

The ocean is a major influence on weather and climate.

1.  
Nearly all the water on Earth is stored in the ocean. The ocean, which covers over 70% of Earth's surface, controls weather and climate by dominating Earth's energy and water systems.

A.1.  
The ocean absorbs & holds much of the solar energy that reaches Earth.

B.1.  
Solar energy absorbed by the ocean drives the water cycle.

C.1.  
The ocean provides the energy for severe weather, such as hurricanes, cyclones, and droughts.

A.2.  
The ocean absorbs & holds more heat than the land.

A.3.  
Uneven heating of Earth causes air (wind) & water movements, referred to as convection currents.

B.2.  
Solar energy warms & evaporates water from the oceans. Most water in the air comes from the ocean, mostly from the tropical ocean.

B.3.  
Water in the air eventually cools, condenses into clouds, & then returns to the surface of the ocean or the land as precipitation.

A.4.  
Temperature fluctuations of air masses over the ocean are less than those over land. The ocean moderates coastal weather.

B.4.  
The ocean is an integral part of the water cycle.

See Principle 1.

See Principle 6.