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Wonder of the Day #769

What Causes an Avalanche?

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28 Comments



SOCIAL STUDIES – Geography

Have You Ever Wondered...

- What causes an avalanche?
- Can avalanches be predicted or prevented?
- Is it possible to dig out of an avalanche?

If you're like most kids, you may love snow. Not only can it get you out of school, but it's also fun to play with. Who doesn't love to sled and build snowmen?

Snow can also be dangerous, too. You've may have heard your parents talk about how difficult it can be to drive in snow. Car accidents aren't the only dangers created by snow, though.

If you're ever skiing in the mountains, you'll want to be aware of avalanches. An avalanche is a sudden flow of snow down a slope, such as a mountain. The amount of snow in an avalanche will vary based on many things, but it can be such a huge amount that it can bury the bottom of a slope in dozens of feet of snow.

Avalanches can be caused by many things. Some of them are natural. For example, new snow or rain can cause built up snow to loosen and fall down the side of a mountain. Earthquakes and the movement of animals have also been known to cause avalanches.

Artificial triggers can also cause avalanches. For example, snowmobiles, skiers, gunshots, and explosives have all been known to cause avalanches.

Avalanches usually occur during the winter and spring, when snowfall is greatest. As they are dangerous to any living beings in their path, avalanches have destroyed forests, roads, railroads and even entire towns.

Warning signs exist that allow experts to predict – and often prevent – avalanches from occurring. When over a foot of fresh snow falls, experts know to be on the lookout for avalanches. Explosives can be used in places with massive snow buildups to trigger smaller avalanches that don't pose a danger to persons or property.

When deadly avalanches do occur, the moving snow can quickly reach over 80 miles per hour. Skiers caught in such avalanches can be buried under dozens of feet of snow. While it's possible to dig out of such avalanches, not all are able to escape.

If you get tossed about by an avalanche and find yourself buried under many feet of snow, you might not have a true sense of which way is up and which way is down. Some avalanche victims have tried to dig their way out, only to find that they were upside down and digging themselves farther under the snow rather than to the top!

Experts suggest that people caught in an avalanche try to “swim” to the top of the moving snow to stay close to the surface. Once the avalanche stops, do your best to dig around you to create a space for air, so you can breathe easier. Then, do your best to figure out which way is up and dig in that direction to reach the surface and signal rescuers.

STANDARDS:CCRA.R.1, CCRA.R.4, CCRA.R.7, CCRA.SL.2, RST.6-8.2

Wonder Contributors

We'd like to thank:

Abby, ayden, Chris, and Lola for contributing questions about today's Wonder topic!

Keep WONDERing with us!

Wonder What's Next?

Visit Castle Wonderopolis for tomorrow's Wonder of the Day!

Try It Out

Would you believe that experts have caught avalanches live on film? Some have even captured video from within an avalanche! How does that work?

Check out NOVA's Capturing it on Film

(<http://www.pbs.org/wgbh/nova/avalanche/capture.html>) online. You'll be walked through the process of how filmmakers managed to film an avalanche from inside the avalanche. You'll also be able to see several other videos of avalanches in action.

Wonder Words (9)

**AVALANCHE, PREDICT, PREVENT,
SLOPE, NATURAL, ARTIFICIAL,
TRIGGER, OCCUR, DESTROYED**

<http://wonderopolis.org/wonder/what-causes-an-avalanche>

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