the height of the jar?*

Introduce the problem. Tell children that they will use Links to find the height of classroom objects. Explain that height tells how tall something is. Demonstrate for children how to make a chain of Links that is the height of a classroom object, such as the leg of a chair. Then have children do the activity to solve the problem. Distribute Links to children.

**Materials**

- Link 'N' Learn® Links (50 per pair)



**1.** Ask children to choose an object in the classroom and estimate its height. Encourage them to make a chain that is the same height as the object.



**2.** Now have children check their chains against the object they are measuring. For example, if children choose a table to measure, **say:** *Hold your chain beside the table to see if they are the same height.* Children may have to add or take away Links to make their chains the same height as the objects they are measuring.



**3.** Have children make sure their chains match the height of the object. Then ask children to share their final measurements with the class.

**! Look Out!**

Some children may choose objects to measure whose height cannot be expressed with an even number of Links. If children are confused by this, tell them that some items may be "almost" or "close to" a certain number of Links.

