

STUDY GUIDE

STEVE TRASH – SCIENCE OF ECOLOGY

BUS-IN THEATRE SHOW

Grades K–6

SHOW OVERVIEW

Steve Trash – Science of Ecology is a fun, fast-paced, and theatrical science show that helps students understand how nature is connected, why resources matter, and how simple choices can make a big difference.

Using magic, music, comedy, and audience participation, Steve Trash introduces students to the “magic words” of ecology — **Reduce, Reuse, Recycle** — and shows why there is no such thing as “away” in nature.

Students also explore how nature recycles one of Earth’s most important resources — **water** — through the amazing Water Cycle.

This show turns big environmental ideas into concepts kids can remember, repeat, and use.

LEARNING OBJECTIVES

After attending the show, students will be able to:

1. **Understand that everything in nature is connected**
Learn why throwing something “away” doesn’t make it disappear.
2. **Explain the meaning of Reduce, Reuse, and Recycle**
Understand how each helps protect Earth’s resources.
3. **Recognize that natural resources are valuable**
Learn that some resources can be replaced (renewable) and some cannot.
4. **Understand what “renewable” means**
Identify examples of renewable and non-renewable resources.
5. **Understand the Water Cycle**
Learn how water moves through the environment and why clean water matters.

6. **See themselves as caretakers of the Earth**
Understand that everyday choices can help the planet.

KEY VOCABULARY

Ecology

The study of how living and nonliving things are connected in nature.

Environment

The place where plants, animals, and people live.

Natural Resource

Something found in nature that people use, such as air, water, plants, animals, soil, or minerals.

Reduce

To use less and create less waste.

Reuse

To use an item again instead of throwing it away.

Recycle

To turn used materials into new products.

Renewable Resource

A resource that can be replaced naturally, like sunlight or wind.

Non-Renewable Resource

A resource that cannot be replaced easily, like oil or coal.

Water Cycle

The continuous movement of water through Earth's atmosphere, land, and oceans.

Evaporation

When liquid water changes into water vapor.

Condensation

When water vapor cools and forms clouds.

Precipitation

Water falling from clouds as rain, snow, sleet, or hail.



VIDEO EXTENSION – Renewable vs. Nonrenewable Resources

To deepen students' understanding of natural resources and help them see how science explains Earth's systems, watch this short video on YouTube together:

► Renewable vs. Nonrenewable Resources

- What is the difference between renewable and nonrenewable resources?

https://youtu.be/osBVRfvkmAU?si=8VHxJ6d_3jLJ8SRY



THE WATER CYCLE

Students also explore one of nature's most important recycling systems — **The Water Cycle**.

In the show, students learn that Earth's water is constantly moving through the environment in a never-ending cycle.

The Water Cycle includes:

- **Evaporation** – Water changes into vapor and rises into the air
- **Condensation** – Water vapor cools and forms clouds
- **Precipitation** – Water falls back to Earth as rain, snow, sleet, or hail
- **Collection** – Water gathers in rivers, lakes, oceans, and underground

Students discover that:

- Nature recycles water over and over again
- Clean water is one of Earth's most valuable natural resources
- Science helps us understand how water moves through the environment



VIDEO EXTENSION – The Water Cycle

To help students better understand how water moves through nature, watch this short video together:

► What Is the Water Cycle?

(Insert YouTube link here)



Quick Discussion Prompts

- Why is the water cycle important?
- Where does rain come from?
- Why do living things need clean water?
- How does the water cycle show that everything in nature is connected?



SHOW CONNECTION: MAGIC & ECOLOGY

In the show, Steve asks:

- What are the magic words that make trash disappear?
(Reduce • Reuse • Recycle)

Students learn:

- Trash doesn't really disappear
- Nature reuses materials through cycles
- Water moves through natural cycles
- Humans can help nature by making smarter choices

Magic makes the ideas fun — science makes them real.









POST-SHOW DISCUSSION QUESTIONS

Use these questions to reflect on the performance:

- Why is there no “away” in nature?
- What happens to trash after we throw it away?
- What is one thing you could reduce, reuse, or recycle?
- Why are renewable resources important?
- Why is clean water valuable?
- How does the water cycle show that everything in nature is connected?
- How can kids help protect the environment every day?

TRUE / FALSE – ECOLOGY CHECK

1. When you throw something away, it disappears forever.
 False.
2. Reduce, Reuse, and Recycle help protect Earth's resources.
 True.
3. Nature reuses materials through cycles.
 True.
4. Water moves through a natural cycle on Earth.
 True.
5. Some resources can run out if we're not careful.
 True.
6. Kids can help take care of the Earth.
 True.

EXTENSION ACTIVITIES (Classroom-Friendly)

The 3 R's Brainstorm

Students list examples of reducing, reusing, and recycling.

Trash or Treasure?

Discuss items that could be reused instead of thrown away.

Water Cycle Drawing

Students draw and label evaporation, condensation, precipitation, and collection.

My Earth Promise

Students write or draw one thing they will do to help the planet.

CURRICULUM CONNECTIONS (High-Level)

Science

- Environmental science
- Natural resources

- The Water Cycle
- Human impact on Earth

✓ English Language Arts

- Listening to presentations
- Speaking and discussion
- Vocabulary development

✓ Civics & Character

- Responsibility
- Stewardship
- Community awareness

ABOUT STEVE TRASH

Steve Trash is the star of the PBS science series **Steve Trash Science** and a nationally recognized performer who uses magic, music, and science to inspire curiosity and environmental responsibility.

He has performed for millions of students around the world, helping kids understand science — and their role in protecting the planet.

 www.stevetrash.com

 <https://www.stevetrash.com/bio>

TEACHER TIP

This BUS-IN study guide works well as:

- A pre-show vocabulary preview
- A post-show reflection
- A follow-up ecology lesson

The Water Cycle is a perfect example of one of the show's biggest ideas:

Everything in nature is connected.