**Snow (AMI Day 4)**

Snow is commonly formed when water vapor undergoes deposition, which is when water vapor changes directly to ice without first becoming a liquid, high in the atmosphere at a temperature of less than 32°F and then falls to the ground.

Snowflakes are made of ice crystals. Each snowflake is six-sided and made of as many as 200 ice crystals. Snowflakes form in clouds where the temperature is below freezing. The ice crystals form around tiny bits of dirt that has been carried up into the atmosphere by the wind. As the snow crystals grow, they become heavier and fall toward the ground.

Bright snow blinds us with its gleaming white color because it reflects beams of white light. Instead of absorbing light, snow’s complex structure prevents the light from shining through its lattice formation. A beam of white sunlight entering a snow bank is so quickly scattered by a zillion ice crystals and air pockets that most of the light comes bouncing right back out of the snow bank. What little sunlight is absorbed by snow is absorbed equally over the wavelengths of visible light thus giving snow its white appearance. So while many natural objects get their blue, red, and yellow colors from absorbing light, snow is stuck with its white color because it reflects light.

A blizzard is a long-lasting snowstorm with very strong winds and intense snowfall. You need three things to have a blizzard; cold air at the surface, lots of moisture, and lift. Warm air must rise over cold air.

Snow squalls are brief, intense snow showers accompanied by strong, gusty winds. Accumulation may be significant. Snow squalls are best known in the Great Lakes region.

Thundersnow is when thunder and lighting occur during a snowstorm. This occurs most often in late winter or early spring. To get thundersnow, you need a mass of cold air on top of warm air, plus moist air closer to the ground. Thundersnow starts out like a summer thunderstorm. The sun heats the ground and pushes masses of warm, moist air upward, creating unstable air columns. As it rises, the moisture condenses to form clouds, which are jostled by internal turbulence. The “tricky part” for making thundersnow is creating that atmospheric instability in the wintertime. For thundersnow to occur, the air layer closer to the ground has to be warmer than the layers above, but still cold enough to create snow. During thundersnow events, heavy snowfall is to be expected. In some cases, two inches per hour is possible.

It rarely snows when the temperature drops below zero degrees Fahrenheit because the atmosphere is too stable. One of the ingredients for snow is enough lifting of saturated air that snow can develop aloft and fall to reach the surface. When it is said, “it is too cold to snow,” in reality it means there is not enough lifting of air to cause snow to reach the surface. Even at very cold surface temperatures, significant snowfall can occur. Intense lifting can produce significant precipitation, even at very low temperatures. The temperature higher in the atmosphere can be much warmer than the air temperature at the surface and that warm air aloft can hold more moist air than the colder air at the surface. And, moisture can be transferred into the area where lifting is occurring through advection (the horizontal movement of an air mass).

On average, thirteen inches of snow equals one inch of rain in the US, although this ratio can vary from two inches for sleet to nearly fifty inches for very dry, powdery snow under certain conditions.

Yes, it’s true. It is important to keep the head and neck covered and as warm as possible to delay or prevent hypothermia.

***Choose only the questions/answers from classes you currently have:***

1. Where does a person lose most of their body heat? (Health)
2. Feet B) Hands C) Head D) Every Time They Exhale
3. How many inches of snow equal one inch of rain? (Math & Science)
4. 10 B) 15 C) 13 D) 24
5. What are snow squalls and where are they best known? (Social Studies & English)
6. Strong gust of wind associated with snow flurries usually in the Northern Lakes Area.
7. Strong gust of wind associated with heavy snow fall usually occurring in the Great Lakes Area.
8. Intense Show showers that could produce some wind usually in the Northern Lakes Area.
9. Intense Snow showers with strong winds that occur most often in the Great Lakes Area.
10. What shape are snowflakes? (Art)
11. Hexagon B) Heptagon C) Octagon D) Pentagon
12. Explain what is meant by the statement, “It’s too cold to snow.” (English)
13. The temperature is too high for snow to fall.
14. The air pressure is too low for snow to form.
15. There is not enough lifting of the air to cause snow to reach the surface.
16. The air is rising to quickly to form snow.
17. List the job of a person who would work for the road department when a snow storm occurs.(Career Orientation)
18. A person who works for the road department gets the day off like everyone else when it snows.
19. A person who works for the road department only works from 8-3:20 when it snows to clear the roads.
20. A person who works for the road department works extra long hours both before daylight and after daylight when it snows to try and clear the roads to prevent accidents.
21. A person who works for the road department works only has to worry about clearing the roads to the grocery store and to school when bad weather occurs.
22. Which type of physical activity would be best conducted/played outside on the snow? (P.E.)
23. Badminton B) Hockey C) Sledding D) Football
24. Finish the following song lyric: Oh the weather outside is frightful, But the fire is so delightful, And since we no place to go, Let it Snow!, Let it Snow!, Let it Snow! (Music)
25. How I hate going out in the storm.
26. It doesn’t show signs of stopping.
27. The fire is slowly dying.
28. All the way home I’ll be warm.
29. How does the snow affect farmer's daily lifestyle that have a large herd of cattle? (Agri)
30. Snow means that farmers have more work to do because they will have to bust ponds and put out hay/grain.
31. When it snows the farmer gets the day off because the ground is covered and there is nothing for him/her to do.
32. The farmer will only have to go out and count his cattle.
33. The farmer will not have to do anything because the cows have hay to eat.
34. What is the term for snow in Spanish? (Spanish)
35. Devanar B) Viento C) Lluvia D) Nieve