Fourth Edition

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Teacher's Toolkit CD

To the Teacher
Worktext Answer Key
Reviews Answer Key
Tests with Coins (in color)
Visuals (from the Teacher's Visual Packet)
Instructional Aids
Math Board Suggestions
Assessments
Fact Reviews
Fact Flashcards
Extended Activities
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Group Work Rubric

Lesson Features

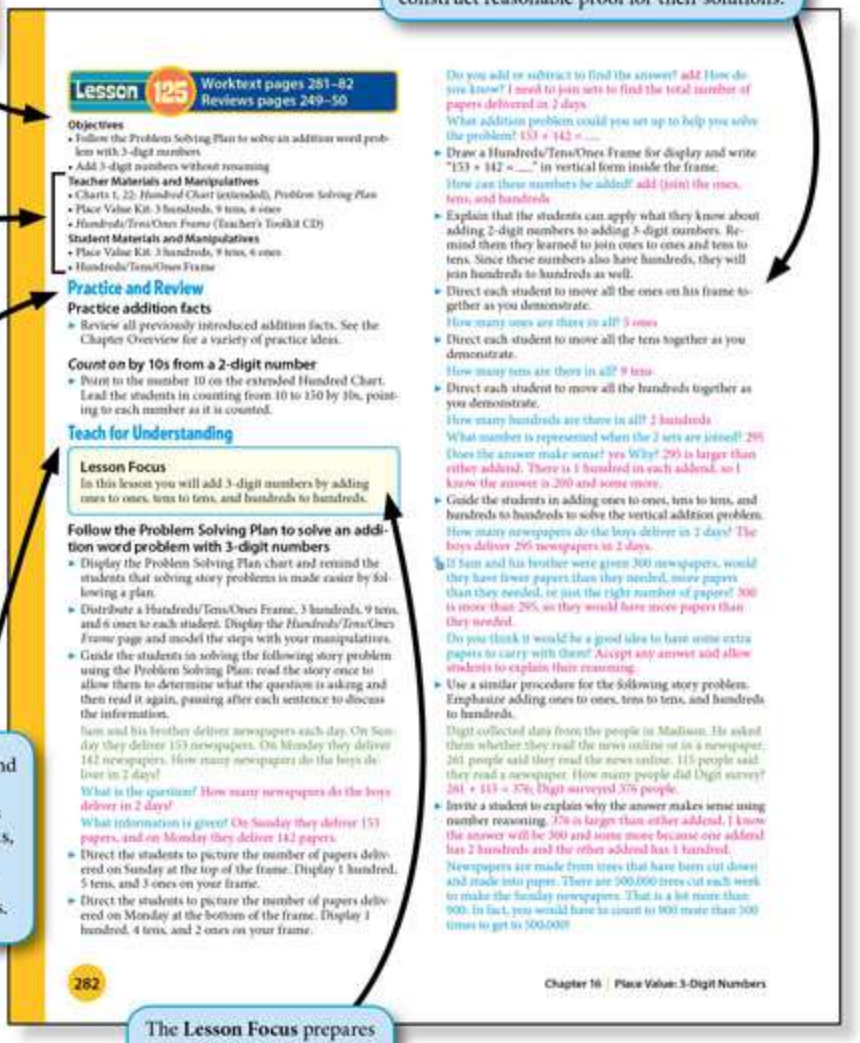
Objectives point out the skills to teach in the lesson.

The **Materials** section lists items to collect or prepare ahead of time.

Practice and Review provides activities for practicing previously taught skills, such as counting objects and number recognition. Review of concepts can occur any time during the day.

Teach for Understanding and **Check for Understanding** provide effective procedures for explaining math concepts, using manipulatives, and promoting problem solving using critical-thinking skills.

Involve the students in **interactive learning** through discussion that encourages them to construct reasonable proof for their solutions.



Lesson 125 Worktext pages 281–82 Reviews pages 249–50

Objectives
- Follow the Problem Solving Plan to solve an addition word problem with 3-digit numbers
- Add 3-digit numbers without renaming

Teacher Materials and Manipulatives
- Charts 1, 22: *Hundred Chart* (extended), *Problem Solving Plan*
- Place Value Kit: 3 hundreds, 9 tens, 6 ones
- *Hundreds/Tens/Ones Frame* (Teacher's Toolkit CD)

Student Materials and Manipulatives
- Place Value Kit: 3 hundreds, 9 tens, 6 ones
- Hundreds/Tens/Ones Frame

Practice and Review

Practice addition facts
- Review all previously introduced addition facts. See the Chapter Overview for a variety of practice ideas.

***Count on* by 10s from a 2-digit number**
- Point to the number 10 on the extended Hundred Chart. Lead the students in counting from 10 to 150 by 10s, pointing to each number as it is counted.

Teach for Understanding

Lesson Focus
In this lesson you will add 3-digit numbers by adding ones to ones, tens to tens, and hundreds to hundreds.

Follow the Problem Solving Plan to solve an addition word problem with 3-digit numbers
- Display the Problem Solving Plan chart and remind the students that solving story problems is made easier by following a plan.
- Distribute a Hundreds/Tens/Ones Frame, 3 hundreds, 9 tens, and 6 ones to each student. Display the *Hundreds/Tens/Ones Frame* page and model the steps with your manipulatives.
- Guide the students in solving the following story problem using the Problem Solving Plan: read the story once to allow them to determine what the question is asking and then read it again, pausing after each sentence to discuss the information.

  Sam and his brother deliver newspapers each day. On Sunday they deliver 153 newspapers. On Monday they deliver 142 newspapers. How many newspapers do the boys deliver in 2 days?

  What is the question? How many newspapers do the boys deliver in 2 days?

  What information is given? On Sunday they deliver 153 papers, and on Monday they deliver 142 papers.
- Direct the students to picture the number of papers delivered on Sunday at the top of the frame. Display 1 hundred, 5 tens, and 3 ones on your frame.
- Direct the students to picture the number of papers delivered on Monday at the bottom of the frame. Display 1 hundred, 4 tens, and 2 ones on your frame.

  Do you add or subtract to find the answer? add How do you know? I need to join sets to find the total number of papers delivered in 2 days.

  What addition problem could you set up to help you solve the problem? 153 + 142 = ____
- Draw a Hundreds/Tens/Ones Frame for display and write "153 + 142 = ____" in vertical form inside the frame.

  How can these numbers be added? add (join) the ones, tens, and hundreds
- Explain that the students can apply what they know about adding 2-digit numbers to adding 3-digit numbers. Remind them they learned to join ones to ones and tens to tens. Since these numbers also have hundreds, they will join hundreds to hundreds as well.
- Direct each student to move all the ones on his frame together as you demonstrate.

  How many ones are there in all? 5 ones
- Direct each student to move all the tens together as you demonstrate.

  How many tens are there in all? 9 tens
- Direct each student to move all the hundreds together as you demonstrate.

  How many hundreds are there in all? 2 hundreds

  What number is represented when the 2 sets are joined? 295

  Does the answer make sense? yes Why? 295 is larger than either addend. There is 1 hundred in each addend, so I know the answer is 200 and some more.
- Guide the students in adding ones to ones, tens to tens, and hundreds to hundreds to solve the vertical addition problem.

  How many newspapers do the boys deliver in 2 days? The boys deliver 295 newspapers in 2 days.

  If Sam and his brother were given 300 newspapers, would they have fewer papers than they needed, more papers than they needed, or just the right number of papers? 300 is more than 295, so they would have more papers than they needed.

  Do you think it would be a good idea to have some extra papers to carry with them? Accept any answer and allow students to explain their reasoning.
- Use a similar procedure for the following story problem. Emphasize adding ones to ones, tens to tens, and hundreds to hundreds.

  Digit collected data from the people in Madison. He asked them whether they read the news online or in a newspaper. 261 people said they read the news online. 115 people said they read a newspaper. How many people did Digit survey? 261 + 115 = 376; Digit surveyed 376 people.
- Invite a student to explain why the answer makes sense using number reasoning. 376 is larger than either addend. I know the answer will be 300 and some more because one addend has 2 hundreds and the other addend has 1 hundred.

  Newspapers are made from trees that have been cut down and made into paper. There are 500,000 trees cut each week to make the Sunday newspapers. That is a lot more than 900. In fact, you would have to count to 900 more than 500 times to get to 500,000!

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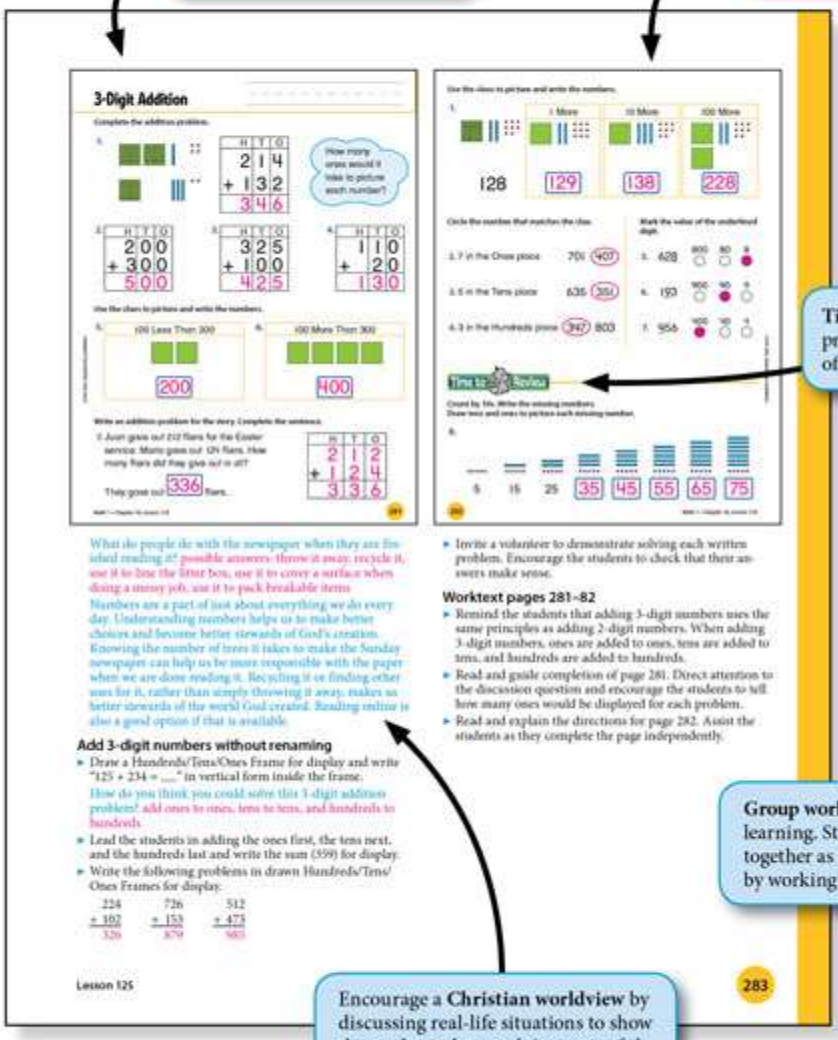
Chapter 16 | Place Value: 3-Digit Numbers

The **Lesson Focus** prepares the students for what they will learn in the lesson.

Reduced **Worktext** pages provide solutions. Use these pages to evaluate student progress and to determine where more guidance is needed.

A variety of **activities** allows the students to see math at work in real-life contexts.



Time to Review exercises provide systematic review of skills and concepts.

Group work promotes collaborative learning. Students learn by working together as a whole class and sometimes by working in smaller groups.

Encourage a **Christian worldview** by discussing real-life situations to show the students that math is a powerful tool for exercising dominion over the earth as commanded in Genesis 1:28.

New to This Edition

1. The goal of this book is to advance the math understanding of every student in your classroom. Since students have diverse needs and learning styles, this book places increased emphasis on implementing differentiated instruction. Changes include more group work, which allows collaboration among peers. For optimal learning for all students, each group should include students with varying strengths and abilities. Groups may vary for each instructional strand. Students who are reluctant to respond in large groups will often participate in small groups. The use of manipulatives and strategies is emphasized throughout to help your students grow their math knowledge and demonstrate their thinking.

2. The Teacher Notes section in the front of each chapter details the learning objectives for the chapter. This section includes background information, indicates what knowledge the chapter is building on, and gives other helpful information that pertains to the chapter. On this page you will also find math board suggestions, which are review activities designed to be used any time of day. This review time focuses on core concepts and provides an excellent opportunity for you to find areas where your students would benefit from additional teaching or practice. Also included are ideas for helping a student who may need individual help.

3. Studies show that retention increases by 23 percent when students know what learning is expected of them. This book offers a Lesson Focus for every lesson. This statement is to be conveyed to your students before the lesson begins. In some cases the Lesson Focus explains a process the students will use to learn a new skill; in other lessons it explains how previous knowledge will be applied to a new concept.

4. To help your students become lifelong problem-solvers, more focus has been placed on processing word problems. Encourage the students to become active listeners by asking them to listen for who the problem is about and what action is taking place as you read through the word problem the first time. As you reread the problem one sentence at a time, encourage your students to picture the problem with manipulatives or drawings. After all sentences have been reread and the picture is complete, ask the students to translate the picture into a number sentence and retell the story in their own words. Making a picture helps the students make sense of their number sentence. Finally, a summary sentence should be crafted to explain the solution.

5. Answers to questions are modeled with full answers using math terminology from the lesson. It may take additional questioning to draw more complete answers and explanations from your students at the beginning of the year. A pattern is established in the lessons of asking students to explain their answers or reasoning. You will notice that the reasoning is often included in answers even when the question does not specifically ask for it. It is expected that the students will give their reasoning for all answers where appropriate. Taking time to listen to students explain their answers provides insight to their reasoning and can help you strengthen their thinking or clear up any misconceptions they may have. A gear icon ( ) is used to help you identify the higher-level thinking questions within the lessons. Supply any prompts or background needed to guide the students to the answer. Worktext pages often have discussion questions in blue think bubbles. These questions are intended to engage your students in math discussions that lead them to a deeper level of math understanding and further develop their reasoning abilities.

6. Provide a safe, loving, and positive learning environment that encourages students to participate in the learning process. Remember that each student is made in God's image (Genesis 1:26–27). Circulate among the students as they work, gently guiding them to correct thinking and giving individual attention as needed. Praise students who work diligently to learn and those who model good behavior and a helpful spirit. Many real-life connections for math are made as Digit volunteers at different businesses in the Madison community. Teach your students that God provides many opportunities for them to help others and that they should desire to be diligent in their work and to portray Christ's love and grace to those around them.