

Snow Science!

Have you ever caught a snowflake on your tongue? Just where does snow come from?

How Does Snow Form?

Snow forms when the air is cold and water freezes into ice crystals or snowflakes. These steps show how a snowflake forms:

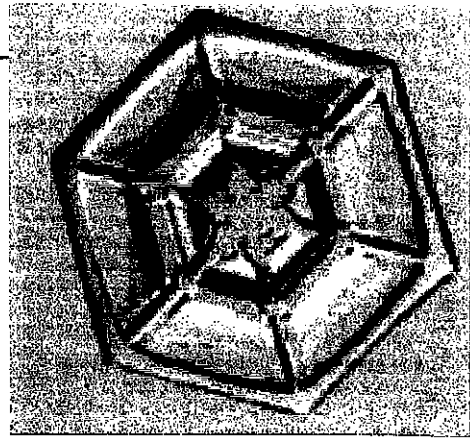
1. A snowflake begins as bits of water inside a cloud.
2. When the temperature drops to 32 degrees, the bits of water freeze.
3. As the bits of water freeze, they start to stick together in an organized way.
4. That arrangement of frozen bits of water creates a beautiful ice crystal or snowflake.
5. As the snowflakes get heavy they fall from the clouds. It's snowing!
6. Snow is FUN! Now go outside and play!

Snowflakes Shape Up!

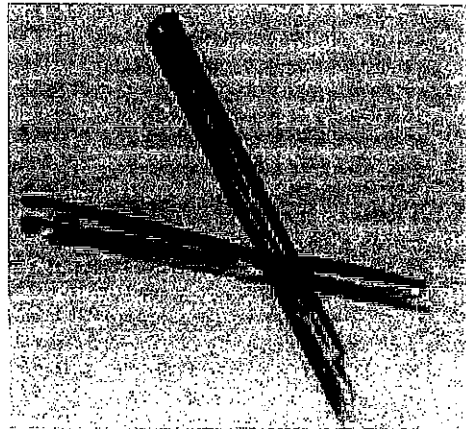
Snowflakes take different shapes depending on the temperature at which they form. Look at these close-up pictures of real snowflakes to see how.

Thin Plates form at 25 to 32

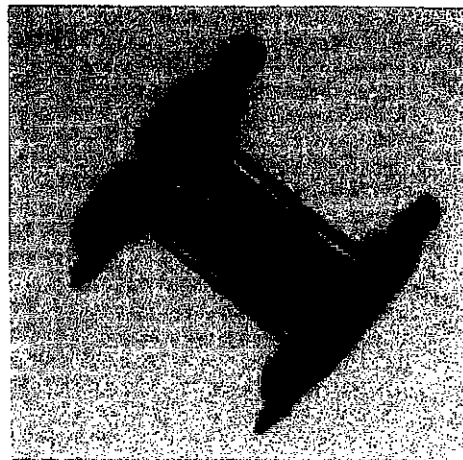
degrees.



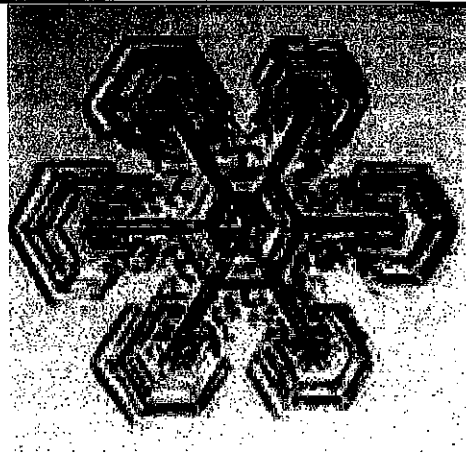
Needles form at 21 to 25 degrees.



Hollow Columns form at 14 to 21 degrees.



Sector Plates form at 10 to 14 degrees.



Dendrites form at 3 to 10 degrees.



snowflakecrystals.com

Picture Perfect

Have you ever looked closely at snowflakes? Scientist Kenneth Libbrecht has. The snowflake pictures in this issue are real. Libbrecht took these pictures with a special camera called a photo-microscope. His camera has

a microscope in it that makes the snowflakes look bigger so he can take pictures of them. When a snowflake falls on a dark, cold surface, Libbrecht gently picks it up using a small paintbrush. Then he places the snowflake under the photo-microscope and takes a picture.

Libbrecht says it's not hard for kids to begin a hobby in snowflake watching. "The best way to start is to get a magnifying glass and take a close look at the crystals next time it snows," he says. "This is very easy to do, and you never know what you might find!"

Name: _____ Date: _____

1. A snowflake will take the shape of _____ when the temperature is between 3 and 10 degrees.

- A. hollow columns
- B. dendrites
- C. thin plates
- D. sector plates

2. Temperatures dropping to 32 degrees causes

- A. clouds to form.
- B. bits of water to freeze.
- C. rain to fall.
- D. snowflakes to melt.

3. What causes snowflakes to take different shapes?

- A. the month of the year
- B. rain
- C. clouds
- D. temperature

4. Which of the following is not true about Kenneth Libbrecht?

- A. He does not think that kids are ready to study snowflakes.
- B. He photographed snowflakes.
- C. He took the pictures that were used in this passage.
- D. He picked up individual snowflakes using a paintbrush.

5. What causes snow to form? Explain.

Name: _____ Date: _____

1. What temperature must it be in order for snowflakes to form?
2. What happens when a snowflake gets heavy?
3. What is a photo-microscope?
4. What is this passage mostly about?
5. The question below is an incomplete sentence. Choose the word that best completes the sentence.

All snowflakes may look the same to the naked eye, _____ a photo-microscope shows that they are not.

- A. so
- B. but
- C. because

6. Which image shows books that are organized by a certain order?



Carol's Numbers

Carol has three number cards.



1. What is the largest three-digit number Carol can make with her cards?

Three empty vertical rectangular boxes are arranged horizontally, intended for the student to write the digits of the largest three-digit number possible using the cards.

2. What is the smallest three-digit number Carol can make with her cards?

Three empty vertical rectangular boxes are arranged horizontally, intended for the student to write the digits of the smallest three-digit number possible using the cards.

Explain to Carol how she can make the smallest possible number using her three cards.

Carol's teacher drew a number line on the board.



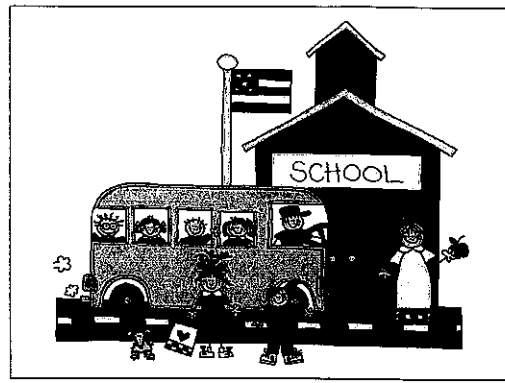
3. About where would 85 be? Place 85 on the number line where it belongs.
4. About where would 21 be? Place 21 on the number line where it belongs.
5. About where would 31 be? Place 31 on the number line where it belongs.

Tell Carol how you knew where to place 31 and why.

NTID SUGGESTED ACTIVITIES

NOVEMBER 26, MARCH 25, SNOW DAY 1, 2, 3

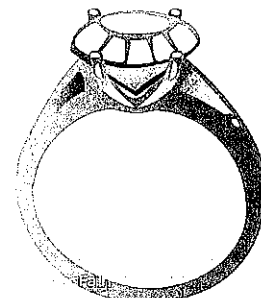
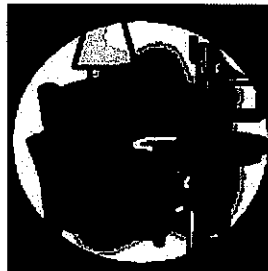
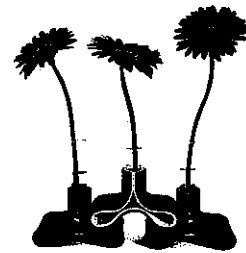
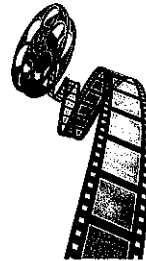
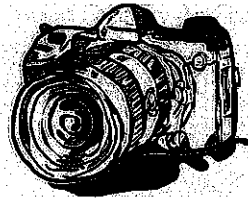
Elementary ART



Draw your favorite things or how you spent your day...

Explore your home and see how many different art forms that you use in a single day.

Did you play a video game, take a photograph, watch a movie, or notice colorful designs on your clothes or around your home?



NTID Suggested Activities

November 26, March 25, Snow Days 1, 2, 3



Elementary Music

Sing your favorite song or listen to a different type of music.

REFLECT: Draw a picture about how it made you feel.

Write about how the music made you feel.

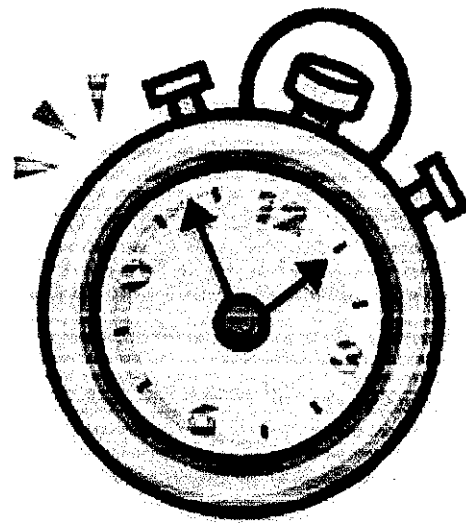
Did the music excite you, calm you, or make you sad?

NTID Suggested Activities

November 26, March 25, Snow Days 1, 2, 3

Elementary P.E.

Take 20 minutes for active play or exercise...



DID YOU...

take a walk?

play outside?

practice a sport?

go swimming?

go sledding?