# SCIENCE MEM school visits

#### MOST POPULAR PRESENTATIONS:

#### 1. Epic Electric

Science Mom uses a plasma ball to demonstrate which materials conduct electricity and explains how this fascinating phenomenon works. Along the way we perform experiments so impressive they seems magical: moving balloons and cans without touching them, and making orbs of tinsel levitate in the air.





# 2. Bernoulli, Blowers, and Bags

What does a scientist from long ago have to do with airplanes and floating ping pong balls? As it turns out, quite a lot! Science Mom explains the Bernoulli effect and how this principle of physics allows us to predict and manipulate one of the most dynamic and interesting fluids we interact with: air.

## 3. When Ice is Dry

What happens if you freeze carbon dioxide into ice? States of matter becomes a magical topic as we make quarters dance and sing, create iridescent bubbles that burst with white fog, and put out candles with invisible forces. There's no other word for it, this lesson is sublime.





#### 4. Surprising Inertia

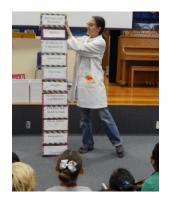
An object in motion likes to stay in motion, and an object at rest wants to rest. Newton's First Law of Motion sounds simple at the outset but is full of dynamic and surprising applications. Science Mom explores this fundamental law of physics with strange looking hats, beads that seem to leap out of their containers, table tricks, and more.

#### 5. Light is Amazing

You've probably seen that white light can be split into a rainbow of color, but did you know you that colored light can be combined to make white? Light is one of the most mysterious and interesting things we interact with every day. This lesson is sure to be enlightening!



NOTE: this presentation requires about 15 minutes of time to set up and for the room to be darkened (windows covered).



#### 6. Tower of Math Knowledge and Extraordinary Water

Math is the key to science, but people sometimes run into trouble with their math journey because math is something that builds, and one weak concept can cause the whole thing to come crashing down. This fun visual exercise helps teach how vital practice is for building a strong math foundation.

Water is one of the most incredible substances on the planet. With three hands-on investigations, Science Mom demonstrates just how extraordinary this everyday substance really is.

# 7. Simply Scientific

Mentos plus soda has become an iconic example of an exciting reaction. But what causes it? Is this a chemical reaction, or a physical reaction? If mentos work, then what about other materials like sugar, salt or sand? Science Mom unpacks the scientific method and explains how it can help us get to the truth of the matter in this sticky experiment. \*Must be done outside.\*



#### 8. Radical Reactions



Chemical reactions power our bodies, provide energy for our cars, and are also responsible for an incredibly fun and kid-friendly reaction nicknamed "Elephant Toothpaste." In this lesson, we blow up balloons, pop bags, cool down cups of water, and make incredible fountains of foam. These jaw-dropping reactions have a lot to teach us about the properties of matter and what really happens when a chemical reaction takes place.

# FREQUENTLY ASKED QUESTIONS:

# Which lesson is best for which grade? Do any of your presentations align with NGSS standards?

Each of the above lessons can easily be adapted to any grade level and have been presented many times to every grade from pre-K to 5th. Most either directly satisfy or have connections to the Next Generation Science Standards:

- \* Epic Electric Connections to 3rd and 4th grade NGSS.
- \* Bernoulli, Blowers, and Bags K, 1st, 2nd, 3rd, 4th, and 5th grade NGSS.
- \* When Ice is Dry Connections to 2nd, 3rd, and 5th grade NGSS.
- \* Surprising Inertia Connections to K, 4th and 5th grade NGSS.
- \* Light is Amazing Connections to K, 1st and 4th grade NGSS.
- \* Extraordinary Water Connections to K, 1st, 2nd, and 5th grade NGSS.
- \* Simply Scientific K, 1st, 2nd, 3rd, 4th, and 5th grade NGSS.
- \* Radical Reactions Connections to 2nd and 5th grade NGSS.

#### What is your fee for a school visit?

My fee for a full day of science demonstrations is \$496. I can be scheduled from opening bell to closing bell (with a 30 minute break for lunch). Most often, I do 30 or 45-minute lessons. I will do any combination of individual classroom visits or assemblies, but individual classroom visits are my favorite as they provide more opportunities for student participation. I cannot bring more than three different presentations on a given day. (More than 3 presentations will not fit in my car).

#### Which presentations are best for assemblies?

Bernoulli, Blowers, and Bags is the best presentation for a large assembly, followed closely by Extraordinary Water. Please note that Light is Amazing and Epic Electric are best suited to smaller groups (one or two classes at a time) and need to be held in a room where the lights can be dimmed.

# What are your qualifications? Are you a "real" scientist?

I hold a master's degree in plant science with an emphasis in molecular biology (Utah State University, 2007) and have extensive teaching experience. I have presented science lessons to hundreds of elementary school classes and performed science demonstrations for a variety of local organizations, including the City of Henderson, the Las Vegas Natural History Museum, and the Desert Research Institute. I also have a YouTube channel (www.youtube.com/ScienceMom) and am the author and illustrator of a series of science activity books.

# Do you have other presentations?

I do. I also have lessons on magnets, the science of slime, liquid nitrogen, and DNA. Email me if you are interested in putting together a different presentation than the eight lessons mentioned above.

## Is there a discount for booking multiple days? Payment details? Invoice? W9?

If interested in booking multiple days, email me at <a href="jenny@science.mom">jenny@science.mom</a> to discuss availability and pricing. Each month I do a drawing for free Science Mom visits, which are sponsored by donations from my patrons at <a href="www.patreon.com/ScienceMom">www.patreon.com/ScienceMom</a>. Find information about the current giveaway on my website (<a href="www.science.mom/speaking">www.science.mom/speaking</a>). My school visits offer incredible value; in addition to providing a full day of exciting demonstrations, I provide science-themed gifts for teachers and assessments and activity pages that are aligned by grade level. Payment is most often done by check (made out to "Science Mom" or "Jenny Ballif"). I am happy to provide an invoice, W-9, and CCSD Public Disclosure Form.

It was awesome! My class was super engaged and excited throughout the entire lesson.

- Lisa Milmeister, Glen Taylor Elementary Jenny Ballif
makes highly complex topics,
such as the states of matter, forces, and
chemical changes, understandable even to first
graders! The enhanced knowledge they walk
away with, combined with the realization that
science can be so much fun...is priceless!
-Tim Roy, Andrew J. Mitchell
Elementary

#### COMMENTS FROM THE YOUTUBE CHANNEL

I met you at school! U used my desk! BEST DAY EVER.

SHE WAS IN MY CLASS TODAY!!!!!!!!

My son saw you at his school and just can't stop talking about you. He was sharing all the science experiments with the entire family. I look forward to more videos!