

AIM | How do snow, sleet, and 20 | hail form?

Did you ever pack a snowball or make a snowman?

You cannot shape rain because rain is a liquid. Snow is different. Snow is a solid. It has a shape of its own. And we can change the shape of snow after it reaches the ground.

Snow is one kind of *solid precipitation*. There are two other kinds, *sleet* and *hail*. Each one forms in a different way. Let's study each one.

SNOW Water vapor condenses to form clouds.

If the temperature around the clouds is *above* freezing, the vapor changes to *liquid* droplets.

If, however, the temperature around the clouds is freezing, the vapor changes to tiny snow crystals.

The tiny snow *crystals* grow and grow. When they become heavy enough, they fall to earth. It snows.

SLEET Sleet is made of frozen raindrops.

Sometimes it is colder near the ground than it is up in the clouds. Rain falls from the clouds and goes through a layer of cold air before hitting the ground. This makes the raindrops freeze. The frozen raindrops fall to the earth as sleet.

HAIL Hail forms during some thunderstorms.

Strong air currents keep the raindrops moving in the air for a long time. As they move, they pass through many cold and warm layers of air.

In the cold air, the raindrops freeze. They change to icy beads. In the warm air, more water builds up around the beads. Then the water freezes when they pass through another cold layer.

This happens over and over again. Each time the icy beads become bigger. They become *hailstones* and fall to earth.

SLEET, SNOW, AND HAIL

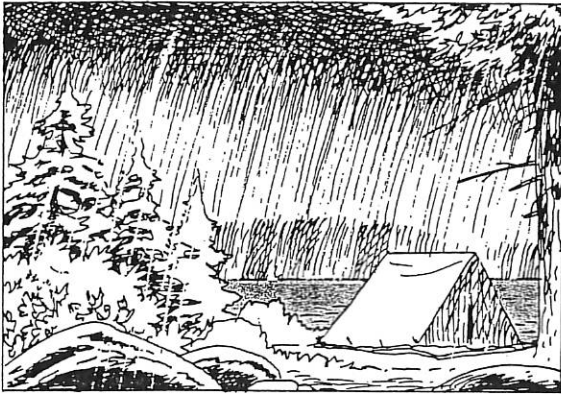


Figure A



Figure B

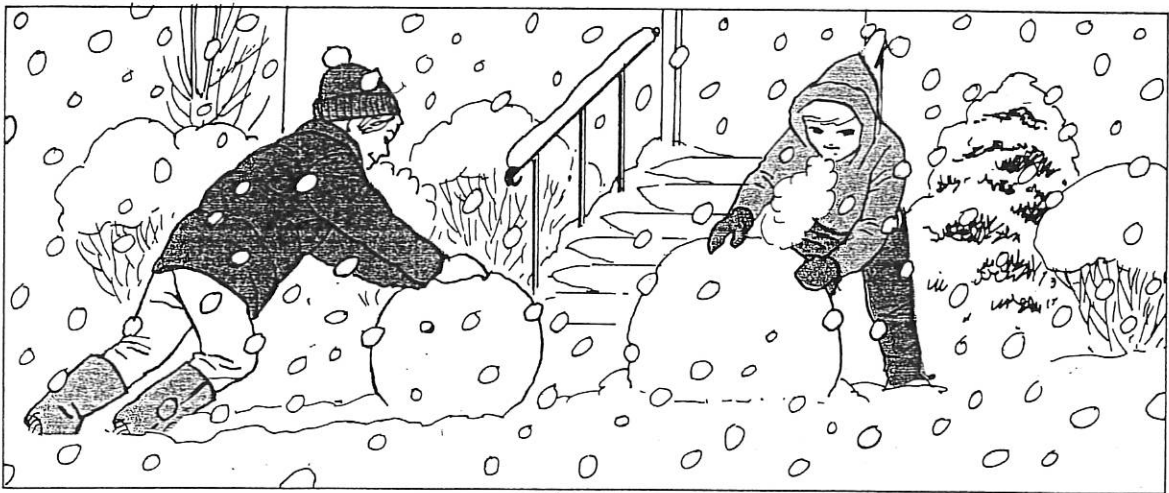


Figure C

Figure A shows rain falling.

1. The temperature around the clouds is _____ freezing.
above, below
2. The temperature near the ground is _____ freezing.
above, below

Figure B shows sleet hitting the ground.

3. Sleet starts out as _____.
ice, rain
4. The temperature around the clouds is _____ freezing.
above, below
5. The temperature near the ground is _____ freezing.
above, below

Figure C shows snow falling.

6. The temperature around the clouds is _____ freezing.
above, below
7. Tiny snow _____ grow until they fall to earth.
drops, crystals

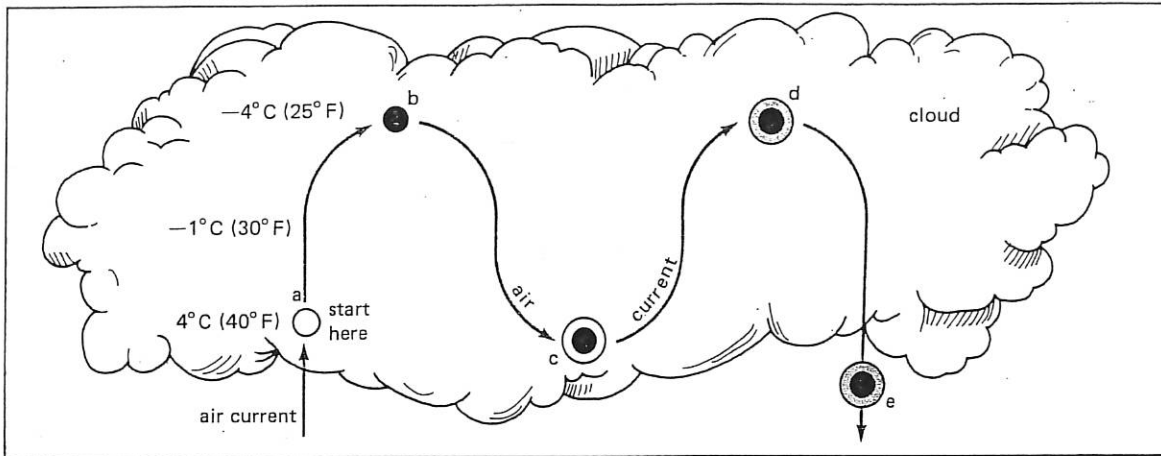


Figure D

Figure D shows how hail grows. Trace it step by step.

8. a) At a, the precipitation is _____
a liquid, a solid
- b) Air currents push it up to b. At b, it _____
changes to ice, is still a liquid
9. The ice drops to c. At c _____
more ice forms, water builds around the ice
10. a) Rising air pushes the ice up to d. At d the _____
added water freezes, ice melts
- b) The ice becomes _____
smaller, bigger
11. At e, the "bead" of ice is falling to earth. What has it become? _____

COMPLETING SENTENCES Complete the sentences with the choices below.

solid above precipitation
freezing liquid

1. Any form of water that falls from clouds is called _____.
2. Rain and drizzle are precipitation in the _____ state.
3. Snow, sleet, and hail are precipitation in the _____ state.
4. Rain and drizzle form in temperatures that are _____ freezing.
5. Snow, sleet, and hail form in _____ temperatures.