Math 1 God's Gift of Numbers

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Your Math Toolbox

Get ready for your journey in math by gathering the following helpful tools.



God separated the land from the sea!

the set

CHAPTER 1 Making Separations

Creating Sets DAY 1

This lesson explores the world. It contains a brief chapter introduction, a lesson, an activity, and a page of exercises. The parent/teacher is needed for about 20 minutes in this lesson.

Introduction

Everything began when God created the world — including math. In the beginning God created the heavens and the earth. The earth was without form, and void; and darkness was on the face of the deep. And the Spirit of God was hovering over the face of the waters. Then God said, "Let there be light"; and there was light. And God saw the light, that it was good; and God divided the light from the darkness. God called the light Day, and the darkness He called Night. So the evening and the morning were the first day. (Genesis 1:1-5)

Your very first math lesson is simple: math is God's idea and it's all about the patterns in His world. He is the Great Mathematician; He knows the answer to every question you could have about math; and He is here to help. In this chapter we will learn about the most basic of God's ideas in math: separations. God separated the

light from the darkness. When we do math, we are finding the beautiful ways that God has separated the world. Can you see the separation of light and darkness in the picture?

DAY 1 | CREATING SETS

Prayer

Memory



Father, we love You; teach us to see Your patterns so that we can know and worship You more. Amen.



' Spend 5 minutes on memory work.

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🖉 Lesson

In math we call a collection of things a **set**. Those things in the set are called **members** of the set. I like to think of a set as a basket and all the members as things inside my basket. Do you see the box in the picture? The members are all the different vegetables together in that box!



When the members of a set only have a little in common, we call it a **simple set**. Let's imagine your kitchen table as a simple set. Lots of things belong on the table during a meal, but the bread is very different from the spoons! Can you imagine those things if they weren't empty sets? God gave us imagination as our most important tool in math.

When we **separate** a set, we split it into smaller sets with members that have more in common with each other. We might separate a laundry basket (a simple set) into smaller sets of shirts, pants, and socks. The smallest sets are called **empty sets**. They have no members at all!

Consider the set of buffalo in your bathroom, lions in your living room, and spiders in your shoes. Hopefully, those are empty sets!

Activity

Now, find a simple set in your house. You might use all the clean dishes in the drainer or the dishwasher. (Parent/teacher, see the box on the next page for a few other options for this activity that don't involve

dishes.) Now, make smaller sets out of the things that belong together. That is, separate the simple set.

- 1. Put all the cups together.
- 2. Put all the plates together.
- 3. Put all the silverware together.



Excellent! You've split your set into a few new sets. Now, let's do it again! This time think of the silverware as the simple set.





- 1. Put all the forks together.
- 2. Put all the spoons together.
- 3. Put all the knives together.

Finally, take a moment to enjoy the separations you have made. You are beginning to think like God thinks. You are beginning to represent His rule in the world. Now is a good time to pray and thank Him for all the sets He has made in His world and for how He is helping you see them.

Other Activities

You can replicate this same activity with many simple sets. You might separate a box of toy blocks, a basket of clean laundry, books on a shelf, or a drawer full of office supplies. Maybe shape, color, or use will define your new sets. There are lots of options. A fun one with no preparation needed is to separate the parts of your body. What is the set of all the body parts on your head? How is that different from the set of body parts on your hand?

Student Exercises

Draw a set of each of these types of things. There can be as many of as few members as you like!



Creating Shapes DAY 2

This is an imagination exploring lesson. There is a brief lesson followed by two pages of exercises, some new and some review. The parent-teacher is needed for about 20 minutes in this lesson.

Prayer

Memory



Father, we love You; teach us to see Your patterns so that we can know and worship You more. Amen.

⁹ Spend 5 minutes on memory work.

🖉 Lesson

The simplest shape that God made is a **point**.

When a set of **points** are all right next to each other they create a **line**.

Some lines are **straight** and others are **curved**.







CHAPTER 1 | MAKING SEPARATIONS

When sets of lines are touching they make other interesting shapes like **triangles**, **squares**, **circles**, **stars**... and so, so much more. Check out the shapes in these pictures! Which of these did God make as part of His creation? Which of these did man make?



Student Exercises

Here are some sets. Split the sets by circling the member that could be in a set all by itself. But first, with a little help from your parent/teacher, let's make sure we know the names of each one of these shapes.



CHAPTER 1 | MAKING SEPARATIONS



Trace these triangles, squares, circles, and other shapes too!



Student Exercises

Parent/teacher: Show your student how to draw a straight line with a ruler.

Draw some straight lines in the box below. Draw some curved ones too. God is always creative. How can you be creative with drawing lines? Try making an entire picture out of just straight and curved lines.



CHAPTER 1 | MAKING SEPARATIONS

Trace these shapes and lines! Add some color too.

God's Separations DAY 4

This is a Scripture lesson. There is an activity that interacts with the Scriptures in a way related to the contents of this chapter following by one page of exercises. The parent-teacher is needed for about 20 minutes in this lesson.

Prayer





Father, we love You; teach us to see Your patterns so that we can know and worship You more. Amen.

Spend 5 minutes on memory work.

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Activity

Read Genesis chapter 1 aloud and take notice of every time that God makes a separation. Remember that a separating is splitting a simple set into smaller sets. Hint: He does it every day!

Now, think about all the animals that God made as a simple set. Remember, a simple set is a collection of things that only have a little bit in common. In this case, the simple set is simply all animals. Now separate that set. That is, separate the animals into the places they should go. Draw a few animals in the sky and draw a few animals on the land on the next page.



What animals did God make to live in the sky? Draw a few! What animals did God make to live on the land? Draw a few of those, too!



Here are some sets. Split the sets by circling the member that is different from the others. Which did God make different?



DAY 5 St. Paul's Cathedral

This is a nature and culture lesson. There is an activity that interacts with some of the beautiful things that God and men have made following by one page of exercises. The parent-teacher is needed for about 15 minutes in this lesson.

Prayer

Memory



Father, we love You; teach us to see Your patterns so that we can know and worship You more. Amen.



Spend 5 minutes on memory work.

Activity

On the next page is a picture of St. Paul's Cathedral, a protestant church in London, England.

It is a stunningly beautiful building, even without that rainbow! Use your new understanding of shapes to think more deeply about this picture.

- 1. Find a set of straight lines.
- 2. Find a set of curved lines.
- 3. Find some squares.
- 4. Find a circle.
- 5. What shape is the rainbow? We actually call it a "bow," but can you imagine its shape if it kept curving around like that?
- 6. Find a triangle.
- 7. Point out some shapes that you don't have a name for. Can you think of a good name for them?



"The rainbow shall be in the cloud, and I will look on it to remember the everlasting covenant between God and every living creature of all flesh that is on the earth." (Genesis 9:16)

When you have finished, do you feel differently about this picture? Are you starting to see the patterns that make it? God made us so that we can build things with different kinds of shapes. Here is a wonderful example of that. Maybe someday you can visit St. Paul's Cathedral!

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CHAPTER 1 | MAKING SEPARATIONS



Draw a set of members that you might find in a garden.

Draw a set of members that you might find in a kitchen.

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Student Exercises

Here are some sets. Split the sets by circling the member that could be in a set all by itself. Which did God make special?



CHAPTER 1 | MAKING SEPARATIONS

Draw a line from the animal to the picture to show whether the animal belongs in a set on the ground or a set in the tree.



Go Separate God's World

This is a world ruling lesson. There is an activity that sends you out to fill your world with God's patterns, goodness, glory, and love followed by one page of exercises. The parent-teacher is needed for about 20 minutes in this lesson.

Prayer

Memory



Father, we love You; teach us to see Your patterns so that we can know and worship You more. Amen.

Activity

Today we are going to rule the world as God's representatives by creating sets and enjoying shapes.

1. Make piles on the ground.

Go outside and search around on the ground. Make one pile of sticks and make one pile of leaves. (If you live somewhere like the desert, you may need to adjust this project!) You may also think of other sets to make too!

2. Find shapes.

Search the sticks and find the most interesting shape. Go through the leaves and find the most interesting shape. Appreciate them for a moment! Tell someone why you like them. Maybe find a special place for them.

3. Clean up and review.

Then, find out where you should put your piles and clean up! What have you done? You've found some chaos, made some order, and enjoyed the beauty along the way. What will be the result? Maybe some plants will grow better, or maybe the yard is clear for your family and your friends to play in!

DAY 7

Spend 5 minutes on

memory work.



Trace these shapes. Do you see the patterns I created here with the dots?



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Here are some sets. Split the sets by circling the member that could be in a set all by itself. Can you explain what makes it unique?



Each year God gives this tree one new ring.

A DE LE DERING DE LE TER DE LE DE

CHAPTER 2 Seeing Sizes

Introduction

This lesson explores the world. It contains a brief chapter introduction, a lesson, an activity, and a page of exercises. The parent/teacher is needed for about 20 minutes in this lesson.

In our first lessons, we learned about sets because God made a world full of distinctions, separations, and differences. One way that God made things different is by size. Do you notice any size differences in this picture below?

The prophet Isaiah said, It is [Yahweh] who sits above the circle of the earth, And its inhabitants are like grasshoppers (Isaiah 40:22)

God is big. How big? The more we learn about sizes, the more we can imagine how big God is! Math is learning more about the world of separations that God has made with numbers.



Learning the Numbers DAY 8

Prayer

Memory



Father, You are great; no one is great like You; thank You for showing us Your greatness with numbers.



^b Spend 5 minutes on memory work.

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🖉 Lesson

A **number** is a name that we give to the size of a set.

You know that sets are not the same size because a couple chocolates are not the same as a bunch of chocolates. And neither of those sets is the same as no chocolates!

The natural numbers are a type of number





that we can see and touch. I'll explain that more once we learn them. Consider these:

The first number is zero, the size of the empty set. Then comes one, and two. There is only one God. Check out all the other numbers on the following pages!



Hear, O Israel: The Lord our God, the Lord is one! You shall love the Lord your God with all your heart, with all your soul, and with all your strength. (Deuteronomy 6:4-5)



Then [Jesus] took the five loaves and the two fish, and looking up to heaven, He blessed and broke them, and gave them to the disciples to set before the multitude. (Luke 9:16)

For in six days the Lord made the heavens and the earth, the sea, and all that is in them, and rested the seventh day. Therefore the Lord blessed the Sabbath day and hallowed it. (Exodus 20:11)



But Peter, standing up with the eleven, raised his voice and said to them, "Men of Judea and all who dwell in Jerusalem, let this be known to you, and heed my words. (Acts 2:14)

In the middle of its street, and on either side of the river, was the tree of life, which bore twelve fruits, each tree yielding its fruit every month. The leaves of the tree were for the healing of the nations. (Revelation 22:2)

This is your first set of numbers. Now, you need to know what 1 looks like. Can you feel "one" by touching your nose? How many noses are on your face? How many eyes can you see on somebody else's face? Can you see "two" when you look at somebody else's eyes?

Tomorrow we will learn to write each of the numbers, but to finish up today, let's practice making them with our fingers. Parent/teacher, show your child how to make the numbers 1 through 10 with their fingers, and then find a creative way to make 11 and 12! This is another way to touch and feel the natural numbers!





Practice writing the numbers 0 to 6.



X

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Practice writing the numbers 7 to 12.



X