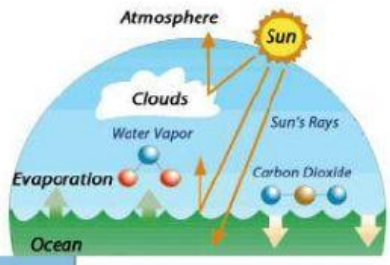
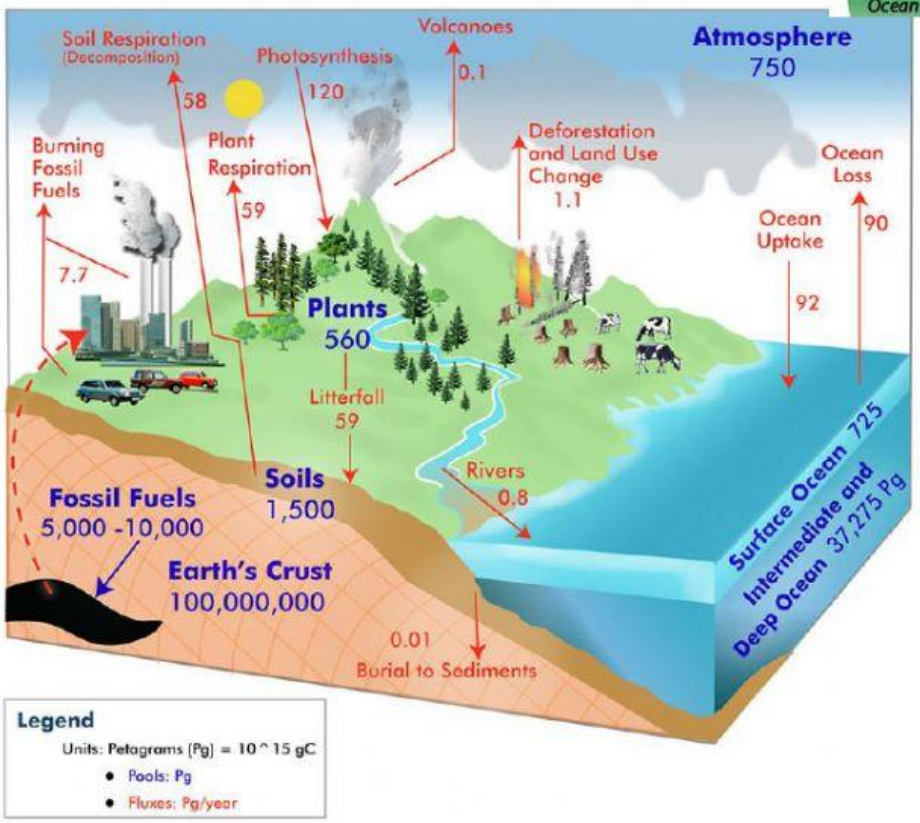


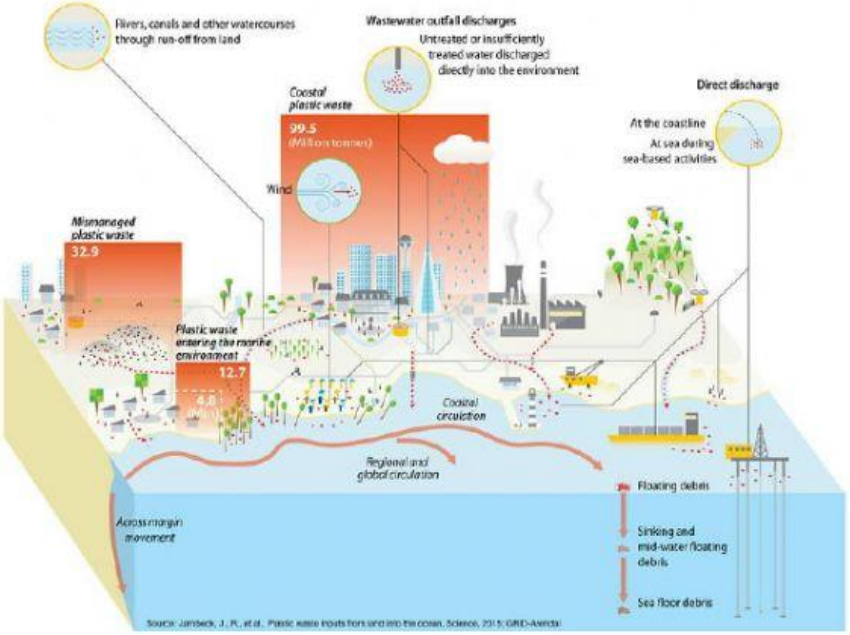
9.7 Ocean Currents and Climate

Global Carbon Cycle

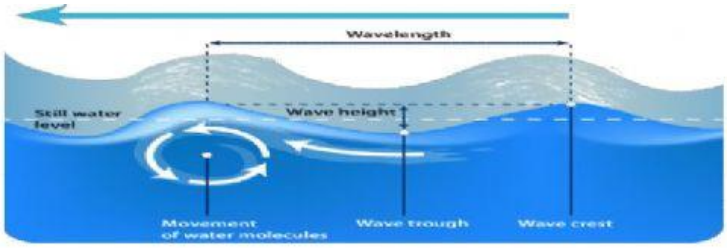


Copyright 2010 GLOBE Carbon Cycle Project, a collaborative project between the University of New Hampshire, Charles University and the GLOBE Program Office.
Data Sources: Adapted from Houghton, R.A. Balancing the Global Carbon Budget. Annu. Rev. Earth Planet. Sci. 007 35:313-347, updated emissions values are from the Global Carbon Project: Carbon Budget 2009.

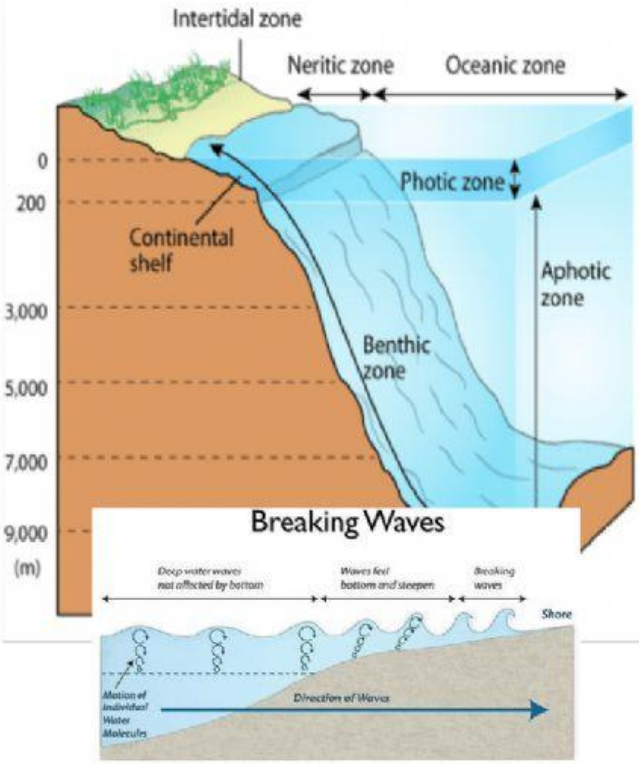
Pathways and fluxes of plastics into the oceans



LIVEWORKSHEETS



Ocean Zones



The intertidal zone

is closest to shore. At high tide it is covered with water. At low tide, it is exposed to air. Living things must adapt to changing conditions and moving water in this zone.

The photic zone

is the top 200 meters of water. This zone has enough sunlight for photosynthesis. That's why there are more living things here than in the aphotic zone.

The neritic zone

lies over the continental shelf. The water is not very deep. There are plenty of nutrients and sunlight. Many organisms live in this zone.

The aphotic zone

is water below 200 meters. There isn't enough sunlight here for photosynthesis. Living things must eat whatever drifts down from above or each other. That's why there are fewer living things here than near the surface.

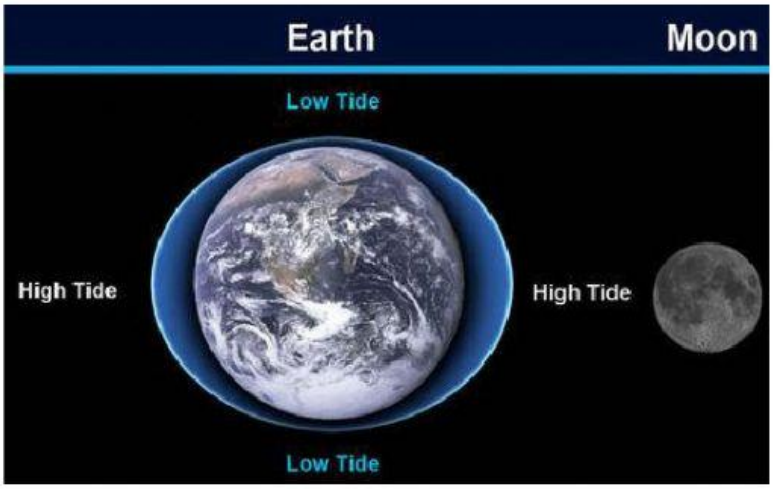
The oceanic zone

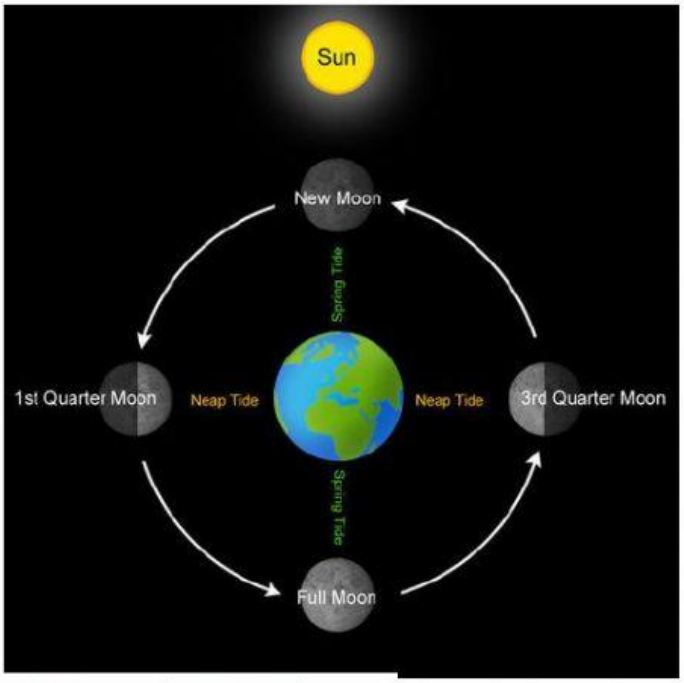
is the open ocean out past the continental shelf. The water may be very deep. Nutrients may be scarce. Fewer organisms live in this zone.

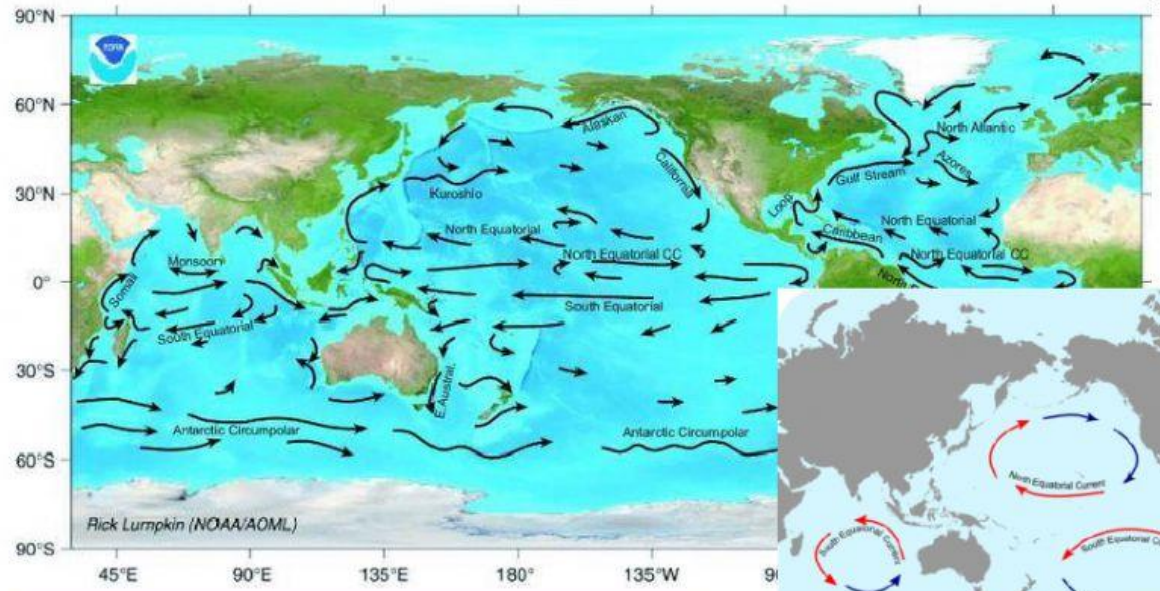
The benthic zone

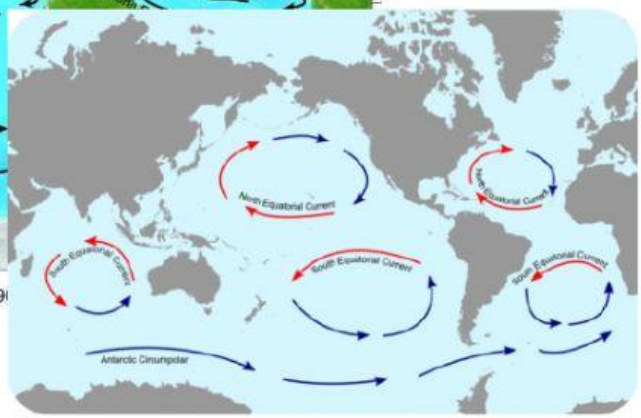
is on the ocean floor. The ocean floor drops as you move away from the continents. There are fewer living things on the ocean floor where the water is very deep.

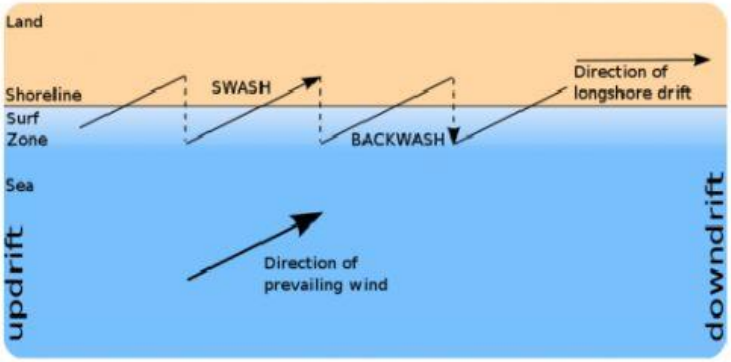
LIVEWORKSHEETS











LIVEWORKSHEETS

1. What occurred in the Atacoma desert in July 2011? Why was this noteworthy?

2. What was the weather like in Australia in August and September 2011?

3. What happened in the summer of 2011 in the United States?

4. How many temperature records were broken in 2011 in the U.S.?

5. Why are scientists monitoring the Arctic ice?

6. What are the effects of the ice melt?

LIVEWORKSHEETS

7. How is the Gulf Stream affected by the melting of the Arctic ice?

LIVEWORKSHEETS