

# DISSOLVING CANDY CANES

## SUPPLIES:

Mini candy canes, variety of liquids, plastic cups, timer, printable worksheet

## INSTRUCTIONS:

Fill plastic cups with a variety of liquids. Place a candy cane in each cup. Time how long it takes for the candy cane to dissolve in each liquid.

**SCIENCE:** Explore chemistry and solubility.



# CHRISTMAS CATAPULT

## SUPPLIES:

10 Jumbo craft sticks in red and green, 3 rubber bands, items to fling like marshmallows, jingle bells, and pom poms

## INSTRUCTIONS:

Stack 8 jumbo craft sticks on top of one another. Wrap the ends tightly with rubber bands. Slide one jumbo craft stick into stack on top of bottom stick. Place remaining stick on the top of the stack. Secure the ends with a rubber band. Fire away!

**SCIENCE:** Explore physics and the laws of motion.



# SANTA'S MAGIC MILK

## SUPPLIES:

Full fat milk, dish soap, food coloring, cotton swabs, Christmas cookie cutters!

## INSTRUCTIONS:

Pour milk into a shallow dish just covering the surface. Place cookie cutters in the dish. Add drops of food coloring to the milk. Dab cotton swab in dish soap. Lightly touch swab to surface of milk by food coloring. Watch the magic!

**SCIENCE:** Explore chemistry and surface tension.



# CHRISTMAS MINI ERUPTIONS

## SUPPLIES:

Mini plastic cups, baking soda, vinegar, food coloring, glitter, tray, eyedropper

## INSTRUCTIONS:

Line tray with mini plastic cups. Add a 1/2 tablespoon of baking soda to each one. Next add a few drops of food coloring to each one. Cover with another 1/2 tablespoon of baking soda. Sprinkle with glitter! Pour vinegar into bowl. Use eye dropper to squirt vinegar into cups. Alternatively, use cookie cutters!

**SCIENCE:** Explore chemistry with reactions.



# CHRISTMAS ENGINEERING

## SUPPLIES:

Gum drops, toothpicks, cardboard house optional!

## INSTRUCTIONS:

Test your engineering skills and build Santa a chimney with candy engineering. Use the toothpicks and gum drops to build all kinds of creative inventions for Santa. What else can you build?

**SCIENCE:** Explore science, engineering, and math.



# PEPPERMINT OOBLECK

## SUPPLIES:

Peppermints or candy canes, corn starch, water, bowl, spoon, tray for play!

## INSTRUCTIONS:

To make oobleck mix 2 parts corn starch to one part water. You should be able to pick up a solid ball of the mixture and have it slowly ooze into a liquid. If it's too runny add more corn starch. If it's too crumbly add more water!

**SCIENCE:** Explore a Non-newtonian fluid.



# COOKIE SCIENCE

## SUPPLIES:

Cookie cutters, baking powder, water, cinnamon, eyedropper, and tray!

## INSTRUCTIONS:

Set up your cookie cutters on a tray and fill with baking powder. Sprinkle with cinnamon. Fill a small bowl with water. Use the eyedropper to squeeze water into the cookie cutters. What happens?

**SCIENCE:** Explore a chemical reaction.



# SALT CRYSTAL GINGERBREAD MAN

## SUPPLIES:

Table salt, tablespoon, measuring cup, bowl, spoon, tray, construction paper shapes.

## INSTRUCTIONS:

Cute shapes from construction paper or use cookie cutters to trace shapes! Heat water in microwave until hot but not boiling. Adult supervision recommended. Add one tablespoon of salt at a time and stir. Add salt until it will no longer dissolve in the water. Place shapes on a tray. Pour solution over them. Move to a quiet place and watch for several days.

**SCIENCE:** Explore chemistry with soluble solutions and crystals.



# CHRISTMAS SANTA SLIME

## SUPPLIES:

Clear PVA washable school glue, water, liquid starch, measuring cups, bowl, spoon, food coloring, and glitter

## INSTRUCTIONS:

Mix a 1/2 cup of glue and a 1/2 cup of water in a bowl. Add red food coloring and glitter. Mix well. Add 1/2 cup of liquid starch and mix until slime forms. Remove from bowl and knead with hands. Decorate a container with a fun Santa theme to store slime.

**SCIENCE:** Explore chemistry making slime.



# CHRISTMAS LAVA LAMP

## SUPPLIES:

Water bottle, baby oil or cooking oil, water, food coloring, Aka Seltzer tablets

## INSTRUCTIONS:

Fill half the water bottle with water. Fill the bottle the rest of the way with baby oil or cooking oil. Note what happens. Slowly add drops of food coloring. Shake and set down. Note what happens. Add half a tablet and watch what happens!

**SCIENCE:** Explore physics and chemistry with liquid density and reactions



# CHRISTMAS TREE BUILDING CHALLENGE

## SUPPLIES:

100 green plastic cups. Alternatively you can use leftover Christmas cards!

## INSTRUCTIONS:

Build a Christmas tree with all 100 plastic cups. Go ahead and decorate it when you are finished!

**STEM:** Explore math and engineering.



# CHRISTMAS 5 SENSES LAB

## SUPPLIES:

Cinnamon sticks, candy canes, vanilla, evergreens, cookies, hot cocoa, jingle bells, and other Christmas items!

## INSTRUCTIONS:

Explore taste, touch, sound, sight, and smell with favorite Christmas items. List the categories each of the items fits into. Have a cookie tasting test for the 5 senses. Does cocoa mix better with water or milk. What does a jingle bell sound like in different containers. Go on a hunt for more items.

**SCIENCE:** Explore the physical sciences and the 5 senses.

