



SNOWFLAKE BENTLEY
By
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From the time he was a small boy, Wilson Bentley thought of snowflakes as small miracles, and he determined that one day his camera would capture for others their extraordinary beauty. Thanks to Wilson Bentley, we have proof today of the uniqueness of all snowflakes. This is a beautiful book, a Caldecott winner, which traces the life of this amazing man.

To transition to these activities talk to them about snowflakes. Snowflakes are fascinating. Each is unique, but the one thing they all have in common is that they have six sides.

MATERIALS: Activity #1: "Matching Snowflakes" worksheet, straightedge, pencils, the book, [Snowflake Bentley](#); Activity #2: paper, scissors, flour tortillas, electric frying pan, oil for frying, powdered sugar or cinnamon sugar.

ACTIVITIES: Activity #1: Review the characteristics of snowflakes with your children: six-sided, symmetrical, fragile, cold, frozen water. Snowflakes are difficult to record because they melt if they are taken inside, and it's very cold to study them outside. Snowflake Bentley managed to photograph many of them. Have your children follow the directions on the attached "Matching Snowflakes worksheet and find the matching snowflakes. Have them indicate a line of symmetry for each snowflake. Activity #2: Teach your children how to make a snowflake by folding and cutting. Follow the steps below:

1. Start with a square piece of paper.
2. Fold it in half diagonally, open it up and fold diagonally again.
3. From the bottom up, fold 1/3 up.
4. Fold the other 1/3 down over the first one.

5. Make a perpendicular cut from the base to the place where the two folds overlap at the top.
6. Make wedge-shaped cuts on all sides.
7. Unfold.

Once your students have practiced on paper, they are ready for "Edible Snowflakes". Fold flour tortillas as if you were making paper snowflakes and carefully cut out the patterns. Fry in hot oil and drain on paper towels. When cool, sprinkle with powdered sugar or plain sugar and cinnamon. *Janice Lynch, Nokomis. IL.*

ART CONNECTION: Cut paper snowflakes.

STANDARDS:

NCTM: 2a, 4a, 4d, 9a, 9b, 9d, 10a, 10d, 12c,12d

BSL: 4.1, 4.2, 4.7, 9.3, 9.9, 12.1, 12.5, 12.6

SCS: A1, A2, B1, B2, D1, E1, E2, H2, H5

EXTENSION: write "diamante" or "triamante" poems.

WEBSITE: This site was created by a Toyota Tapestry Grant. It is "Frosted Flakes: The Science of Snowflakes."

<http://www.ux1.eiu.edu/~cxtm/met/snow/flakes.html> Click on *Snowflake Applet* and watch a snowflake grow in different cloud layers.

This website is snowcrystals.com.

<http://www.its.caltech.edu/~atomic/snowcrystals/>

This link takes you to a guide to snowflakes.

<http://www.its.caltech.edu/~atomic/snowcrystals/class/class.htm>

Martin, Jacquelin Briggs. Snowflake Bentley. [921 Ben] Illus. by Mary Azarian. NY: Houghton Mifflin, c1998. ISBN#0395861624 a biography of a self-taught scientist who photographed thousands of individual snowflakes in order to study their unique formations.

Melling, David. The Tale of Jack Frost. [* Mel] NY: Barron's, c2003. ISBN#0-7641-5675-6 A very little boy with snow-white skin surprises his new forest friends because he knows how to work real magic.

Matching Snowflakes

On this page are some of Wilson "Snowflake" Bentley's snowflakes. Draw a line between the matching snowflakes. With your straight edge, draw a line of symmetry for each one.

