ODM EDUCATIONAL GROUP
Changing your Tomorrow

WELCOME TO VIRTUAL CLASS STD VII

SUBJECT : GEOGRAPHY
CHAPTER NUMBER: 8
CHAPTER NAME : THE HYDROSPHERE

Website: www.odmegroup.org
Email: info@odmps.org
Toll Free: **1800 120 2316**
Sishu Vihar, Infocity Road, Patia, Bhubaneswar- 751024

The Hydrosphere

Ocean water:-

Ocean form the major part of the hydrosphere . Ocean water is saline in nature because of rivers and underground streams, which carry dissolved salt with them , empty into the oceans. The salt that come from volcanic eruption in the mid –ocean ridges also contribute. With global warning adding to the rate of evaporation , the oceans are becoming saltier by the day.

The movement of water in the Ocean:-

The three movement s noticed in ocean are Waves, tides and Ocean Current.

Causes:-

- The force of wind
- Difference in temperature
- Gravitational force.

ODM EDUCATIONAL GROUP
Changing your Tomorrow

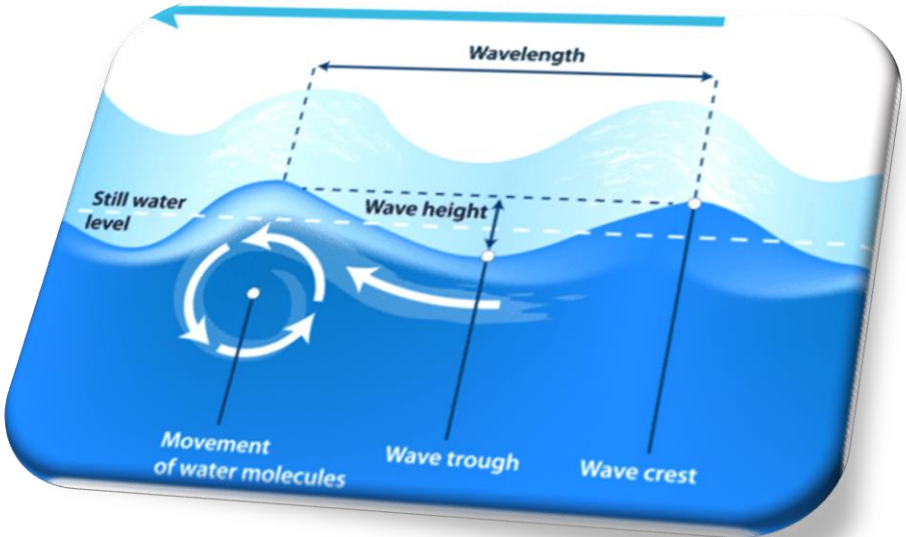
Waves

Waves are actually the energy, not the water as such, which moves across the ocean surface.
Water particles only travel in a small circle as a wave passes. Wind provides energy to the waves. Wind causes waves to travel in the ocean and the energy is released on shorelines.

Characteristics of Waves

- Wave crest and trough: The highest and lowest points of a wave are called the crest and trough respectively.
- Wave height: It is the vertical distance from the bottom of a trough to the top of a crest of a wave.

Wavelength: It is the horizontal distance between two successive crests



ODM EDUCATIONAL GROUP
Changing your Tomorrow

Tides

The periodical rise and fall of the sea level, once or twice a day, mainly due to the attraction of the sun and the moon, is called a tide.

The ‘tide-generating’ force is the difference between these two forces; i.e. the gravitational attraction of the moon and the centrifugal force.

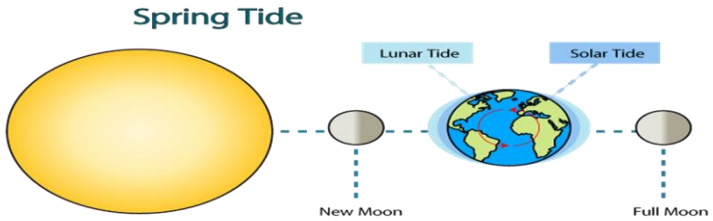
There are to type of tides:- High Tide and Low Tide.

When the highest part, or crest of the wave reaches a particular location, high tide occurs; low tide corresponds to the lowest part of the wave, or its trough. The difference in height between the high tide and the low tide is called the tidal range.

Tides based on the Sun, Moon and the Earth Positions The height of rising water (high tide) varies appreciably depending upon the position of sun and moon with respect to the earth.

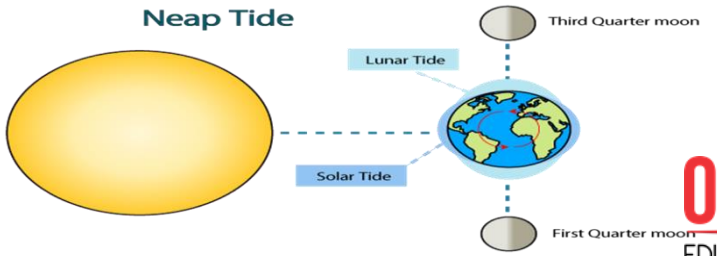
Spring tides and neap tides come under this category.

Spring tides: The position of both the sun and the moon in relation to the earth has direct bearing on tide height. When the sun, the moon and the earth are in a straight line, the height of the tide will be higher. These are called spring tides and they occur twice a month, one on full moon period and another during new moon period.



Neap tides:

Normally, there is a seven-day interval between the spring tides and neap tides. At this time the sun and moon are at right angles to each other and the forces of the sun and moon tend to counteract one another. The Moon's attraction, though more than twice as strong as the sun's, is diminished by the counteracting force of the sun's gravitational pull.



- Use of Tides:-
- Tidal flows are of great importance in navigation.
- Tidal heights are very important, especially harbors near rivers and within estuaries having shallow ‘bars’ at the entrance, which prevent ships and boats from entering into the harbour.
- Tides are also helpful in desilting the sediments and in removing polluted water from river estuaries.
- Tides are used to generate electrical power

THANKING YOU

ODM EDUCATIONAL GROUP

ODM EDUCATIONAL GROUP
Changing your Tomorrow