**Weather and Climate**

1. **What is weather?**
   1. Weather is the state of the \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ at a place and time with regards to heat, dryness, sunshine, wind, etc.
2. **What is climate?**
   1. The prevailing \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ conditions in an area in general, or over a long period of time.
3. **What is the difference?**
   1. Weather is the \_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_ atmospheric conditions in a specific location.
   2. Climate is the atmospheric conditions for a large area over a \_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_ of time.
4. **What determines weather and climate?**
   1. The \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ of the atmosphere and oceans from \_\_\_\_\_\_\_\_\_\_\_\_\_ heating of the Earth as it rotates.
   2. What causes this unequal heating?
      1. The \_\_\_\_\_\_\_\_\_ of Earth’s axis!
      2. This tilt is responsible for the seasons:
         1. Tilted towards the Sun = \_\_\_\_\_\_\_\_\_\_\_\_\_\_.
         2. Tilted away from the Sun = \_\_\_\_\_\_\_\_\_\_\_\_.
5. **Latitude and Longitude**
   1. Lines of Longitude run \_\_\_\_\_\_\_\_\_\_\_\_\_ and \_\_\_\_\_\_\_\_\_\_\_\_\_.
   2. Lines of Latitude run \_\_\_\_\_\_\_\_\_\_\_\_\_\_ and \_\_\_\_\_\_\_\_\_\_\_\_\_.
   3. What are lines of Latitude and Longitude used for?
      1. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
      2. What is the starting point for Longitude? \_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_
      3. What is the starting point for Latitude? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
      4. What do we call areas above the Equator? \_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_
      5. What do we call areas below the Equator? \_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_
6. **Climate**
   1. Each hemisphere is divided into 3 zones.
      1. Tropical Zone
      2. Temperate Zone
      3. Polar Zone
   2. What hemisphere do we live in? \_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_
   3. What zone do you think we live in? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
   4. What do you think Temperate means? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
7. **The Coriolis Effect**
   1. the apparent deflection of a moving object that is the result of the Coriolis force.
      1. What direction will your path be altered if you travel North?\_\_\_\_\_\_\_
      2. If you travel South? \_\_\_\_\_\_\_\_
8. **Global Atmospheric and Oceanic Circulation**
   1. How does the Coriolis Force effect the circulation of Earth’s atmosphere?\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
   2. Will the oceans move in a similar manner?\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
9. **Thermohaline Circulation**
   1. Thermo means \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
   2. Haline means \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
   3. Why do you think the temperature and salt content of water is important to the circulation of the Oceans and Climate?
   4. How about after watching the video?
   5. The Thermohaline circulation is like a conveyor belt that moves ocean water around the world. As salty water cools, it sinks deeper into the oceans, and as it warms it rises where it is then affected by Solar Radiation. The process then begins again.
10. **Stop and think…….**
    1. What is the driving force behind both atmospheric and oceanic circulation? How do these circulations work?
    2. What effects can these circulations have on our planet's climates?
    3. What is the difference between climate and weather?
    4. What type of climate do we live in?