

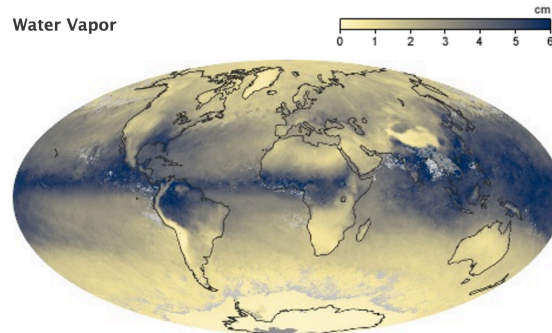
Name: \_\_\_\_\_

Date: \_\_\_\_\_

**Task:** Rain Belt (ITCZ) Inter Tropical Convergence Zone Motion Patterns

**Unit:** Aerosols and Climate Change DATA

**Module:** Atmosphere



### Introduction:

Watch the data animation by NASA's Earth Observatory – Link:

[https://earthobservatory.nasa.gov/GlobalMaps/view.php?d1=MYDAL2\\_M\\_SKY\\_WV](https://earthobservatory.nasa.gov/GlobalMaps/view.php?d1=MYDAL2_M_SKY_WV)

Please answer the questions listed below. The scale on the upper left hand side measures in cm the water vapor available in a given month. If the water vapor were to condensate the cm is the amount of water that would be available to potentially fall as precipitation over land and the ocean.

### Questions:

1. What part of the Earth receives the most radiation from the Sun?
2. What effect do you think this energy has on the wind patterns close to the equator?
3. What geographical area has the most concentration of water vapor? Based on what you know about cloud formation why does this geographical area contain the most water vapor? Please list the geographical regions by name.
4. Can you identify a pattern in how the water vapor moves up and down around the equator? Based on what you know about the Earth's orbital motion can you propose a reason for this fluctuation in motion? Please explain.