




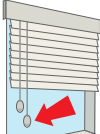


# Do Try This At Home



After the performance, try these activities and experiments with your friends and family.

## Simple Machines

Six simple machines make work easier for us. These six machines are the **inclined plane, lever, wedge, screw, pulley, and wheel and axle**. Doktor Kaboom uses a lever (and fulcrum) to make a banana catapult. Can you name the types of simple machine shown in these pictures? (Answers at the bottom of the page.)

- |  |   |
|--|---|
| A.  _____  | D.  _____  |
| B.  _____  | E.  _____  |
| C.  _____ | F.  _____ |

## The Homemade Volcano

With the help of a parent, look up and follow the recipe for a baking soda and vinegar volcano. If you do it right: **ka-boom!**



## Science Kits

Visit children's science museums to try hands-on science experiments. Or, for an at-home option, borrow or buy a pre-made science kit. Kits can teach you about chemicals, electronics, electricity, planets, animals, rocks, the environment, solar energy, robots, microscopes, and even outer space.

## And remember...

being a good audience member isn't rocket science—just stay seated and quiet, don't eat, and remember to watch, listen, and clap.

Answers: A. inclined plane, B. lever, C. wedge, D. screw, E. pulley, F. wheel and axle

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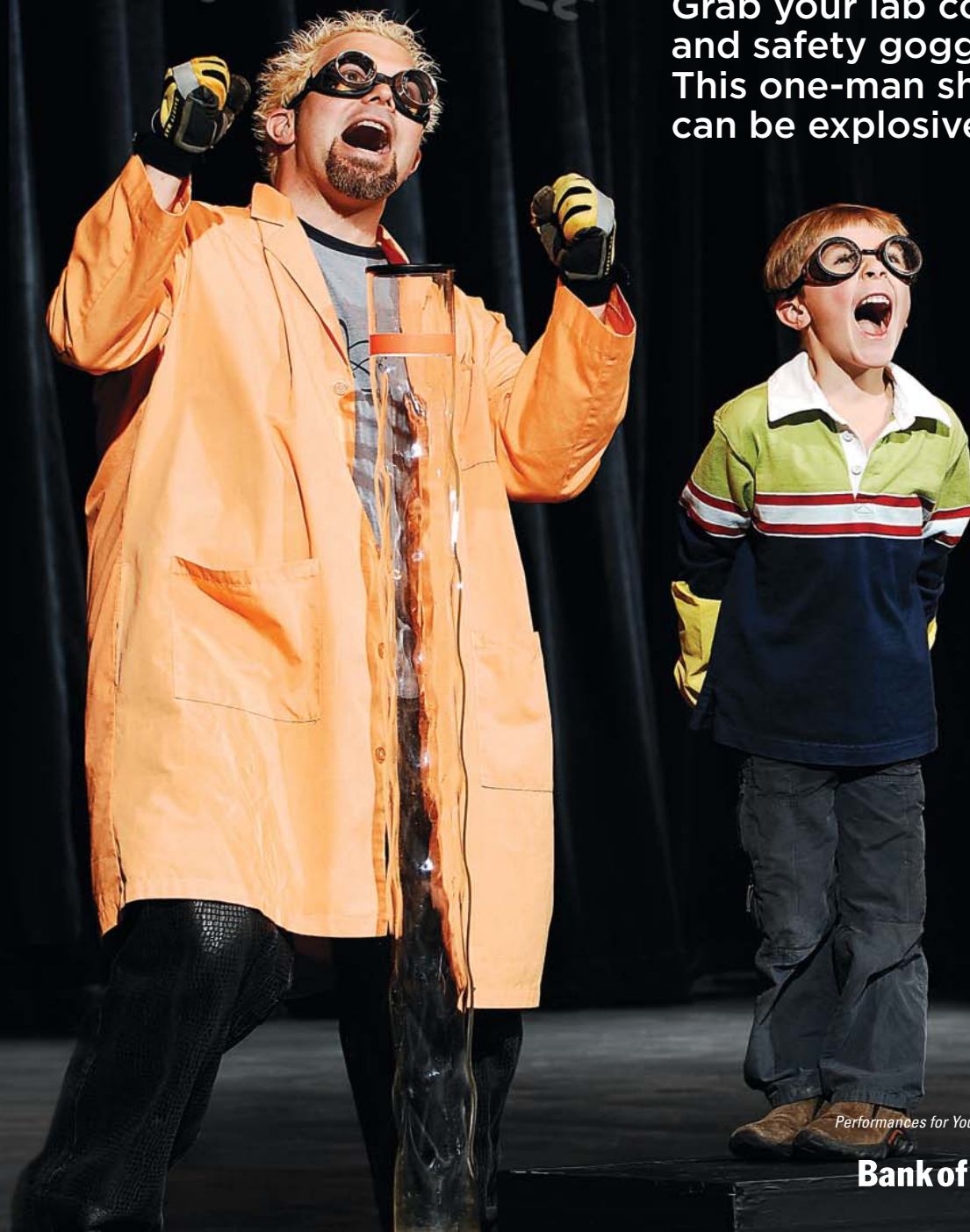
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# Doktor Kaboom!

Written and performed by David Epley

Grab your lab coats and safety goggles. This one-man show can be explosive!



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# Get Psyched About Science

## One Man, Three Acts, and a Stageful of Fun

Science is a blast, and nothing says scientific discovery quite like “kaboom.” So are you ready to share a hilarious hour of scien-sational entertainment with Doktor Kaboom? Be sure to raise your hand to volunteer. While this may be a “one-man show,” Doktor Kaboom will ask **YOU**, members of the audience, to help spread the fun (and the funny) of science.

In each of his three interactive experiments, Doktor Kaboom will demonstrate a daring spectacle:

### 1. A Chemical Reaction

Doktor Kaboom has a special mission: to create a fizzy liquid mixture in a gigantic plastic tube. He and his audience volunteer have to be careful to make sure the mixture turns out just right. Will the experiment work as planned? As Doktor Kaboom says, “It’s science—what could possibly go wrong?”

#### Watch for...

- ✿ the order of the ingredients
- ✿ the moment when the mixture fizzes



### 2. The Catapult “Schmatapult”

What does a scientist do when he wants to give a banana to someone across the room? Build a catapult for bananas, of course!

#### Watch for...

- ✿ the different parts of a catapult
- ✿ the way Doktor Kaboom uses a lever to shoot the banana
- ✿ how much force Doktor Kaboom needs to send the banana across the stage

### 3. The Air Cannon

Now it’s time to learn about the power of air. You’ve probably blown bubbles using air, dish soap, and wands. Doktor Kaboom, on the other hand, blows fog machine rings with *cannons*. If you think his first cannon looks big, just wait for his huge surprise at the end of the show.

#### Watch how...

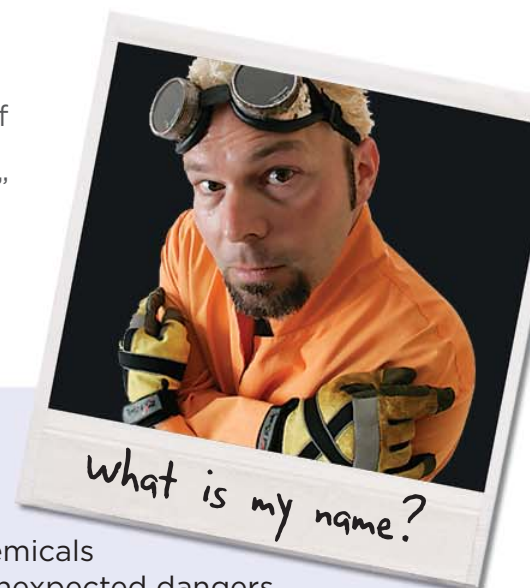
- ✿ Doktor Kaboom can “show” air
- ✿ he sends one fog ring flying through another



## Meet the Sci Guy

What’s his name? Doktor Kaboom, whose real name is David Epley, is a comedian with a love for science. When he performs, he plays the role of a scientist from Germany. To show that you agree with Doktor Kaboom, remember to say “ja” (pronounced like “yah”), which is German for “yes.”

David performs “improvisational comedy,” which means that he “improvises” (changes) his jokes depending on what happens during his show. To add to the fun, the audience never knows what he’ll say next.



## Practicing Safe Science

As Doktor Kaboom says, “Science can hurt you, especially if I’m the one doing the science.” He has to watch out for splashes of chemicals or very hot or cold liquids. Even an expert experimenter can face unexpected dangers, so Doktor Kaboom suits up even if there’s only the tiniest chance that it’ll be necessary.

Let’s look at the gear that Doktor Kaboom wears to protect his body.



**Goggles:** Much as they do for swimmers, goggles protect scientists’ eyes.



**Lab Coat:** Long sleeves cover Doktor Kaboom’s clothing and—also very important—his skin.



**Gloves:** As you can probably guess, gloves protect Doktor Kaboom’s hands.

## Science Says: Vocabulary

To be a good scientist, you need to talk the talk. Listen to hear if Doktor Kaboom uses these words as he performs his experiments:

**Chemical:** a liquid, solid, or gas that can undergo change

**Chemical Reaction:** when two different substances come together and at least one of them changes its composition

**Experiment:** a scientific test used to find out or prove something

**Force:** some thing—such as a push or pull—that changes an object’s speed or direction

**Fulcrum:** the point where a lever turns or is supported when it is moving or lifting something

**Hypothesis:** a theory that a scientist tests to see if it’s true

**Lever:** a bar that rests on a support (fulcrum) and uses one end to lift or move loads

**Simple Machine:** a device that makes work easier by allowing us to push or pull over increased distances. See the next page for the six types of simple machines.

**Theory:** one or more scientific ideas that we use to explain something without actual proof