## MASTERBOOKS CURRICULUM

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## Dedication

To all the little children, whom He Loves.

## Author Bio:

As a homeschooling mom and author, Angela O'Dell embraces many aspects of the Charlotte Mason method yet knows that modern children need an education that fits the needs of this generation. Based upon her foundational belief in a living God for a living education, she has worked to bring a curriculum that will reach deep into the heart of home-educated children and their families. She has written over 20 books, including her history series and her math series. Angela's goal is to bring materials that teach and train hearts and minds to find the answers for our generation in the never-changing truth of God and His Word.

## Scope and Sequence

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## Using This Course

Features: The suggested weekly schedule enclosed has easy-to-manage lessons that guide the reading, worksheets, and all assessments. The pages of this course are perforated and three-hole punched so materials are easy to tear out, hand out, grade, and store. Teachers are encouraged to adjust the schedule and materials needed in order to best work within their unique educational program.

Lesson Scheduling: Students are instructed to read the pages in their book and then complete the corresponding section provided by the teacher. Assessments that may include worksheets, activities, quizzes, and tests are given at regular intervals with space to record each grade. Space is provided on the weekly schedule for assignment dates, and flexibility in scheduling is encouraged. Teachers may adapt the scheduled days per each unique student situation. As the student completes each assignment, this can be marked with an " X " in the box.

Approximately 30 minutes per lesson, five days a week, for 36 weeks
Answer keys for worksheets are available online: www.masterbooks.com/classroom-aids

## $\ddagger$

Worksheets and quizzes are included throughout course

## + Designed for grade 2 in a one-year course

## Course Description

Welcome to the second book in the Math Lessons for a Living Education series! You will find that Math Lessons for a Living Education is a unique approach to learning math. A blend of stories, copy work, oral narration, and hands-on experience brings the concepts to life and invites the child to explore the world around them. The tone of this math book is meant to speak personally to each child, and the method easily adapted to any teaching style.

The first 30 lessons have a story about the twins, taught through hands-on learning. Sometimes, this lesson is learned by the twins' explorations in nature. After the story, there are exercises for students to practice the lesson they learned and to review what they have learned earlier. "Quizzes" or reviews, whichever you want to use them as, are in the form of "letters to family and friends." The twins want to show them what they have been learning, and they need students to help them! Students show what they have learned by writing the letters for the twins. The last 6 lessons are focused reviews, covering topics learned throughout the first 30 lessons.

Note: You can supplement the worksheets in the Math for a Living Education series with additional worksheets, activities, and quizzes in Practice Makes Perfect, also available from Master Books.

## Course Objectives: Students completing this course will

$\checkmark$ Review addition and subtraction, and basic numbers up to 100
$\checkmark$ Explore new concepts like word problems, skip counting money and time
$\checkmark$ Learn how to read bar graphs and line graphs, as well as understand basic measurement
$\checkmark$ Identify place values, regrouping concepts, and measurement with a thermometer.

## Teaching mathematics as a living subject

This book is the continuing story of Charlie and Charlotte, who are learning that life is full of learning opportunities! As you read their story, students will be drawn into the adventure along with the twins. They will learn about numbers, shapes, place value, adding, and subtracting. They will also learn about the seasons, geography, and the love of family. They will be invited to join the twins on their living math adventures. I hope you have a grand time on this adventure. Have a wonderful time exploring and learning!

As a teacher and a mother, I have discovered that true education is based on relationships: the relationship the child makes with the amazing concepts in the world around them; the relationship the teacher and the child make with each other; and most importantly and ultimately, the relationship the child makes with their Creator. It is built on discovering the God of the Universe - the One who holds the universe in His hands but at the same
time, lovingly indwells the heart of a little child. The story in Book 2 is meant to reach into a child's world, grab their attention and invite them into the learning process. The concepts are not taught through drill only, but also through encouraging the student to hone their critical thinking skills and think outside of the book. This curriculum teaches the student math, but it is not result-oriented, focusing only on grades; instead it is skill and process-oriented. I have discovered that it is in the everyday that we grow and become who we are meant to be. It is in the little discoveries all along the path of life that we grow, learn, develop, and discover who God is and, in turn, see ourselves the way He sees us. Math concepts are learned well, as it is learned in the context of living, in the midst of discovery, and through the worldview glasses that focus on the bigger picture.

Optional resources in back: If you feel that your student could use a little more practice, use the Larger Addition Mat or Larger Subtraction Mat from the appendix to practice the concepts being taught. These are included in the back and can be laminated or slipped into a page protector. The use of these mats is optional. If an exercise mentions using a mat, please feel free to use it according to your student's needs. They are meant to give students extra practice in the concept being taught in the lesson.

## About manipulatives

In the back of the book, you will find a manipulatives section. It is imperative that you gather these before you start the book. You will need these resources:
contact paper and construction paper
large index cards
brass fasteners
crayons, markers, and colored pencils
glue or paste
hole punch and hole reinforcers
rings to keep flashcards together
a plastic shoe box with lid in which to store manipulatives
stickers to use for flashcards (optional but helpful)
pictures from old magazines
poster board (several large pieces)
dried beans, buttons, craft sticks all work well
4 containers for your Place Value Village (1-extra large, 1-large, 1-medium, 1-small)
snack-size baggies
foot ruler (with inches marked)
simple indoor/outdoor thermometer (non-digital)
4 square pieces of material which measure
12 inches on all sides ( 4 different light colors would be best, or white/off white)
$\square \quad$ fabric or permanent markers in bright colors your favorite color of yarn and a large needle with a large eye
$\square \quad$ thread in whatever color you wish in a sewing needle
material (whatever kind you wish) for backing (about 24 inches square)
thin batting (about 24 inches square) optional
fabric scissors
measuring tape
iron
straight pins
candy thermometer
measuring devices (cup, pint, quart, gallon)
Note about money manipulatives: you will need to have the following money available for students to use throughout this book:

- 10 dimes
- 20 nickels
- 100 pennies
- 4 quarters
- $5 \$ 1$ bills


## Right Brain Flash Cards

I include these special flash cards in this math curriculum because I have found through almost two decades of teaching math that every student connects better when asked to use both sides of their brain to engage in a new concept. Memory is enhanced. Recall is improved. And personalization of the learning process is brought to a much higher level than simple rote memory facilitates. In short, when we engage both sides of our brains, the learning goes deeper. By allowing and encouraging the student to make up stories that help them to
connect with what they are learning, we are asking them to take the learning personally.
"But what if my student doesn't WANT to do right brain flashcards? What if they learn it just fine without them?"

Well, like I've said before, you are the expert on your child; I'm just here to help you. If you don't want to do right brain flash cards and are absolutely certain your student will not benefit from doing it, then don't. But please give it a whole hearted attempt first.

## How to use everyday items as manipulatives

Contrary to popular opinion, you don't need fancy, expensive, and special manipulatives to teach math concepts. What? As shocking as that is, I can personally attest that it is 100 percent true; I've been doing it for years. So how do you turn all those small items that hang around your house and fill your "junk drawer" into useful math manipulatives? Well, let's start with my favorite, the trusty dried bean! When you are teaching your children place value, dried beans just might become your new best friends. How? Simply follow these steps:

When a student is counting $0-9$, simply place single beans into the ONES' house, and have the student write the numbers 0-9 on their Place Value Village Mat. As we all know, only 9 ones can live in
the ONES' house, so all 9 beans jump out of their house and join up with their new friend, Mr. Tenth bean! They all then jump into a snack-size baggie (usable over and over) and go next door, to live in the TENS' house. Repeat this process, until you have ten baggies of beans trying to live in the TENS' house. Of course, only nine can live there, so all the baggies of ten get traded in for a 100s counter (included in the manipulatives section) and make the move to their new house, the HUNDREDS' house. Dried kidney beans are the best for this, as they are very sturdy! You can also use buttons, paper clips, or basically any small item. They don't even have to be all the same kind of item.

## Grading subjective assignments

Most often with math the grading is very objective. For example, $2+2=4$, and no amount of individual expression changes this answer. However, there are times in this course when the answer may depend on a student's reflections of what he or she has learned on a particular day or in a week of assignments. In these subjective cases, the teacher can base a grade for these responses on several more objective measures. Does the student seem to understand the question and answer it as clearly as possible? Does the answer seem complete or does it fail to answer all aspects of the question? So a student may receive full credit if they seemed to meet all the assignment requirements, may get a passing grade if they meet some of the requirements, or may need to repeat the assignment if they didn't meet any of the requirements.

A - Student showed complete mastery of concepts with no errors.
B - Student showed mastery of concepts with minimal errors.
C - Student showed partial mastery of concepts. Review of some concepts is needed.
D - Student showed minimal understanding of concepts. Review is needed.
F - Student did not show understanding of concepts. Review is needed.

## Why copywork?

Copywork is widely used in the Charlotte Mason method. I included it in this math curriculum to aid in the learning and reviewing process. However, if you feel like your child is either not yet ready for this amount of writing, or they do not need the practice, please use your own judgement! You are the expert on your child; I am only here to help you. Tip for young children who are just beginning the
process of learning to write: Some children are ready to learn new concepts before they are ready to write them down. This is simply because the small motor skills may develop later than other skills. If your child struggles with writing, try this simple tip. Use a yellow highlighter to write the numbers on the provided lines for your child. Have your child trace them with their pencil.

First Semester Suggested Daily Schedule

| Date | Day | Assignment | Due Date | $\checkmark$ Grade |
| :---: | :---: | :---: | :---: | :---: |
| First Semester-First Quarter |  |  |  |  |
| Week 1 | Day 1 | Read Lesson 1 • Pages 15-16 <br> Complete Lesson 1 Exercise $1 \cdot$ Pages 17-18 |  |  |
|  | Day 2 | Complete Lesson 1 Exercise $2 \cdot$ Pages 19-20 |  |  |
|  | Day 3 | Complete Lesson 1 Exercise $3 \cdot$ Pages 21-22 |  |  |
|  | Day 4 | Complete Lesson 1 Exercise $4 \cdot$ Pages 23-24 |  |  |
|  | Day 5 | Complete Lesson 1 Exercise 5 Review Time • Pages 25-26 |  |  |
| Week 2 | Day 6 | Read Lesson 2• Pages 27-28 Complete Lesson 2 Exercise 1 • Page 29 |  |  |
|  | Day 7 | Complete Lesson 2 Exercise 2• Pages 30-31 |  |  |
|  | Day 8 | Complete Lesson 2 Exercise $3 \cdot$ Page 32 |  |  |
|  | Day 9 | Complete Lesson 2 Exercise 4• Pages 33-34 |  |  |
|  | Day 10 | Complete Lesson 2 Exercise 5• Pages 35-36 |  |  |
| Week 3 | Day 11 | Read Lesson 3• Page 37 <br> Complete Lesson 3 Exercise 1• Pages 38-39 |  |  |
|  | Day 12 | Complete Lesson 3 Exercise 2 • Page 40 |  |  |
|  | Day 13 | Begin Lesson 3 Exercise 3-4 Page 41 |  |  |
|  | Day 14 | Finish Lesson 3 Exercise 3-4 - Page 41 |  |  |
|  | Day 15 | Complete Lesson 3 Exercise 5 Review Time • Pages 42-44 |  |  |
| Week 4 | Day 16 | Read Lesson 4 • Page 45 <br> Complete Lesson 4 Exercise 1 • Page 46 |  |  |
|  | Day 17 | Complete Lesson 4 Exercise $2 \cdot$ Page 47 |  |  |
|  | Day 18 | Complete Lesson 4 Exercise 3 - Page 48 |  |  |
|  | Day 19 | Complete Lesson 4 Exercise $4 \cdot$ Page 49 |  |  |
|  | Day 20 | Complete Lesson 4 Exercise $5 \cdot$ Pages 50-52 |  |  |
| Week 5 | Day 21 | Read Lesson 5 • Page 53 <br> Complete Lesson 5 Exercise 1 • Pages 54-56 |  |  |
|  | Day 22 | Complete Lesson 5 Exercise 2 - Page 57 |  |  |
|  | Day 23 | Complete Lesson 5 Exercise 3 - Page 58 |  |  |
|  | Day 24 | Complete Lesson 5 Exercise $4 \cdot$ Pages 59-60 |  |  |
|  | Day 25 | Complete Lesson 5 Exercise 5 Review Time • Pages 61-62 |  |  |
| Week 6 | Day 26 | Read Lesson 6 • Page 63 Complete Lesson 6 Exercise $1 \cdot$ Page 64 |  |  |
|  | Day 27 | Complete Lesson 6 Exercise $2 \cdot$ Pages 65-66 |  |  |
|  | Day 28 | Complete Lesson 6 Exercise 3 - Page 67 |  |  |
|  | Day 29 | Complete Lesson 6 Exercise 4 - Pages 68-69 |  |  |
|  | Day 30 | Complete Lesson 6 Exercise 5 Review Time $\bullet$ Page 70 |  |  |


| Date | Day | Assignment | Due Date | $\checkmark$ | Grade |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Week 7 | Day 31 | Read Lesson 7 • Page 71 Complete Lesson 7 Exercise 1 • Page 72 |  |  |  |
|  | Day 32 | Complete Lesson 7 Exercise 2 • Page 73 |  |  |  |
|  | Day 33 | Complete Lesson 7 Exercise 3 - Page 74 |  |  |  |
|  | Day 34 | Complete Lesson 7 Exercise $4 \bullet$ Pages 75-76 |  |  |  |
|  | Day 35 | Complete Lesson 7 Exercise 5 Review Time • Pages 77-78 |  |  |  |
| Week 8 | Day 36 | Read Lesson $8 \cdot$ Pages 79-80 Complete Lesson 8 Exercise 1 - Page 81 |  |  |  |
|  | Day 37 | Complete Lesson 8 Exercise 2 • Page 82 |  |  |  |
|  | Day 38 | Complete Lesson 8 Exercise 3 - Page 83 |  |  |  |
|  | Day 39 | Begin Lesson 8 Exercise 4-5 Review Time • Pages 84-86 |  |  |  |
|  | Day 40 | Finish Lesson 8 Exercise 4-5 Review Time • Pages 86-87 |  |  |  |
| Week 9 | Day 41 | Read Lesson 9• Pages 87-88 <br> Complete Lesson 9 Exercise 1 - Page 89 |  |  |  |
|  | Day 42 | Complete Lesson 9 Exercise 2 - Page 90 |  |  |  |
|  | Day 43 | Complete Lesson 9 Exercise 3 - Page 91 |  |  |  |
|  | Day 44 | Complete Lesson 9 Exercise $4 \cdot$ Page 92 |  |  |  |
|  | Day 45 | Complete Lesson 9 Exercise 5 Review Time • Pages 93-94 |  |  |  |
| First Semester-Second Quarter |  |  |  |  |  |
| Week 1 | Day 46 | $\begin{aligned} & \text { Read Lesson } 10 \bullet \text { Page } 95 \\ & \text { Complete Lesson } 10 \text { Exercise } 1 \text { Review Week • Page } 96 \\ & \hline \end{aligned}$ |  |  |  |
|  | Day 47 | Complete Lesson 10 Exercise 2 Review Week • Page 97 |  |  |  |
|  | Day 48 | Complete Lesson 10 Exercise 3 Review Week • Page 98 |  |  |  |
|  | Day 49 | Complete Lesson 10 Exercise 4 Review Week • Page 99 |  |  |  |
|  | Day 50 | Complete Lesson 10 Exercise 5 Review Week • Pages 100-102 |  |  |  |
| Week 2 | Day 51 | Read Lesson 11 • Page 103 <br> Complete Lesson 11 Exercise 1 • Page 104 |  |  |  |
|  | Day 52 | Complete Lesson 11 Exercise 2 • Page 105 |  |  |  |
|  | Day 53 | Complete Lesson 11 Exercise 3 • Page 106 |  |  |  |
|  | Day 54 | Complete Lesson 11 Exercise $4 \cdot$ Pages 107-108 |  |  |  |
|  | Day 55 | Complete Lesson 11 Exercise 5 Review Time • Pages 109-110 |  |  |  |
| Week 3 | Day 56 | Read Lesson 12 • Pages 111-112 <br> Complete Lesson 12 Exercise 1 • Pages 113-116 |  |  |  |
|  | Day 57 | Complete Lesson 12 Exercise 2 - Pages 117-118 |  |  |  |
|  | Day 58 | Complete Lesson 12 Exercise 3 - Page 119 |  |  |  |
|  | Day 59 | Complete Lesson 12 Exercise $4 \cdot$ Page 120 |  |  |  |
|  | Day 60 | Complete Lesson 12 Exercise 5 Review Time • Pages 121-124 |  |  |  |

## Date

Day
Assignment
Due Date $\checkmark$ Grade


Second Semester Suggested Daily Schedule

| Date | Day | Assignment | Due Date | $\checkmark$ Grade |
| :---: | :---: | :---: | :---: | :---: |
| Second Semester-Third Quarter |  |  |  |  |
| Week 1 | Day 91 | Read Lesson 19 • Page 183 <br> Complete Lesson 19 Exercise 1 - Page 184 |  |  |
|  | Day 92 | Complete Lesson 19 Exercise 2 - Page 185 |  |  |
|  | Day 93 | Complete Lesson 19 Exercise 3 • Pages 186-187 |  |  |
|  | Day 94 | Complete Lesson 19 Exercise $4 \bullet$ Pages 188-189 |  |  |
|  | Day 95 | Complete Lesson 19 Exercise 5 Review Time • Page 190 |  |  |
| Week 2 | Day 96 | Read Lesson 20 • Page 191 <br> Complete Lesson 20 Exercise 1 Review Week • Page 192 |  |  |
|  | Day 97 | Complete Lesson 20 Exercise 2 Review Week • Page 193 |  |  |
|  | Day 98 | Complete Lesson 20 Exercise 3 Review Week • Page 194 |  |  |
|  | Day 99 | Complete Lesson 20 Exercise 4 Review Week • Page 195 |  |  |
|  | Day 100 | Complete Lesson 20 Exercise 5 Review Week • Page 196 |  |  |
| Week 3 | Day 101 | Read Lesson 21 • Pages 197-198 <br> Complete Lesson 21 Exercise 1 - Page 199 |  |  |
|  | Day 102 | Begin Lesson 21 Exercise 2-3 - Page 200 |  |  |
|  | Day 103 | Finish Lesson 21 Exercise 2-3 - Page 201 |  |  |
|  | Day 104 | Complete Lesson 21 Exercise 4 - Page 202 |  |  |
|  | Day 105 | Complete Lesson 21 Exercise 5 Review Time Pages 203-204 |  |  |
| Week 4 | Day 106 | Read Lesson 22 • Pages 205-206 <br> Complete Lesson 22 Exercise 1 • Page 207 |  |  |
|  | Day 107 | Complete Lesson 22 Exercise 2 - Page 208 |  |  |
|  | Day 108 | Complete Lesson 22 Exercise 3 - Page 209 |  |  |
|  | Day 109 | Complete Lesson 22 Exercise $4 \cdot$ Pages 210-211 |  |  |
|  | Day 110 | Complete Lesson 22 Exercise 5- Page 212 |  |  |
| Week 5 | Day 111 | Read Lesson 23 • Pages 213-214 <br> Complete Lesson 23 Exercise 1 - Page 215 |  |  |
|  | Day 112 | Complete Lesson 23 Exercise 2 Page 216 |  |  |
|  | Day 113 | Complete Lesson 23 Exercise 3 - Page 217 |  |  |
|  | Day 114 | Complete Lesson 23 Exercise 4 - Page 218 |  |  |
|  | Day 115 | Complete Lesson 23 Exercise 5 Review Time Pages 219-220 |  |  |
| Week 6 | Day 116 | Read Lesson 24 • Pages 221-223 <br> Complete Lesson 24 Exercise $1 \cdot$ Pages 224-234 |  |  |
|  | Day 117 | Complete Lesson 24 Exercise 2 - Page 235 |  |  |
|  | Day 118 | Complete Lesson 24 Exercise 3 - Page 236 |  |  |
|  | Day 119 | Complete Lesson 24 Exercise 4 - Page 237 |  |  |
|  | Day 120 | Complete Lesson 24 Exercise 5 Review Time • Pages 238-240 |  |  |


| Date | Day | Assignment | Due Date | $\checkmark$ | Grade |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Week 7 | Day 121 | Read Lesson 25 - Page 241 Complete Lesson 25 Exercise 1 Review Week • Page 242 |  |  |  |
|  | Day 122 | Complete Lesson 25 Exercise 2 Review Week • Page 243 |  |  |  |
|  | Day 123 | Complete Lesson 25 Exercise 3 Review Week - Page 244 |  |  |  |
|  | Day 124 | Complete Lesson 25 Exercise 4 Review Week • Pages 245-246 |  |  |  |
|  | Day 125 | Complete Lesson 25 Exercise 5 Review Week • Pages 247-248 |  |  |  |
| Week 8 | Day 126 | Read Lesson $26 \cdot$ Page 249 <br> Complete Lesson 26 Exercise 1 • Pages 250-251 |  |  |  |
|  | Day 127 | Complete Lesson 26 Exercise 2 • Page 252 |  |  |  |
|  | Day 128 | Complete Lesson 26 Exercise 3 • Pages 253-254 |  |  |  |
|  | Day 129 | Complete Lesson 26 Exercise $4 \bullet$ Pages 255 |  |  |  |
|  | Day 130 | Complete Lesson 26 Exercise 5 Review Time • Pages 256-258 |  |  |  |
| Week 9 | Day 131 | Read Lesson 27 • Pages 259-260 <br> Complete Lesson 27 Exercise 1 • Pages 261-262 |  |  |  |
|  | Day 132 | Complete Lesson 27 Exercise 2 - Page 263 |  |  |  |
|  | Day 133 | Complete Lesson 27 Exercise 3 - Page 264 |  |  |  |
|  | Day 134 | Complete Lesson 27 Exercise $4 \bullet$ Page 265 |  |  |  |
|  | Day 135 | Complete Lesson 27 Exercise 5 P Page 266 |  |  |  |
| Second Semester-Fourth Quarter |  |  |  |  |  |
| Week 1 | Day 136 | Read Lesson 28 • Pages 267-268 <br> Complete Lesson 28 Exercise 1 - Pages 269-270 |  |  |  |
|  | Day 137 | Complete Lesson 28 Exercise 2 - Page 271 |  |  |  |
|  | Day 138 | Complete Lesson 28 Exercise 3 - Page 272 |  |  |  |
|  | Day 139 | Complete Lesson 28 Exercise 4 • Page 273 |  |  |  |
|  | Day 140 | Complete Lesson 28 Exercise 5 Review Time - Page 274 |  |  |  |
| Week 2 | Day 141 | $\begin{aligned} & \text { Read Lesson } 29 \bullet \text { Pages 275-276 } \\ & \text { Complete Lesson } 29 \text { Exercise } 1 \bullet \text { Page } 277 \end{aligned}$ |  |  |  |
|  | Day 142 | Complete Lesson 29 Exercise 2 • Pages 278-279 |  |  |  |
|  | Day 143 | Complete Lesson 29 Exercise 3 - Page 280 |  |  |  |
|  | Day 144 | Complete Lesson 29 Exercise 4 - Page 281 |  |  |  |
|  | Day 145 | Complete Lesson 29 Exercise 5 Review Time • Pages 282-284 |  |  |  |
| Week 3 | Day 146 | $\begin{aligned} & \hline \text { Read Lesson } 30 \bullet \text { Page } 285 \\ & \text { Gather Materials for a Quilt • Page } 286 \\ & \hline \end{aligned}$ |  |  |  |
|  | Day 147 | Make Your Quilt • Pages 286-288 |  |  |  |
|  | Day 148 | Make Your Quilt • Pages 286-288 |  |  |  |
|  | Day 149 | Make Your Quilt • Pages 286-288 |  |  |  |
|  | Day 150 | Make Your Quilt • Pages 286-288 |  |  |  |


| Date | Day | Assignment | Due Date | $\checkmark$ | Grade |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Week 4 | Day 151 | Read Lesson 31 • Page 289 <br> Complete Lesson 31 Exercise 1• Page 290 |  |  |  |
|  | Day 152 | Complete Lesson 31 Exercise 2 - Page 291 |  |  |  |
|  | Day 153 | Complete Lesson 31 Exercise 3 • Pages 292-293 |  |  |  |
|  | Day 154 | Complete Lesson 31 Exercise $4 \cdot$ Page 294 |  |  |  |
|  | Day 155 | Complete Lesson 31 Exercise 5 Review Time Pages 295-296 |  |  |  |
| Week 5 | Day 156 | Read Lesson 32 - Page 297 <br> Complete Lesson 32 Exercise 1 - Page 298 |  |  |  |
|  | Day 157 | Complete Lesson 32 Exercise 2 - Page 299 |  |  |  |
|  | Day 158 | Complete Lesson 32 Exercise 3 - Page 300 |  |  |  |
|  | Day 159 | Complete Lesson 32 Exercise $4 \cdot$ Page 301 |  |  |  |
|  | Day 160 | Complete Lesson 32 Exercise 5•Review Time • Page 302 |  |  |  |
| Week 6 | Day 161 | Read Lesson 33 - Page 303 <br> Complete Lesson 33 Exercise 1 Review Week • Page 304 |  |  |  |
|  | Day 162 | Complete Lesson 33 Exercise 2 Review Week • Page 305 |  |  |  |
|  | Day 163 | Complete Lesson 33 Exercise 3 Review Week • Page 306 |  |  |  |
|  | Day 164 | Complete Lesson 33 Exercise 4 Review Week • Page 307 |  |  |  |
|  | Day 165 | Complete Lesson 33 Exercise 5 Review Week • Page 308 |  |  |  |
| Week 7 | Day 166 | Read Lesson 34 • Page 309 <br> Complete Lesson 34 Exercise 1 Review Week • Page 310 |  |  |  |
|  | Day 167 | Complete Lesson 34 Exercise 2 Review Week - Page 311 |  |  |  |
|  | Day 168 | Complete Lesson 34 Exercise 3 Review Week • Page 312 |  |  |  |
|  | Day 169 | Complete Lesson 34 Exercise 4 Review Week Pages 313-314 |  |  |  |
|  | Day 170 | Complete Lesson 34 Exercise 5 Review Week • Pages 315-316 |  |  |  |
| Week 8 | Day 171 | Read Lesson 35 • Page 317 <br> Complete Lesson 35 Exercise 1 Review Week • Page 318 |  |  |  |
|  | Day 172 | Complete Lesson 35 Exercise 2 Review Week • Page 319 |  |  |  |
|  | Day 173 | Complete Lesson 35 Exercise 3 Review Week - Page 320 |  |  |  |
|  | Day 174 | Complete Lesson 35 Exercise 4 Review Week • Page 321 |  |  |  |
|  | Day 175 | Complete Lesson 35 Exercise 5 Review Week • Page 322 |  |  |  |
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## Place Value Village, Telling Time, Shapes and Patterns

It had been a week since Charlie and Charlotte had arrived home from their grandparents' farm. They had experienced such a grand summer with Grandpa and Grandma learning about so many animals, plants, and patterns in nature on the farm. Now that they were home, they were continuing to learn a lot. First off, Mom's round tummy was growing, and they could feel their baby sister kicking from within. Just last night, Charlie had counted 20 energetic kicks, and today, at lunch, Charlotte
 had counted up to 50 vigorous kicks. Charlie and Charlotte simply could not wait to meet their new little sister! Grandma had explained to them about this wonderful pattern, which God designed, of babies growing securely inside a mother's body while their hearts and lungs grow stronger each day in a warm, safe environment, until they were ready to be born. Knowing God cared so much for their baby sister meant everything to Charlie and Charlotte!


Upon arriving home, Charlie and Charlotte also were excited to discover that Dad had added two new rooms onto their house to create more space for their growing family. The addition consisted of a nursery for the new baby and a schoolroom for Charlie and Charlotte. Filled with hundreds of exciting books and an abundance of art supplies, Charlie and Charlotte could not wait for the school year to begin! Mother had told them they were to start right after Labor Day, which is the first Monday in September. Looking at the new addition, Charlie and Charlotte could not help thinking about Grandpa’s Place Value Village. He had shown them the Hundreds' House, the Tens' House, and the Ones' House. Bundling carrots in bundles of 10 with Grandpa and arranging flowers with Grandma in bunches of 10 had helped them understand numbers and place value up to 100 . They simply could not wait to add onto their own Place Value Village houses this year!

One more change the twins quickly noticed was that Father had constructed a sturdy looking pen and shed to keep Ann and Andy in, the two lambs from Grandpa and Grandma's farm. Nestled snugly in the corner of the yard, in the shape of a rectangle, just like Pokey's bed (Pokey was their pet box turtle), Ann and Andy seemed to already be enjoying themselves as they danced gleefully around in their new home. Every morning at 7:30, right before breakfast, Charlie and Charlotte fed them, and Ann and Andy jumped and skipped happily about.

Although Charlie and Charlotte missed Grandpa and Grandma and the farm, they really were glad to be home. They were extremely excited for school to start, and they could not wait to discover more with Dad and Mom!

Let's begin our adventure together by reviewing counting and place value using our Place Value Village.

In preparation for teaching this lesson (and any other lessons about place value), you will need to gather these items:

- At the back of this book, you will find several pages with your "Place Value Village." Please cut out the "houses" and paste each piece on a separate piece of sturdy paper. It would be wise to laminate each "house" to make it more durable.
- For this lesson, gather three cups or containers; a smaller, shorter one (for the ONES' house), a medium one (for the TENS' house), and a larger one (for the HUNDREDS' house); we will add the large THOUSANDS' house later.
- To create your Place Value Village set, adhere your houses onto the side of the containers.
- Also have on hand numerous small items, such as dried beans (kidney beans work very well), 10 snack-size baggies and 9 one-gallon freezer bags.
Place value can be a tricky concept. Please be aware of that this is a concept that your student will grow in for years to come. At this age, and in this book, we are simply laying the foundation for their understanding. Please take time to view the instructional video showing how to set up and use the Place Value Village manipulative.
www.youtube.com/watch?v=fuZ7Y3fDe7c
Count out 20 beans by using your Place Value Village. Write each number on your Place Value Mat.


Name $\qquad$ Exercise

Copywork:

$\qquad$

$\qquad$
$\qquad$

Telling time. If your child has learned to tell time to the hour but is coming into this book after a period of no practice, simply take the time to review the concept. Remind them that the clock shows 12 hours and that the hour hand goes around the face of the clock two whole times in one day. Review the function of the hour hand and the minute hand. Let them study an actual analog clock or watch. Discuss the movements of the hands.

Review Time! Remember, when the short hour hand is pointing directly at a number, and the long minute hand is pointing directly at the 12, we say it is "something oclock."

## Like this:

We say 9 oclock.


Now it's your turn! Write the time under each clock.
$\qquad$

___ o'clock $\qquad$ o'clock

Name $\qquad$

Exercise
2

Copywork:


Patterns and shapes. Deciphering and understanding patterns is foundational to understanding numeric concepts. Please make sure your child understands what patterns are. You may want to encourage your student to point out the patterns in the world around us. For example: the cycles of the seasons, colors of the rainbow, and routines used in their daily life.

Shapes. Have your student name and show you as many kinds of shapes as they can. Encourage them to find objects that depict the shapes. Discuss the difference between squares and rectangles.
Square: four equal sides, four corners that are perfect $90^{\circ}$ angles [right angles]
Rectangles: four sides - two longer and two shorter, four corners that are perfect $90^{\circ}$ angles [right angles]


The patterns above are made of shapes. What shapes are they?

Tell your teacher what makes a square and then draw one here:

Tell your teacher what makes a rectangle and then draw one here:

If both squares and rectangles have four corners, like this: and four sides that are straight, what is the difference between them?

## Name

$\qquad$ Exercise

Copywork:
Practice counting items up to 40 using your Place Value Village.


## 26 <br>  <br> 28 <br> 

$3 \mid 32333435$
3637
38
39
40

## More Shapes.

Discuss the different types of shapes.
Added from last exercise: circles [no corners] and triangles [3 sides]
Color the triangles green, the circle orange, the square blue, and the rectangles red.


## Review Time!

## Dear Grandma and Grandpa,

 We have been having a good time with Mom and Dad since we got back home. We miss both of you so much! How are all the animals? Grandpa, did you harvest all the vegetables yet? Grandma, Mom made us some of your scrumpdelicious oatmeal! We have been practicing all the wonderful math concepts you taught us over the summer. Look how neatly we can write our numbers now! Copywork:
## 404142434445

$$
\begin{aligned}
& 4647484950 \\
& 5152535455
\end{aligned}
$$

We have been practicing telling time, too! Write the correct time under each clock.

o'clock




___ o'clock
___ o'clock

Complete the pattern:

$20^{2}+\frac{9}{4 \underbrace{2}}$
$x^{2}+\theta^{\circ}$ 却分

Love lots,
Charlie, Charlotte, and our friend,

## Introducing Perimeter

Home from the hospital with Ella a couple of days later, Charlie and Charlotte and their parents and grandparents busily began preparing for Thanksgiving. Grandpa had explained to the twins that the first Thanksgiving had taken place in 1621 in Plymouth in New England. Seeking religious freedom, the Pilgrims were a group of people who had come to the United States in 1620. The first winter had been incredibly tough for the Pilgrims and many died. In the spring, an Indian named Squanto, and some of his Indian friends, showed the Pilgrims how to grow corn, beans, squash, and pumpkins. Together, in the fall of 1621 , the Pilgrims invited over 90 Indians to a feast to give thanks. Later, Grandpa explained that President Abraham

Lincoln had officially named the fourth Thursday of November as Thanksgiving Day.

Looking forward to Thursday with much anticipation, Charlie and Charlotte were busily making colorful name cards for each place at the table. They were so excited that Grandpa and Grandma were able to stay and join them for Thanksgiving. In fact, Grandpa had promised them that later on they would do a special project with him in the garage. Finishing up the place cards, the twins cleaned up their mess and trotted off to find Grandpa.

Grandpa was deep in concentration when they found him in the garage at the workbench, looking at a pile of various-sized boards.

"Hi, children," Grandpa said with a twinkle in his eyes.
"Hi, Grandpa!" the children replied in unison, "What are we going to make?"
"Well," Grandpa answered, "we need something to feed the birds all winter long. Since you have been feeding them this fall, they rely on you to continue through the winter.
"Either we need to stop feeding them so they can fly south now or we need to make a feeder for them, so they have enough food for the winter and then they won't die from lack of food."
"We sure don't want our pretty birds dying!" Charlie exclaimed, "We are making a bird feeder, right,
 Grandpa?"
"Yes, Charlie, we sure are,"
Grandpa chuckled, wondering once again at the children's enthusiasm.

Grandpa and the twins spent the rest of the afternoon working on cutting out the pieces for two bird feeders. Grandpa explained to the children how important it was to measure every piece correctly before cutting it out with the saw. Charlie and Charlotte were so tickled to help Grandpa out and keep the beautiful birds safe throughout the approaching winter months.

The perimeters of the following shapes will not all be exact in measurement. For example, for the sake of the problem, it might say 4 inches but actually be $3 \frac{1}{2}$ inches on a side. Please explain this to your students if they have their rulers out and are measuring with them.

Perimeter is the distance around a polygon. A polygon is simply a shape made with straight sides. "Poly" is a prefix which means "many"; thus, a polygon is a shape with many straight sides. To figure out the perimeter of a rectangle, we just need to add up each side, like this:

$\square \quad$ First, add the shorter sides together:
2 inches +2 inches $=4$ inches
$\square \quad$ Next, add the longer sides together.
4 inches +4 inches $=8$ inches
$\square \quad$ Last, add the totals together:
8 inches +4 inches $=12$ inches
So the perimeter of this rectangle is 12 inches.



For a square, add two sides together, and then add the other two sides together. Now, take those two numbers and add them together to find the perimeter.

4 inches +4 inches $=8$ inches
4 inches +4 inches $=8$ inches
8 inches +8 inches $=16$ inches

So the perimeter of this square is $\qquad$ inches.


To figure out the perimeter of a triangle, add two sides together. Now, add that number to the other side, and you will find the perimeter. By the way, some triangles have equal sides, while other triangles have unequal sides.

$$
\begin{aligned}
& 2 \text { inches }+2 \text { inches }=4 \text { inches } \\
& 4 \text { inches }+2 \text { inches }=6 \text { inches }
\end{aligned}
$$

So the perimeter of this triangle is $\qquad$ inches.
$\qquad$

Count the nickels and write how many cents.

$\qquad$ ¢

What did you count by to come up with your answer?

Count the dimes and write how many cents.

$\qquad$
\$

What did you count by to come up with your answer?

Calculate the perimeter of the following polygons, following the steps you learned in our last lesson.


Draw hands on the clocks to show the right time.

| $18 \overline{\text { Math Level 2 - Lesson } 12}$

In working with perimeter today, we will be doing a hands-on activity. We will use construction paper, scissors, a pencil, and a ruler. Measure and cut out the following shapes, and then figure out the perimeter for each.
$\square \quad$ One square with 3-inch sides: $\qquad$ inches
$\square$ One triangle with 5-inch sides: $\qquad$ inchesOne rectangle with two 3 -inch sides and two 6 -inch sides: $\qquad$ inches
$\square \quad$ One square with 7-inch sides: $\qquad$ inches
$\square \quad$ One triangle with a 1 -inch side and two 6 -inch sides: $\qquad$ inches
$\square \quad$ One rectangle with two 2-inch sides and two 4-inch sides: $\qquad$ inches
$\square$ For this last project today, use all the figures you have cut out, and make a giant picture. You may add in circles and ovals to complete your picture. Show it to your class or family, and share with them what you have learned about perimeter and measuring.

## Addition:

$$
\begin{array}{r}
23 \\
+15 \\
+46 \\
\hline
\end{array}
$$

$\square \quad$ Use your flashcards to review addition and subtraction facts.

Figure out the perimeter of the following shapes. Notice that you will be adding with some double digits today.


## Review Time!

To solve the following word problems involving perimeter, first draw the figure on another piece of paper, and label each side. Next, figure out the perimeter using the steps taught earlier in the lesson.

We have a rectangle with two 6 -inch sides and two 8 -inch sides. What is the perimeter?

We have a triangle with one side that is 4 inches, one side that is 3 inches, and one side that is 5 inches. What is the perimeter?

We have a square with 7 -inch sides. What is the perimeter?

## Just for Fun!

Have you ever had a bird feeder or a birdhouse? Charlie and Charlotte are so excited to feed the birds all winter long. You don't have to have a bird feeder to feed the birds. There are many other ways to feed the birds all year long. One of them includes decorating a tree for the birds using dried fruit, birdseed, peanut butter, popcorn, and old bagels and bread. Listed on the next page are some ideas for you.

## Wildlife Energy Muffins

You will need:
1 cup chunky peanut butter
1 cup pure rendered suet or vegetable shortening
$2 \frac{1}{2}$ cups coarse yellow corn meal
Seeds, raisins, or other dried fruit and roasted peanuts
Pipe cleaners

1. Mix peanut butter, suet, and corn meal together. Stir in seeds, fruit, and nuts.
2. Make "muffins" by placing the mixture into a muffin tin. Sprinkle seeds on top.
3. Place a pipe cleaner in each muffin to act as a hanger, and place the tin in the freezer to harden.
4. Once hardened, hang the muffins from a tree.

## Bagels for the Birds

You will need:
1 bag of bagels (old, stale ones work best)
1 jar of plain peanut butter
1 bag of birdseed
1 roll of ribbon (cloth or gift wrapping ribbon)

1. Split bagels lengthwise, and let them harden overnight. Tie lengths of ribbon through each bagel hole.
2. Spread peanut butter over both sides of each bagel slice.
3. Sprinkle with birdseed.
4. Hang bagels throughout your backyard.
| $22 \quad \overline{\text { Math Level } 2 \text { - Lesson } 12}$

Use this page to create a "Backyard Bird-Watching Journal" of your very own.
Your teacher has permission to make as many copies as you need. Have a bird field guide for your state or area handy, to identify the birds that come to your yard.
(A picture or drawing of the bird I saw.)

Where I saw it: $\qquad$
What kind of bird is it? $\qquad$
What kind of food does it like? $\qquad$
Describe it:

Name $\qquad$ Exercise


How many triangles are here?
Count only those that have the entire shape visible.
For example,
1 , and not 2.

$124 \quad \overline{\text { Math Level } 2 \text { - Lesson } 12}$

# More Measurement Concepts Gallons, Quarts, Pints, Cups 

Nothing thrilled the twins more these days than receiving mail from Hairo and Natalia. The letters their Peruvian friends wrote needed to be translated by someone who could speak both English and Spanish so Charlie and Charlotte could read them. Mom was teaching the children how to count in Spanish (uno, dos, tres, cuatro, cinco, seis, siete, ocho, nueve, diez), the Spanish alphabet, and how to sing "Jesus Loves Me" in Spanish, but they were far from being able to interpret Hairo and Natalia's letters in Spanish without help from a translator. Thankfully, there was such a person at the orphanage who could read, write, and speak both Spanish and English. The translator wrote the letters in English before sending them off to the very eager twins in the United States. Today, the letters had contained a couple of recipes for Charlie and Charlotte to make with Mom. They could hardly wait to begin cooking these South American specialities. The first one was "Papas a la Huancaina" (Potatoes with Cheese). The recipe read as follows:

## Papas a la Huancaina (Potatoes with Cheese)

8 potatoes, peeled and cubed

## water

$1 \frac{1}{2}$ cups heavy cream
$\frac{1}{2}$ tsp. turmeric
3 cups Monterey Jack cheese

1. Boil the potatoes, covered, until tender. Drain and set aside.

2. In a small saucepan, heat cream over low heat. Do not allow it to boil. Stir in cheese and turmeric. Continue to stir until cheese is melted. Add potatoes, cooking until potatoes are heated through. Serve warm or cold.

The other recipe was called "Alfajores" (or Caramel-filled Cookies). It read as follows:

## Alfajores (Caramel-filled Cookies)

2 cups cornstarch
1 cup flour
1 cup sugar
$\frac{1}{2}$ tsp. baking powder
$\frac{3}{4}$ cup butter, room temp.

2 eggs
1 tsp. vanilla
3 tbsp. milk
1 can ( 13.4 oz .) Dulce de Leche*
Powdered sugar

1. Preheat oven to $300^{\circ} \mathrm{F}$. Combine dry ingredients in a large bowl. Cut in butter and stir until mixture resembles coarse crumbs. Add eggs, vanilla, and milk. Knead until smooth. Let dough rest for 20 minutes.
2. Roll dough out at about $\frac{1}{4}$ inch thickness. Cut out cookies with a cookie cutter. Bake for 20 minutes or until cookies begin to brown. Remove from oven and cool.
3. Spread dulce de leche on one side of the cookie and top with another cookie. Roll cookie sandwich in powdered sugar. Repeat with remaining cookies. Serve.
$222 \overline{\text { Math Level } 2 \text { - Lesson } 24}$

## Dulce de Leche*

1 can sweetened condensed milk

1. Remove label from can. Pierce the top, using a can opener, with two holes.
2. Place in a pot, pierced end up, and fill pot with water about $\frac{1}{4}$ inch from the top of the can.
3. Bring to a boil. Reduce heat and simmer, uncovered, for 3 hours. You may need to add more water as the water evaporates.
4. Remove from water and cool.

As Charlie, Charlotte, and Mom patiently waited for the Dulce de Leche to finish, Mom worked on more measurement concepts with them. She told them that 1 cup is equal to 8 oz., 2 cups is equal to 1 pint, 2 pints is equal to 1 quart, and 4 quarts is equal to 1 gallon. The children knew what a gallon looked like because they often bought milk in a gallon jug. Mom also showed them a one-cup measuring cup, a pint container of sour cream, and a one quart container of buttermilk. As they worked on their measurement flashcards at the table, they eagerly anticipated finishing the delicious-smelling cookies.

Mr. M!
Today you will be putting together a "Mr. Measure" to help you better understand some of the measurements we have been learning about. To construct your "Mr. M," first cut out the figures on the next few pages, and sort them into piles. Next, take your gallon-sized "Mr. M" and attach the 4 quarts (his arms and legs) to him with brads, since we know that there are 4 quarts in a gallon. Now, take the 8 pints and attach 2 to each quart, because there are 2 pints in each quart. Lastly, take the 16 cups and attach 2 to each pint, because there are 2 cups in a pint. Now, you have "Mr. Measure"
 to help you learn measurements.


Name $\qquad$

Exercise 5


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Exercise

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## Fun with Measurements!

Today you will further explore the measurements of one cup (c.), one pint (pt.), one quart (qt.), and one gallon (gal.) by doing some hands-on experimenting. Take the measuring devices that you and your teacher have gathered and, using rice, begin measuring with the measuring cup ( 1 c .) and fill the pint container.
$\square \quad$ How many cups are in the pint? $\qquad$ c.
$\square \quad$ Now, take your one-cup measuring cup, and see how many cups are in a quart. Write your findings on the line here. $\qquad$ c.
$\square \quad$ Next, take your one-cup measuring cup, and find out how many cups are in a gallon. Write the amount here. $\qquad$ c.
$\square \quad$ How many pints are in a quart? $\qquad$ pt.
$\square \quad$ How many pints are in a gallon? $\qquad$ pt.
$\square \quad$ How many quarts are in a gallon? $\qquad$ qt.
$\square \quad$ If your teacher allows you to, continue experimenting with these measurements using water (in the bathtub or sink).

## Measurement Flashcards.

Today you will begin working on your measurement flashcards for cups, pints, quarts, and gallons.
Also, you will be following a recipe and cooking something with your teacher's help. You may follow one of the recipes from Hairo and Natalia in this lesson, or you may choose something out of a cookbook. In the box below, draw a picture of whatever you chose to make.

My Picture
$\qquad$

## Matching.

Match the correct picture with the clue provided. There may be more than one clue for each picture.

1. There are 4 of me in a gallon.
2. There are 2 of me in a quart.
3. There are 4 of me in a quart.
4. There are 16 of me in a gallon.

## One

G@llon
5. There are 8 of me in a gallon.
6. One of me holds 4 quarts.
7. One of me holds 4 cups.
8. One of me holds 2 cups.
9. One of me holds 16 cups.
10. One of me holds 8 pints.

Take out all the flashcards you have made this year. What a stack! Take the time to review all the flashcards you have made. You sure have learned a lot!

## Copywork Time!

The twins really enjoyed making the recipes that their Peruvian friends sent!
They want to write a thank you letter and send them one of their own favorite recipes. (In the space below write down one of your favorite recipes.)

My Favorite Recipe

## Review Time!

## Dear Hairo and Natalia,

Thank you so much for sending the recipes! We made them with Mom, and they were so yummy! We have been learning about measurements. Some units of measure are used to measure length, some are used to measure weight, while others are used to measure liquids. We have shown you how to measure temperature and length. This is how you measure liquid:
(Match the picture to the correct word)
1 gallon

1 quart

One
Gallon

## One <br> Pinis

We also learned...
1 gallon = $\qquad$ quarts 1 quart = $\qquad$ pints

1 pint $=$ $\qquad$ cups

Love,
Charlie, Charlotte, and our friend, $\qquad$

Count how many of each kind of animal or bird, and put the number in the circles below.


## Review of Addition and Subtraction Fact Families

Make fact families with the following groups of numbers. The first one is done for you.
$4 \quad 6 \quad 10$
2810
39
12
$4+6=10$
$6+4=10$
$10-6=4$
$10-4=6$

7916
3811
$67 \quad 13$

## 8917



On the following page, you will be creating a page of math opposites. For example:
Adding is opposite of subtracting because the answer to an addition problem is bigger than both of the numbers added together. The answer to a subtraction problem is smaller than both of the other numbers in the problem.

Think of any other math opposites you have learned this year!

## Math Opposites

$$
\begin{aligned}
& \text { Congratulations! } \\
& \text { You Are Finished! }
\end{aligned}
$$

