



## Geography Department

During the summer holiday, we would like you to complete the following challenges!

### Challenge one.

Find a news article that in your opinion has a geographical theme to it. If you can bring it in to school in September to share with your class.

### Challenge two.

Take a selfie in a place you find particularly interesting. This will make your first geography inter-house competition. You need to accompany your picture of yourself with a short explanation of why you chose that location and why it is important to you.

## Glacier tourists lap up melt in the South sights

Thousands of people are visiting the shrinking Tasman Glacier to watch the temperate ice field give way to lakes and wild flowers as it retreats to, or perhaps even past, the point it was before the world's Little Ice Age, which lasted from about 1450 to 1750. BEN SANDILANDS, of The Observer, reports from Mt Cook Village.

**T**OUR OPERATORS are calling it the "greatest ice show in 10,000 years". The mighty Tasman Glacier, larger than any in Europe, is in full and rapid retreat, just like temperate ice fields all around the world.

Until the 1800s, the Tasman was 30km long. But since 1900, it has shrunk to 10km. In some places, the ice has melted back to its original level, and in some places, it has melted back to its original level, and in some places, it has melted back to its original level.

It is not clear how long it will last, but it is likely to last less than the



Catch it while you can... A Mt Cook helicopter flies over the shrinking Tasman Glacier, where melting ice is providing a spectacular show.

lifetime of garden of school children, who will take to the hills. While the ice melts, the lakes and rivers will "wash into the sea" of future generations that ripales with the wind, some that inevitably sweep the adjacent glacial.

On the other western side of the Mt Cook region, the glaciers slide more steeply from their source, where they are forced through a series of narrow ice falls into thick flows.

At the Fox Glacier township, any more they bring out many of helicopters taking heli-tourists to glaciers like the Chaperelle Ice Falls, a terrace where a "beach head" of spraying wind flows is surrounded in all sides, and above and below, by ice streams hundreds of metres thick.

There flows of ice, moving at more than 7m a day, which is incredibly fast for a glacier, produce loud bangs, groans and creaking noises as they deform into cracks or fissures as they collapse their top, form the slope into a chain of blocks and crevasses.

But, Tower Chimney points out that, the Southern Alps are not completely deglaciated. "They are going back, perhaps to or maybe past where they were before the Little Ice Age," he says. "They may go back to the minimum number of large glaciers that were here 500,000 years ago, when the world was warmer than it has ever been since the end of the global ice age."

But how far depends on how much damage man-made global warming has done to the climate in accordance the response of the glaciers to natural climate variability. Like other famous temperate glaciers in North America and Europe, New Zealand's were stable when the ice was deep at or just before melting point. But that stability is vulnerable to even slight rise in temperature, and as the sheets of accumulated ice get saturated with melt water and rise even slightly above freezing, their destruction becomes inevitable.

Mr Chimney said recent claims by British global warming sceptics, Dr David Bellamy, that New Zealand's glaciers were advancing, ignored the real situation. "The broad expanse of the glaciers, filling the valleys on the eastern side of the (Southern) Alps, are disappearing fast. If even the 10 will be gone, between the warmer low south, and the shrinking one where snow fall is rising, is difficult to predict," he says. "But I will say that if you want to see the Tasman look anything like it did before global warming, do it soon." - Guardian Newspapers