

No. 2437

Color Diffusing Snowflakes

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Discover the symmetrical beauty of snowflakes in the comfort and warmth of your classroom!

We've created a beautiful classroom poster featuring illustrations of 4 different snowflakes. Show these images to your students to inspire them when they create their artwork. Note: The word "Snowflake" is written in four languages; English, French, German and Spanish. Use the right word for your class and remove the other three titles.

Along the bottom of the poster are basic illustrations of snowflakes that form at different temperatures. Use these as part of a follow-up discussion of snowflakes after the artwork is complete.

To make amazing snowflakes, start by folding one of the flakes in half. Fold up the top third. Fold back the bottom third. Fold the small "V" in half. Cut wedges, slots and notches out of the folds. Tip: Cut the bottom and top corners.

Open up your snowflake to reveal a complex, symmetrical design. Tip: You can re-fold the snowflake and cut more wedges.

Once you have achieved the design you want, paint the snowflake. Although we think of snowflakes as white, they are really clear crystals, so children can use their imaginations to give their crystals a multitude of colors!

To reinforce the concept of symmetry, fold the snowflakes back up and dip in liquid watercolor paint. Alternatively, color in the snowflake with a water-based marker. When children are finished coloring, lightly spritz the flakes with water using a spray bottle in order to make the colors bleed and blend. Because of the texture of Color Diffusing Paper, it works well with crayon, too!

Hang the snowflakes up in your classroom window or let them float down from the ceiling on fishing line.

Let's learn more about snowflakes!

Catch a snowflake on your fingertip. Look closely at it. If you are lucky and able to look very closely, you will see six points. Beyond that, the details are hard to see. On our poster we have illustrated four beautiful snowflakes. Our illustrations are perfectly symmetrical, but this isn't always the case in nature. Sometimes the flakes are slightly imperfect, but they are almost always beautiful!

Did you know: Snowflakes from different parts of the world, or even different parts of the same country form differently. Each climate is slightly different and these differences result in different flake designs.

Snowflakes begin in lakes, rivers and oceans as water. Warm water evaporates and forms clouds made of water

vapor. When these clouds cool down, the vapor collects around dust particles to form droplets.

When the water becomes cold enough, the droplet freezes and the molecules start to line up in an extremely orderly fashion. Chemical reactions occur during the freezing process and these reactions are responsible for the fascinating shapes of the snowflakes. Small flakes tend to look very simple, more like hexagons rather than what we think as traditional snowflakes, but the longer the snowflake lasts, the more time it has to attract more tiny water droplets on each of its six "spokes". These spokes then grow larger and more complex.

When the snowflake is in the cloud, they are very sensitive to changes in the atmosphere and temperature. Each snowflake grows differently. By the time they hit the ground they have experienced many slight variations in temperature and humidity and each experience affects their appearance. The result is that no two snowflakes are ever the same because they each take a unique journey down to earth.

The trip down to earth affects all of the spokes on the snowflake at the same time and in the same way which results in a more or less symmetrical snowflake.

Although snowflakes form separately, there are some similarities in how they appear when formed at different temperatures.

The first snowflakes start to appear when the temperature dips below freezing, 0° C or 32° F. There are five basic snowflake shapes:

- Between 0 and -4° C (32 and 25° F) snowflakes form as very basic hexagon (six-sided) plates. They have very little detail and six flat edges rather than six arms.
- Between -4 and -6° C (25 and 21° F) snowflakes form as thin, jagged needles.
- Between -6 and -10° C (21 and 14° F) snowflakes form as thicker, hollow tubes or columns.
- Between -10 and -12° C (14 and 10° F) snowflakes form with six simple arms pointing out of a hexagon center.
- Between -12 and -16° C (10 and 3° F) snowflakes form with almost fern-like, lacy arms, or dendrites.

Did you know: Snowflakes are clear water crystals, but because of all of their facets created by the complex crystal structures, they reflect light back and appear white.

