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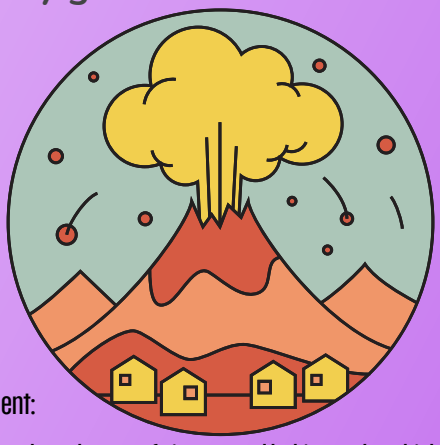
SIMPLY SCIENCE

FIERY VOLCANOES

MATERIALS

- Baking soda
- Vinegar
- Washing up liquid
- Red food coloring
- Container (plastic bottle)
- Protective covering or tray
- Safety glasses



PROCEDURE

1. Set up your container or volcano model on a protective covering or tray.
2. Fill the container or volcano model about halfway with warm water.
3. Add a few drops of red food coloring (optional) to create a realistic lava effect.
4. Add a generous amount of baking soda to the container or volcano model.
5. In a separate container, mix vinegar with a small amount of washing up liquid.
6. Carefully pour the vinegar mixture into the container or volcano model.
7. Watch as the vinegar reacts with the baking soda, causing a fizzy eruption that mimics a volcanic explosion.

Risk Assessment:

This activity involves the use of vinegar and baking soda, which can cause mild irritation if they come into contact with the eyes or skin. It is recommended to wear safety goggles and avoid direct contact with the ingredients.
Conduct the experiment in a well-ventilated area to prevent inhaling the vinegar fumes.
Ensure the container or volcano model is stable and placed on a protective covering or tray to catch any spills or overflow.
Keep a safe distance from the eruption to avoid accidental splashing or getting too close to the fizzing reaction.
Note: Adult supervision is recommended, especially for younger children, to ensure safe handling of materials and to guide the experiment.

Please remember to review and follow all safety guidelines and perform the experiment responsibly. Enjoy the fiery volcanic eruption and have fun exploring the wonders of science!

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SIMPLY SCIENCE

MARVELOUS RAINBOW IN A JAR

MATERIALS

- Clear glass jar or tall glass
- Various liquids with different densities (e.g., honey, syrup, dish soap, water, vegetable oil)
- Food coloring (different colors)
- Dropper or spoon for adding liquids
- Safety goggles (recommended)

PROCEDURE

1. Gather the liquids with different densities and food coloring in separate containers.
2. Begin by pouring the liquid with the highest density into the glass jar (e.g., syrup or honey).
3. Carefully add a few drops of food coloring to the first layer to create a colored gradient.
4. Slowly pour the next liquid with a lower density on top of the first layer, making sure not to mix the two (e.g., dish soap).
5. Repeat the process, layering each liquid with a lower density and adding different food coloring to create a rainbow effect.
6. Take your time and pour the liquids gently to avoid mixing the layers.
7. Observe and marvel at the beautiful rainbow of colors formed by the different density layers.

Risk Assessment:

- Be cautious when handling glass jars to avoid breakage or injury. Ensure the jar is sturdy and stable.
- Some liquids used in this experiment, such as dish soap, may cause mild irritation if they come into contact with the eyes or skin. It is recommended to wear safety goggles and avoid direct contact with the liquids.
- Exercise care when pouring liquids to prevent spills or splashes.
- Adult supervision is advised, especially for younger children, to ensure safe handling of materials.

Remember to review and follow all safety guidelines, perform the experiment responsibly, and have fun creating your marvelous rainbow in a jar!

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SIMPLY SCIENCE

FUNKY OIL LAVA LAMP

MATERIALS

- Clear plastic bottle or glass container
- Vegetable oil
- Water
- Effervescent tablets (e.g., Alka-Seltzer)
- Food coloring (optional)
- Flashlight or small LED light (optional)
- Safety goggles (recommended)

PROCEDURE

1. Fill the plastic bottle or glass container about three-quarters full with vegetable oil.
2. Add water to the container, leaving some space at the top.
3. If desired, add a few drops of food coloring to the mixture to create a vibrant effect.
4. Wait for the oil and water to separate and settle into distinct layers.
5. Break an effervescent tablet (e.g., Alka-Seltzer) into smaller pieces.
6. Drop a small piece of the tablet into the container and watch as the reaction occurs.
7. The tablet will create gas bubbles that rise through the oil, carrying droplets of colored water along with them.
8. For an added glow, shine a flashlight or small LED light underneath the container to illuminate the bubbles and colors.

Risk Assessment:

- Be cautious when handling glass containers or sharp objects to avoid injury. It is recommended to use a plastic bottle as a safer alternative.
- Ensure the bottle or container is sturdy and stable to prevent accidental spills or breakage.
- The use of effervescent tablets may cause rapid bubbling or fizzing. Take care when adding the tablet to avoid splashing or getting the mixture on skin or eyes.
- It is advisable to wear safety goggles, especially when breaking the tablet or handling any potential splashes.
- Adult supervision is recommended, especially for younger children, to ensure safe handling of materials and to guide the experiment.
- Please review and follow all safety guidelines, perform the experiment responsibly, and enjoy the mesmerizing effects of your funky oil lava lamp!

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SIMPLY SCIENCE

GOOEY GLOWING SLIME

MATERIALS

- Clear PVA glue
- Elmer's Magical Liquid (slime activator)
- Water
- Glow-in-the-dark paint or fluorescent pigment (optional)
- Mixing bowl
- Spoon or craft stick for stirring
- Safety goggles (recommended)
- Protective covering or tray
- Sealable container for storage

PROCEDURE

1. In a mixing bowl, pour approximately ½ cup of clear PVA glue.
2. If desired, add a few drops of glow-in-the-dark paint or fluorescent pigment for a fun twist.
3. Mix the glue and paint together until well combined.
4. Slowly pour in Elmer's Magical Liquid, following the manufacturer's instructions for the amount needed.
5. Stir the mixture continuously as you pour in the activator.
6. Keep stirring until the slime starts to form and pull away from the sides of the bowl.
7. Knead the slime with your hands until it reaches a smooth, stretchy consistency.
8. If the slime is too sticky, add a small amount of Elmer's Magical Liquid and continue kneading until desired texture is achieved.
9. Play, stretch, and mold your gooey glowing slime to your heart's content!

Risk Assessment:

- Adult supervision is recommended, especially for younger children, to ensure safe handling of materials and to guide the experiment.
- Avoid contact with eyes or ingestion of the slime. If any discomfort occurs, rinse with plenty of water and seek medical advice if necessary.
- It is advisable to wear safety goggles, especially during the mixing process, to protect your eyes from accidental splashes.
- The slime may be messy, so perform the activity on a protective covering or tray to make cleanup easier.
- After use, store the slime in a sealable container to prevent drying out.
- Please review and follow all safety guidelines, perform the experiment responsibly, and have a gooey good time with your glowing slime using PVA glue and Elmer's Magical Liquid!

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SIMPLY SCIENCE

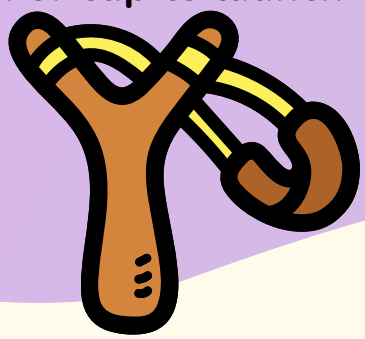
CATAPULT CHAOS

MATERIALS

- Craft sticks (Popsicle sticks)
- Rubber bands
- Plastic spoon or small cup
- Small objects for launching (e.g., marshmallows, small pom-poms)
- Safety goggles (recommended)
- Open space for launching (outdoors or a large indoor area)

PROCEDURE

1. Take two craft sticks and stack them together in a cross shape, forming an "X."
2. Secure the craft sticks together at the center using a rubber band. Repeat this step with two more craft sticks to create the other side of the catapult.
3. Connect the two "X" shapes by placing another craft stick horizontally across the top and bottom, securing them with rubber bands. This will create the base of the catapult.
4. Attach a plastic spoon or small cup to the end of the top craft stick, using rubber bands. This will serve as the launching mechanism for your projectiles.
5. Place a small object, such as a marshmallow or pom-pom, onto the spoon or inside the cup.
6. Hold the base of the catapult firmly with one hand, and pull back the spoon or cup with your other hand to create tension in the rubber bands.
7. Aim the catapult towards your desired target and release the spoon or cup to launch the object into the air.



Risk Assessment:

- Take caution when using the catapult, as the launching mechanism can release objects with force. Aim the catapult away from people, fragile objects, and sensitive areas.
- Adult supervision is recommended, especially for younger children, to ensure safe assembly and use of the catapult.
- Be mindful of the size and weight of the objects you use for launching to avoid causing harm or damage.
- Ensure you have a safe and open space for launching, either outdoors or in a large indoor area, to minimize the risk of objects hitting obstacles or individuals.
- It is advisable to wear safety goggles, especially when launching objects, to protect your eyes from any unexpected mishaps.
- Please review and follow all safety guidelines, perform the activity responsibly, and have a blast with your catapult chaos!

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SIMPLY SCIENCE

CABBAGE CHEMISTRY

MATERIALS

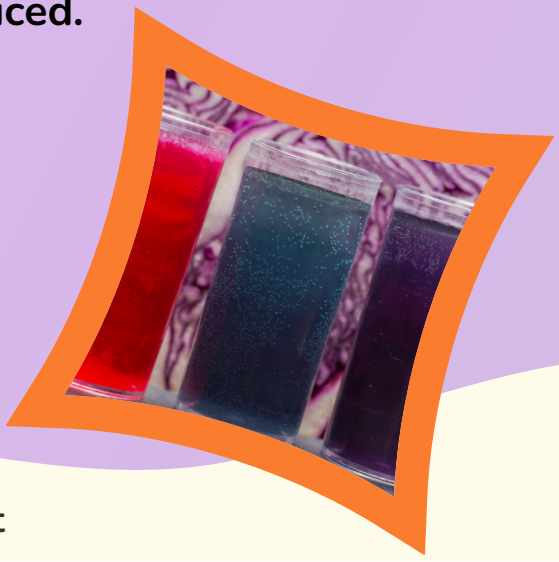
- Water
- Small bowls or containers
- Strainer or cheesecloth
- Various household substances for testing (e.g., lemon juice, vinegar, baking soda, detergent)
- Safety goggles (recommended)
- Protective covering or tray

PROCEDURE

1. Chop the red cabbage into small pieces and place them in a pot.
2. Add enough water to cover the cabbage pieces and bring the mixture to a boil.
3. Reduce the heat and let the cabbage simmer for approximately 15-20 minutes.
4. Allow the cabbage mixture to cool, then strain it using a strainer or cheesecloth to separate the liquid from the solid pieces.
5. Pour the cabbage juice into small bowls or containers.
6. Gather the household substances you wish to test and add small amounts to separate bowls of cabbage juice.
7. Observe any color changes that occur when the substances are added to the cabbage juice.
8. Record your findings and note which substances cause a color change and what colors are produced.

Risk Assessment:

- Take care when handling sharp objects such as knives while chopping the cabbage. Ensure proper knife safety and adult supervision for younger children.
- Be cautious when working with boiling water to prevent burns or scalds. Follow safe practices for handling hot liquids.
- Use safety goggles to protect your eyes from any potential splashes or spills.
- Conduct the experiment on a protective covering or tray to avoid staining or damage to surfaces.
- Avoid contact with the substances being tested. Some substances may cause irritation or harm if they come into contact with the skin or eyes. Take necessary precautions and handle the substances with care.
- Please review and follow all safety guidelines, perform the experiment responsibly, and have a fascinating time exploring the colorful world of cabbage chemistry!



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SIMPLY SCIENCE

BALLOON-POWERED SPEEDSTER

MATERIALS

- Balloon
- Plastic straw
- Lightweight materials for constructing the vehicle (e.g., cardboard, foam, popsicle sticks)
- Scissors
- Tape
- Marker or pen
- Open space for testing (indoors or outdoors)

PROCEDURE

1. Construct a base for your speedster using lightweight materials such as cardboard, foam, or popsicle sticks. This will serve as the body of the vehicle.
2. Attach wheels to the base using tape or by cutting slots and inserting the wheels.
3. Make a small hole in the back of the vehicle's body and insert the plastic straw. Ensure the straw is secure and pointing backward.
4. Inflate the balloon, but do not tie it.
5. Stretch the opening of the balloon over the end of the straw, creating a seal.
6. Hold the vehicle firmly and release the balloon to let the air rush out through the straw. The escaping air will create propulsion, propelling the speedster forward.

Risk Assessment:

- Be cautious when using scissors to avoid cuts or injuries. Adult supervision is recommended, especially for younger children, during the construction phase.
- Ensure the balloon is not overinflated to prevent bursting. Inflate the balloon to a suitable size for optimal performance.
- Use lightweight materials for the construction of the speedster to ensure safe and smooth movement.
- Choose an open space for testing, either indoors or outdoors, that is clear of obstacles or people to avoid collisions or accidents.
- Be mindful of the direction and force with which the speedster moves to prevent it from causing harm or damage to objects or individuals.
- If conducting the activity indoors, consider protecting fragile items or creating barriers to prevent the speedster from reaching unwanted areas.
- Please review and follow all safety guidelines, perform the activity responsibly, and enjoy the thrill of your balloon-powered speedster!

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