

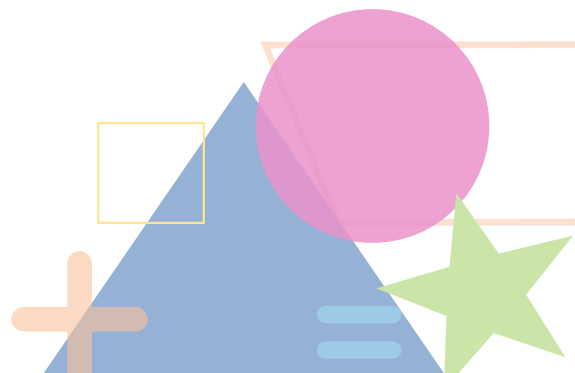
Math 1

God's Gift of Numbers

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TEACHER GUIDE



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How to Use This Curriculum

Hello and welcome! I'm so thankful that you have chosen to journey through elementary mathematics with me. I pray that God would grant me the grace I need to speak to you, and that God would grant you the grace you need to hear from me. But moreover, I pray that together we might walk with God through faith in Jesus Christ in this small but important area of life.

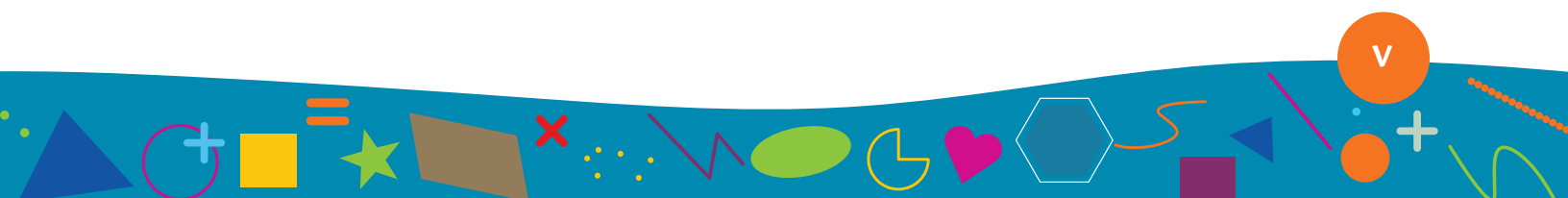
Our first goal is to make God's math our math, and our second is to impart that math to our students. The following is a brief introduction to the design and intent of the curriculum. Throughout the material, I refer to you as the parent/teacher and to your learning partner as the child/student. For most of you that simply means Mom and Son or Mom and Daughter. But I've also written this for any parent/teacher who has been equipped by God with courage and love and has been given to a child/student so that they might learn mathematics together. With that, parent/teacher, let's jump into how to use this curriculum.

The Student Book

The first point of organization for this curriculum is the distinction between the Student Book and the Teacher Book. The Student Book is organized in terms of chapters and days. For example, "Chapter 1" consists of "Day 1" through "Day 7", and "Chapter 2" begins with "Day 8". The first day of each chapter will have a short chapter introduction. The last day of each chapter will help your child/student take that chapter's content into the world and use it to worship God.

There are two types of sections that make up the majority of the days: lessons and practice. Typically the book will alternate between the two, learning something new on one day and spending time practicing it or reviewing familiar concepts on the next. There are approximately 150 days worth of content meant for a 30 week school year. You can find a suggested schedule for completing the curriculum in this Teacher Book. To move through the material slower, you can simply stretch out that timeline. To move through the material more quickly, you might consider doing both a lesson and the following practice section back-to-back.

The lessons are designed with content to be read aloud by the parent, pictures to in-



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teract with, and ideas for the parent to reflect on with the student. There are a number of different types of lessons. Some lessons send the child into God's world to explore what they can see and touch. Some involve drawing or thinking exercises, engaging the imagination to explore. Some connect the world of mathematics with the Scriptures, God's creation, or culture. Mathematics, as "the patterns of God," is so much more than what the unbelieving world teaches, and these lessons will help you see that. Some lessons apply mathematical ideas in games and puzzles. Other activities send them out into God's world, not just to explore, but to apply math to everyday life, taking dominion of God's creation. In all, we hope that this variety of lessons presents the content in an engaging, wonder-filled, enthusiastic way such that your child is happily immersed into the wonderful world of mathematics. Some kids will be naturally good at it, some will really (really) struggle, but regardless I pray that all might at some point each day be able to look up to heaven and smile.

Towards the end of most lessons there are a few exercises. These exercises are outfitted with a single set of instructions per page. The parent/teacher may need to walk through the first exercise, after which the child should be able to work on their own. For the first year of the curriculum, the child may need quite a bit more hand-holding, as they learn the introductory lessons of math for the very first time. The basic concepts of math (as in the case of reading) require more one-on-one interaction. But that initial investment will pay off in subsequent years, chapters, and lessons. By the time the child enters their second or third year, he or she should be able to work through the exercises more independently.

The practice sections are made up of two exercise pages. Although these sections are not accompanied with prayer or memory work in the Student Book, I recommend that the parent/teacher maintain the same "rhythm" for each day of study. See more on that below.

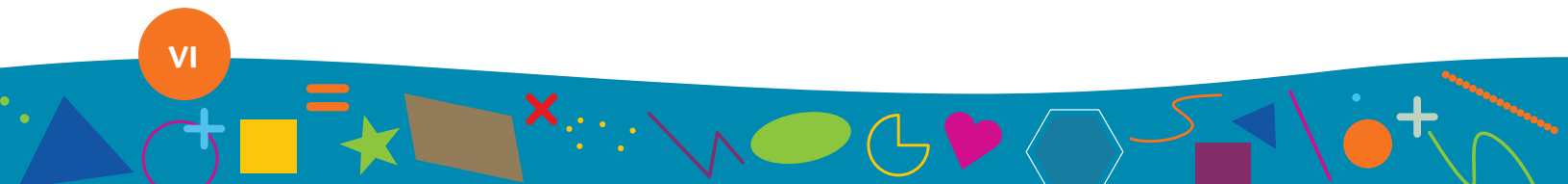


Daily Prayer

Each day begins with a prayer. Realize that your math class has a rhythm.

This time that you spend with your child will be habit-forming: math habits, learning habits, and life habits. Beginning with prayer is a wonderful habit to impart: a simple confession of our dependence on God, a small acknowledgement of God's greatness, a sincere giving of thanks for the chance to learn, a breath of yearning for his kingdom in the context of math. I have suggested a prayer in each chapter and lesson, but feel free to adjust this as you find good and wise. Maybe some days could start with a song instead. *This Is My Father's World* is my favorite hymn for doing mathematics:

"He shines in all that's fair."





Memory Work

The next habit that I strongly suggest is that of warming up with memory work. Scales are the foundation of music. Drills are the fundamentals for athletes. So too, there are basic ideas that should be memorized and rehearsed. This is essential for engaging in the art and science of mathematics.

You will find a collection of these ideas for each chapter in the Teacher Book. I leave it to you to establish a rhythm for memory work that fits best with you and your child. You may want to flip through the prior lessons and exercises in the chapter and rehearse what you've already done. You may find flashcards helpful. You may look at the list of ideas and start a conversation: "Do you remember this idea? Can you use this word in a sentence? What is this or that called again?" Another option is to find the "Oral Test" at the end of the chapter and use those questions as starting points for interacting with the material.

It is fashionable these days to limit math by considering it simply as critical thinking or problem solving. This is a mistake as both the art of memorization and communication are critical to any well-rounded education. Memorizing mathematics, both rote facts and related meaning, will prepare your child to excel in all areas of life (wherever patterns can be found). I'll address this sentiment more fully in a few of the letters, but my request here is simply not to ignore or underestimate the rhythm and resultant value of memory work.

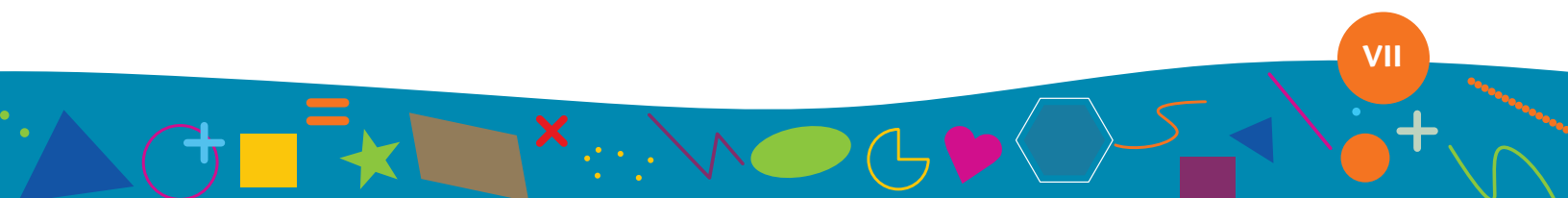
The Teacher Book

The Teacher Book (this book) provides a necessary complement to the Student Book. Each chapter in the Teacher Book corresponds to a chapter in the Student Book. In the Teacher Book, each chapter contains a vision casting letter, a guide to the exercises (or *answer key*), a resource for daily memory work, a family devotional, and a collection of tests. Let's

Vision Casting Letters

Each chapter begins with a short letter addressed to the parent/teacher, the purpose of which is to cast a mathematical vision. How can we improve on our understanding of God's mathematics? How can we move toward a richer, livelier, more God-glorifying perspective on mathematics? How can we gain a vision for mathematics that flows out in the life we have in Christ, finds communion with the Spirit of God, and blossoms into the glory of the Father?

These letters are meant to be read carefully before and/or while teaching through the chapter and afterwards processed with our Lord in prayer. Try to understand the



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basic vision. Insofar as you perceive that it is of God, try to make it your own. As you work through the material with your child/student, I pray that you would begin to see the significance of the ideas presented in these letters and find your own ways to express them. Your child/student is watching you expectantly; they are learning to explore, interpret, and apply after your example, and thus they are capturing your vision of mathematics. The lessons and exercises will communicate most of the *what*, but these letters will communicate most of the *why*. May the Lord bless you in your continued journey through God's mathematics and may your labors of love bear much fruit in your young, precious disciple.

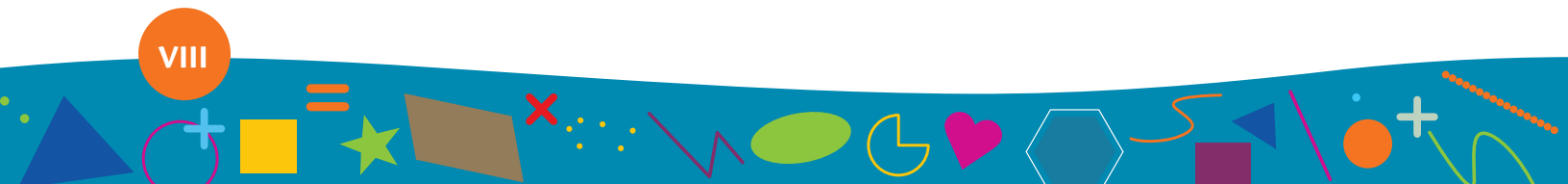
Exercise Guide



The exercise guide is both an answer key and an additional resource to help you understand the exercise pages. Every day's content can be found on the exercise guide. If nothing appears for that day, that means there are no exercises. If there are exercises, every exercise page will be represented in the exercise guide. This feature has been designed to limit space on the page while maintaining an intuitive representation of the answers. Some pages have no proper answers (e.g. practice writing the numbers). Some have many *possible* answers. For those, examples of acceptable answers are given along with advice on how to assess the page. And others have exact answers as might be expected in a math book.

I do have one important warning regarding the exercise guide. An experienced leader of elementary math teachers once told me something to the effect that if a curriculum can become the teacher, it will. Most modern math curricula are designed to minimize the influence of the teacher. "Leave it to the experts," is the sentiment they project. As a parent/teacher, you are busy. Crazy busy. Right? When the math book does all the explaining and the answer key does all the grading, odds are that we are going to take that opportunity and only partially engage with the content. That would all be fine if a book could teach or your child/student could teach themselves, but neither of those is the case. I'm confident in your desire, commitment, and ability to be fully engaged with your child/student in this curriculum, but I also want to warn you of any features that might hinder you toward that end. The exercise guide is one of those features. Please, use it to save time. Your time is precious, and that is why it's here! But be careful not to let it pardon you from the responsibility of understanding the exercises and the content they reflect.

For example, one exercise page might have twelve addition exercises (I avoid the terminology of math *problems*). You might grade this in 20 seconds using the answer



key. Or you might grade it in two minutes by simply reading the page: $3+4=7$, “Yup, that’s right,” $5+6=11$, “Mhm,” $2+7=10$, “Nope, not quite.” This may seem trivial, but the latter will increase your engagement with the content. As a co-learner alongside your child/student, you have the unparalleled opportunity to disclose God’s glory to them. In my estimation, that extra minute and 40 seconds is worth it. Now, what if the exercises were more like $134+289$? In that case, I would use the answer key or a calculator and take a moment at the end to scan the page and reflect on the big picture. I hope this gives you some idea for how the exercise guide might be both a help and a hindrance to you.



Family Mealtime Discussions

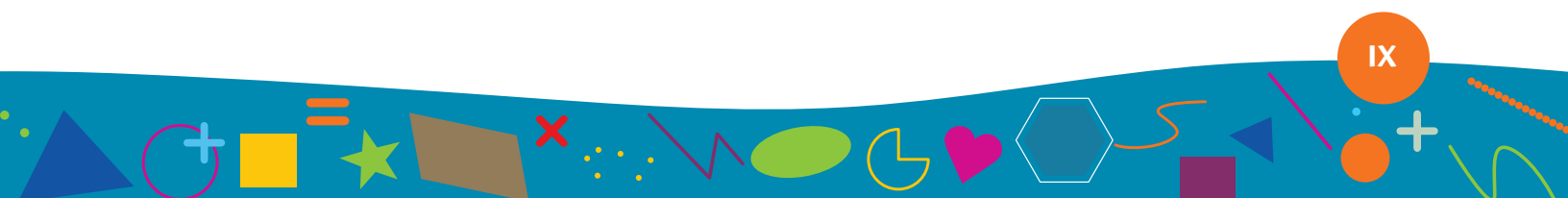
At the end of each chapter there is an important section called *Family Mealtime Discussion*. Typically a single page in length, this serves as a conversation starter for drawing out deeper meaning from the content in the chapter. I imagine these to be great for dinner table conversations, engaging the whole family. However you choose to incorporate this into the learning process, you will find it helpful toward connecting mathematics with the larger context of a life in relationship with God through Jesus Christ.

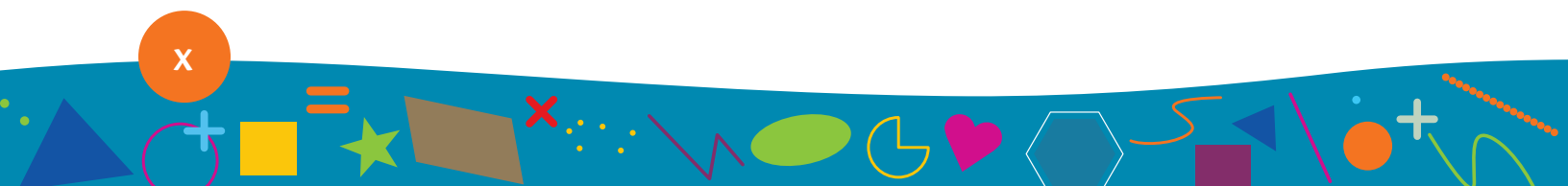
Oral Tests

The final piece of each chapter is the oral test. There are fifteen questions provided in three sets of five. There are a number of ways in which these questions may be asked, but ideally they will promote a discussion that will help to identify key concepts, consolidate learning, and assess progress. You might ask all 15 questions at once; you might space them out over three days of review and discussion, you might ask the 5 questions you think are the most helpful; or you might find another creative way to use them.

Father, we humble ourselves before You; Grant us wisdom by Your Spirit to know the mysteries of mathematics; That we might know and love You all the more as we labor to serve You in Your world. By faith in our Risen Lord, Jesus Christ, for His reputation, to Your eternal glory, our God and Father, Amen.

cab



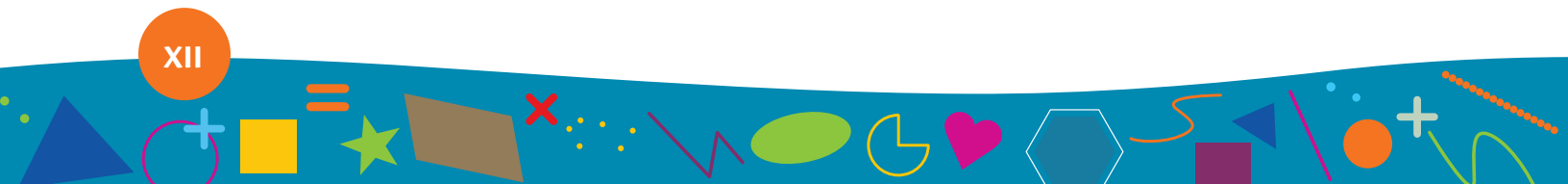


Suggested Daily Schedule

Planned Date	Day	Lessons & Practice	✓	Progress Notes
First Semester-First Quarter				
Week 1	Monday	Chapter 1, Day 1: Creating Sets		
	Tuesday	Chapter 1, Day 2: Creating Shapes		
	Wednesday	Chapter 1, Day 3: Practice		
	Thursday	Chapter 1, Day 4: God's Separations		
	Friday	Chapter 1, Day 5: St. Paul's Cathedral		
Week 2	Monday	Chapter 1, Day 6: Practice		
	Tuesday	Chapter 1, Day 7: Go Separate God's World		
	Wednesday	Review & Test		
	Thursday	Review & Test		

SUGGESTED DAILY SCHEDULE

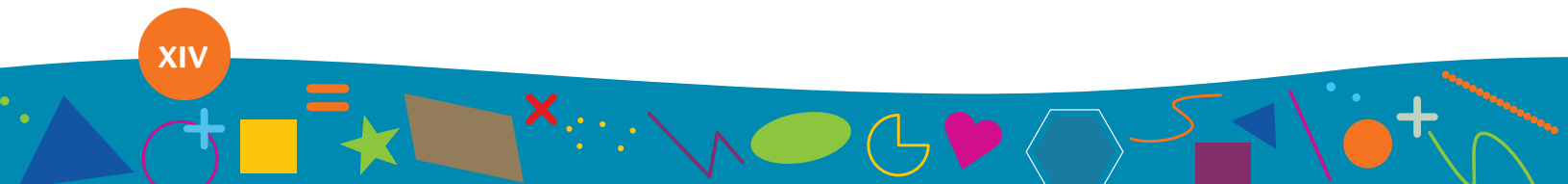
Planned Date	Day	Lessons & Practice	✓	Progress Notes
	Friday	Chapter 2, Day 8: Learning the Numbers		
Week 3	Monday	Chapter 2, Day 9: Practice		
	Tuesday	Chapter 2, Day 10: Counting with Numbers		
	Wednesday	Chapter 2, Day 11: Counting with Shapes		
	Thursday	Chapter 2, Day 12: Practice		
	Friday	Chapter 2, Day 13: Numbers Patterns		
Week 4	Monday	Chapter 2, Day 14: Practice		
	Tuesday	Chapter 2, Day 15: Counting with Graphs		
	Wednesday	Chapter 2, Day 16: Practice		
	Thursday	Chapter 2, Day 17: Counting in Yosemite		
	Friday	Chapter 2, Day 18: Practice		



Planned Date	Day	Lessons & Practice	✓	Progress Notes
Week 5	Monday	Chapter 2, Day 19: Practice		
	Tuesday	Chapter 2, Day 20: Go Count God's World!		
	Wednesday	Review & Test		
	Thursday	Review & Test		
	Friday	Chapter 3, Day 21: Bringing Sets Together		
Week 6	Monday	Chapter 3, Day 22: Practice		
	Tuesday	Chapter 3, Day 23: Adding Numbers		
	Wednesday	Chapter 3, Day 24: Practice		
	Thursday	Chapter 3, Day 25: Ordering Numbers		
	Friday	Chapter 3, Day 26: Practice		
Week 7	Monday	Chapter 3, Day 27: Adding Sounds		

SUGGESTED DAILY SCHEDULE

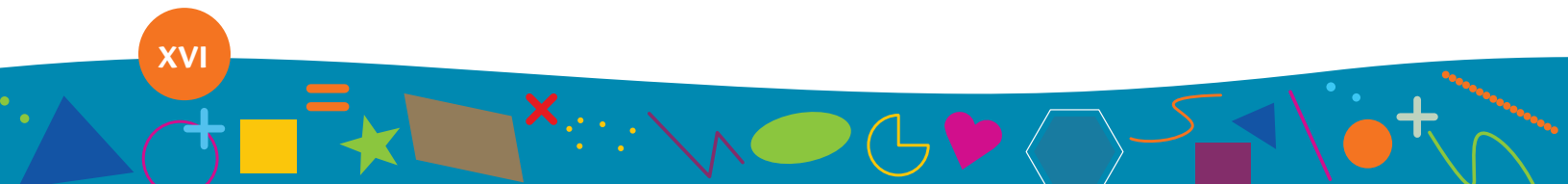
Planned Date	Day	Lessons & Practice	✓	Progress Notes
	Tuesday	Chapter 3, Day 28: Practice		
	Wednesday	Chapter 3, Day 29: Combining Patterns		
	Thursday	Chapter 3, Day 30: Practice		
	Friday	Chapter 3, Day 31: Racing with Dice		
Week 8	Monday	Chapter 3, Day 32: Practice		
	Tuesday	Chapter 3, Day 33: Joining Shapes		
	Wednesday	Chapter 3, Day 34: Go Help with Addition!		
	Thursday	Review & Test		
	Friday	Review & Test		
Week 9	Monday	Cumulative Memory Work Review		
	Tuesday	Play Racing with Dice (from Day 31)		
	Wednesday	Cumulative Memory Work Review		



Planned Date	Day	Lessons & Practice	✓	Progress Notes
	Thursday	Play Racing with Dice (from Day 31)		
	Friday	Cumulative Memory Work Review		
First Semester-Second Quarter				
Week 1	Monday	Chapter 4, Day 35: Finding Symmetry		
	Tuesday	Chapter 4, Day 36: Practice		
	Wednesday	Chapter 4, Day 37: Numbers in Groups		
	Thursday	Chapter 4, Day 38: Practice		
	Friday	Chapter 4, Day 39: Combining Numbers in Groups		
Week 2	Monday	Chapter 4, Day 40: Practice		
	Tuesday	Chapter 4, Day 41: Symmetry in Psalm 67		
	Wednesday	Chapter 4, Day 42: Practice		

SUGGESTED DAILY SCHEDULE

Planned Date	Day	Lessons & Practice	✓	Progress Notes
	Thursday	Chapter 4, Day 43: Making Symmetry		
	Friday	Chapter 4, Day 44: Practice		
Week 3	Monday	Chapter 4, Day 45: Crack the Code		
	Tuesday	Chapter 4, Day 46: Practice		
	Wednesday	Chapter 4, Day 47: Go Make Symmetry!		
	Thursday	Review & Test		
	Friday	Chapter 5, Day 48: Separating Sets		
Week 4	Monday	Chapter 5, Day 49: Practice		
	Tuesday	Chapter 5, Day 50: Subtracting Numbers		
	Wednesday	Chapter 5, Day 51: Practice		
	Thursday	Chapter 5, Day 52: Comparing Sets		

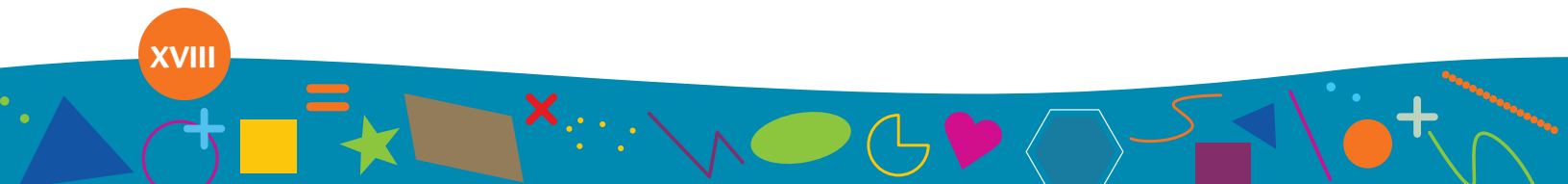


Planned Date	Day	Lessons & Practice	✓	Progress Notes
	Friday	Chapter 5, Day 53: Practice		
Week 5	Monday	Chapter 5, Day 54: Dice Battle!		
	Tuesday	Chapter 5, Day 55: Practice		
	Wednesday	Chapter 5, Day 56: Finding the Number that Fits		
	Thursday	Chapter 5, Day 57: Practice		
	Friday	Chapter 5, Day 58: A God of Opposites		
Week 6	Monday	Chapter 5, Day 59: Practice		
	Tuesday	Chapter 5, Day 60: A World of Opposites		
	Wednesday	Chapter 5, Day 61: Practice		
	Thursday	Chapter 5, Day 62: Go Help with Subtraction!		
	Friday	Review & Test		



SUGGESTED DAILY SCHEDULE

Planned Date	Day	Lessons & Practice	✓	Progress Notes
Week 7	Monday	Chapter 6, Day 63: Adding in Chunks		
	Tuesday	Chapter 6, Day 64: Practice		
	Wednesday	Chapter 6, Day 65: Counting to 100		
	Thursday	Chapter 6, Day 66: Practice		
	Friday	Chapter 6, Day 67: Counting to 100 with Coins		
Week 8	Monday	Chapter 6, Day 68: Practice		
	Tuesday	Chapter 6, Day 69: Bigger Numbers in the Bible		
	Wednesday	Chapter 6, Day 70: Adding & Subtracting Bigger Numbers		
	Thursday	Chapter 6, Day 71: Practice		
	Friday	Chapter 6, Day 72: Numbers in Really Big Groups		

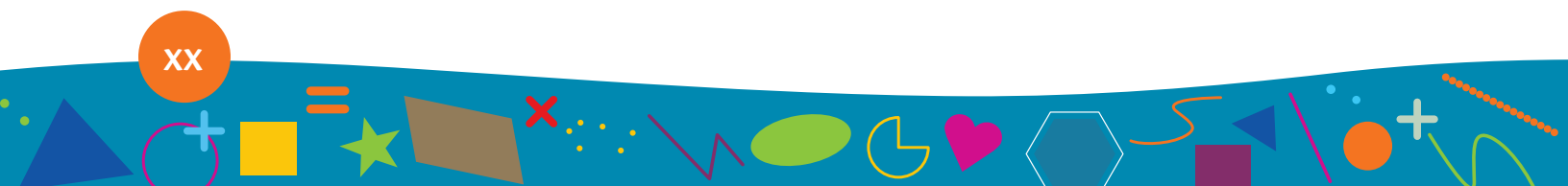


Planned Date	Day	Lessons & Practice	✓	Progress Notes
Week 9	Monday	Chapter 6, Day 73: Practice		
	Tuesday	Chapter 6, Day 74: More Number Patterns		
	Wednesday	Chapter 6, Day 75: Practice		
	Thursday	Chapter 6, Day 76: Go Help with Bigger Numbers!		
	Friday	Review & Test		
Midterm Progress Notes				
Grade: _____				

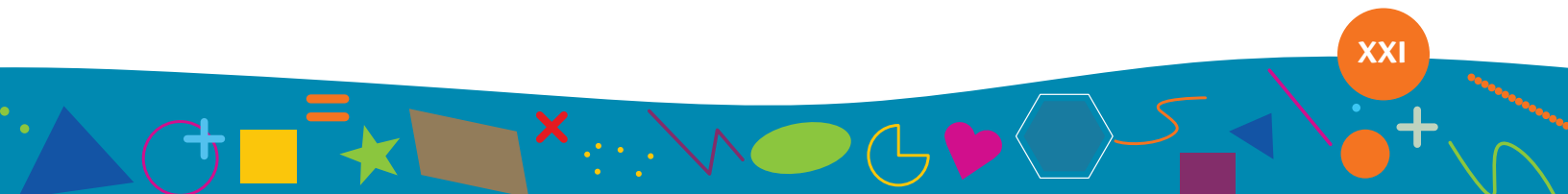


SUGGESTED DAILY SCHEDULE

Date	Day	Lessons & Practice	✓	Progress Notes
Second Semester-Third Quarter				
Week 1	Monday	Chapter 7, Day 77: God's Straight World		
	Tuesday	Chapter 7, Day 78: Practice		
	Wednesday	Chapter 7, Day 79: God's Curved World		
	Thursday	Chapter 7, Day 80: Practice		
	Friday	Chapter 7, Day 81: Practice		
Week 2	Monday	Chapter 7, Day 82: Lengths and Shapes		
	Tuesday	Chapter 7, Day 83: Practice		
	Wednesday	Chapter 7, Day 84: Huge Creations!		
	Thursday	Chapter 7, Day 85: Practice		
	Friday	Chapter 7, Day 86: Practice		

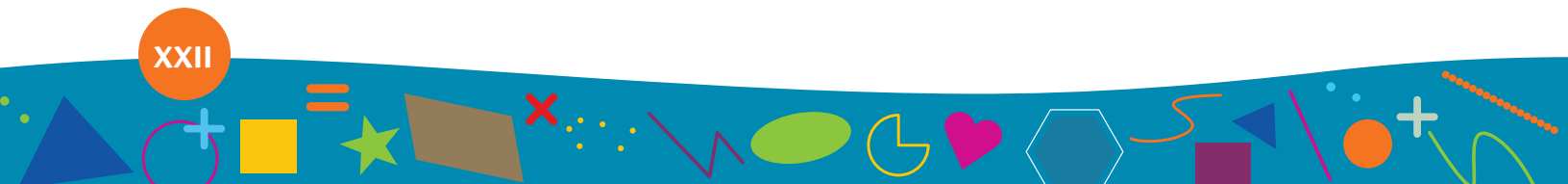


Date	Day	Lessons & Practice	✓	Progress Notes
Week 3	Monday	Chapter 7, Day 87: Go Measure Your World!		
	Tuesday	Review & Test		
	Wednesday	Review & Test		
	Thursday	Chapter 8, Day 88: Distance Between Numbers		
	Friday	Chapter 8, Day 89: Practice		
Week 4	Monday	Chapter 8, Day 90: Finding Distance with Subtraction		
	Tuesday	Chapter 8, Day 91: Practice		
	Wednesday	Chapter 8, Day 92: Rounding		
	Thursday	Chapter 8, Day 93: Practice		
	Friday	Chapter 8, Day 94: Rounding Lengths		
Week 5	Monday	Chapter 8, Day 95: Practice		



SUGGESTED DAILY SCHEDULE

Date	Day	Lessons & Practice	✓	Progress Notes
	Tuesday	Chapter 8, Day 96: Guessing Short Lengths		
	Wednesday	Chapter 8, Day 97: Practice		
	Thursday	Chapter 8, Day 98: Guessing Long Lengths		
	Friday	Chapter 8, Day 99: Practice		
Week 6	Monday	Chapter 8, Day 100: Go Guess in Your World		
	Tuesday	Review & Test		
	Wednesday	Review & Test		
	Thursday	Chapter 9, Day 101: Adding Bigger Numbers		
	Friday	Chapter 9, Day 102: Practice		
Week 7	Monday	Chapter 9, Day 103: A New Way to Add		
	Tuesday	Chapter 9, Day 104: Practice		

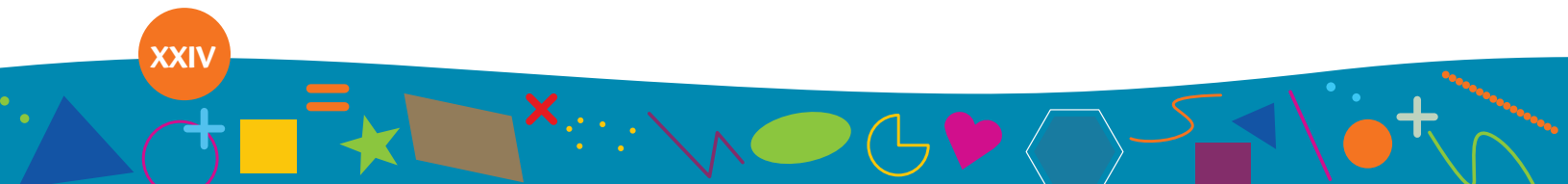


Date	Day	Lessons & Practice	✓	Progress Notes
	Wednesday	Chapter 9, Day 105: Patterns in Chess		
	Thursday	Chapter 9, Day 106: Practice		
	Friday	Chapter 9, Day 107: A New Way to Subtract		
Week 8	Monday	Chapter 9, Day 108: Practice		
	Tuesday	Chapter 9, Day 109: Patterns in Sudoku		
	Wednesday	Chapter 9, Day 110: Practice		
	Thursday	Chapter 9, Day 111: Go Work with Bigger Numbers!		
	Friday	Review & Test		
Week 9	Monday	Review & Test		
	Tuesday	Play Dice Battle (from Day 54)		
	Wednesday	Cumulative Memory Work Review		

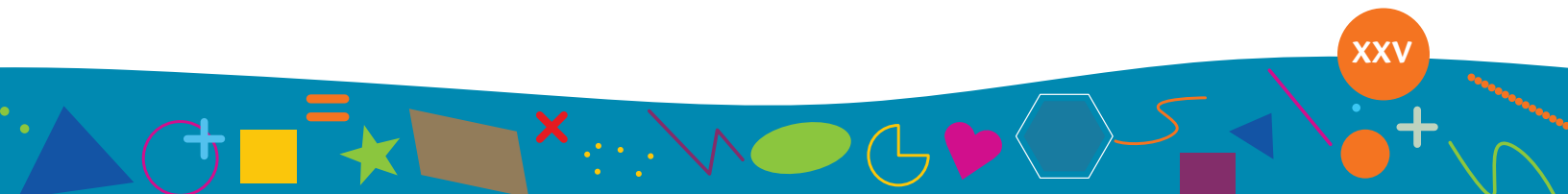


SUGGESTED DAILY SCHEDULE

Date	Day	Lessons & Practice	✓	Progress Notes
	Thursday	Play Dice Battle (from Day 54)		
	Friday	Cumulative Memory Work Review		
Second Semester-Fourth Quarter				
Week 1	Monday	Chapter 10, Day 112: Distance Around the House		
	Tuesday	Chapter 10, Day 113: Practice		
	Wednesday	Chapter 10, Day 114: The Car and the Crow		
	Thursday	Chapter 10, Day 115: Practice		
	Friday	Chapter 10, Day 116: Paths on Graphs		
Week 2	Monday	Chapter 10, Day 117: Practice		
	Tuesday	Chapter 10, Day 118: Distance in the Bible		
	Wednesday	Chapter 10, Day 119: Practice		

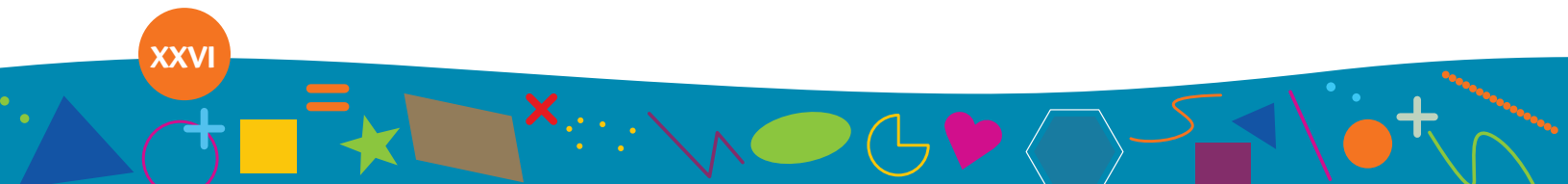


Date	Day	Lessons & Practice	✓	Progress Notes
	Thursday	Chapter 10, Day 120: Practice		
	Friday	Chapter 10, Day 121: Go Find Distances!		
Week 3	Monday	Review & Test		
	Tuesday	Review & Test		
	Wednesday	Chapter 11, Day 122: Finding Time		
	Thursday	Chapter 11, Day 123: Practice		
	Friday	Chapter 11, Day 124: Reading a Clock		
Week 4	Monday	Chapter 11, Day 125: Practice		
	Tuesday	Chapter 11, Day 126: Reading a Calendar		
	Wednesday	Chapter 11, Day 127: Practice		
	Thursday	Chapter 11, Day 128: Groups and Time		
	Friday	Chapter 11, Day 129: Practice		



SUGGESTED DAILY SCHEDULE

Date	Day	Lessons & Practice	✓	Progress Notes
Week 5	Monday	Chapter 11, Day 130: Our Patient God		
	Tuesday	Chapter 11, Day 131: Practice		
	Wednesday	Chapter 11, Day 132: Go Tell Time!		
	Thursday	Review & Test		
	Friday	Review & Test		
Week 6	Monday	Chapter 12, Day 133: 0 to 999		
	Tuesday	Chapter 12, Day 134: Practice		
	Wednesday	Chapter 12, Day 135: Ordering Bigger Numbers		
	Thursday	Chapter 12, Day 136: Practice		
	Friday	Chapter 12, Day 137: Bigger Numbers in the Scriptures		
Week 7	Monday	Chapter 12, Day 138: Practice		

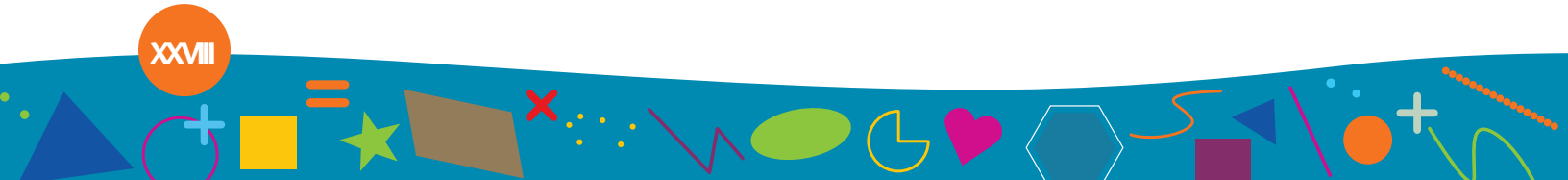


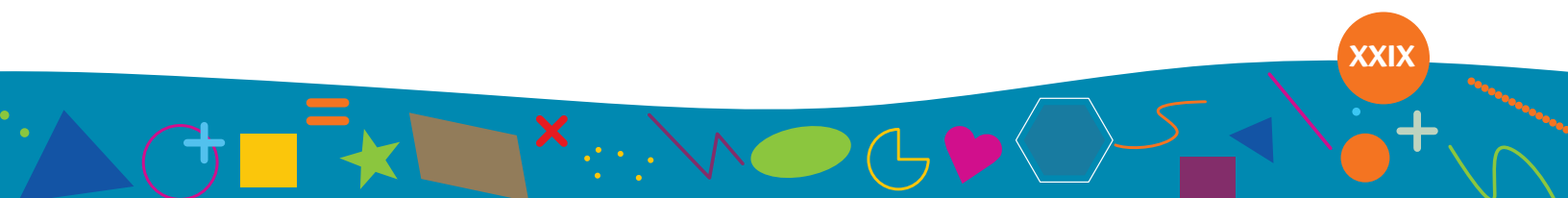
Date	Day	Lessons & Practice	✓	Progress Notes
	Tuesday	Chapter 12, Day 139: Longer Lengths and Distances		
	Wednesday	Chapter 12, Day 140: Practice		
	Thursday	Chapter 12, Day 141: Rounding to the Nearest 100		
	Friday	Chapter 12, Day 142: Practice		
Week 8	Monday	Chapter 12, Day 143: Timelines		
	Tuesday	Chapter 12, Day 144: Practice		
	Wednesday	Chapter 12, Day 145: Go See Bigger Numbers!		
	Thursday	Review & Test		
	Friday	Review & Test		
Week 9	Monday	Cumulative Memory Work Review		
	Tuesday	Game Day		



SUGGESTED DAILY SCHEDULE

Date	Day	Lessons & Practice	✓	Progress Notes
	Wednesday	Cumulative Memory Work Review		
	Thursday	Game Day		
	Friday	Cumulative Memory Work Review		
Final Progress Notes				
Grade: _____				







God separated the land
from the sea.

CHAPTER 1

Making Separations



To the Parent or Teacher

Can you imagine a world without sin? Entire industries – banking, defense, health-care, and emergency services – exist only because of sin. Our world is fraught with the consequences of our failure to seek God and His kingdom, and mathematics is no exception. I want to draw your attention to some of the problems we have in mathematics, problems that you likely have experienced firsthand. I want to explore their implications and how they might affect you as a teacher, so that I might then encourage you in the Lord and give you some advice for doing and teaching mathematics well in a broken world.

The first idea that I want to address is that we tend to think of mathematics *purely* as law and language, rules and symbols. This is especially true in the classroom. The error goes that math is a collection of rules represented with complex symbols that are to be learned and followed. Why do we learn mathematics? Because they are rules, not suggestions. This is the way the world works, and we need the tools of mathematics to live in the world. Why are there so many confusing words and symbols? I'm sure someone smarter than us has a good answer for that.

One issue with this way of approaching mathematics is that it makes mathematics mindless. Oh sure, the mind is engaged (often struggling to remember that formula that never seems to stick), but imagination, curiosity, wonder, and insight – the real glories of the mind – have long departed. If math is simply the rules of numbers and the right way to say them, then as teachers we might as well consider ourselves bureaucrats and our classrooms akin to the DMV. This issue is easy for us to fall into, and unless otherwise

CHAPTER 1 | MAKING SEPARATIONS

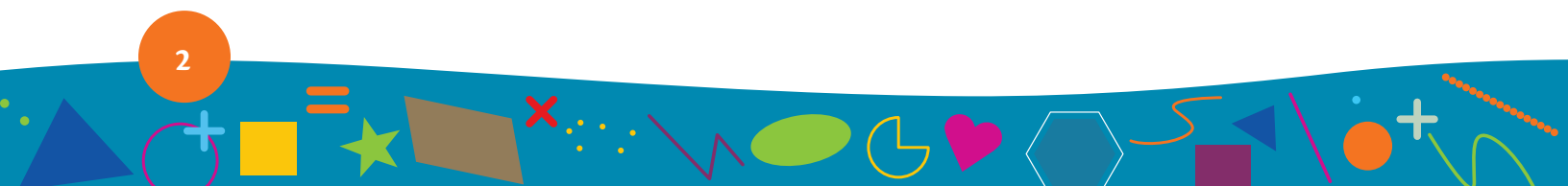
addressed, we naturally gravitate toward getting through math and getting on to the good things in life.

The other implication of approaching math as mere law and language is much more insidious. Because of our flesh, and unless we are otherwise aided by the Spirit, we take advantage of law and use it to fuel our pride. This is exactly how some students use the laws of mathematics. They work hard to win praise and secretly consider themselves better than others. Alternatively, if they fail, they despair, being unable to reach the standard of approval. If children produce good work for the praise of men rather than for the glory of God, they have missed the point of mathematics all together. This legalistic way of doing mathematics is easy to fall into when math is just rules and symbols. If God is not present in mathematics, who is there to love but myself? Jesus said, “If you love me, you will keep my commandments.” Love for God makes it possible to live (truly live) with law, even the laws of mathematics.

Along this same line, we must be careful that we do not encourage a spirit of self-reliance but rather a spirit of humble dependence and trust in God. Math is a challenging subject for many, and with any challenge comes fear. Children can be afraid of learning; it’s hard, and they might fail. But parents can also be afraid of teaching; it’s hard, and they might fail. If we respond to these fears with self-reliance, we’ve not entered into the *paideia* (or training program) of the Lord Jesus Christ. His *paideia* is a call to faith, and thus our classrooms must be founded on faith. A true love for God works diligently but trusts in God for the results; a true love for God faces difficulty, uncertainty, and failure with a confidence that rests not in self but in the Father who loves the self.

So, we have some problems, and I’ve not even introduced you to 10% of them, but there is good news. The first step toward any child’s journey in true mathematics is to have a teacher who has been called by God and equipped with His Spirit. That’s you! Here you are, chosen by God to raise this child in the fear of the Lord through mathematics. He is near to you as you are in Christ, and He hears every one of your prayers for help. He has invited you into His work (not the other way around) and he is eager to bless your child with a true, living, and satisfying experience of mathematics. As tired as you might become or as hard as this might get, you have good reason to be encouraged.

Let’s talk more good news. Your classroom can be a true, living, and satisfying experience of mathematics because God’s mathematics is *more* than most of us realize. I define mathematics as the art and science of exploring, interpreting, and applying the patterns of God along the path in a quest to realize the fullness of the kingdom of the Lord Jesus Christ and the glory of God in His creation. That definition is a lot, and we will keep coming back to unpack it, but for now let’s just make one observation: math is so much more than the rules we make and the language we use to communicate those



rules. Math is an art, engaging the imagination and calling upon creativity in a unique way. Math says something about God. The heavens declare the glory of God (Ps 19:1), and the patterns in which they are made are no exception. And math, in its proper context, is also a facet of our great quest to love God and man. It is both consistent with and contributing toward our eternal destiny.

That means that math is not meaningless. If you perceive your child is learning to go through the motions, if they are not asking curious questions, if they are asking why and so what and not seeming to find those answers, stop. When we are forced to do meaningless things, we begin to resent them. While you should have goals and a timeline for getting through the material, the goal of cultivating a God honoring mathematical experience should take precedence. That means slowing down is okay. Review prior lessons with games, puzzles, and other integrative activities. Take a week off. Pray that God would fill your mathematics classroom with life, beauty, and vibrancy. Consider before Him how you might better represent math as well as how you might better appreciate your child's blossoming personality. I am praying right along with you, and I trust that God will meet your every need in Christ Jesus.

The definition and meditations above also mean that math is not simple. Exploring, interpreting, and applying take hard work. God made simple patterns, but he also made really complicated ones. There are character lessons to learn along the way. The slothful won't plow his fields, because, he says, "There is a lion in the streets!" (Proverbs 22:13). Without question you will find lions (challenges and difficulties) in some of these lessons! Encourage your child to engage the struggle, by faith and prayer. The *why* comes before the *what*, but neither is more important than the other. Though math is much more, there are rules, words, and symbols just like anything in life (okay, maybe more symbols than normal).

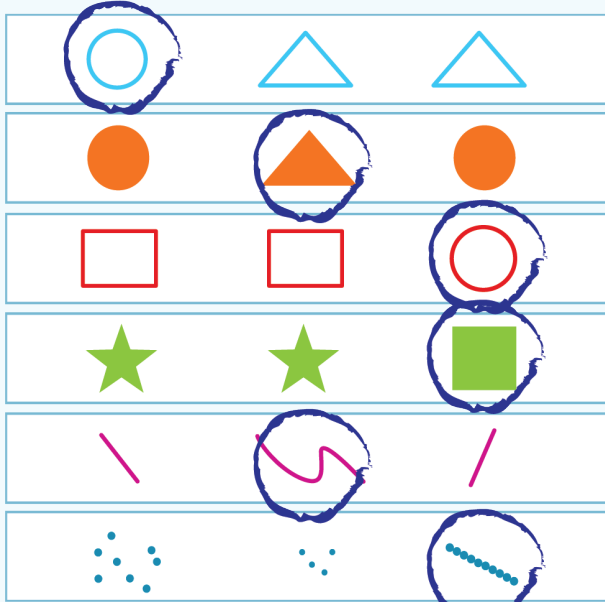
One thing you might consider is letting your child create their own vocabulary. I will be very clear about what words the student should know, but beyond that, have some fun. Is not naming our God given right (Genesis 2:19)? A quadrilateral might be a "crooked rectangle." An oval or an ellipse might be a "squashed circle." Vocabulary is necessary, but if not used appropriately, the wording itself can confuse or cause a child to miss God's beautiful patterns. Teach them to love God's beautiful patterns first, and the vocabulary will work itself out.

I have much more to write to you, but that will come later. For now I wish you the best as you reenter the world of mathematics, and I pray that God will take your little time and little talents and make much of them for His glory and your joy.

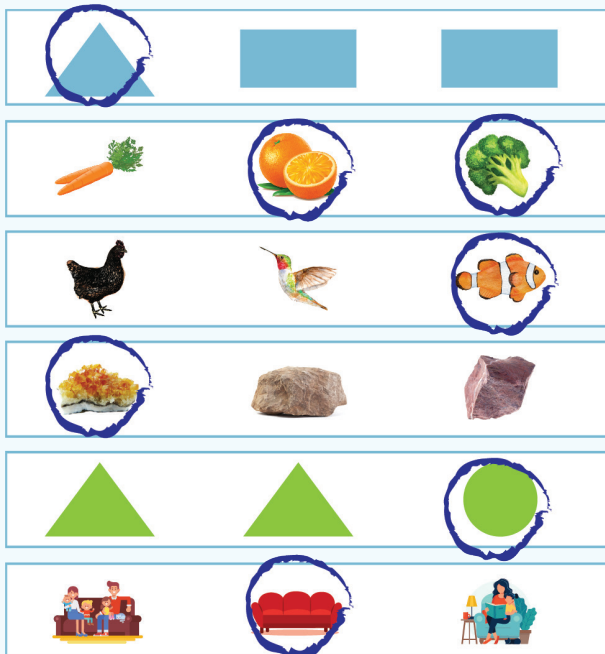


Exercise Guide

DAY 2



DAY 4

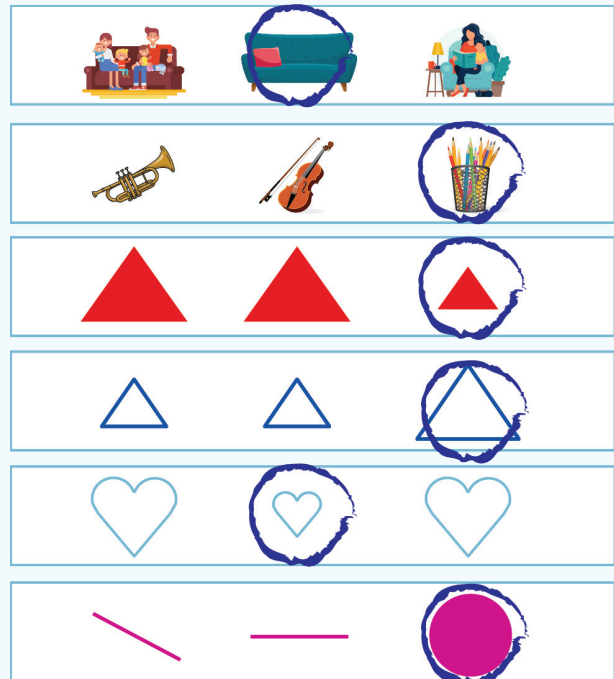


*The second line can be split apart by color
OR fruit vs. vegetable.

DAY 6



DAY 7





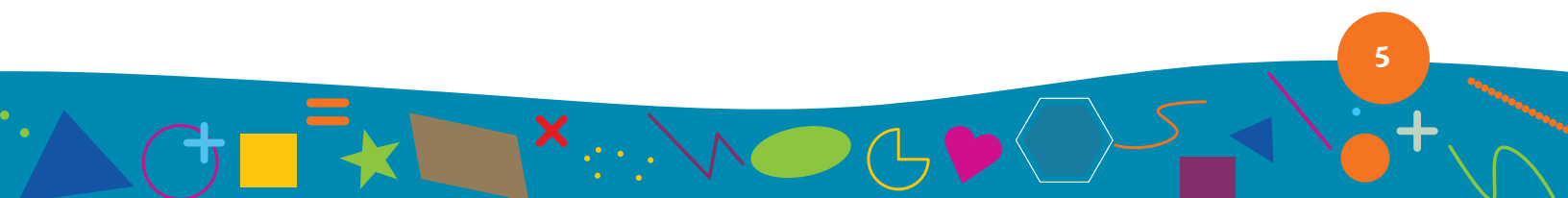
A Guide for Memory Work

Discuss each of these ideas as you read the chapter. The amount of material you have for memory work and review will slowly grow. Each day, focus on some of the new ideas and some of the old. Which ones are easier for your child, and which are harder? Maybe you can use the easier ones as encouragement for the harder ones!

- ◆ **Keep reinforcing this idea:** When we do math, we are finding beautiful ways that God has separated the world.
- ◆ Engage in simple conversation using the words:
 - › Set, member, and empty set.
 - › Point, line, straight, curved, shape, triangle, square, star, and circle

You might want to try making **flashcards** for memory work. Depending on how you want to integrate technology into your schooling, Quizlet might be a great website for creating flashcards and playing games with them! You can also use the activities we do in the lessons to find creative ways to memorize through exploring the world.

- ◆ **Skill:** Create a set of things that all have something in common.
- ◆ **Skill:** Split a set into smaller sets so that the members of each new set have even more in common.
- ◆ **Skill:** Draw a straight line with a ruler.
- ◆ **Skill:** Draw triangles, squares, stars, and circles.
- ◆ **Keep reinforcing this idea:** We are like God because we are made in His image, but God is separate from us because He is God and we are not.





Family Mealtime Discussion

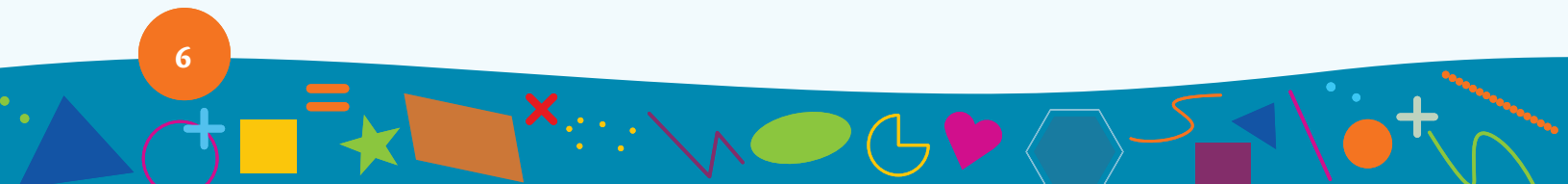
In the book of Genesis we see that God is a naming God and he calls us to be naming people.

[God] created them male and female, and blessed them and called them Mankind in the day they were created. (Genesis 5:2)

And whatever Adam called each living creature, that was its name. (Genesis 2:19)

God made a world full of the patterns of sets and partitions and we glorify him by naming them. But how do we interpret sets and partitions? Why did God make a world full of differences? Separations help us understand that God is different from us. God is holy. He is smarter, stronger, and sweeter than we will ever be. He is God, and we are not. Learning separations in math helps us praise our God, the Creator of heaven and earth, as wonderfully separate from us.

- ◆ Why are names like woodpecker, fly, sloth, and anteater good names?
- ◆ Why did your parents give you your name?
- ◆ We name things under our care; have you ever named anything? Is there anything in your world that needs a name?
- ◆ In what way are you like God? In that way, how is he “more” than you?



CHAPTER 1

1. What do we call the things in a set?
2. Split the set of your family into adults and children. Who belongs in each set?
3. Draw a straight line in the air with your finger.
4. Draw a curved line in the air with your finger.
5. Draw a straight line on paper with a ruler.

1. In math, why would we split a set apart? Can you think of an example?
2. What is an empty set missing?
3. Consider your kitchen and everything in it as one big set; name three smaller sets that you could create.
4. Name three different shapes.
5. On a piece of paper, draw points that form a line and draw points that do not form a line.

1. What do we call a set that has no members?
2. Parent/teacher, draw a square, triangle, circle, and star. Ask your child to identify each shape.
3. What are three different sets of animals that God has made?
4. Use your finger to draw points in the air.
5. Parent/teacher, draw a trapezoid on paper. Ask your child to create a good name for this shape.

