I.D.E.A. KIT

3-D Snowflakes

What You Need

Paper	Scissors
Tape or glue	Stapler

What You Do

1. Cut 6 identical squares of paper.
2. Fold the square in half diagonally to create a triangle. Fold this triangle in half once more. Repeat for all 6 paper squares.
3. Starting at the edge with the single fold, cut three slits in the triangle parallel to the longest edge. Leave approximately ½ inch uncut at the opposite side. Repeat with all 6 triangles.
4. Unfold each triangle, taking care not to tear any of the strips.
5. Starting with the innermost flaps, curl the opposite points together and secure with tape to create a "branch".
6. Flip your paper over and repeat with the next innermost flaps. Repeat twice more. This creates one "arm" of your snowflake!
7. Repeat steps 5 & 6 for all of the papers.
8. Assemble the 6 snowflake "arms" into one snowflake by stapling them together at the bottoms and the outermost "branch". (It is easiest to staple them together one at a time.)

Questions to ask

- *Why do you think snowflakes have 6 arms?*
- *What is a real snowflake made of?*
- *What time of year do you usually see snow? Why do you think that is?*

What's The Science?

A snowflake is formed when a cold water droplet freezes onto dust or other particles in the sky, creating an ice crystal. As the ice crystal falls to the ground, water vapor freezes onto the crystal and builds the six symmetrical arms of the snowflake. Each snowflake is unique because as it tumbles through the clouds, the crystal experiences ever changing temperature and humidity. Each of these changes makes the arms grow a bit differently.

Try This

Use vocabulary: Use related science and math words such as water, snow, snowflake, weather, precipitation, temperature, crystal, geometry, symmetrical, and three-dimensional as you talk and play together.

Extend the Activity: It's true that no two snowflakes are exactly alike! Try making your snowflakes unique by using different colors of paper, changing the number of slits you cut for each snowflake arm, or cutting the slits using decorative scissors to create textured designs!

Keep In Mind

- Children are natural scientists; let them lead the way in their experimentation! Encourage them to ask questions and make suggestions only when they are stuck/discouraged.
- The order suggested is not the only right or perfect way. Adjust the activities based on the age, ability, and interests of the children.

Additional Resources

Stella, Queen of the Snow by Marie-Louise Gay
The Greedy Triangle by Marilyn Burns

imagination STATION
pure science. pure fun.