

CHRISTIAN LIBERTY PRESCHOOL SCIENCE



Sherry Kurz

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Christian Liberty Preschool Science

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Scripture References are conformed to the Holy Bible, New King James Version ©1982, Thomas Nelson, Inc., so that modern readers may gain greater comprehension of the Word of God.



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Author: Sherry Kurz

Copyeditor: Diane C. Olson

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— Preface —

Preschool children are active learners. They enjoy touching, tasting, hearing, seeing, and smelling their way through the world—this is part of the learning process. Active exploration also helps in retention of information; the more senses that are involved, the more the retention of information increases. What better way to use all our senses than to explore and learn the discipline of science!

God is a God of science. Just look at all the scientific principles God has written about in the Bible. Wonder at the marvelous world we can explore. Revelation 4:11 says, “You are worthy, O Lord, to receive glory and honor and power; for You created all things, and by Your will they exist and were created.” Genesis 1 is a great passage to read before embarking on these lessons, as it is all about God’s creation of this world and all the creatures in it.

This book will help you structure science activities that will help your child(ren) learn about the world around them. This book can be used as a stand-alone book, or can be used as a supplement to the *Christian Liberty Preschool Activity Book* and *Teacher’s Guide*. There are some introductory and end-of-year lessons along with one lesson for each letter of the alphabet. Each science lesson will usually coordinate with the letter and suggested unit each week as found in the *Activity Book* and the *Teacher’s Guide*. These are available for purchase from Christian Liberty Press at shopchristianliberty.com.

Most of the science activities use supplies you have around your home. Supply lists are given at the beginning of each lesson, so you will want to consult the list before the day you plan to teach the lesson so all items are at hand on the day you choose to use that lesson. For your convenience, we have included a short space for notes on each experiment at the back of this book.

Enjoy using the senses to examine God’s creation with your little one! This is a fun adventure and will lead to so many more future experiments and scientific explorations as your child gets motivated to be a “scientist” and “explorer.”

Sherry Kurz,
Arlington Heights, Illinois
2017

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The Grand Canyon

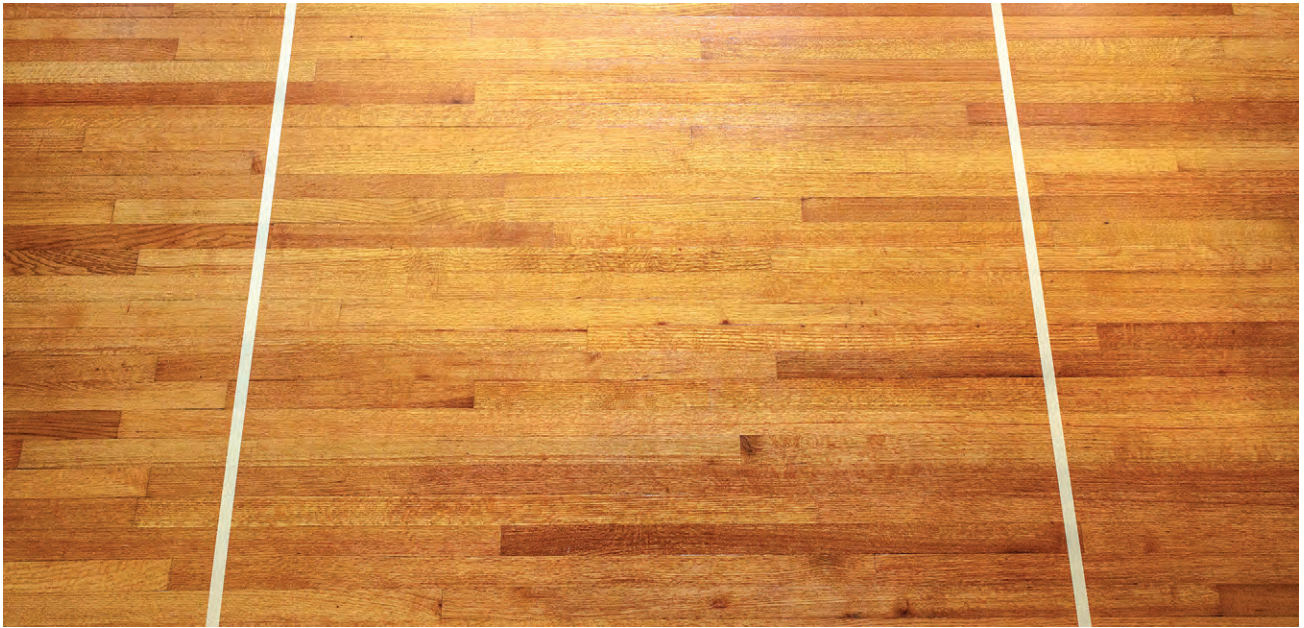
Jesus Is the Bridge

Supplies Needed:

- a picture of the Grand Canyon
- masking tape
- a 7-foot long piece of cloth or other material that would be safe to walk on

What To Do:

1. Show the children a picture of the Grand Canyon. The Grand Canyon is a GIANT hole in the ground in Arizona that was carved out by Noah's flood. It is very, very deep. Explain how big it is and how deep. Some facts:
 - a. The Grand Canyon is in Arizona.
 - b. At its narrowest point, it is 4 miles across.
 - c. At its widest, it is 18 miles across.
 - d. It is 6,000 feet deep.
 - e. It is 277 miles long.
2. Place two pieces of masking tape across from each other 6 feet apart. Tell the children, "This is the Grand Canyon!" (See photos.)
3. Have the children line up behind one piece of tape, and tell them that God is on the other side of the second piece of tape. Ask them to try to jump to the other side and reach God. Don't fall into the canyon! As each tries and fails, have him or her sit and watch the others try.
4. When all have tried, tell the children: "People can try all they want to jump across the Grand Canyon, but they will never be able to do it. We can try and try to be good and to do what we can to reach God, but we can't do it! Since we can't do it, because we are sinners, God made a way for us to do it. Do you want to know how we can reach God?"
5. Place the cloth between the two pieces of tape so that it makes a bridge. Tell the children that the bridge is Jesus Christ. Now have them walk across to the other side (to God).



Bible Application:

“Jesus Christ died on the cross to pay for our sins. When we believe in Him, He will help us reach God. He is the only way we can get to God because God made Jesus to be sin for us so we can be saved and not fall! We cannot reach God by our effort; we have to rely on Jesus to have access to God” (John 14:6; Romans 3:21-25).

Dancing Popcorn!

God's Spirit

Supplies Needed:

- a clear glass container
- popcorn kernels (unpopped)
- 2.5–3 cups of water
- 2 Tbsp. baking soda
- 6 Tbsp. white vinegar
- food coloring (optional—use a light color such as orange or yellow)

What To Do:

1. Fill the glass container with water, and add a couple drops of food coloring, if desired. (The food coloring makes the action a little more visible, but use just a little of a light color, so it is not too dark to see the reaction.)
2. Add the baking soda, and stir well until it is all dissolved.
3. Add a small handful of unpopped popcorn kernels.
4. Add the vinegar, and watch the corn start to dance up and down!

What Happened:

When the baking soda (a base) and vinegar (an acid) combine, they react to form a gas called carbon dioxide gas. The gas forms bubbles in the water that surround the popcorn kernels. The bubbles lift the kernels up to the surface, and when they get there some pop and the kernels sink again.

The “dancing” continues until the vinegar and baking soda have finished reacting. After the kernels have stopped, you can add a little more vinegar, give it a stir, and watch it happen all over again!



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Bible Application:

“When you first trust Jesus Christ as your Savior, that means you fully rest in the work that He did for you when He died on the cross for you and rose again the third day for you; then God gives you His Spirit. When His Spirit mixes with your spirit, you sometimes feel like dancing up and down with the joy that bubbles up inside of you (Romans 5:11, 15:13)!”

Letter A: Apple Gravity

God's Love

Supplies Needed:

- 1 apple
- 1 pencil

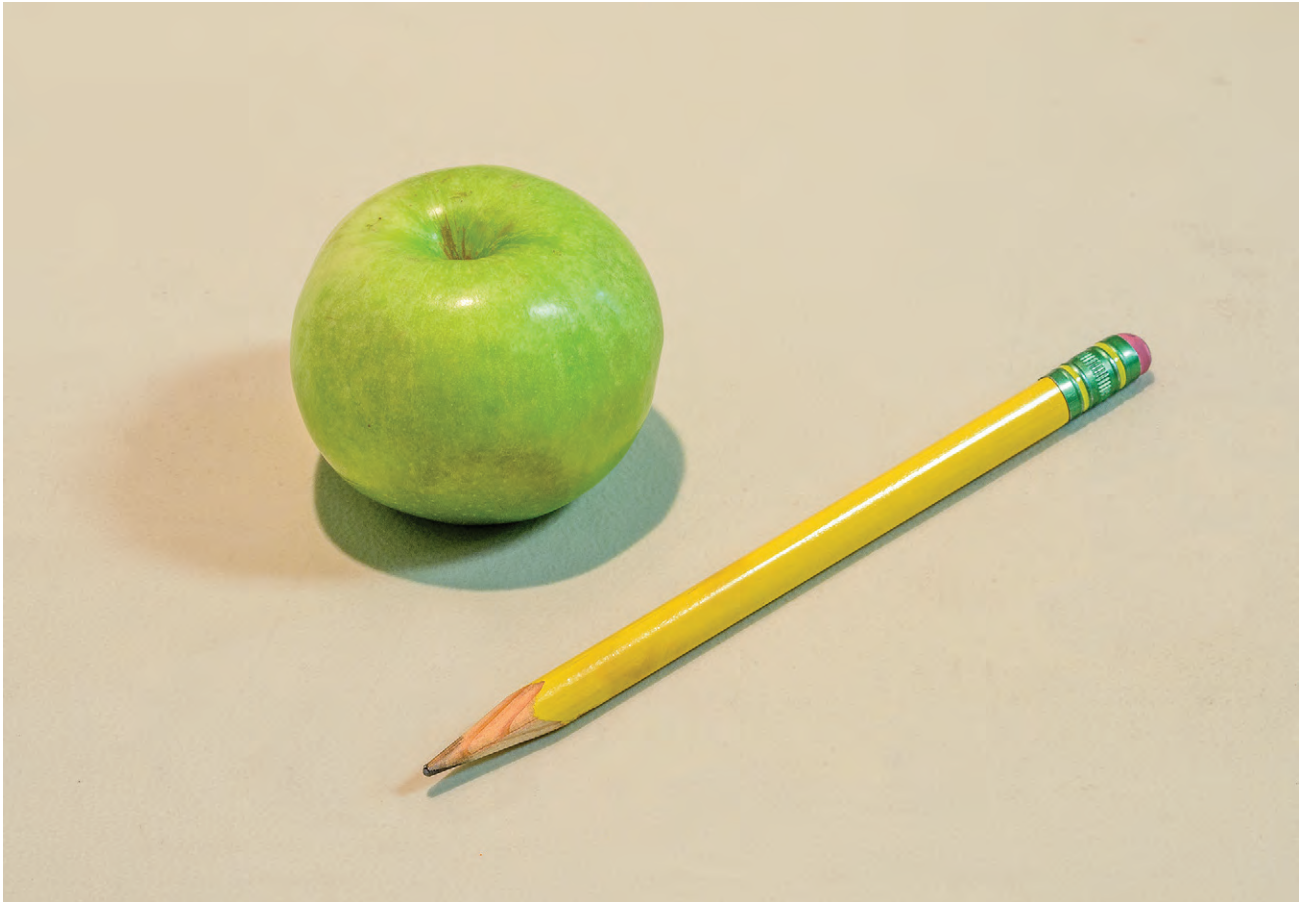
What To Do:

1. Have the children hold the apple and pencil. Ask them, "Which one is heavier?" (They will usually say the apple, which is correct.)
2. Ask them to guess which one will hit the floor first if they are dropped at the same time, from the same height.
3. Demonstrate this: drop an apple and a pencil at the same time. Let the children observe you do this two or three times.
4. Let each child try dropping them and see what happens.
5. Ask the children: "Which one hit the ground first?" The answer is that they both hit the ground at the same time.

What Happened:

"Things are attracted to each other. The more mass something has (that's how much stuff is in it), the bigger the attraction! The earth God made is round and hard and has a LOT of mass (a lot of stuff inside it). So the earth is attracted to you; and you are attracted to the earth. Gravity is what we call this attraction. What is inside of you is a lot less stuff than what is inside the earth. Because of that, you can't get away from the earth easily. When you jump, do you stay in the air or come back down? Try it. Gravity in the earth pulls you down every time. Without it you would be floating around the room, and how would we eat our snack or get our coats on to go out to play?

"Our feet stay on the ground because of gravity—this force God put inside our earth. Everything gets pulled down with equal force. That's why the pencil and apple hit the ground at the same time."

**Bible Application:**

“Just like gravity pulls us to the earth and holds us there, God loves us all the same. God pulls us to Himself with equal force. Tall people, short people; rich or poor; black, brown, or white; fat or skinny—God draws us all to Himself through His Word and His love. He puts us all into Christ—we become one in Him (Galatians 3:26-28)! Just like gravity keeps our feet on the ground, God will keep you close to Him and He will not ever let you go!”

Letter B: Bees and Honey

God Sticks to Us

Supplies Needed:

- a book about bees and beehives, such as *The Very Greedy Bee* by Steve Smallman or *Are You a Bee?* by Judy Allen
- juice (grape juice would work well, or a thicker juice, such as prune juice)
- a copy for each child of the picture of the simple beehive interior—honeycomb (page 14)
- a little marshmallow fluff
- 2 containers, such as little plastic medicine cups, for each child
- honey

What To Do:

1. Read a book about bees and beehives, such as the ones listed above. Or show the children pictures of bees and beehives and honey. Talk about how bees take nectar (“sugar water”) from flowers and bring it to the hive where it will be made into honey.

“The flowers leave pollen on the bees’ feet, and the pollen and nectar are food for the bees at the hive, as well as the nectar being used to make honey. The bees at the hive take the nectar from each bee and fan their wings over the nectar until most of the water is out (evaporation). What is left is thick—that’s what we eat on our toast or pancakes! Yum!”

(By the way, it takes *ten* pounds of nectar to make *one* pound of honey!)

2. Give each child a paper “beehive”. Place a little marshmallow fluff in a small container near each child. Also, place a small container of the juice near each child.
3. Have the children dip their fingers in the fluff and dab it on the beehive. Then have them dip their fingers in the juice and dab it on the beehive. Have them do each one a few times. (Then, if they want, they can lick the marshmallow off their fingers and drink the rest of the juice.)



This is a way to demonstrate how nectar and pollen end up going from the flower to the hive via the bee.

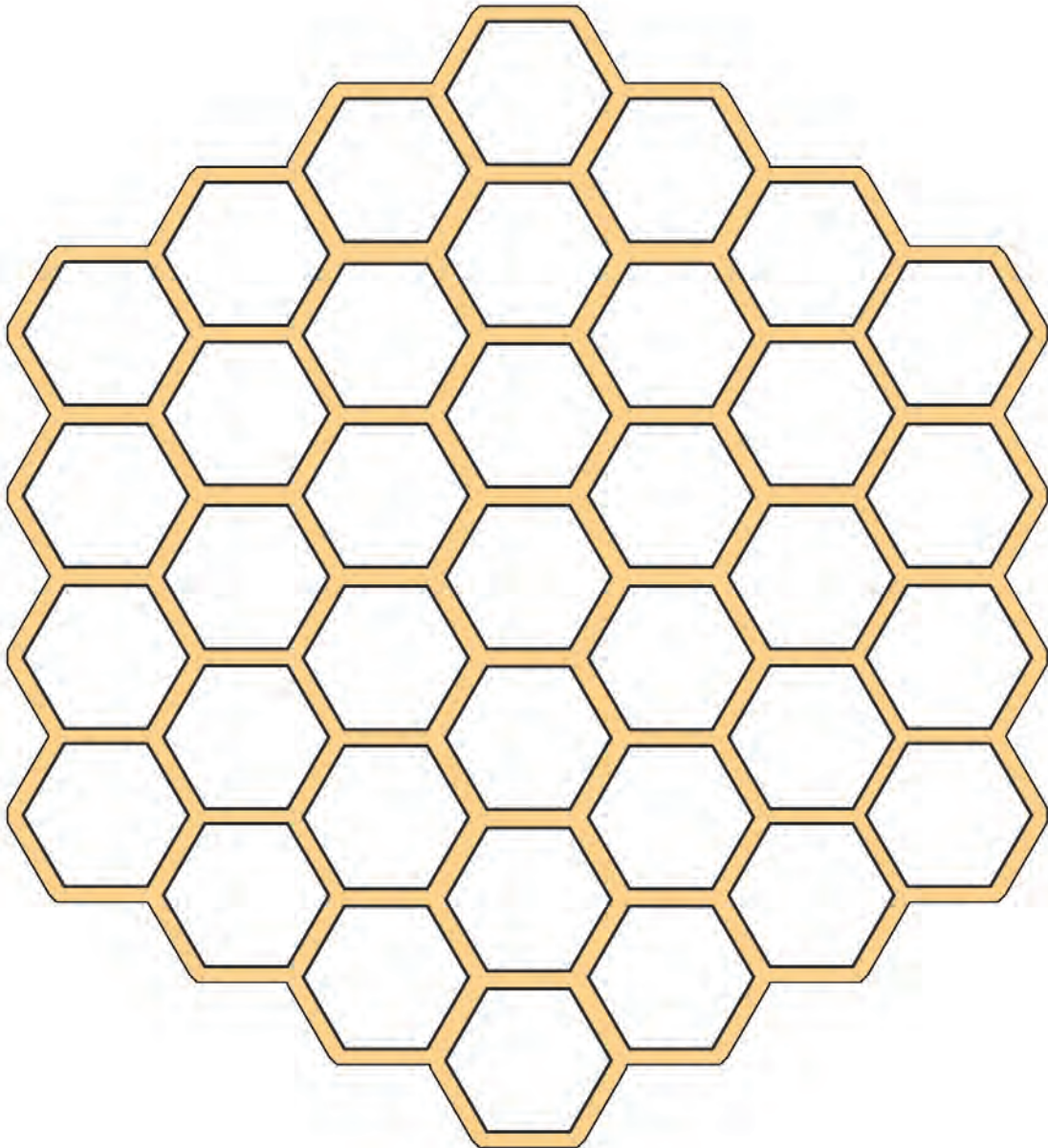
4. Try some honey, and feel how sticky it is and see how it tastes.

Bible Application:

“In the Bible we see references to bees and honey. John the Baptist ate locusts and honey when he was in the wilderness preparing the way for Jesus to be openly acknowledged as the Son of God (Mark 1:6). Samson ate honey out of a lion carcass (Judges 14:5-9). The manna in the wilderness that the Israelites ate after they crossed the Red Sea is said to have tasted like honey (Exodus 16:31). God sticks to us like honey sticks to your fingers. Once you have trusted in His Son, Jesus Christ, you belong to God forever! He will never let you go! How sweet it is to be loved and promised a future in heaven because we trust in Jesus Christ!”

(Lesson continues on page 14 with **honeycomb** activity.)

**Letter B: Beehive—
Honeycomb for nectar and pollen activity**



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