

Background Information for Teachers

It's the melting land ice (ice caps and glaciers) adding extra water to the ocean that's raising the sea level. Icebergs, which are already floating in the ocean, don't change the ocean level as they melt.

The other phenomenon causing sea level rise is the expansion of the ocean due to the water warming up. Water molecules, H₂O, two hydrogens and one oxygen, spread farther apart as they warm, so warmer water takes up more space than colder water. Students cannot demonstrate this phenomenon themselves because the proportions are too small to show the effect.

According to the latest satellite information (CU Sea Level Research Group 2015), sea level has been rising about 3 mm/year over the past 20 years. As Earth warms, scientists expect this number to continue to rise. The satellite data gathered is much more accurate than the buoy measuring system they used in the past. The coastlines, and other factors, determine the actual rate of sea level rise in any particular area.