

# Oceans & Seas of the WORLD



# Origin of the sea

- Seas are as much as 500 million years old.
- Escaping of the gases and vapor from the molten magma and igneous rocks, and subsequently, after its cooling down along with the earth, rain begin to fall and continued to fall for centuries. As the water drained into the great hollows the primeval ocean came into existence. The forces of gravity prevented the water from leaving the planet.

# Oceans of the world

- 1 **Pacific** (155,557,000 sq km)
- 2 **Atlantic** (76,762,000 sq km)
- 3 **Indian** (68,556,000 sq km)
- 4 **Southern** (20,327,000 sq km)
- 5 **Arctic** (14,056,000 sq km)

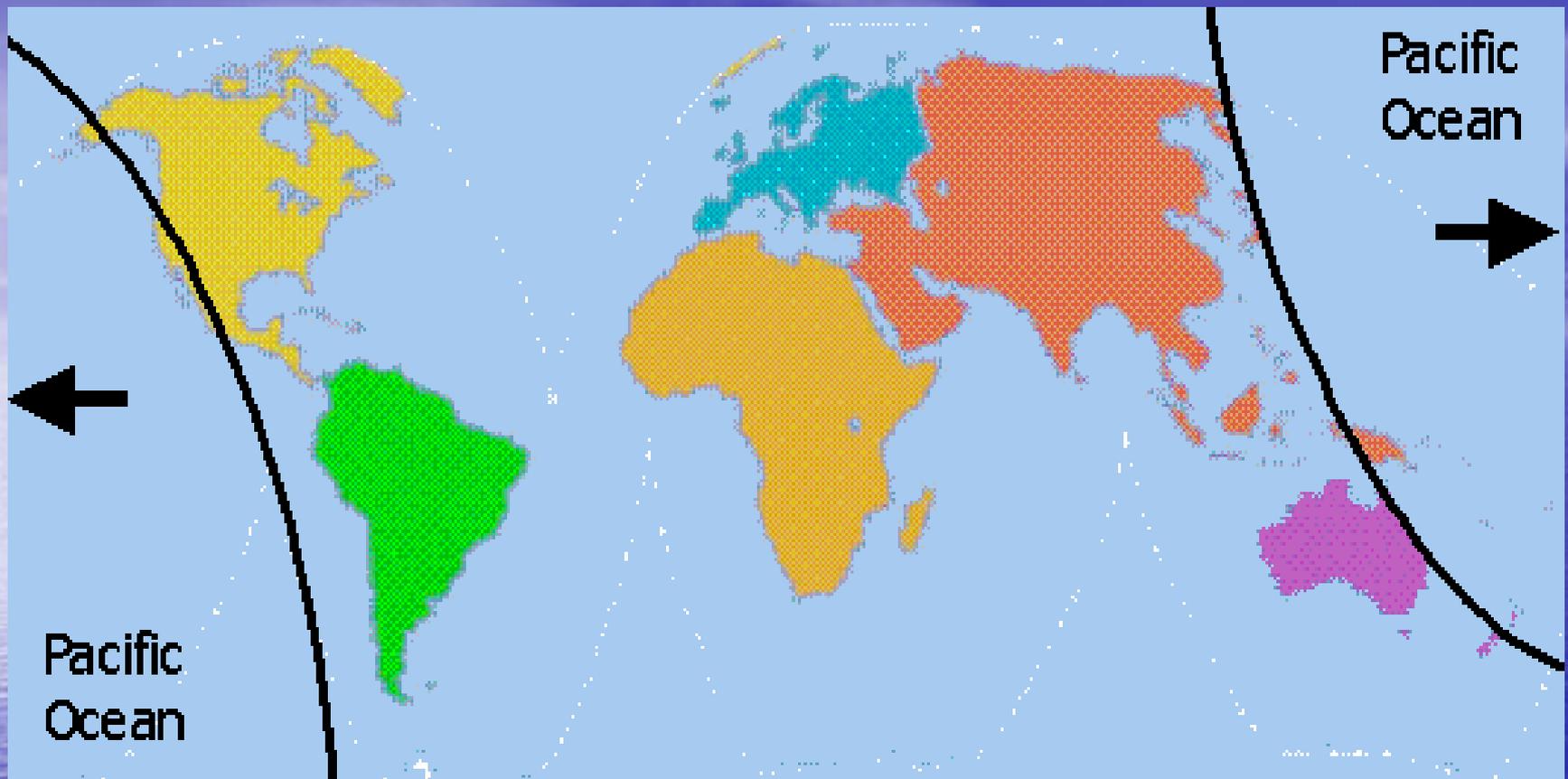
(greatest depths in the oceans)

**Mariana Trench**, Pacific (36,201 feet)

**Puerto Rico Trench**, Atlantic 30,246 ft

**Java Trench**, Indian 24,460 ft

**Arctic Basin**, Arctic 18,456 ft



extends from the Arctic in the north to the Antarctic in the south, bounded by Asia and Australia on the west and the Americas on the east.

- It is the largest Ocean.
- The equator subdivides it into the North Pacific Ocean and South Pacific Ocean.
- The Mariana Trench in the western North Pacific is the deepest point in the world, reaching a depth of 11,034 meters (36,201 feet).

- Along the Pacific Ocean's irregular western margins lie many seas, the largest of which are the Celebes Sea, Coral Sea, East China Sea (East Sea), Philippine Sea, Sea of Japan, South China Sea (South Sea), Sulu Sea, Tasman Sea, and Yellow Sea (West Sea of Korea).
- The Indonesian Seaway (including the Strait of Malacca and Torres Strait) joins the Pacific and the Indian Ocean to the west, and Drake Passage and the Strait of Magellan link the Pacific with the Atlantic Ocean on the east to the north, the Bering Strait connects the Pacific with the Arctic Ocean.

- This ocean has most of the islands in the world.
- There are about 25,000 islands in the Pacific Ocean.
- The volume of the Pacific Ocean, representing about 50.1 percent of the world's oceanic water.

# Fish & Fisheries of Pacific Ocean

- Fish are an important economic asset in the Pacific.
- The shallower shoreline waters of the continents and the more temperate islands yield herring, salmon, sardines, snapper, swordfish, and tuna, as well as shellfish
- Overfishing has become a serious problem in some areas.



bounded on the west by North and South America in the north it is separated from the Arctic Ocean by the Canadian Arctic Archipelago, Greenland, Iceland, and Europe. To the east, the boundaries of the ocean proper are Europe, the Strait of Gibraltar and Africa southeast, the Atlantic merges into the Indian Ocean, the border being defined by the 20° East

- The Atlantic Ocean is the second largest of the world's oceans, with an area of about 106,460,000 square kilometres.
- It covers approximately 20 percent of the Earth's surface and about 29 percent of its water surface area.
- It separates the "Old World" from the "New World".
- The Atlantic Ocean occupies an elongated, S-shaped basin extending longitudinally between Europe and Africa to the east, and the Americas to the west.



- it is connected in the north to the Arctic Ocean, to the Pacific Ocean in the southwest, the Indian Ocean in the southeast, and the Southern Ocean in the south (other definitions describe the Atlantic as extending southward to Antarctica).
- The Equatorial Counter Current subdivides it into the North Atlantic Ocean and the South Atlantic Ocean at about 8°N.

- The most productive areas include the Grand Banks of Newfoundland, the Scotian Shelf, Georges Bank off Cape Cod, the Bahama Banks, the waters around Iceland, the Irish Sea, the Bay of Fundy, the Dogger Bank of the North Sea, and the Falkland Banks.



bounded on the north by Asia on the west by Africa; on the east by Indochina, the Sunda Islands, and Australia; and on the south by the Southern Ocean (or, Indian Ocean is delineated from the Atlantic Ocean by the 20° east and from the Pacific by the 147° east. The northern most extent of the Indian Ocean is approximately 30° north

- The Indian Ocean is the third largest of the world's oceanic divisions, covering 70,560,000 km<sup>2</sup>
- Two large gyres, one in the northern hemisphere flowing clockwise and one south of the equator moving anticlockwise (including the Agulhas Current and Agulhas Return Current), constitute the dominant flow pattern.
- The Indian Ocean accounts for the second largest share of the most economically valuable tuna catch.



Almost completely surrounded by Eurasia and North America, the Arctic Ocean is largely covered by sea ice throughout the year. The Arctic Ocean's temperature and salinity vary seasonally as the ice cover melts and freezes; its salinity is the lowest on average of the five major seas, due to low evaporation, heavy freshwater inflow from rivers and streams

- The Arctic Ocean is the smallest and shallowest of the world's five major oceans.
- Endangered marine species in the Arctic Ocean include walruses and whales jellyfish are abundant in the waters of the Arctic.



- The Southern Ocean also known as the Antarctic Ocean or the Austral Ocean.
- It is smaller than the Pacific, Atlantic, and Indian Oceans but larger than the Arctic Ocean.

- The Southern Ocean has typical depths of between 4,000 and 5,000 m (13,000 and 16,000 ft) over most of its extent with only limited areas of shallow water.
- The Antarctic continental shelf appears generally narrow and unusually deep.
- Antarctic sea life includes penguins, blue whales, orcas, colossal squids and fur seals.

# Assignment

- Fill the table with appropriate examples (5-10):

OCEANS	Islands	Tranches	Gyre	Fish Species
Pacific				
Atlantic				
Indian				
Southern				
Arctic				



**THANK YOU!**