

Melting Polar Ice Caps

NASA studies the Earth from space via *satellites*. From here they can see changes in the shape and size of the polar icecaps. They can see that the year-round *ice pack* in the Arctic is shrinking. In the past 25 years, it has shrunk 10%. Scientists have also been watching satellites that have been collecting the Earth's surface temperatures for 20 years. They show that the temperatures are rising. In 2003, the largest ice shelf in the Arctic – that had been in place for 3,000 years – broke up into the ocean. Climate does change naturally over time, but rapid changes are unusual. These facts may signal *global warming*.

How would melting ice caps affect the planet? For one thing the bright white ice caps reflect a lot of the sun's energy back to space. As the icecaps shrink, more sunlight will be absorbed by the Earth, warming the climate even more. Melting icecaps would make more water available for the water cycle, which could change the rain patterns and how salty the ocean is around the poles, affecting ocean fisheries.

The shrinking ice shelf is already affecting arctic animal populations. Species like polar bear who hunt seals off ice shelves are unable to find prey as easily without the frozen platforms. Scientists have found that hungry polar bears are drowning while trying to get to prey without the ice shelves from which to hunt.

Melting Ice Caps Activity

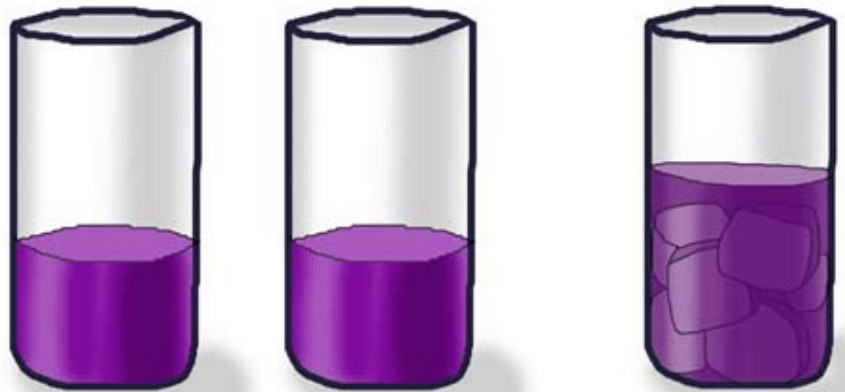
Will the melting ice caps dilute the ocean's salt water (salinity)?

Will it raise the ocean water levels?

Materials:

To test this you will need:

1. 2 clear glasses
2. some ice
3. dark liquid (grape juice or flat cola)



Procedures:

1. Fill both glasses part way with a dark liquid, like grape juice or flat cola.
2. Then add several ice cubes to one glass.
3. Leave them both on the counter until all the ice is melted.
4. Look at both glasses. What do you notice? The glass with the melted ice is fuller, the water level rose. The dark liquid is also lighter. It is diluted. If that liquid had been salt water like the ocean, it would be less salty now!

