



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

## Wind, Water and Mountains: Ingredients for Regional Climate

*Please circle the options for each statement for your location as you follow along on SOS.*

1. Exotic Location:    **1**      **2**      **3**      **4**      **5**      **6**

2. Latitude affects the amount of direct sunlight a place gets, which also affects the seasons that it has. My location has:

**Northern Hemisphere seasons**

**Southern Hemisphere seasons**

**Tropical seasons (wet / dry only)**

3. Latitude also determines whether a location is mostly hot, mostly cold or seasonal. According to the latitude coordinate map, my location is:

**Polar, above 60° N or S and mostly cold all year.**

**Mid-latitude, between 30° and 60° N or S and has 4 seasons**

**Tropical and Sub-tropical, between 0° and 30° N or S  
and has fewer seasonal changes**

4. Elevation can cause the climate of places of similar latitude very different. The higher you go in the atmosphere, the colder it gets; therefore places that are higher are generally colder and more extreme. Let's estimate their elevation as:

**High (mountainous)**

**Medium**

**Low (near sea level)**

5. Prevailing winds and the presence of mountains can also have an effect on the amount of precipitation a location gets. When the wind moves perpendicular to a mountain, the upwind side is called windward and usually gets more rainfall than the side downwind called the leeward side. If your location is on the leeward side of a mountain, we say that it falls in a rain shadow.

**Yes, mine is in a rain shadow**

**No, mine is not.**

6. Some places are wet and some are dry. There are many factors that can affect the amount of precipitation a place gets including proximity to water, elevation, and latitude. Estimate the amount of precipitation your location gets:

**Wet**

**Dry**

**Average**

7. Proximity to water affects the climate of a location especially those places that are near warm ocean currents. The closer you are to the ocean the more it regulates your climate. It can also affect the temperature difference between day and night at a location. Water has a high heat capacity, which means it cools down and warms up very slowly. If your location is close to the ocean then it's day and night temperature difference would be less than if your location is far inland.

**Coastal – less temp difference      Continental – large temp difference**

8. Sea surface currents can be cold or warm depending on where it's located. If your location is coastal, there's a good chance it has a sea surface current flowing near it. Warmer currents would bring warmer water and warmer temps and colder currents would do the opposite. What current flows next to your location?

**Name:** \_\_\_\_\_ **&**      **Warm or Cold**

**No current – mine is continental**

9. Climate really matters because it gives you a sense of the look and feel of a place. Climate determines the type of vegetation that would be living in your location. What biome (life/climate zones) is your location? What is your location's name?

**Biome:** \_\_\_\_\_ **&**      **Name:** \_\_\_\_\_

10. Sum it up! On a separate sheet of paper write a paragraph to sum up what you have learned. Make sure you use all of the terms you circled and wrote in this activity when describing the climate of your exotic location and add a sentence about how it would look to you.