

**Bible Fun Stuff**

FOR AGES 7-9

**FUN &  
Freaky  
SCIENCE**

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FUN & FREAKY SCIENCE  
Published by David C. Cook  
4050 Lee Vance View  
Colorado Springs, CO 80918 U.S.A.

David C. Cook Distribution Canada  
55 Woodslee Avenue, Paris, Ontario, Canada N3L 3E5

David C. Cook U.K., Kingsway Communications  
Eastbourne, East Sussex BN23 6NT, England

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Interior Design by TrueBlue Design/Sandy Flewelling  
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ISBN 978-1-4347-6723-3

First Printing 2009  
Printed in the United States

1 2 3 4 5 6 7 8 9 10

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# Introduction

Fun, science, and the Bible? ABSOLUTELY! Bring some common items such as a soft drink, magnets, candy, vinegar, or baking soda and put them to work with the activities in this resource and you've got a formula for fun and freaky Bible lessons that will be remembered long after the experiment is completed.

Turn your classroom into a science lab with these 26 dynamic science explorations. Your 7- to 9-year-old students will delve, dig, and detect astonishing things about the world God created. Each 10-minute lesson is a hands-on experience that will allow children to experiment with a variety of

substances, materials, everyday objects, and common science tools.

Children this age have a wonderful sense of curiosity that will get a workout with these activities. It's hands-on learning where they explore and uncover the answers to their *what*, *why*, and *how* questions. And for you, we've included a "Why does it work?" section to put you ahead of the students and keep you in the know.

Put on your safety goggles and discover some laws of physics, chemistry, and geometry, while embedding truths from God's Word in young hearts and minds.



## How to Use This Book

The 26 activities in this book can be done in any order and easily fit into any curriculum. Simply use the Scripture and Topic Index on page 110 to match a project with the lesson you're teaching. These activities also can be used as alternate Step Three activities in several curriculum lines: David C. Cook Bible-in-Life, Echoes, LifeLINKS to God, College Press, Reformation Press, Wesley, Anglican, and The Cross. If you have one of these lines, look through the Correlation Chart on page 111 and find the activity geared to your lesson. You'll use this new activity instead of one of the other Step Three activities listed in your teacher's guide. This book, when combined with *Rock the Room Games*, will give you a full year's worth of Step Three replacement activities for the elementary age group.

Please keep in mind:

- ★ Children need basic guidelines given in a positive way. For example: listen first, then follow directions; touch, smell, poke, and feel only when asked; explore freely but safely; everyone helps clean-up; and so on.

- ★ As children explore, remind them to share materials and keep the experiments in the area where they belong.
- ★ Some experiments are messy. It's wise to keep basic supplies handy such as paper towels, newspapers or a shower curtain (for protecting the table or work area), and trash bags.
- ★ Look ahead in each activity to the "End with a Bang" questions and consider using them as your students progress through the experiment.
- ★ Some experiments work better in small groups, especially when an adult volunteer assists each group of kids.
- ★ Children will be eager to show parents the experiment. Instead of putting everything away at the end of the time, keep a sample available for children to show off.
- ★ Experimental results may differ if you alter or substitute ingredients and methods, allowing kids to figure out what went wrong and how to correct it. That's a valuable skill for life!

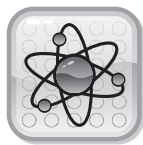
# VOLCANO CREATIONS

An explosive example of creation!

Bible Basis: Genesis 1:1-31; Psalm 111:2, 7

## MEMORY VERSE:

*Do you not know?  
Have you not heard?  
The LORD is the ever-  
lasting God, the Creator  
of the ends of the earth.  
Isaiah 40:28a*



## BIBLE BACKGROUND

Throughout the first chapter of Genesis, the time period for each element of creation is listed as “one day” (Gen. 1:5, 8, 13, 19, 23, 31). Debate continues among Christians as to the exact length of a day of creation. Some argue for a young earth, taking a day as a literal 24-hour period. The Hebrew word used for day is *yom*. This word is used throughout Scripture to refer to a one-night/day cycle of 24 hours. Jonah 1:17 reminds us that Jonah endured three days in the fish—obviously 24 hours and not thousands or millions of years.

Others focus on scientific and geological findings pointing to an old earth idea allowing millions of years for the Creation. Second Peter 3:8 states, “With the Lord a day is like a thousand years, and a thousand years are like a day.” Whatever time frame is taken, the Creation is still an astonishing marvel that has no equal.

The Bible leaves no question about the Creator. Isaiah 40:28 reminds us, “Do you not know? Have you not heard? The LORD is the everlasting God, the Creator of the ends of the earth.” Praise the God of creation and help the children develop a habit of praising their Creator.

## Teacher Tips:

Make your volcanoes inside, but take them outside for the eruptions. Using a narrow-opening water bottle will cause the eruption to go up a few inches above the opening. With wider jars and cans, the eruption will foam over the edge, but you can add more soda to keep the eruption going longer.

Some children may feel anxious or fearful when you use words like “eruption” or “explosion.” Remind them that although you say the experiment explodes, it’s very safe and no one will be hurt.

If your class time is short, complete Investigation steps 1 and 2 ahead of time.

## Variations to the Experiment:

Did you know there are three types of volcanoes? They are shield (low and shaped like a Roman shield on the ground, such as the Hawaiian volcanic chain), cinder cone (bowl-shaped crater, rarely over 1,000 ft. high, such as Sunset Crater in Arizona), and composite (tall, mountain-like, such as Mt. St. Helens and Mt. Fuji). You may want to have three different-sized jars or bottles to represent the three types of volcanoes. In addition, you might cut brown construction paper to wrap around each jar or bottle to create the look of the volcano.

## Materials List:

- 1 c. baking soda
- Vinegar (1 c. for jar or can; 2–4 c. for bottles)
- Empty peanut butter jars, cans, or water bottles
- Foam plate or pie tin (1 per volcano)
- Optional: funnel (helpful if using bottles)
- Optional: red-flavored powdered drink mix (to create a lava-colored mixture)
- Optional: salt dough recipe (to cover 2–3 jars)
  - 6 c. flour
  - 2 c. salt
  - 4 Tbs. cooking oil
  - 2 c. water
  - Large mixing bowl





## INVESTIGATION

1. Have the children work in groups to mix together the salt dough with their hands. This takes three or four minutes if you have the ingredients pre-measured. If time is tight, you may choose to make this ahead of time and bring the dough to class, or use play dough.
2. Place each jar, can, or bottle on a firm foam plate or pie tin. Let the children form the dough around the sides of the can to create a volcano. Children may want to wash their hands after forming the volcanoes with the salty dough.
3. Take the volcanoes outside and set them a few feet apart from each other.
4. Pour the colored drink mix into each container.
5. If using jars or cans, fill them about half-full with the vinegar. If using bottles, fill them half or three-fourths full. Note: The closer the vinegar is filled to the top of the bottle, the more spray you'll have. But you'll have a harder time getting the baking soda into the bottle before it starts to react.
6. When you're ready, add the baking soda. You can add as much as one-fourth cup at a time. If you're using a bottle, use a funnel or paper rolled into a funnel (this allows the baking soda to quickly drain into the bottle). After the initial eruption is over, you can add more baking soda to reactivate it.



## WHY DOES IT WORK?

Vinegar is a weak acid, called acetic acid. Baking soda, also called sodium bicarbonate, is a base—the chemical opposite of acids. When the vinegar and baking soda mix, a reaction takes place that produces a gas known as carbon dioxide. The carbon dioxide causes the fizzing and bubbling you see as the eruption begins.



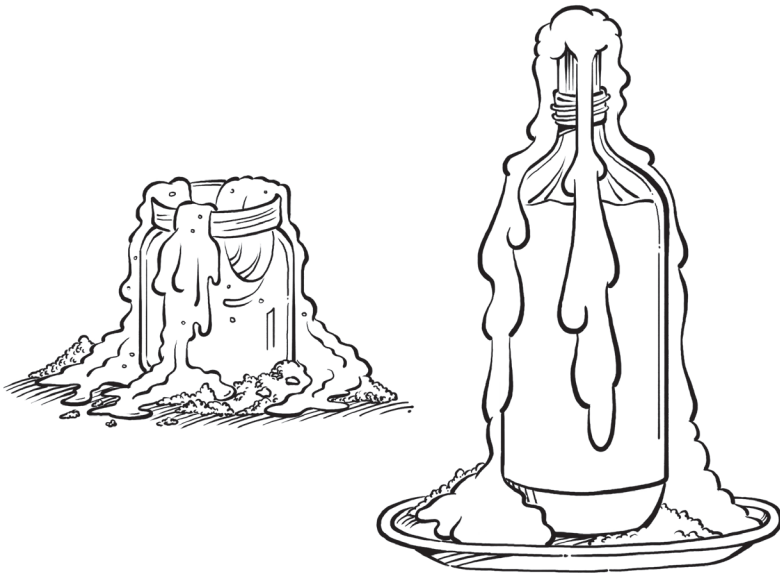


# END WITH A BANG

- ★ What did you think would happen in this experiment?
- ★ What caused the “lava” to come out of the volcano? (*The baking soda reacted with the vinegar and created a gas that forced the lava out.*)
- ★ If you tried this experiment more than once: Which experiment worked the best and why?

God created the earth and everything in it—including volcanoes. Some volcanoes are still active. If they erupt, the lava could destroy houses or villages too close to the volcano. God didn't make a mistake when He created volcanoes. There were no accidents when God created the world and everything in it. Everything He created was good and well-planned. We can confidently trust Him and His plans for us!

- ★ What plans have you made that turned out well?
- ★ What plans did you make that didn't turn out well?
- ★ Jeremiah 29:11 tells us that God has good plans for us. What kinds of good plans could God have for you?




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