



SODA SURPRISE

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

- Diet Soda
- Regular Soda
- Large Aquarium Tank
- Water
- Digital Scale

INSTRUCTIONS

STEP 1: Fill the large aquarium tank half of the way with water. Describe and classify the water by its observable properties.

STEP 2: Using the digital scale, determine the mass of the diet soda and the regular soda. Using these measurements, identify the diet soda and regular soda, based on their properties.

STEP 3: Drop the diet soda and the regular soda into the large aquarium tank of water and observe. What happened? Why?

EXPLANATION

The cans of soda have exactly the same volume or size. The difference, their densities, due to what is dissolved in the soda, one sinks while one floats. The regular soda contains a lot more sugar, making it denser, causing it to sink.



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 matter. Different properties are suited to different purposes. Density is a physical property of matter, which tells how much matter is in a certain space, or volume. The density of an object makes it float or sink in a liquid like water. If something is denser than water, it will sink, if it is less dense, it will float.

I CAN STATEMENTS

- ✓ I can plan and conduct an investigation to describe and classify different kinds of materials by their observable properties.
- ✓ I can make observations and measurements to identify materials based on their properties.

NEXT GENERATION SCIENCE STANDARDS CONNECTION

2 – Structure and Properties of Matter
5 – Structure and Properties of Matter

