

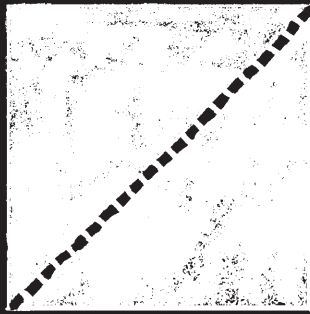


# Activity Kit

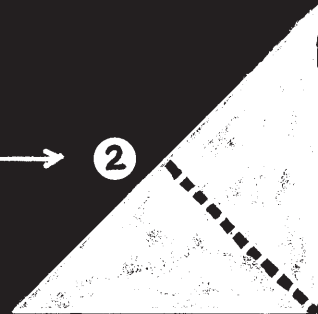
By Carolyn Fisher

## MAKE a SNOWFLAKE

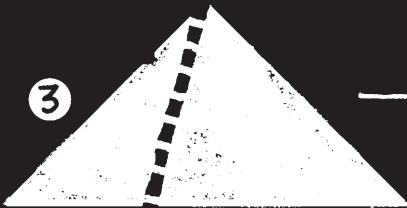
1



2



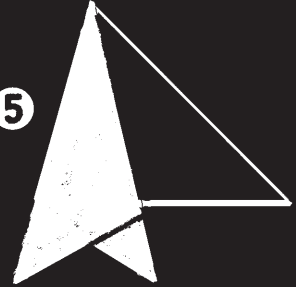
3



4



5



6



7



8



# The Snow Show

## Activity Kit

By Carolyn Fisher

What's **WRONG** with this picture? Circle the things that don't belong. Then draw in some strange details of your own.



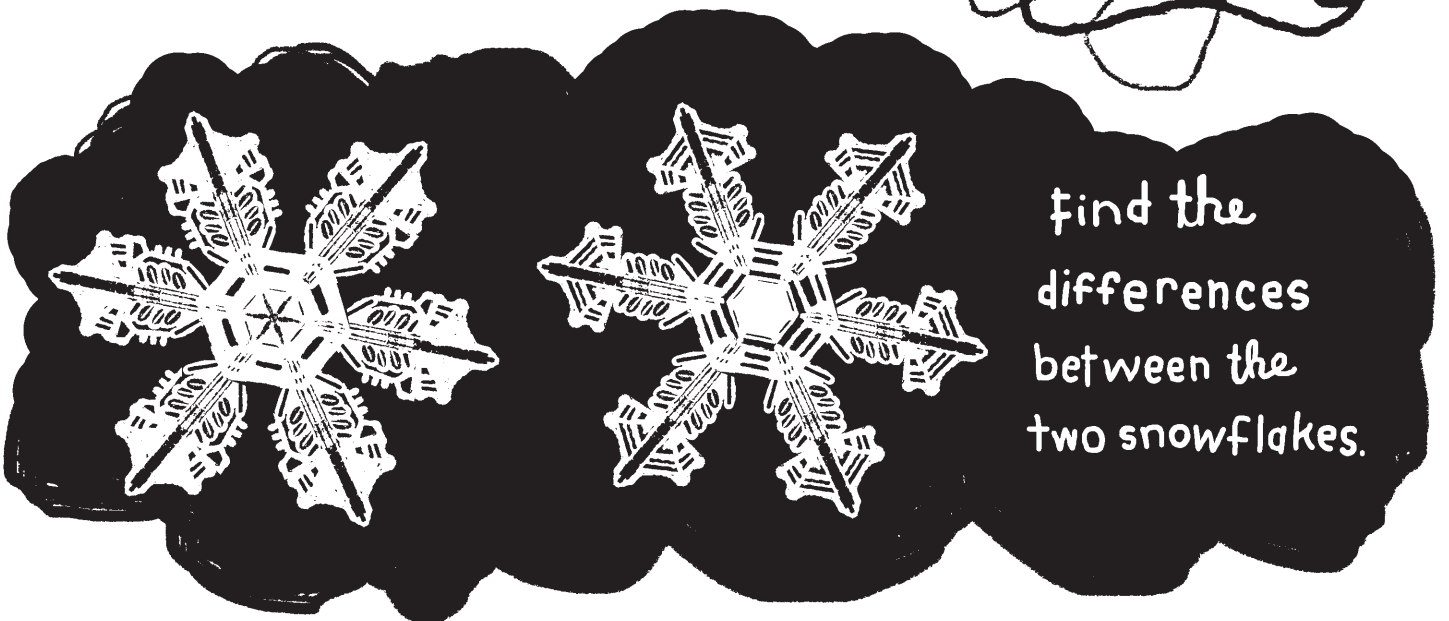
Green ○ Easiest



# Activity Kit

By Carolyn Fisher

## MITTEN MIX-UP *Which string is tied to BOTH mittens?*



find the differences between the two snowflakes.



# Activity Kit

By Carolyn Fisher

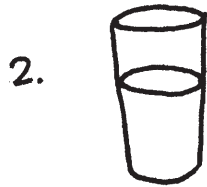
## Phase changes

Is this water solid, liquid, or gas?



The sea

---



Glass of water

---



Cloud

---



Invisible vapor

---



Ice cubes

---



Snow crystals

---



Leaky faucet

---



Rain

---



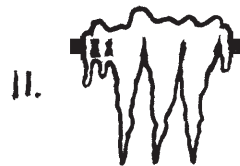
Puddle

---



Snowman

---



Icicles

---



12.

---





# Activity Kit

By Carolyn Fisher

## DEFINITIONS

Condensation nucleus: a fleck of ice or dust that bumps into a water vapor molecule and triggers condensation from invisible vapor (gas) into water (liquid).

Cloud:  a bunch of tiny floating water or ice drops.

Crystal: a special symmetrical stack of molecules.  A six-sided snow crystal forms when an invisible water vapor molecule bumps into a fleck of ice or dust at a temperature below  $0^{\circ}\text{C}$  ( $32^{\circ}\text{F}$ ), and changes by deposition into ice.

Frost: ice crystals that form on the ground (e.g. on grass or on a window) by deposition.

Hexagon: A symmetrical six-sided shape, like a stop sign. 

Freezing nucleus: A fleck of ice or dust that bumps into a water drop and triggers freezing, so that the water turns into ice.

Supercooling: Supercooled water droplets occur when the water is chilled to a sub-zero temperature (below  $0^{\circ}\text{C}$  or  $32^{\circ}\text{F}$ ), but remains liquid instead of freezing into ice because it hasn't bumped into a freezing nucleus to trigger the freezing action.

Precipitation: Any form of water - liquid or solid - that falls from the sky to the ground. Precipitation includes:

Snow: Ice crystals that form by deposition.

Rain: Liquid water drops.

Sleet: Frozen raindrops.

Hail: A frozen rain droplet encounters supercooled water droplets.

The frozen rain droplet acts as a freezing nucleus:

Supercooled water instantly coats the ice seed with a layer of ice.

After many ice layers have built up, the hailstone falls from the sky.





# Activity Kit



By Carolyn Fisher

## WORD SCRAMBLE:


Unscramble the following words:

NAPTIERAVOO → \_\_\_\_\_  → 



When water turns from liquid to invisible water vapor (a gas).  
(Hint: add heat.)

TIONOCENDSA → \_\_\_\_\_  → 



When invisible water vapor (a gas) turns to liquid.  
(Hint: take away heat.)

TIOPITRECIPAN → \_\_\_\_\_ 



When water- solid or liquid- falls from the sky to the ground.

SITOPEDION → \_\_\_\_\_  → 



When invisible water vapor (a gas) turns directly into ice (a solid).  
(Hint: take away heat.)

ZINGEREF → \_\_\_\_\_  → 

When a liquid (for example, water) becomes colder than 0°C (32°F) and turns into a solid (for example, ice).

LIMBUSTIANO → \_\_\_\_\_  → 

When solid water (ice) turns directly to invisible water vapor (a gas).

GLEMTIN → \_\_\_\_\_  → 

When a solid (like ice) turns into a liquid (like water).

Answers found in THE SNOW SHOW, on the DELETED SCENES page, under PHASE CHANGES.

Black ♦ Expert



# Activity Kit

By Carolyn Fisher

## SNOW CRYSTAL SHAPES

Identify the snow crystal shapes. Then color in the thermometer to show the temperature ranges in which the snow crystals form.

1. R T

2. L

3. E E

4. L L L

5. N T

6. H L



# Activity Kit

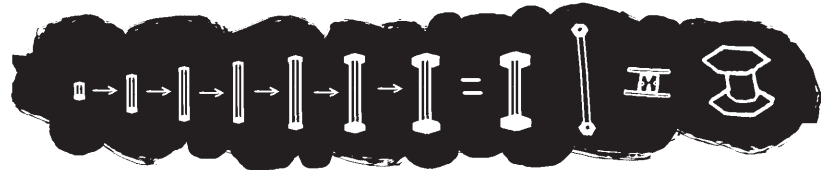
By Carolyn Fisher

## Bonus SNOW CRYSTALS: Identify the snow crystal shapes.

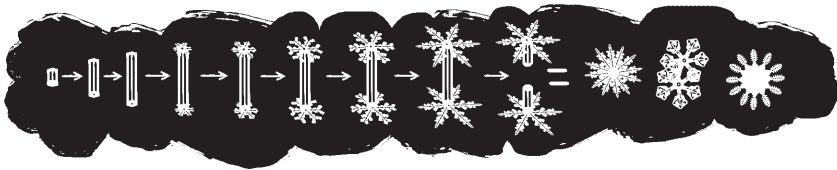
1. LY : composed of several crystals growing in all directions.



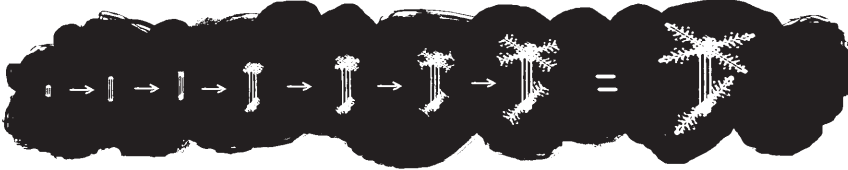
2. PP MN



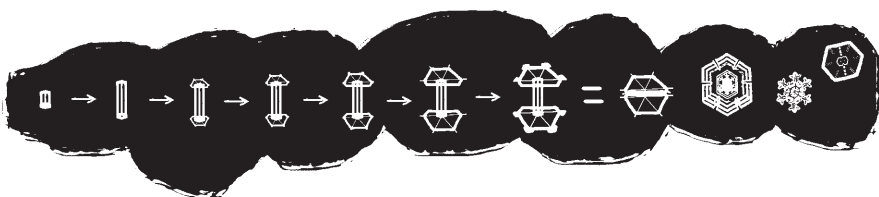
3. BL AR



4. PL T S



5. P T L E




6. IA  
T : 

A polycrystal made up of plates.

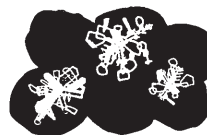
7. NG  
ND



A polycrystal made up of dendrites.


8. LL 

9. RR



Imperfect and broken crystals.

10. ND  
ST

The tiniest crystals, also called prisms. 

11. CT L



Stellar plates that are divided into wedges, like pieces of pie.

12. TR  
YS



Answers found in THE SNOW SHOW, on BLOOPERS page, under BONUS SNOW CRYSTALS.

Black ♦ Expert