



STUDENT WORKBOOK





BOTTLED UP

You see weather in the sky. You see weather in pictures. Have you ever seen weather in a bottle? In this activity, you will begin your weather discovery with one type of weather in a bottle.

WEATHER IN A BOTTLE

Making a Model

WHAT YOU NEED:

FROM THE KIT:

- Bottle
- Bottle cap
- Graduated cup
- Matches

THER ITEMS:

Water

WHAT TO DO:



WARNING! Be careful with fire and flame. Don't use in windy areas or near objects that can catch fire.

WARNING! CHOKING HAZARD - Small parts. Not for children under 3 years.



STEP I

Measure 30 mL of cold water using the graduated cup. Pour it into the bottle.

STEP 2 Put the cap on the bottle.



STEP 3 Squeeze and release the bottle 3–4 times. Draw what the inside of the bottle looks like in the "Before Match" box after Step 9.

STEP 4 Remove the cap from the bottle.



Get an adult's help for this steps 5-7

STEP 5 Light a match.

STEP 6 Hold the bottle on its side with the opening facing the match.

STEP 7 Blow the match out by squeezing the bottle and releasing it. This should make the smoke go into the bottle.

STEP 8 Quickly, put the cap on the bottle.

STEP 9 Squeeze and release the bottle 3–4 times. Draw what the inside of the bottle looks like in the "After Match" box. *Note: Empty the bottle and graduated cup, and let them dry. Save the graduated cup for Activity 2 and the bottle for Activity 4.1*



? Draw what the bottle looked like before you added the match and after.

BEFORE MATCH:

AFTER MATCH:

If you don't live in an area where it snows, or even if you do, instant snow is a fun experience. Instant snow is a powder that you add water to. This makes it puff up and get sparkly white, just like real snow. It will last for up to 6 weeks of fun!

WHAT YOU NEED:

- Instant snow
- Water

If you have seen or played in snow before, think about how instant snow is the same and different from real snow.

GLOSSARY

Cloud – a group of tiny water droplets in the sky.

Cloud seeds – small pieces of dust water can stick to.

Condensation – the process of water changing from a gas state to a liquid state.

Evaporation – the process of water warming enough to change into water vapor.

Gas – a state of matter that can change its size and shape.

Hail - frozen rain that falls to the Earth.

Liquid – a state of matter that keeps its size, but can change its shape.

Local - specific to an area or something that is nearby.

Matter - all the stuff in the universe.

Model – a smaller version of an object that can be used to help people understand the object.

Pattern - something that repeats.

Precipitation – the process of water coming back to Earth.

Prepare - take action to get ready for something.

Rain - drops of water that fall from clouds above Earth.

Solid – a state of matter that keeps its size and shape.

Snow – airy flakes of ice that form when water vapor freezes.

State of matter – the different forms matter is in; if the matter is a solid, liquid, or gas.

Temperature - how hot or cold something is.

Water vapor – water in a gas state.

Weather - what the air outside is like from day to day.

Wind - air moving.

Wind speed - how fast the wind is blowing.



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