

Solutions

Each answer shows the steps, then the **result**.

2.1

- Carbon dioxide (CO_2)

2.2

- Carbonic acid

2.3

- Shell-building organisms (corals, shellfish, plankton)

3.1 B

- build calcium carbonate shells

3.2

(a)

- The ocean absorbs CO_2 ; it reacts with water to form carbonic acid; this lowers the ocean's pH (makes it more acidic)

(b)

- Harm to shelled plankton at the base of the food web disrupts the whole web/fisheries

3.3

- Both come from extra CO_2 , but warming is heat trapped by CO_2 in the air, while acidification is CO_2 dissolving into the water and lowering its pH — different mechanisms and effects