



# The Mini Page

Issue 49, 2021

Founded by Betty Debnam

**Next Week:**  
Christmas bird  
count



## Snowflakes

photo by Bob Collins

As winter begins, many people prepare for snow. Have you ever taken a close look at the fuzzy white flakes that fall from the sky? Today The Mini Page takes a look at snowflakes.

### Formation

Snowflakes are formed when a very cold drop of water attaches to a piece of dust or pollen in the sky, according to the National Oceanic and Atmospheric Administration (NOAA). When this happens, it makes something called an **ice crystal**. As the ice crystal travels through the sky and toward the ground, water vapor freezes onto the main crystal, which builds new crystals that form into the arms of a snowflake.



photo by Alexey Kijatov

Snowflakes are **hexagonal** in shape, which means they have a six-sided structure.

### They're not white

It might look like they're white, but did you know snowflakes are actually **translucent**, or clear? It's the light that reflects off the ice crystals that makes them appear white. Light sparkles off a snowflake's many sides, giving it a look that's bright and white. The next time you see a snowflake, take a minute to study it from different positions and see what colors you can observe.

### Wilson A. Bentley

A farmer from Jericho, Vermont, named Wilson A. Bentley became well-known for his photographs of snowflakes.

Since they're made of ice crystals, snowflakes melt quickly, which can make it very hard to photograph them. Bentley developed his own technique and even his own special equipment to help him capture photos of snowflakes before they melted.

Bentley connected his microscope to his camera so he could get detailed photos of snowflakes. According to the Smithsonian Institution, once a snowflake landed, Bentley used a feather to move it under the lens, then snapped the photo before it melted. He used the feather because it wouldn't melt the flake.

Bentley took his first snowflake photograph in 1885 and enjoyed it so much, it became his hobby. He snapped more than 5,000 photos in his lifetime.

In the early 1900s, Bentley contacted the Smithsonian and donated 500 of his snowflake photos in the hope that they would be protected. His photos are still considered to be important because they were some of the first taken of snowflakes and are very detailed.

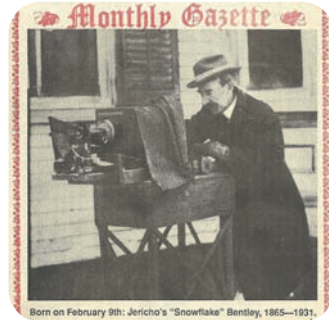


Photo courtesy of Jericho Historical Society

### Types of snowflakes

It is said that each snowflake is **unique**, which means no two are exactly the same. But some people say that isn't provable because not all snowflakes have been studied carefully under a microscope.

There are many types of snowflakes. Depending on which information you look at, you could find 121 types of snowflakes listed!



photo by Janice Sherman

Some types of snowflake patterns have the name **stellar** in them, which means they resemble a star.

If a snowflake looks feathery, it might be a **fernlike stellar dendrite** pattern.

Some snowflakes are so small that they're the same **diameter**, or width, as a strand of human hair.

Temperature plays an important role in what shapes snowflakes take as they form and how they change as they melt. The amount of moisture in the cloud it forms in also affects its shape.

In the U.S., at least 1 septillion (that's 24 zeroes!) ice crystals travel from the clouds to the ground each year.

### Resources



#### On the Web:

- [bit.ly/TMPSnowflakes](https://bit.ly/TMPSnowflakes)

#### At the library:

- "The Story of Snow: The Science of Winter's Wonder" by Jon Nelson, Ph.D.
- "Curious About Snow" by Gina Shaw

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## Try 'n' Find

Words that remind us of snowflakes are hidden in this puzzle. Some words are hidden backward or diagonally, and some letters are used twice. See if you can find:



- BENTLEY, CAMERA,
- COLD, CRYSTALS,
- DENDRITE,
- FLAKES, FREEZING,
- HEXAGONAL, ICE,
- MICROSCOPE, SHAPE,
- SNOW, STELLAR,
- TYPES, UNIQUE,
- WATER.

C	P	F	W	R	C	O	L	D	G	K	J	V	C	B
O	H	R	S	E	E	V	D	E	N	D	R	I	T	E
E	E	A	C	U	S	T	T	Z	I	X	S	C	Z	N
P	X	L	M	Q	E	X	A	I	Z	D	A	P	X	T
A	A	L	M	I	P	Y	D	W	E	M	Z	F	W	L
H	G	E	E	N	Y	V	C	M	E	A	Q	L	S	E
S	O	T	I	U	T	E	K	R	R	T	T	A	N	Y
M	N	S	R	C	C	G	A	T	F	X	O	K	O	M
P	A	K	M	I	C	R	O	S	C	O	P	E	W	Q
D	L	C	K	C	R	Y	S	T	A	L	S	S	B	A

## Mini Spy Classics

Mini Spy is reading a bedtime story to her younger sister. See if you can find the hidden pictures. Then color the picture.



Mini Spy Classics appear in the first issue of each month.

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- exclamation mark
- olive
- ruler
- ladder
- Easter egg
- kite
- carrot
- lima bean
- toothbrush
- lips
- number 8
- letter E
- peapod
- pencil
- sailboat

## Mini Jokes



**Sal:** How do mountains stay warm?

**Susie:** By wearing snowcaps!

## Eco Note



The sea ice surrounding the North Pole reached its lowest coverage of the year in September. While not a record low in 2021, sea ice cover has dropped by about 50% since the 1980s, which scientists say has been a direct result of greenhouse gas emissions. This summer's more stubborn ice forced Russia to use icebreakers to clear a path through its summertime Northern Sea Route after it remained blocked for the first time since 2008.

adapted with permission from Earthweek.com

## Thank You



The Mini Page thanks the Jericho Historical Society for help with this issue.

## For later:

Look in your newspaper for articles about snowflakes.

The **NEW Mini Spy Booklets** volumes 4 and 5! Features 48 of your favorite puzzles from The Mini Page! Volumes 1, 2 and 3 are still available!

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