



Red line: This shows the levels of CO₂ in the atmosphere.

Green line: This shows the levels of CO₂ in the ocean as it is absorbing CO₂ from the atmosphere.

Blue line: This line shows how the ocean is getting more and more *acidic* (going down the pH scale which is why you see the graph line going downwards!)

This graph illustrates the correlation between rising levels of carbon dioxide (CO₂) in the atmosphere at the Mauna Loa observatory off Hawaii with rising CO₂ levels in the ocean. As more CO₂ accumulates in the ocean, the pH of the ocean decreases. (Courtesy of NOAA/Modified after R.A. Feely, Bulletin of the American Meteorological Society)



AU2.3 Optional Ocean Acidification Extension

Look at the blue line on the graph.

See how it goes up? That means there's more CO₂ in the sky over time.

Think about how adding too many layers to your bed on a warm night makes you feel. That's what's happening to our Earth!

Look at the green line on the graph.

Notice how it rises too? That means there's more CO₂ in the oceans over time. The CO₂ from the atmosphere goes into our oceans!

Imagine adding too much salt to your food. It doesn't taste good, right? Too much CO₂ isn't good for ocean animals either.

It can make coral and shells weak so they break easily and because fish like to live near coral it can make it harder for them to find food.

Explain how each sea creature would feel about CO₂ increasing in the ocean?

Coral

Shellfish

Fish



In pairs or small groups, analyse the graphs and answer these questions:

1. What do you notice about the atmosphere?
2. What is happening to the level of CO²?
3. What do you notice about the oceans?
4. What do you think will happen as more CO² is put into the atmosphere?