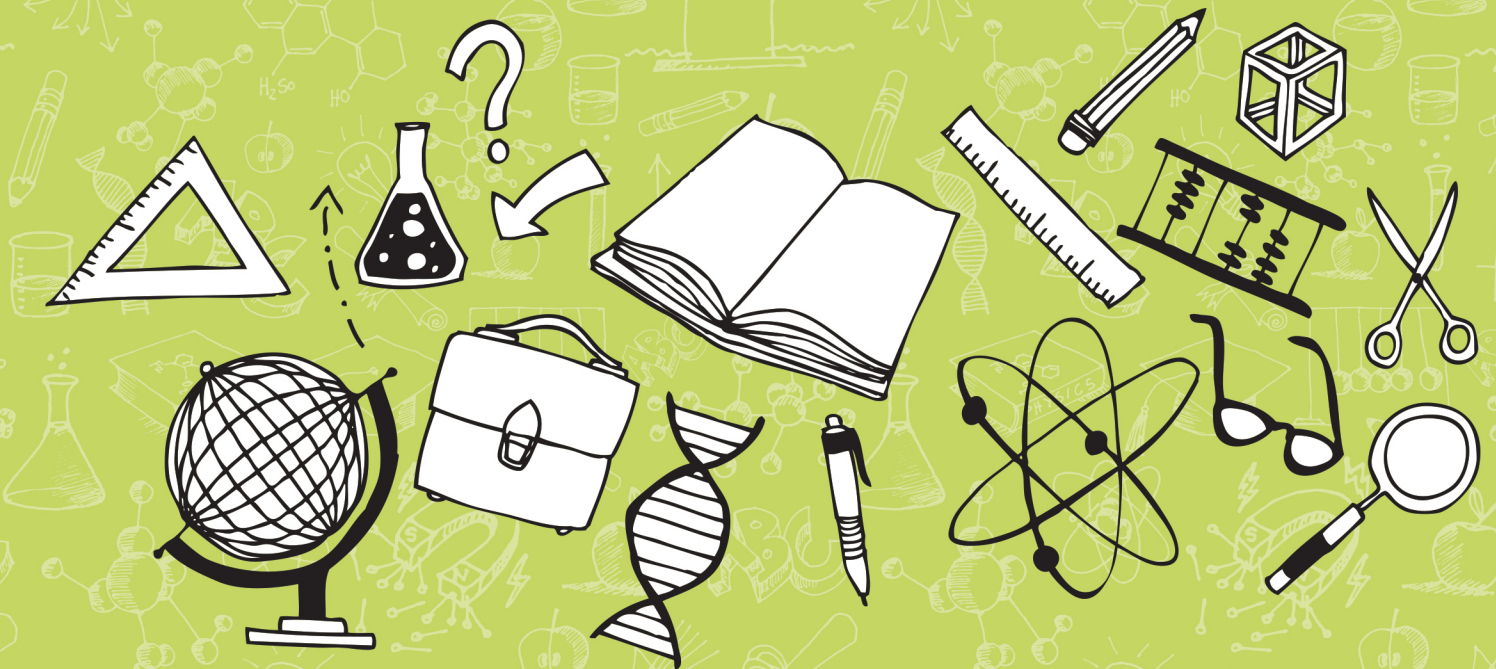


Elementary

BIG BOOK

of

Science Fun



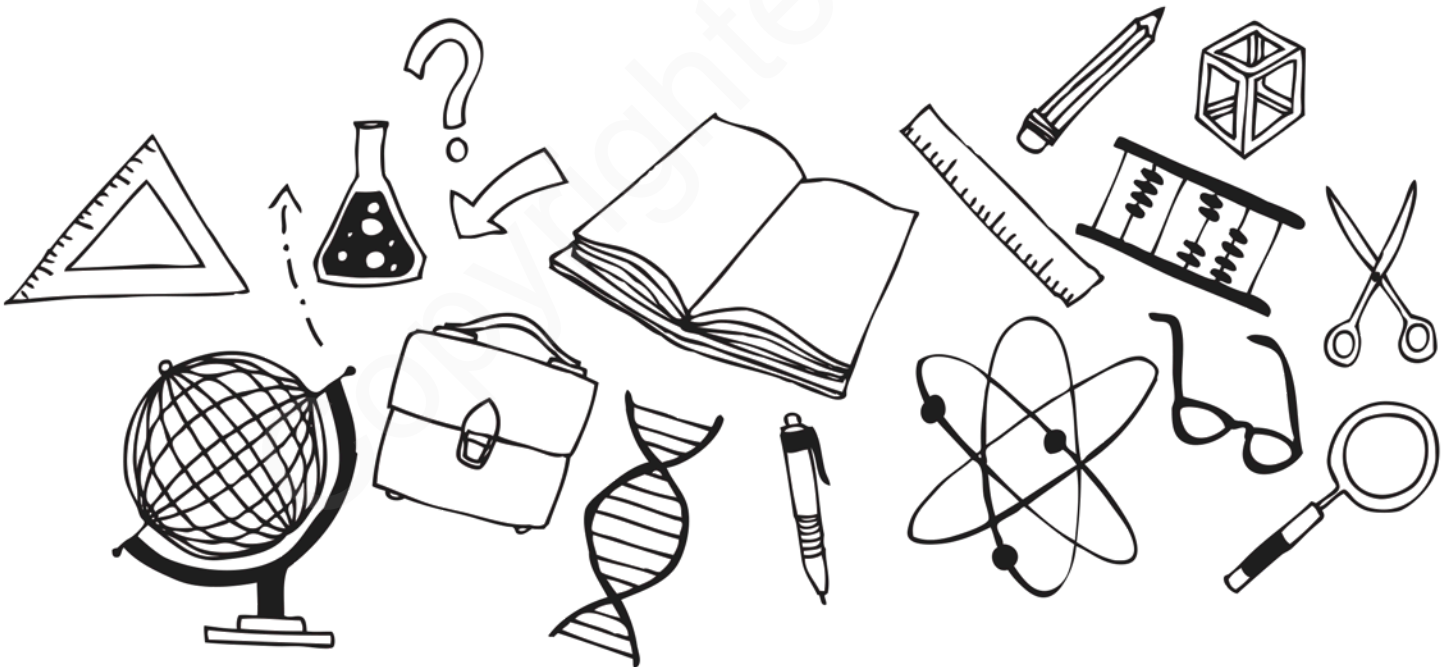
Experiments help kids learn about God!

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Introduction

Slime. Balloons. Goo. Cooking Oil. Water. Really fun stuff for elementary kids—really great teaching tools for you to lead them along the path of discipleship!

The more we understand science, the more we stand in awe of God. Nothing attests to the endless imagination of God like the world He created. Every square foot of the natural world is filled with wonders just waiting to be explored. And the things you and your kids can cook up with just a few supplies will bring new understanding of important spiritual truths right along with the “oohs” and “ahs.”

These little scientific wonders will work in your elementary classroom (although middle schoolers may be fascinated by these activities too!). Your kids get to be the scientists, often working in pairs or groups. There are no plans for noxious gases or wall-shuddering explosions, but a sturdy vinyl tablecloth is recommended. After all, you can't make slime without getting a little slimy!

Experiments and the lessons that go with them are grouped according to three themes:

- Properties of God: Discovering Who God Is
- “Me” Matter: Formulating Who I Am
- Common Bonds: Transforming My Relationships

You'll find a clear goal for each activity in the Truth Explosion, along with suggested themes and Scriptures that correlate to the experiment. The Formula for Success lists the supplies you'll need—most of them readily available from your grocery or pharmacy. Think how much fun you'll have watching your sometimes-distracted kids totally engrossed with their experiments and absorbing spiritual truth. Then check the Lab Results for a brief wrap-up discussion and Beyond the Laboratory for an extra, more in-depth activity.

Some activities provide scientific treasures for your kids to take with them. Others can be repeated with family and friends with the kids in the teaching role, flaunting their scientific prowess and making the application to how we live as followers of Christ.

So what are you waiting for? Grab your goggles and white coat—the lab is all yours!

Leading a Child to Christ

One of the greatest privileges of serving in children's ministry is to help guide children to become members of God's family. Pray and ask God to prepare the kids you know to understand and receive the good news about Jesus. Ask God to give you the sensitivity and wisdom to communicate effectively and to be aware as opportunities occur.

When talking with children about salvation, use words and phrases they understand; never assume kids understand a concept just because they can repeat certain words. Avoid symbolic terms that will confuse literal-minded thinkers. As you watch and pray, you will see kids developing relationships with God.

Here are some questions you can ask and things you can discuss with a child who is interested in accepting Jesus as their Lord and Savior. Encourage the child to look up and read the Bible verses along with you.

Read John 3:16. **Why did God send Jesus to earth?** (God loved us so much that He wants us to have eternal life with Him.)

First John 3:1 says that God wants us to be His children. But sin, doing wrong, separates us from God. Read Romans 6:23. **What do you think should happen to us when we sin?** (die) **But what is God's gift to us?** (eternal life in Jesus)

Jesus willingly died on the cross to take the punishment for our sins. Read 1 Corinthians 15:3. **But Jesus didn't stay in the tomb. After three days, He came back to life! Jesus died so that we can live forever in heaven with Him.**

Are you sorry for the wrong things that you've done? If you are, what should you do? Read 1 John 1:9. **Our sins are wiped away when we're truly sorry for what we've done and when we turn to God.**

Read Ephesians 2:8. **How are we saved?** (by God's grace, through faith) **Christian faith is a life-long adventure here on earth. With Jesus as Lord of our lives, we build a life of submitting to God, following Jesus, and keeping in step with the Spirit.**

At this point, continue to talk with the child about accepting Jesus as Lord and Savior. Include what your church teaches about how this happens. If you have any questions about salvation, talk with your pastor or children's ministry leader.

God wants every person to accept the free gift of eternal life that He's offering. What do you need to do about this?

Every Bloomin' Thing

Topic: Creation

Time: 10–15 minutes

Group Size: Individuals

Mess Meter: 1 2 3

*For everything God created is good.
—1 Timothy 4:4*

Truth Explosion: God created everything.

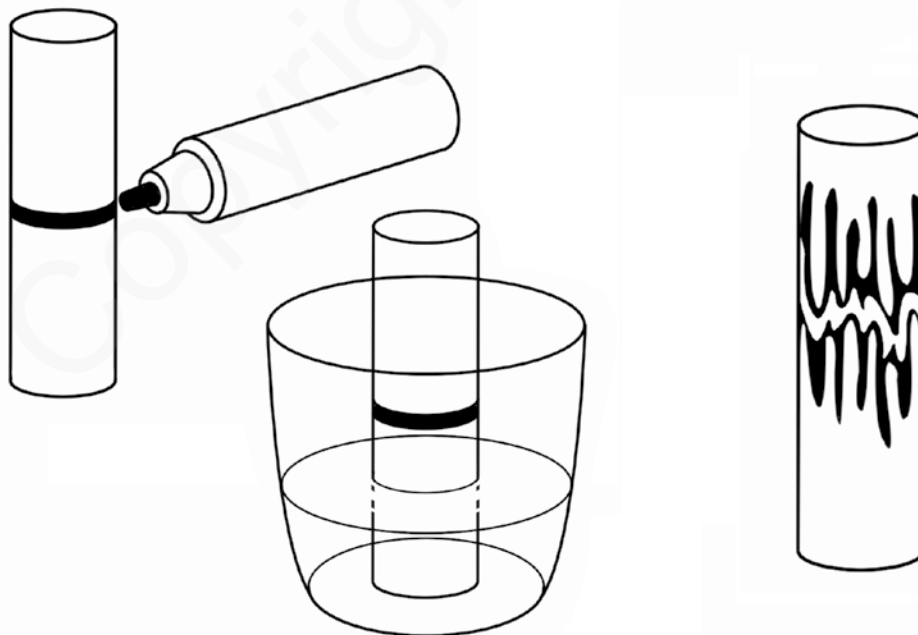
Formula for Success

- paper cups (1 per child)
- white sidewalk chalk (1 piece per child)
- brown markers (not permanent)
- water
- 1 seed

Use this activity to remind kids God created a beautiful world for us. Evidence of His love is all around!

Begin this experiment with a question about growing plants. **How do you grow a plant?** (put a seed in dirt, water it, put it in sunshine, etc.) **Can you grow a plant without a seed?** (no) **When God created plants, He just spoke! He told the ground to grow plants, and it did! We can't just tell the ground to grow plants, but we can do an experiment that will help us understand what it might have been like when God created plants.**

With a brown marker, draw a line around a piece of chalk about two inches from one end. **We can pretend this line is the ground.**



Note: Different brands of markers, even of similar shades of a color, may produce different results. If you like, try a variety of brands ahead of time to see which brown marker works best.

Pour about one inch of water in the bottom of each cup. Place the chalk in the water so the line is above the water. **Now let's tell flowers to grow from the ground. Say it all together: "Grow!"**

It will take a few minutes for the chalk to absorb the water. Play a short game of "Hide the Seed" while you wait. Have each child take turns hiding a seed while the other kids look for it. Say "green" when kids are close to the seed and "brown" when they're farther from it.

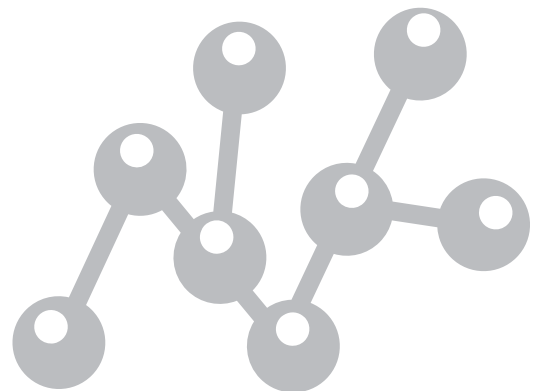
After a few moments, look at the chalk. **The brown line has moved up the chalk in shades of pink, orange, and yellow! Wow! It looks like our flowers grew!**

Lab Results

- **What are some of the plants and flowers God created?** (trees, bushes, roses, etc.)
- **How did God "make" plants?** (He spoke and the plants grew.)
- **Why did God make such a beautiful world for us?** (because He loves us so much)

Super Science Fact

Brown ink really isn't brown—it's a mixture of many different colors. Ink gets its color by absorbing some of the colors in white light and reflecting others. When all these colors are combined, many colors are absorbed, leaving very little to reflect. Water is a solvent for water-based pigments. As the water spreads through the chalk, the pigments in the marker dissolve and we can again see all the colors. This process is called chromatography.



Beyond the Laboratory

Truth Explosion: God created everything.

God's creation is amazing! Choose the correct response to complete each of the following statements:

1. Although polar bears have fluffy white fur, their skin is actually _____.	pink	black	white
2. Unlike humans, _____ sleep while standing up.	pigs and turtles	chickens and ducks	horses and cows
3. Despite its name, the killer whale is actually a type of _____.	dolphin	shark	jellyfish
4. The _____ land mammals on Earth are elephants.	smartest	largest	rarest
5. _____ lions are actually the best hunters.	Male	Sick	Female
6. Venus is the _____ planet in our solar system.	hottest	biggest	farthest
7. _____ is the coldest place on Earth, with a recorded temp of -126.9 degrees.	Alaska	Antarctica	Alabama
8. _____ actually moves faster uphill than downhill.	Fire	A black bear	Rain
9. Glass is made from _____.	water	diamonds	sand
10. Earth has 45,000 _____ every day.	thunderstorms	earthquakes	blizzards

What is your favorite part of God's creation? What makes it your favorite? Say a prayer thanking God for His wonderful gift of creation, and for His unending love for each of us.



Ye Old Wizer Geyser

Topic: Faithfulness

Time: 15–20 minutes

Group Size: Small groups

Mess Meter: 1 2 3

And whatever you do, whether in word or in deed, do it all in the name of the Lord Jesus, giving thanks to God the Father through him.
—Colossians 3:17

Formula for Success

- small glass jar with screw-on lid
- medium nail
- hammer
- drinking straw
- modeling clay
- straight pin
- bowl
- hot and cold water
- tablecloth

Use this activity to remind kids that God is a geyser of faithfulness—He always provides and never lets us down. Our loving response should be up to the task!

Truth Explosion: God is faithful to us.

Spread the tablecloth on your worktable as you speak to your group. **Who has heard of the**

hot water geyser called Old Faithful? Pause for responses. **Old Faithful is a geyser found in Yellowstone National Park. A geyser is an underground spring that spurts a tall tower of heat and hot water every few hours. This particular geyser is named Old Faithful because it is faithful, always spurting on schedule. Park rangers—and visitors—can depend on the geyser to spray and amaze.**

Today let's make a geyser to help us remember God wants us to be as faithful as that famous geyser in living the way He taught us.

Depending on the size of your class, you may wish to have several groups make separate geysers.

Fill the jar with cold water three-quarters full. Use the hammer and nail to poke a hole in the jar lid. Push a straw through the hole and screw the lid on the jar. Make sure the bottom of the straw is in the water. To seal off the opening, press modeling clay around the straw where it meets the lid. With another piece of clay, plug the top of the straw. Use a pin to make a hole through the clay plug. This

is where the water should come out. **Let's see.**
Everybody ready? Set the jar in a bowl of hot water and stand back. Expect a shower!

God is faithful to us. He wants us to be faithful to Him by making choices that show others what God is like.

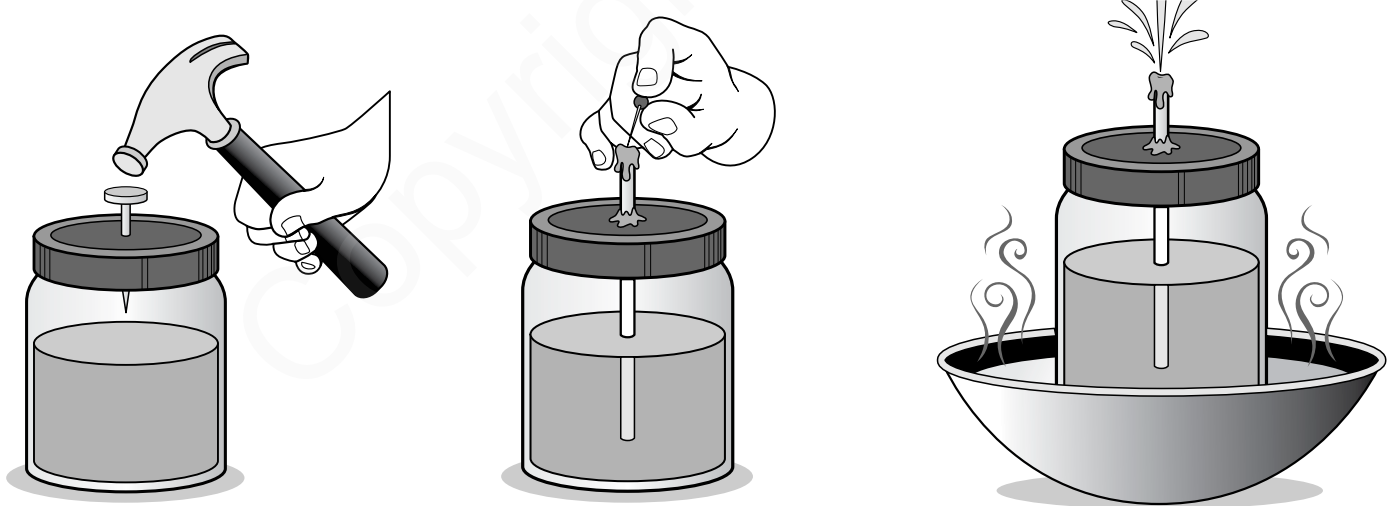
Lab Results

- **How can a geyser help us understand what it means to be faithful?** (by remaining the same, even when other things change)
- **Tell me some other words for *faithful*.** (*dependable, reliable, trustworthy, constant*)

- **Why is it important for us to be faithful to God in the way we live and the choices we make?** (because other people can learn about God by watching us)

Super Science Fact

As the water warms in the jar, the air molecules inside move faster and farther apart. This “excited” state of expansion causes the water to move and burst from the straw.



Beyond the Laboratory

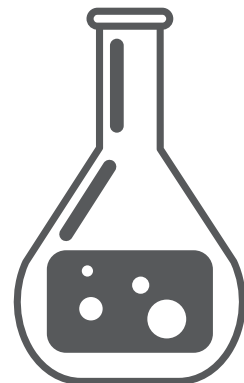
Truth Explosion: God is faithful to us.

Many things and people in our lives are faithful, but many are not! Read each item listed below and decide whether it is FAITHFUL or NOT FAITHFUL.

1. An alarm that only works part of the time	FAITHFUL	NOT FAITHFUL
2. A friend who talks behind your back	FAITHFUL	NOT FAITHFUL
3. The sun that comes up every morning	FAITHFUL	NOT FAITHFUL
4. A teacher who always helps you	FAITHFUL	NOT FAITHFUL
5. A bus that is sometimes very late	FAITHFUL	NOT FAITHFUL
6. A dog who sometimes licks you and sometimes bites you	FAITHFUL	NOT FAITHFUL
7. An ice cream shop that sometimes serves you spoiled milkshakes	FAITHFUL	NOT FAITHFUL
8. A grandparent who always listens	FAITHFUL	NOT FAITHFUL
9. A parent who has never missed one of your soccer games	FAITHFUL	NOT FAITHFUL
10. A friend who suddenly ditched you for a new group of friends	FAITHFUL	NOT FAITHFUL

Nobody's perfect, and people will always mess up and let us down. But we can always count on God to be faithful to us. Check out these Scriptures that tell about God's faithfulness. Then choose your favorite and memorize it this week!

- Lamentations 3:22–23
- Psalm 36:5
- Psalm 86:11



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Lab Notes

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