STUDY GUIDE - STEVE TRASH – SCIENCE LIVE - BUS IN - FIELD TRIP SHOW
Grades K–6

🔬 SHOW OVERVIEW

Steve Trash Science Live! blends **real science, magic tricks, music, and comedy** to help students understand how the natural world works — and how scientists figure things out.

Through playful demonstrations (like making water "disappear"), students learn that while **magic and science can look similar**, they are very different.
Magic creates *illusions*.
Science discovers *truth*.

The show makes **STEAM (Science, Technology, Engineering, Art, Math)** exciting, approachable, and memorable.

🎯 LEARNING OBJECTIVES

After participating in the show, students will be able to:

1. **Understand the difference between magic and science**
   Recognize that magic creates illusions, while science explains how the world actually works.

2. **Explain what science is and why it matters**
   Understand science as a tool for discovering, explaining, and improving our world.

3. **Describe the scientific method**
   Learn how scientists use observation, questions, experiments, and evidence to reach conclusions.

4. **Understand what it means to be science-literate**
   Recognize that curiosity, critical thinking, and evidence-based reasoning are for everyone.

🧠 KEY VOCABULARY

Magic
Creating the illusion that you can defy the laws of nature.

Science
The study of how the natural world works.

Natural Resource
Something found in nature that people use, such as air, water, plants, minerals, and fossil fuels.

Scientific Method
A step-by-step process used to investigate questions using evidence and experimentation.

Scientifically Literate
A person who is curious, asks good questions, finds reliable information, and uses evidence to form conclusions.

📽️ SHOW CONNECTION: MAGIC vs. SCIENCE

During the show, Steve makes water in a glass appear to disappear.

Students ask:
“Is it magic… or is it science?”

Steve explains:

- The *magic* is pretending the water vanished
- The *science* is understanding how materials like **sodium polyacrylate** absorb liquid

Magic is for **fun**.
Science is for **real**.

💬 POST-SHOW DISCUSSION QUESTIONS

Use these questions to guide reflection and conversation:

- What is the difference between magic and science?
- Why do scientists use experiments instead of guesses?
- What is a hypothesis?
- How can we use the scientific method in everyday life?
- Why does good science require both observation and testing?
- Why is science for *everyone*, not just scientists?

✅ TRUE / FALSE – SCIENCE CHECK

1. **Science is creating the illusion that you can defy the laws of nature.**
   ❌ False — that's magic.
2. **Science is fake.**
   ❌ False — science makes modern life possible.
3. **Sodium polyacrylate is used in baby diapers to absorb liquid.**
   ✅ True.
4. **Magic is for fun, but science is for real.**
   ✅ True.
5. **The scientific method is just making things up.**
   ❌ False.
6. **Science is only for really smart people.**
   ❌ False — science is for everyone.
7. **Cell phones, YouTube, and Minecraft rely on science.**
   ✅ True.
8. **The scientific method includes observing, questioning, testing, and concluding.**
   ✅ True.
9. **Magicians entertain; scientists discover how the world works.**
   ✅ True.

✏️ EXTENSION ACTIVITIES (Optional & Easy)

Science or Magic?
Students sort examples into “Magic” or “Science” and explain why.

Scientific Method Mini-Challenge
Present a simple classroom problem and walk through the steps together.

Curiosity Journal
Students write one science question they wonder about.

📚 COURSE OF STUDY ALIGNMENT (High-Level)

✔️ Science (K–8)

- Asking questions and defining problems
- Planning and carrying out investigations
- Analyzing evidence and drawing conclusions

✔️ ELA

- Speaking and listening in collaborative discussions
- Explaining ideas using evidence
- Academic vocabulary development

✔️ Enrichment Goals

- STEM engagement
- Critical thinking and problem-solving
- Curiosity-driven learning
- Increased student engagement in enrichment settings

📽️ TEACHER RESOURCES

- **PBS – Steve Trash Science**
  https://www.pbs.org/show/steve-trash-science/
- **Course-of-Study Correlated PBS Videos**
  https://tinyurl.com/YOUTUBE-stevetrashscience
- **More Classroom Resources**
  www.stevetrash.com

🌟 ABOUT STEVE TRASH

Steve Trash is the star of the PBS series **Steve Trash Science** and has performed for over **25 million students worldwide**. He blends real science, humor, and music to make learning unforgettable — and to help kids think like scientists.

🔗 https://www.stevetrash.com/bio

⭐ TEACHER TIP

This guide works perfectly as:

- A **same-day post-show reflection**
- A **next-week STEM anchor lesson**
- A **21st CCLC documentation artifact**