

Chapter 9 - Hurricanes and Extratropical Cyclones

1. Tropical cyclones form over \_\_\_\_\_ and have \_\_\_\_\_ central cores, extratropical cyclones form over \_\_\_\_\_ or \_\_\_\_\_ and have \_\_\_\_\_ cores.
2. A Nor'easter is a type of \_\_\_\_\_.
3. A tropical cyclone in the Western Pacific is called a \_\_\_\_\_.
4. The names of \_\_\_\_\_ are picked sequentially from a list of names for that year
5. The majority of precipitation in a hurricane occurs in the \_\_\_\_\_.
6. The eye is the calmest part of the storm, because rotating air causes dry air to \_\_\_\_\_.
7. The conditions needed for a hurricane to develop include a thick layer of warm air at the \_\_\_\_\_, the warm air must \_\_\_\_\_ quickly in the atmosphere, upper level winds must be \_\_\_\_\_, and a \_\_\_\_\_ must form.
8. One thing that makes extratropical cyclones different than tropical cyclones, is that extratropical cyclones are associated with \_\_\_\_\_.
9. Hurricane season for the Eastern and Gulf coasts of the U.S. runs from the months of \_\_\_\_\_ through \_\_\_\_\_.
10. The amount of storm surge on a coastline is affected by \_\_\_\_\_, atmospheric \_\_\_\_\_, and the shape of the \_\_\_\_\_.
11. Tools used to forecast hurricanes include weather \_\_\_\_\_, aircraft, \_\_\_\_\_ radar, and weather \_\_\_\_\_.

## Chapter 10 - Waves, Currents and Coastlines

1. The size of waves depends on the length of time the wind blows, the wind \_\_\_\_\_, and the distance the wind blows over the surface without obstructions, called the \_\_\_\_\_.
2. If you were watching waves from the shore and started counting the seconds between one crest to the next, you would be measuring the wave \_\_\_\_\_.
3. If you placed a small boat in waves in the open ocean (NOT near the shoreline), the motion of the boat would be a \_\_\_\_\_ pattern, staying in the same place.
4. Waves begin to slow down and “feel bottom” at a depth equal to \_\_\_\_\_ wavelength.
5. Waves generated by storms are called \_\_\_\_\_.
6. Sand moving parallel to the shore is called \_\_\_\_\_.
7. The difference between eustatic and relative sea level is that “eustatic” refers to the \_\_\_\_\_ sea level, whereas “relative” refers to \_\_\_\_\_ sea level near \_\_\_\_\_.
8. An area of calm, surrounded by breaking waves, is one way to spot a \_\_\_\_\_ from the shore.
9. Along a lake shore with steep bluffs, you would expect to see lots of \_\_\_\_\_.
10. Beach nourishment is a form of \_\_\_\_\_ stabilization.
11. \_\_\_\_\_ are a type of hard stabilization, built parallel to shore to protect cliffs or bluffs.
12. Breakwaters are NOT a perfect solution for saving beaches from eroding, because they increase erosion in the \_\_\_\_\_ area.
13. A solution which involves rethinking land uses and developing less of the coastal zone is called the \_\_\_\_\_ solution.”

## CHAPTER 11 - Climate & Climate Change

1. The Koeppen system uses average monthly \_\_\_\_\_ and \_\_\_\_\_ to describe climate in a region. Ozone is found in the \_\_\_\_\_, and mostly \_\_\_\_\_ incoming \_\_\_\_\_ light.
2. CFCs (chlorofluorocarbons) are a problem in the atmosphere because they break down \_\_\_\_\_ in the stratosphere.
3. Evidence of global warming includes rising ocean \_\_\_\_\_, melting \_\_\_\_\_, melting \_\_\_\_\_, and rising \_\_\_\_\_ levels.
4. Glaciation is thought to be influenced by the changing positions of the \_\_\_\_\_, and changes in Earth's \_\_\_\_\_, \_\_\_\_\_ and \_\_\_\_\_.
5. The absorption of ultraviolet radiation from the Sun is called the \_\_\_\_\_.
6. Scientists measure the amount of carbon dioxide in the atmosphere for dates prior to 1955 by examining \_\_\_\_\_ from the Antarctic ice sheet.
7. Over the last 500 years, carbon dioxide concentrations in the atmosphere have been mostly stable, but around 1900, CO<sub>2</sub> started to \_\_\_\_\_ dramatically.
8. "There is widespread evidence of human influence on global climate," "global warming is now occurring," and "the mean surface temperature of the Earth is likely to increase." These are conclusions of the \_\_\_\_\_ on \_\_\_\_\_.
9. As the Earth warms, the areas that we lose to agriculture (such as the U.S. Midwest) might be replaced by new areas that are now too cold for farming (such as Northern

Canada). But we're not sure. There's more to farming than just \_\_\_\_\_ . We need further study on the \_\_\_\_\_ characteristics of these areas.

10. Scientists know that the current global warming situation is NOT caused by natural forces, in part because mathematical \_\_\_\_\_ show \_\_\_\_\_ sources to be the cause.

11. Melting ice sheets raise \_\_\_\_\_ , add \_\_\_\_\_ \_\_\_\_\_ to the ocean, which changes global ocean currents, reduces the supply of \_\_\_\_\_ , and changes the habitat for polar bears, \_\_\_\_\_ and some \_\_\_\_\_ .

## Chapter 12 - Wildfires

1. In order for a wildfire to burn, \_\_\_\_\_ , \_\_\_\_\_ and \_\_\_\_\_ are required.

2. Indicators of whether a region is prone to wildfires include \_\_\_\_\_ , \_\_\_\_\_ type, and \_\_\_\_\_ .