



**CAWTHRON**  
The power of science®

## **Seaweed 2019**

### #3 Weather

### Level 3/4 Teacher Information

Key message – *there is a difference between weather and climate, weather is day to day, climate is over a long period of time*

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

1. Understand the difference between weather and climate
2. Discuss how the ocean currents affect weather
3. Ocean traps heat from sun, evaporates, and transfers

Warm ocean waters provide the energy to fuel storm systems, precipitation

NZ Curriculum-

**Science- Planet Earth and Beyond** – Interacting systems

Investigate and understand that the geosphere, hydrosphere, atmosphere, and biosphere are connected via a complex web of processes

**Nature of Science-** Understanding about science –

Appreciate that science is a way of explaining the world and that science knowledge changes over time

Most scientists believe that global warming will herald a new era of extreme and unpredictable weather.

Tropical storms and heavier rainfall may increase and so too would the consequent physical damage to coral reefs, other coastal ecosystems, and coastal communities. Hurricanes Hugo and Marilyn hit the US Virgin Islands National Park in 1989 and 1995, respectively, and did massive damage to coral ecosystems.

**Most of Earth's water is stored in the ocean - a driving force for weather and climate. ... Both the atmosphere and ocean move heat; the atmosphere does**

this quickly, the ocean slowly. Music. At the ocean's surface, winds drive currents. <https://m.youtube.com/watch?v=6vgvTeuoDWY>

Ocean currents have a significant impact on weather. The greatest currents are well-established flows set in motion by the earth's rotation and winds, which take the form of massive rotating currents north and south of the Equator in the northern and southern hemispheres, and an east-flowing current in the Southern Ocean. One of the most important ways in which these ocean currents affect climate is their conveyance of heat and cold across great distances.

### Activities

<https://www.weareteachers.com/best-weather-activities/>