



HEART LAUNCHER

SCIENCE SAFETY

PLEASE follow these safety precautions when doing any science experiment.

- **ALWAYS** have an adult present.
- **ALWAYS** wear the correct safety gear while doing any experiment.
- **NEVER** eat or drink anything while doing any experiment.
- **REMEMBER** experiments may require marbles, small balls, balloons, and other small parts. Those objects could become a CHOKING HAZARD. Adults are to perform those experiments using these objects. Any child can choke or suffocate on uninflated or broken balloons. Keep uninflated or broken balloons away from children.

INGREDIENTS

- Valentine's Day Candy Filled Heart Topped Tube
- 2 Effervescent Tablets
- Warm Water

INSTRUCTIONS

STEP 1: Empty the candy from the Valentine's Day candy filled heart topped tube.

STEP 2: Fill the tube $\frac{1}{2}$ of the way with warm water. Describe the water by its observable properties.

STEP 3: Break two effervescent tablets into four equal pieces. Describe the effervescent tablets by their observable properties.

STEP 4: Drop the effervescent tablets into the tube, with the water, quickly push the top onto the tube, rapidly shake, and observe. What happens? Did mixing the effervescent tablets with warm water result in a new substance?

EXPLANATION

When the effervescent tablets are mixed with the warm water, a chemical reaction happens, which creates carbon dioxide gas. The carbon dioxide gas fills the tube and eventually launches the heart top into the air.

WATCH NOW



SCIENCE BACKGROUND

Matter is anything that has mass and takes up space. Different kinds of matter exist and many of them can be either solid or liquid, depending on temperature. Matter can be described and classified by its observable properties.

Measurements of a variety of properties can be used to identify materials. When two or more different substances are mixed, a new substance with different properties may form. This is considered a chemical reaction, which is a change that results in one or more new substances. A physical reaction does not result in a new substance.

I CAN STATEMENT

- ✓ I can plan and conduct an investigation to describe and classify different kinds of materials by their observable properties.
- ✓ I can conduct an investigation to determine whether the mixing of two or more substances results in a new substance.

NEXT GENERATION SCIENCE STANDARDS CONNECTION

2 – Structure and Properties of Matter | Patterns

5 – Structure and Properties of Matter | Cause and Effect