



## Tides are . . .

- the daily change(s) in ocean depth.

- MOON mostly (very close)
- sun (very far away)

## Diurnal Tides

- 1 high tide AND 1 low tide per 24 hours (aka 1 tidal cycle)

## Semidiurnal Tides

- 2 high tides AND 2 low tides per 24 hours (aka 2 tidal cycles)

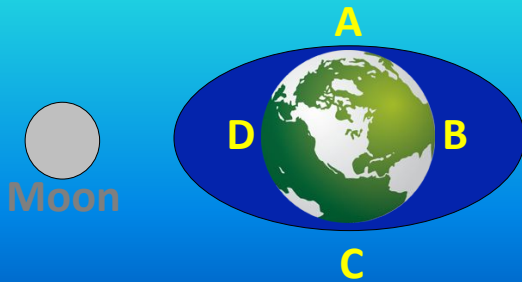
## High Tides

- Water becomes deeper & further inland (though only noticeable along shore).
- Two types:
  - Direct—the moon pulls the surface of the oceans.
  - Indirect—the moon pulls Earth away from the ocean's surface.

## Low Tides

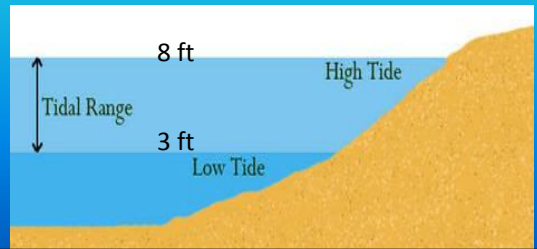
- Oceans become more shallow & less inland
- Happens on Earth where the moon's gravity is not "stretching" the oceans

Copy the diagram and label Points A, B, C, and D, with the correct tide (direct high, indirect high, or low).



## Tidal Range

- ... is the difference in ocean height between high and low tide.



## Spring Tide

- Occurs twice a month during new & full moons
- During these times, the sun, moon, & earth align (make a straight line).



- Linear alignment causes a Large tidal RANGE.

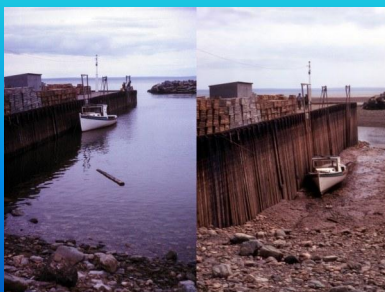
## Neap Tide

- Occurs twice a month during the 1<sup>st</sup> & 3<sup>rd</sup> (aka last) quarter phases
- During these times, the sun, moon, & earth make a 90° angle.



- This angular arrangement causes a small tidal RANGE.

What combination of tides (high/low, neap/spring) would most likely cause the scene depicted below? Explain your decision.



Bay of Fundy  
Nova Scotia  
Canada