

TOPIC & GRADE LEVEL: Oceanography - 6th Grade

Key Learning(s): The global marine environments are affected by external factors and impact organisms around the world.

Unit Essential Question(s):

How do external factors work together to affect the global marine environment?

Concept - Ocean Water

Lesson Essential Questions:

What makes up ocean water?

How do temperature and pressure change as you go deeper in the ocean?

What factors affect the density of ocean water?

How are ocean organisms classified?

What are some characteristics of salt water organisms?

Vocabulary:

| | |
|-----------------|---------|
| salinity | density |
| sediment | nekton |
| plankton | benthos |
| phytoplankton | |
| zooplankton | |
| dissolved gases | |

Concept - Ocean Features

Lesson Essential Questions:

What features make up the ocean floor?

What are examples of shoreline features?

What can scientists learn by studying ocean sediment?

How does SONAR help us to learn more about the ocean floor?

Vocabulary:

| | |
|-------------------|-----------|
| continental shelf | seamounts |
| continental edge | organic |
| continental slope | inorganic |
| continental rise | SONAR |
| abyssal plain | |
| mid-ocean ridge | |

Concept - Moving Ocean Water

Lesson Essential Questions:

What causes ocean currents?

How do ocean currents affect weather?

What factors are involved in causing deep ocean currents?

How do the strength and duration of wind affect a wave?

Vocabulary:

| | |
|-------------------|------------|
| currents | wave |
| Coriolis effect | period |
| trade winds | crest |
| westerlies | trough |
| upwelling | wavelength |
| turbidity current | fetch |

Learning-Focused

Unit Map

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Concept - Moving Ocean Water

Lesson Essential Questions:

How do the Sun and the Moon affect the tides?

Vocabulary:
tides
spring tides
neap tides

Concept - Oceans as a Resource

Lesson Essential Questions:

What are some important resources that come from the ocean?

What forms of energy come from the ocean?

Vocabulary:
aquaculture
desalination

Concept - Ocean Pollution

Lesson Essential Questions:

How are we polluting our oceans?

Vocabulary:
pollution