

PRACTICE - ASSESS - DIAGNOSE

# 180 Days of MATH

for Third Grade



Developed by  
Jodene Smith

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## INTRODUCTION AND RESEARCH

### The Need for Practice

In order to be successful in today’s mathematics classroom, students must deeply understand both concepts and procedures so that they can discuss and demonstrate their understanding. Demonstrating understanding is a process that must be continually practiced in order for students to be successful. According to Marzano (2010, 83), “practice has always been, and will always be, a necessary ingredient to learning procedural knowledge at a level at which students execute it independently.” Practice is especially important to help students apply their concrete, conceptual understanding to a particular procedural skill.

### Understanding Assessment

In addition to providing opportunities for frequent practice, teachers must be able to assess students’ understanding of mathematical procedures, terms, concepts, and reasoning (Kilpatrick, Swafford, and Findell 2001). This is important so that teachers can adequately address students’ misconceptions, build on their current understanding, and challenge them appropriately.

Assessment is a long-term process that often involves careful analysis of student responses from a lesson discussion, project, practice sheet, or test. When analyzing the data, it is important for teachers to reflect on how their teaching practices may have influenced students’ responses and to identify those areas where additional instruction may be required. In short, the data gathered from assessments should be used to inform instruction: slow down, speed up, or reteach. This type of assessment is called *formative assessment* and is used to provide a seamless connection between instruction and assessment (McIntosh 1997).

# HOW TO USE THIS BOOK

*180 Days of Math for Third Grade* offers teachers and parents a full page of daily mathematics practice activities for each day of the school year.

## Easy to Use and Standards-Based

These activities reinforce grade-level skills across a variety of mathematical concepts. The questions are provided as a full practice page, making them easy to prepare and implement as part of a classroom morning routine, at the beginning of each mathematics lesson, or as homework.

Every third-grade practice page provides 10 questions, each tied to a specific mathematical concept. Students are given the opportunity for regular practice in each mathematical concept, allowing them to build confidence through these quick standards-based activities.

Question	Mathematics Concept	NCTM Standard
1	<b>Addition or Subtraction</b>	Understands meanings of operations and how they relate to one another; Computes fluently and makes reasonable estimates; Understands various meanings of multiplication and division; Develops fluency in adding, subtracting, multiplying, and dividing whole numbers; Understands numbers, ways of representing numbers, relationships among numbers, and number systems
2	<b>Multiplication</b>	
3		
4	<b>Division or Number Sense</b>	
5	<b>Place Value or Fractions, Decimals, and Money</b>	Understands numbers, ways of representing numbers, relationships among numbers, and number systems; Computes fluently and makes reasonable estimates
6	<b>Algebra and Algebraic Thinking</b>	Understands patterns, relations, and functions; Represents and analyzes mathematical situations and structures using algebraic symbols
7	<b>Measurement</b>	Understands measurable attributes of objects and the units, systems, and processes of measurement; Applies appropriate techniques and formulas to determine measurements
8		
9	<b>Geometry or Data Analysis</b>	Analyzes characteristics and properties of two-dimensional and three-dimensional geometric shapes and develops mathematical arguments about geometric relationships; Formulates questions that can be addressed with data and collects, organizes, and displays relevant data to answer them
10	<b>Word Problem/Logic Problem or Mathematical Reasoning</b>	Builds new mathematical knowledge through problem solving; Applies and adapts a variety of appropriate strategies to solve problems

*Standards are listed with the permission of the National Council of Teachers of Mathematics (NCTM). NCTM does not endorse the content or validity of these alignments.*

# HOW TO USE THIS BOOK *(cont.)*

## Using the Practice Pages

As outlined on page 4, every question is aligned to a mathematics concept and standard.

Practice pages provide instruction and assessment opportunities for each day of the school year.

Each question ties student practice to a specific mathematics concept.

## Using the Scoring Guide

Use the scoring guide along the side of each practice page to check answers and see at a glance which skills may need more reinforcement.

Fill in the appropriate circle for each problem to indicate correct (Y) or incorrect (N) responses. You might wish to indicate only incorrect responses to focus on those skills. (For example, if students consistently miss numbers 2 and 6, they may need additional help with those concepts as outlined in the table on page 4.) Use the answer key at the back of the book to score the problems, or you may call out answers to have students self-score or peer-score their work.

NAME: \_\_\_\_\_

**DIRECTIONS** Solve each problem.

**SCORE**

1. (Y) (N)

$$\begin{array}{r} 20 \\ - 15 \\ \hline \end{array}$$

2. (Y) (N)

6.  $4 + 5 = \square + 4$

3. (Y) (N)

2.  $9 \times 5 = \square$

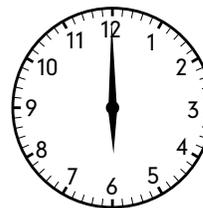
7. How many days are in June?  
\_\_\_\_\_

4. (Y) (N)

8. Write the time in words.  
\_\_\_\_\_

5. (Y) (N)

3. 4 groups of 10 is \_\_\_\_\_.



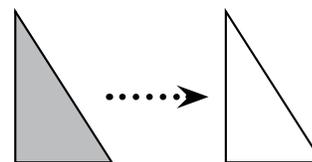
6. (Y) (N)

4. What is the numeral for forty-two?  
\_\_\_\_\_

9. Does the drawing show a *flip*, *slide*, or *turn*?  
\_\_\_\_\_

7. (Y) (N)

8. (Y) (N)



9. (Y) (N)

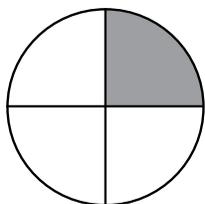
5. What fraction of this shape is shaded?  
\_\_\_\_\_

10. (Y) (N)

10. Grandma made 20 cookies. We ate 13. How many are left?  
\_\_\_\_\_

\_\_\_ / 10

Total



NAME: \_\_\_\_\_

**DIRECTIONS** Solve each problem.

$$\begin{array}{r} 1. \quad 25 \\ \quad 52 \\ + 15 \\ \hline \end{array}$$

$$2. \quad 4 \times 80 = \square$$

3. What is the product of 8 and 8?

\_\_\_\_\_

$$4. \quad 72 \div 8 = \square$$

5. Write 2,304 in expanded notation.

\_\_\_\_\_

6. Fill in the missing number.

550, 561, \_\_\_\_\_, 583

7. Which is longer: 2 hours or 100 minutes?

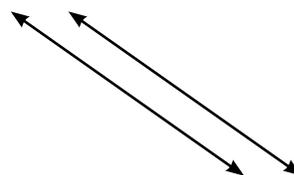
\_\_\_\_\_

8. Does the palm of your hand have an area greater than or less than  $1 \text{ m}^2$ ?

\_\_\_\_\_

9. Name the lines.

\_\_\_\_\_



10. Gwen has a collection of 54 stuffed animals. Two-sixths are teddy bears. The rest are other types of animals. How many teddy bears does Gwen have?

\_\_\_\_\_

SCORE

1. (Y) (N)

2. (Y) (N)

3. (Y) (N)

4. (Y) (N)

5. (Y) (N)

6. (Y) (N)

7. (Y) (N)

8. (Y) (N)

9. (Y) (N)

10. (Y) (N)

\_\_\_ / 10

Total