



CAWTHRON
The power of science®

Seaweek 2019

#1 Gases

Level 3/4 Teacher Information

Key message – *Gases are everywhere, expand freely and can be absorbed by the ocean*

By the end of this lesson the students will be able to-

1. Understand that Gases will expand freely and have no fixed shape,
2. See how different gases are absorbed by the sea
3. Discuss the fact that we breathe in oxygen and give off co₂
4. Understand that too much co₂ is having a negative effect on our oceans

NZ Curriculum-

Science- Material World – Chemistry and society

Relate the observed, characteristic chemical and physical properties of a range of different materials to technological uses and natural processes

Nature of Science- Communicating in science

Begin to use a range of scientific symbols, conventions and vocabulary

Activity

How does the ocean soak up CO₂?

Cross section drawing of ocean, with wind making turbulence and mixing carbon dioxide into the water. The ocean absorbs carbon dioxide from the atmosphere wherever air meets water. Wind causes waves and turbulence, giving more opportunity for the water to absorb the carbon dioxide.

Fish and other animals in the ocean breathe oxygen and give off carbon dioxide (CO₂), just like land animals. Ocean plants take in the carbon dioxide and give off oxygen, just like land plants. The ocean is great at sucking up CO₂ from the air. It absorbs about one-quarter of the CO₂ that we humans create when we burn fossil fuels (oil, coal, and natural gas.) If not for the ocean, we'd be in even worse trouble with too much CO₂.

<https://climatekids.nasa.gov/ocean/>

Make a yummy

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