

Helping children defend their faith!

No. 23

ANSWERS FOR KIDS

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Was there an Ice Age?

Antarctica today is almost completely covered in ice, and so is much of Greenland.

But did you know that great sheets of ice used to be in many other places, like South Africa, Italy, Tasmania (Australia) and even Ohio (USA)? Where did that ice come from, and where has it gone?

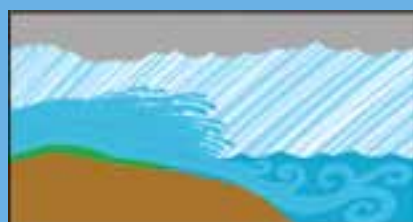
Ice, ice and more ice

Around 4,500 years ago, God judged the sin of mankind with a globe-covering watery catastrophe (Genesis 6–9). Many scientists who believe the Bible explain that this Flood provided just the right conditions for the great



sheets of ice to form afterwards.

At the beginning of the Flood when the 'fountains of the great deep' broke open, hot water



from inside the earth gushed into the oceans, eventually covering the land.

At the end of the Flood, the waters drained off the land into the oceans. But they were still warmer than they are today from all the volcanic activity caused by the 'fountains' breaking open and the land masses moving around.

Being warmer, the water in the oceans evaporated faster than it does today. Clouds of water vapour formed and moved over the land, like we see on the weather reports today. But these clouds were bigger, carrying more water, than today's clouds, because there was more evaporation from the oceans. So, there was much more snow and rain in the years after the Flood.

Also, the snow fell over a much larger area—in places that do not have snow today. That is because the volcanoes had blasted so much fine dust high into the air that the sun's warmth was blocked from the earth. So places which are warm today were much cooler then.

With all the volcanic dust and clouds keeping the land cool, the snow on the ground didn't

melt during the summer. Instead, it turned to ice, and gradually built up thick ice sheets which eventually covered about one-third of the land on the earth!

After many years, the oceans cooled down. So with less evaporation, there was less snow-fall. Also, the volcanoes weren't as active and the dust cleared away, letting the sun's warmth through to melt the snow and ice each summer. Eventually, the 'Ice Age' was over.

Altogether, the Ice Age lasted around 700 years—500 years to build up and 200 years to melt back.

By the way ...

The Bible tells about one of the descendants of Noah (a man named Job), who possibly experienced the effects of the Ice Age. God asked Job, 'Out of whose womb came the ice? And the frost of the heavens, who fathered it? The waters are hidden like stone, and the face of the deep is frozen' (Job 38:29–30).



How do we know where the great ice sheets were?

Some parts of the world are still covered with ice, especially on and near the snow-capped mountains. Often the ice moves slowly down the steep slopes. These glaciers, as they are called, grind up the rock they creep over, carve U-shaped valleys, leave groove marks behind, and also carry heaps of broken rock long distances.

That's why we know that there must have once been much bigger ice sheets than we have today. We see the tell-



tale U-shaped valleys, groove marks, and heaps of crushed rocks and boulders in many places around the world.

Although some people claim there have been many 'ice ages' over millions of years, the truth is that there really was only one—it was caused by the results of the Flood, and its effects can still be seen today!

MONARCH BUTTERFLIES

When you are going on a long trip, there is a list of things you do first. You pack your bags, make your lunch and snacks, and take your map to get you where you would like to go. You might get lost quickly if you did not have a map to follow. Every year, monarch butterflies go on a trip from Canada, where they lay their eggs in autumn, to winter in Mexico. The trip is very long—over 4,000 km (2,500 miles). Unlike us, the monarch butterflies don't plan their trip. Amazingly, they are able to fly to Mexico to the same place their parents, grandparents and great-grandparents before them went without any map or ever having been before.

How do they do it? People have known for a long time that monarch butterflies can use the sun for directions. (In the morning the sun is in the east, in the afternoon it sets in the west.) And now scientists have discovered in every monarch butterfly there is a magnetic 'compass'. Their 'compass' can sense the earth's magnetic field. Instead of reading a map for directions, they 'read' the earth! There is still much we don't know about how butterflies (and other creatures) find their way. As we discover new things about how these creatures live and move, it teaches us just how amazing is this world that God made. It reminds us, too, of how much more God knows than we do!

Butterflies do not have lungs like ours. Instead, air moves in and out through many tiny holes around the outside of their body.

Butterflies are cold blooded. So they usually have to warm themselves in the sunshine before they can fly. You can often see them sitting on a twig, as they slowly open and shut their wings, while they warm up.

Monarch butterflies can live up to six months or more.

We sometimes carry a magnetic compass to help us with directions. The needle on a compass points to 'magnetic north'. Monarch butterflies don't need to carry a magnetic compass, because theirs is built-in!

What to do

1. Scatter some iron filings onto the sheet of paper.
2. Carefully lift the paper, holding it on two sides.
3. Place the bar magnet under the sheet of paper.
4. Lower the sheet of paper onto the bar magnet.
5. Look at the new pattern the iron filings form into. If it were possible to do this activity using the earth (instead of the bar magnet) and a GIGANTIC sheet of paper, you would see a similar pattern!

Activity

Magnetic field pattern
Magnetic fields cannot be seen by our eyes. We can see magnetic fields working by looking at magnetized items.

What you need

- One bar magnet
- Iron filings
- One sheet of thin paper
- Two people (one to hold the magnet, one to hold the paper)

Did you know that the Bible talks about bird migration? Look up Jeremiah 8:7.

Which of these were created on the sixth day of creation?

In Genesis chapter 1 it tells us that God created the flying creatures and all the water creatures on the fifth day. On the sixth day God created all the land animals and the first humans, Adam and Eve.

