

## Winter 2019 Nature Notes – Sparkling Snowflakes!

Snow and frost can bite, but they can also be beautiful! There are many different types of sparkling snowflakes (or snow crystals), which form depending on temperature and formation speed. Here are some common types, see if you can catch some on your glove next time and check out how many different types you can find!

### Stellar Plates



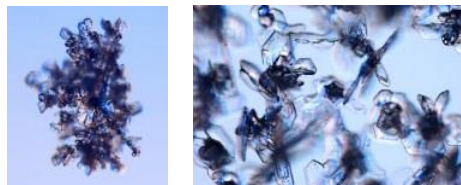
These common snowflakes are thin, plate-like crystals with six broad arms that form a star-like shape. Their faces are often decorated with amazingly elaborate and symmetrical markings. Plate-like snowflakes form when the temperature is near 28°F or near 5°F.

### Stellar Dendrites



Dendritic means "tree-like", so stellar dendrites are plate-like snow crystals that have branches and sidebranches. These are fairly large crystals that are easily seen with the naked eye. Stellar dendrites are clearly the most popular snow crystal type, seen in holiday decorations everywhere. You can see these crystals for yourself quite well with just a simple magnifier.

### Irregular Crystals



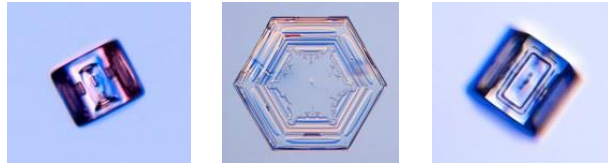
The most common snow crystals by far are the irregular crystals. These are small, usually clumped together, and show little of the symmetry seen in stellar or columnar crystals.

### Needles




Needles are slender, columnar ice crystals that grow when the temperature is around 23°F. On your sleeve these snowflakes look like small bits of white hair. One of the amazing things about snow crystals is that their growth changes from thin, flat plates to long, slender needles when the temperature changes by just a few degrees.

## Simple Prisms (a.k.a. Diamond Dust!)



A hexagonal prism is the most basic snow crystal geometry. These tiny snow crystals look like sparkling dust in the sunlight, which is where they get their name. They are the smallest snow crystals; many are no larger than the diameter of a human hair. They are most often seen in bitter cold weather.

## Types of Snowflakes Chart

 Simple Prisms	 Solid Columns	 Sheaths	 Scrolls on Plates	 Triangular Forms
 Hexagonal Plates	 Hollow Columns	 Cups	 Columns on Plates	 12-branched Stars
 Stellar Plates	 Bullet Rosettes	 Capped Columns	 Split Plates & Stars	 Radiating Plates
 Sectored Plates	 Isolated Bullets	 Multiply Capped Columns	 Skeletal Forms	 Radiating Dendrites
 Simple Stars	 Simple Needles	 Capped Bullets	 Twin Columns	 Irregulars
 Stellar Dendrites	 Needle Clusters	 Double Plates	 Arrowhead Twins	 Rimed
 Fernlike Stellar Dendrites	 Crossed Needles	 Hollow Plates	 Crossed Plates	 Graupel