

CLASS VII CHAPTER 5 WATER (NCERT)

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TOPICS:



INTRODUCTION



DISTRIBUTION OF WATER BODIES



OCEAN CIRCULATION



WAVES



TIDES



OCEAN CURRENTS



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INTRODUCTION

SLEET

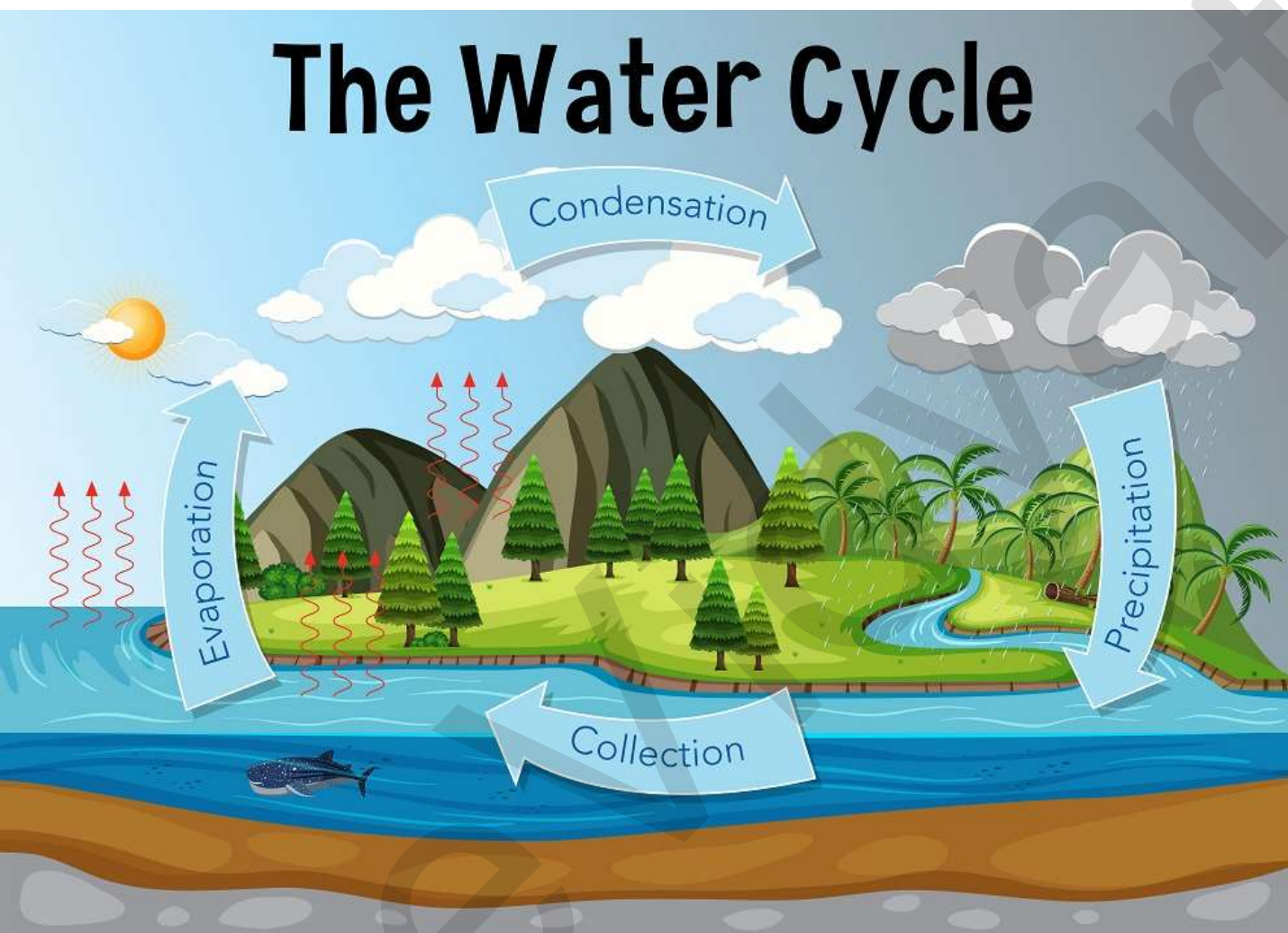
- ❑ SUNS HEAT EVAPORATES THE WATER INTO VAPOR WHEN THE WATER VAPOR COOLS DOWN, IT CONDENSES AND FORMS CLOUDS.
- It may fall on land or sea in the form of rain ,snow, sleet.



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The Water Cycle



☐ WORKS IN
A CYCLE

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- Water continually changes its form and circulated between oceans and land it is known as water cycle.
- Major sources – rivers, ponds, glaciers, springs.
- Salty water – oceans and seas.
- The same water may flow down in many places.

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SPRINGS



GLACIERS

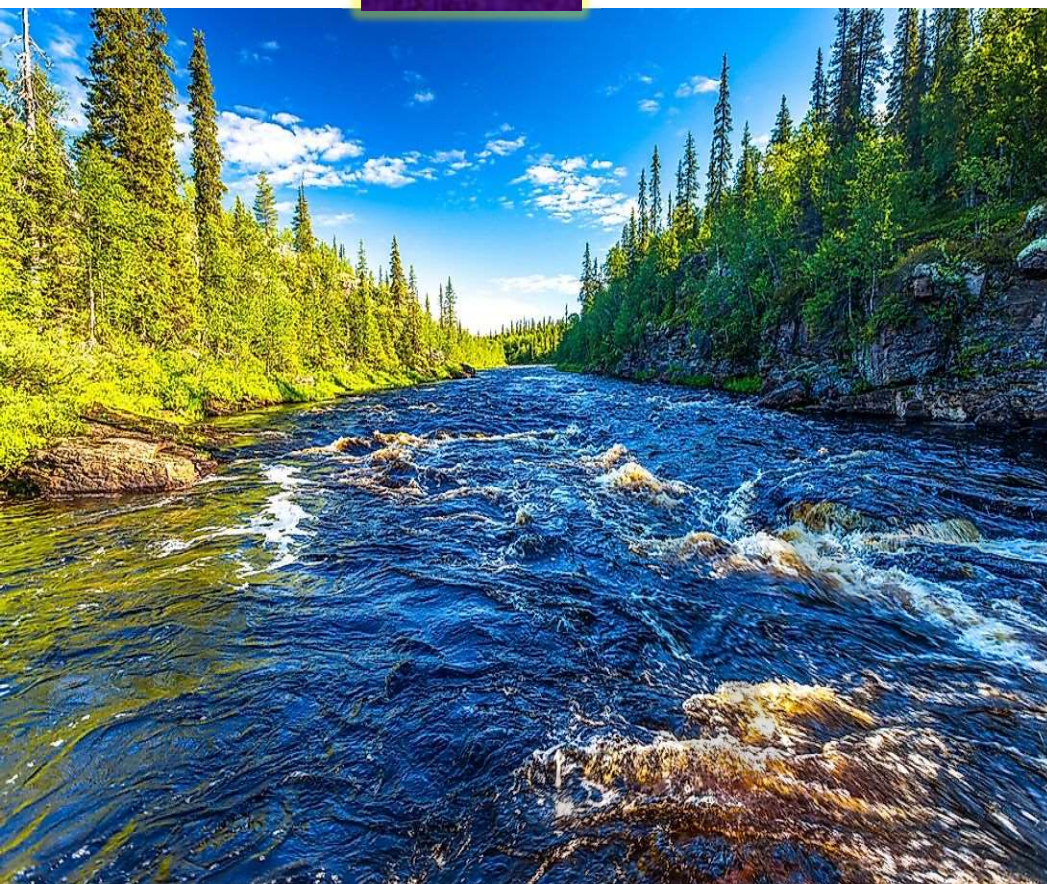


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RIVERS



PONDS



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SALINE WATER

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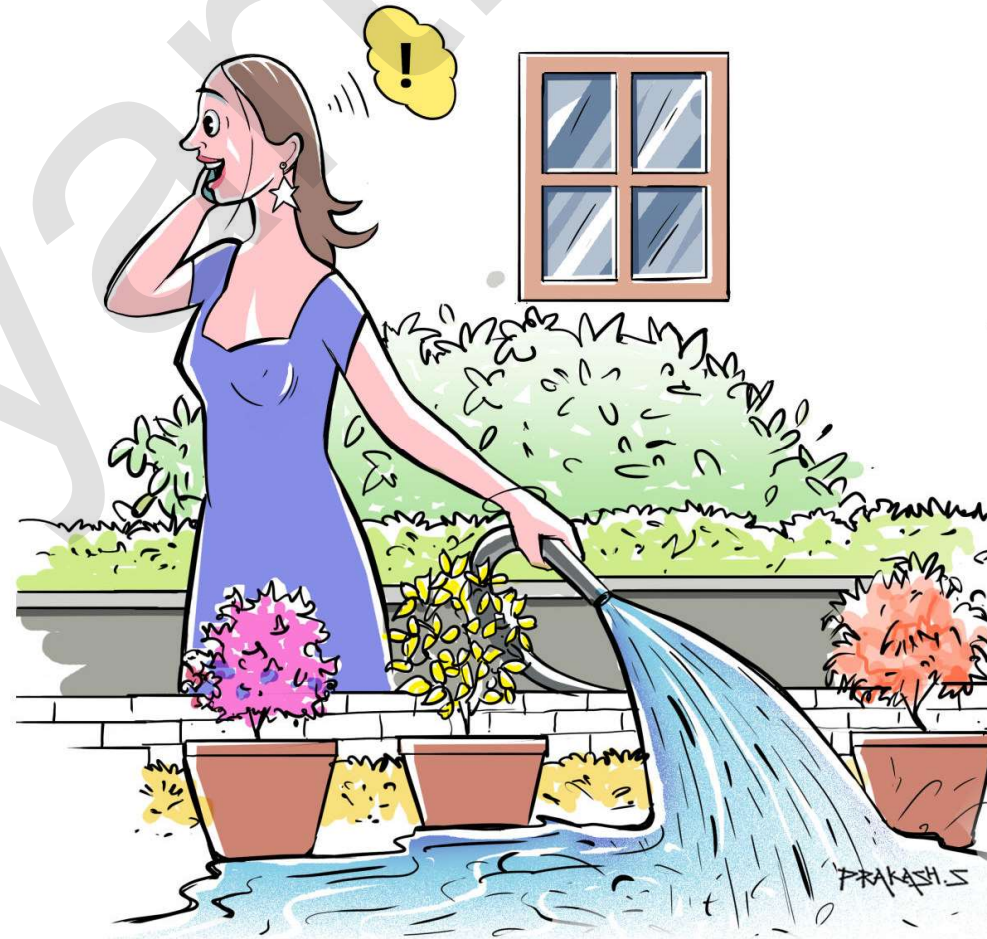
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DISTRIBUTION OF WATER BODIES

- ☐ IF THE EARTH IS COVERED WITH $3/4$ AMOUNT OF WATER THEN WHY WE FACE SCARCITY.
- ☐ ONLY WATER CAN QUENCH OUR THIRST ALONG WITH THAT WE ARE WASTING A PRECIOUS RESOURCE.



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WATER IS A HEALER



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- OCEAN – 97.3
- ICE CAPS – 02.0
- GROUND WATER – 0.68
- FRESH WATER LAKES – 0.009
- INLAND SEAS AND SALT LAKES – 0.009
- ATMOSPHERE – 0.0019
- RIVERS – $\frac{0.0001}{100.0}$
- 12 TABLESPOON FROM A BOWLFUL OF WATER.



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OCEAN CIRCULATION

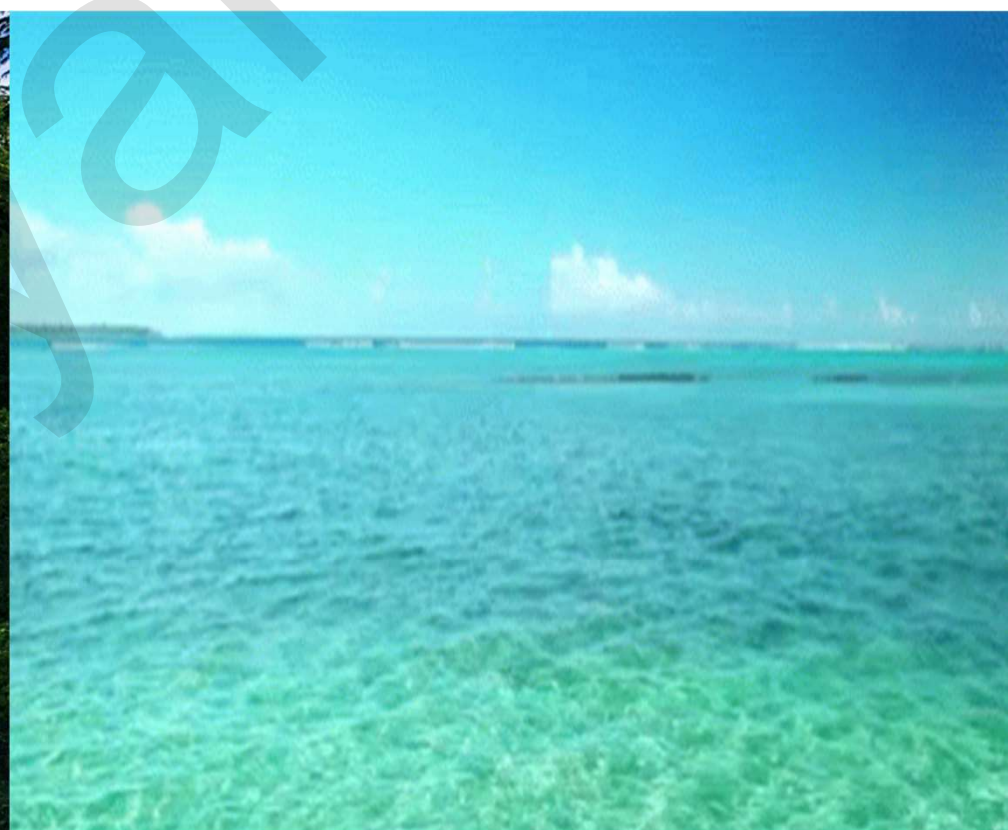
- ❑ **WALKING BAREFOOT IN SAND, COOL BREEZE, THE SMELL OF WATER, THE SEA BIRDS ARE AMAZING.**
- As other calming waters, ocean water is never still.



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MAJOR WATER BODIES END IN OCEANS



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- The movement that occurs in ocean can be broadly categorized as: waves, tides and ocean currents.

MADE BY AIR

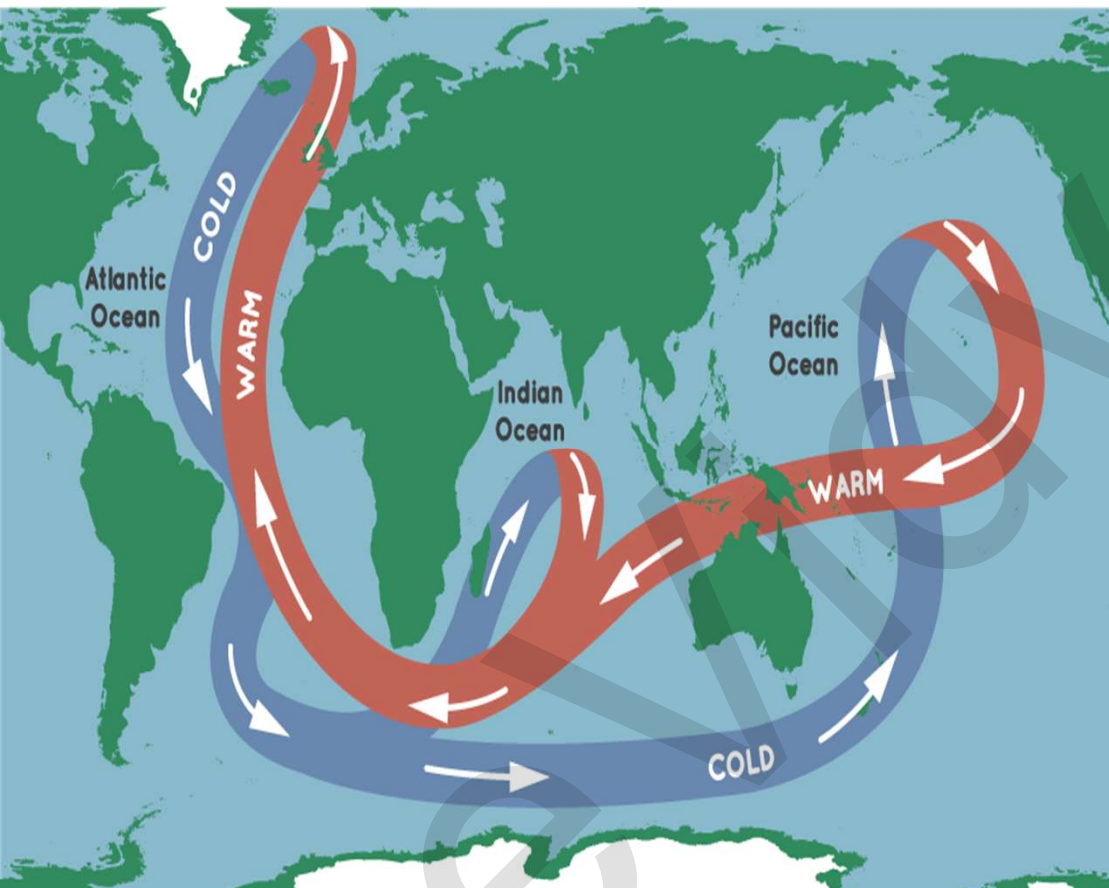


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OCEAN CURRENTS

RISE AND FALL



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WAVES

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- ❑ WHEN THE WATER RISE HIGH AND FALL ALTERNATELY THEY ARE CALLED WAVES.
- During a storm, wind blows at a very high speed forms high waves. (can cause tremendous destruction)
- A huge tidal wave is called **TSUNAMI**.



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2004 TRAGEDY

TSUNAMI



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- **EX** – tsunami of 2004 cause wide spread damage in the Andaman (got submerged)
- Can travel with the speed of 700 km.
- 15 meter high.

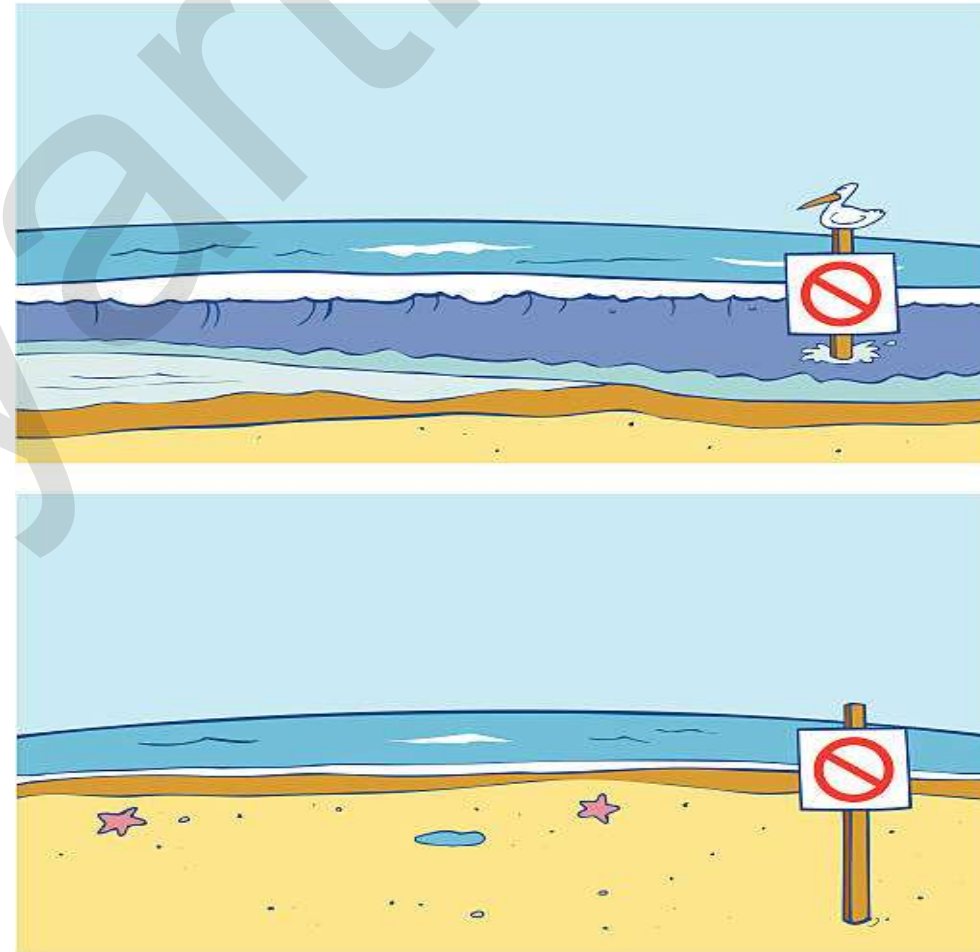


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TIDES

- ❑ THE RISE AND FALL OF OCEAN TWICE IN A DAY IS CALLED A TIDE.
- IT IS HIGH TIDE WHEN WATER COVERS MUCH OF THE SHORE BY RISING TO ITS HIGHEST LEVEL.
- IT IS LOW TIDE WHEN WATER FALLS TO ITS LOWEST LEVEL AND RECEDES FROM THE SHORE.

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HIGH TIDE



LOW TIDE



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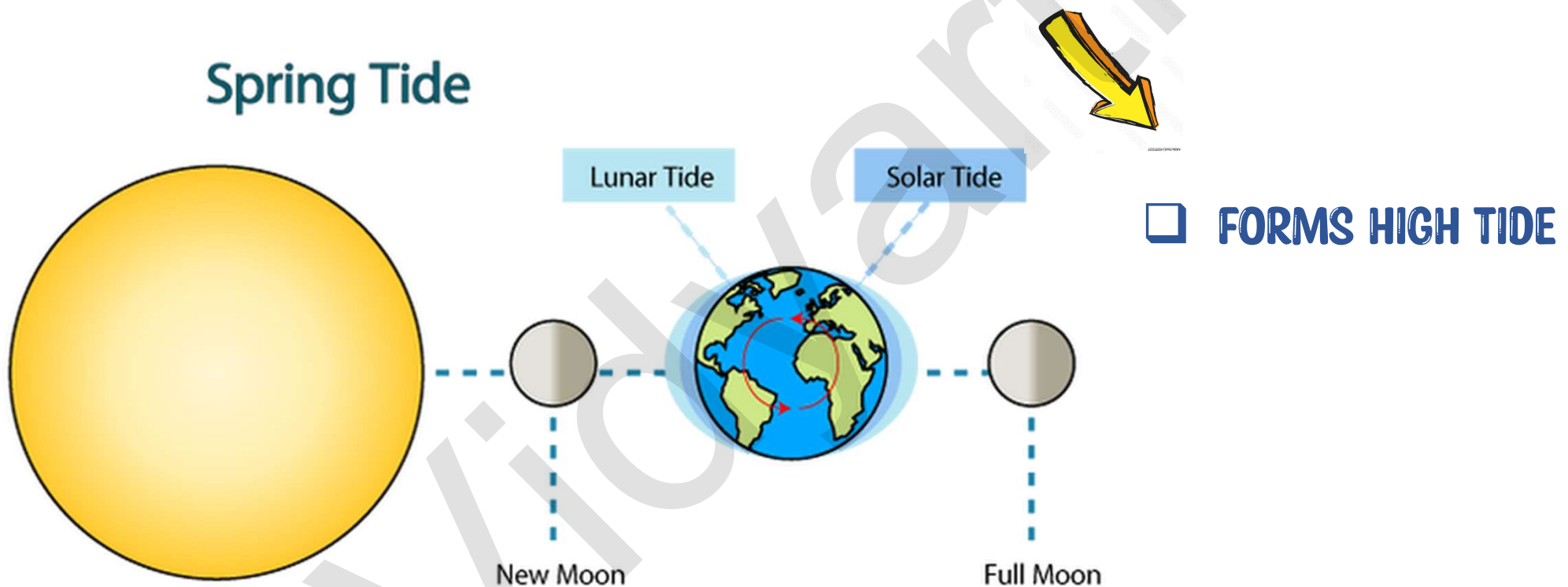
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- A strong gravitational pull exerted by sun and the moon causes tides.
- ❑ **SPRING TIDE** – when the sun, moon, earth fall in the same line the tides occurs the highest.(occurs in new moon, full moon)
- ❑ **NEAP TIDE** – when the moon and the sun are at right angle tides are at its lowest 90 degree angle.

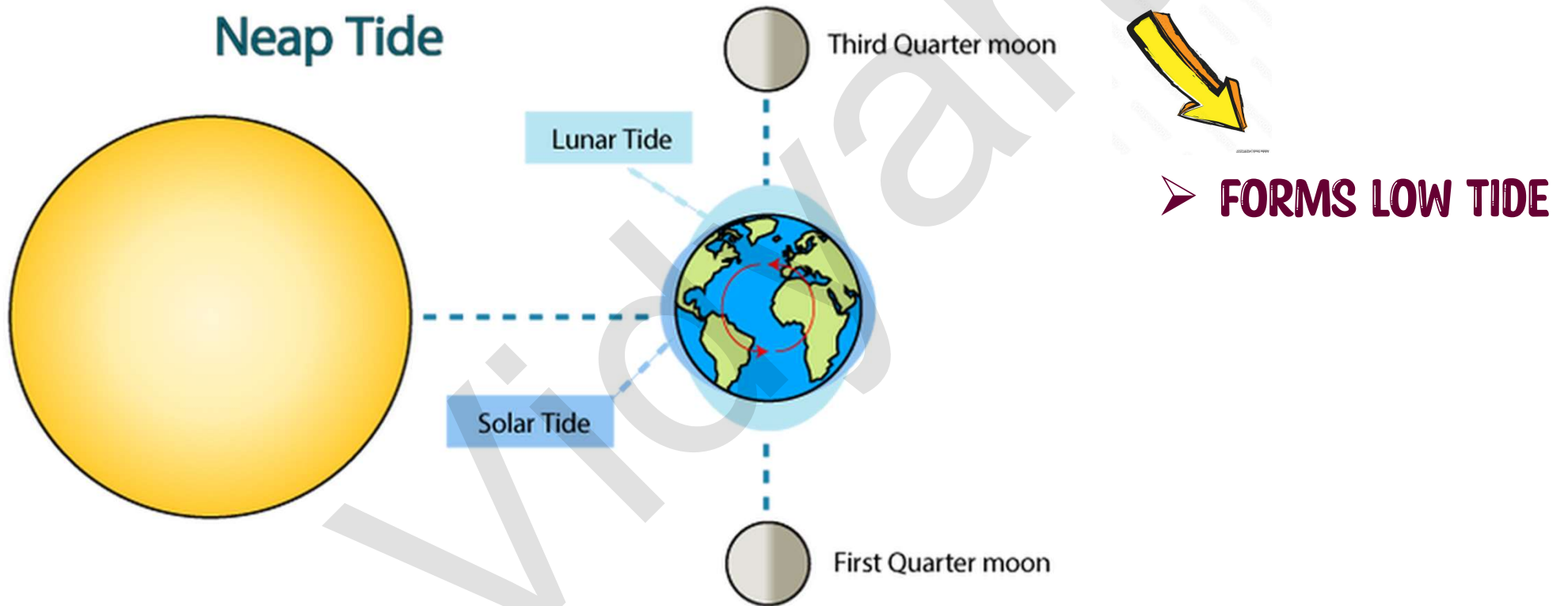
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ADVANTAGE OF HIGH TIDE.

- Generates electricity (tidal power)
- Helps in fishing (fishermen's catches plentiful of fish from the shore).
- High tides harbors the ship and helps in arriving fast.

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OCEAN CURRENTS

- OCEAN CURRENTS ARE THE CONTINUOUS, PREDICTABLE, DIRECTIONAL MOVEMENT OF SEAWATER DRIVEN BY GRAVITY, WIND AND WATER DENSITY. HORIZONTAL MOVEMENTS ARE REFERRED TO AS CURRENTS.
- The ocean currents flows constantly on a direction.
- Can be both warm and cold.

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WARM CURRENTS

- ☐ THE WARM OCEAN CURRENTS ORIGINATE NEAR THE EQUATOR AND MOVE TOWARDS THE POLES.

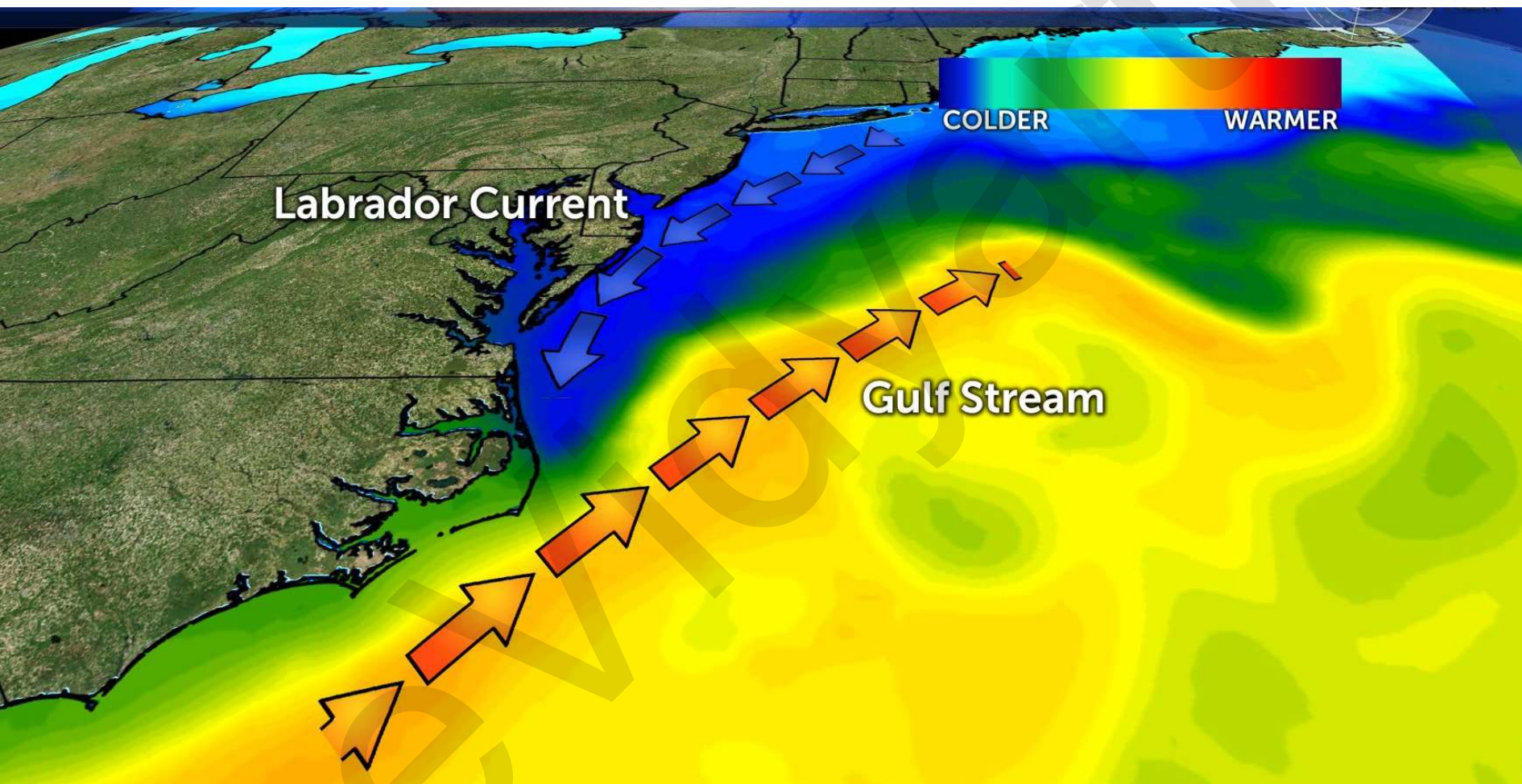
COLD CURRENTS

- ☐ THE COLD CURRENTS CARRY WATER FROM POLAR OR HIGHER LATITUDES TO TROPICAL OR LOWER LATITUDES.



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- **EX** – Labrador oceans currents- cold
- **EX** – gulf stream currents – warm
- Areas with warm and cold currents also experience foggy weather making it difficult to navigation
- Warm and cold meeting currents is suitable for fishing grounds as planktons produces in this situation (fish food)

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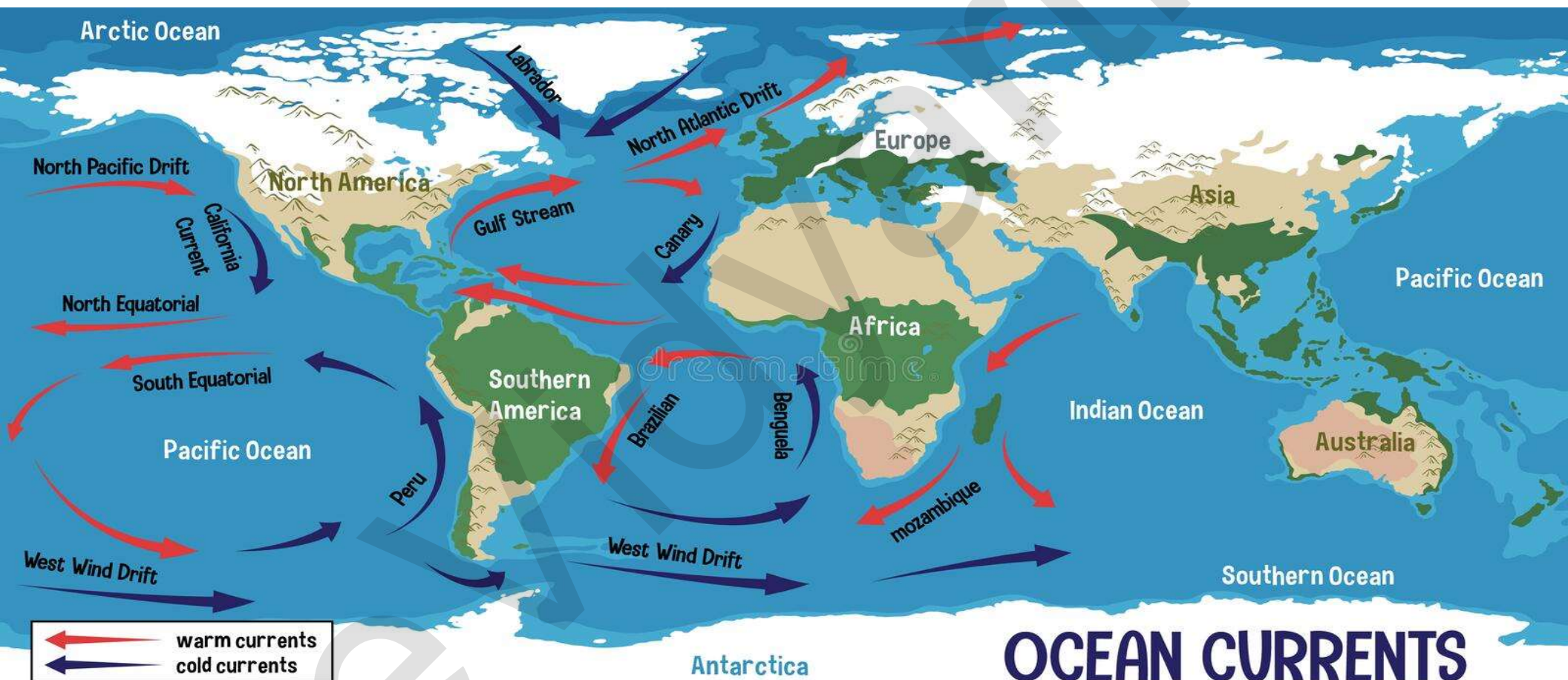
HELPS IN HARBOR THE SHIP AND FISHING

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❑ MAJOR OCEAN CURRENTS

➤ NORTH ATLANTIC.

➤ SOUTH ATLANTIC

➤ NORTH PACIFIC

➤ SOUTH PACIFIC

➤ THE INDIAN OCEAN

❖ **FOG** – WHEN THE MOIST,
WARM AIR MAKES CONTACT
WITH THE COOLER SURFACE
AIR, WATER VAPOR
CONDENSES TO CREATE FOG.

