

All about gyres



1. Think about how ocean currents are formed and how they can then create gyres. Join the beginnings of the sentences in the table below to the correct end of the sentence.

Beginnings...

The ocean is...

Both at the surface and at depth the ocean currents...

Ocean currents...

When wind blows across the surface of the water...

A second factor impacting the ocean currents is...

They are also affected by differences in...

When the wind and land create a large circular motion...

Plastics entering the sea can be carried by ocean currents...

Endings.

are primarily driven by wind.

an ocean gyre forms.

the position of land masses.

in constant motion.

it creates friction, causing the water to move.

and accumulate in gyres.

water density and the Earth's rotation.

move vast volumes of water every day.

STUDENT SHEET 1b

2. The development of the North Pacific Gyre

Either:

Read and complete the following sentences to describe the formation of the North Pacific Gyre.

Or:

Using the map, describe how the North Pacific Gyre is formed.

The Coriolis effect means that the trade winds cause the tropical water to move westwards as the _____ Current.

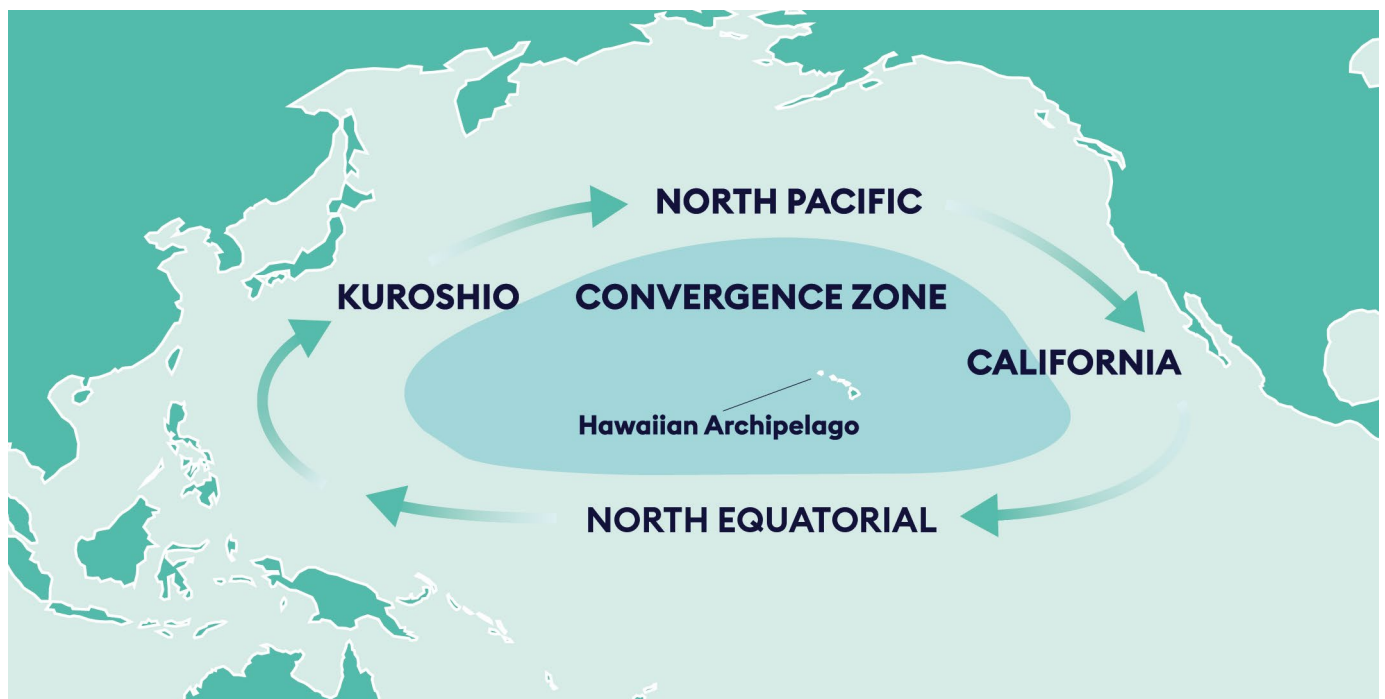
Debris usually stays in the gyre but may wash up on coasts when there are storms.

Westerly winds change the direction of the current towards the east as the _____ Current.

Again, blocked by land the ocean current is forced south towards the Equator as the _____ Current.

When the North Equatorial current reaches the Asian land mass it is forced to move north as the _____ Current.

The circular movement of the water sweeps any plastic debris with it. One circulation may take ten years.



Map: The North Pacific Gyre or Convergence Zone