**El Nino**

Weather Conditions

Normal weather patterns – \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ and upwelling along the South America coast.

El Niño – weather patterns \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_the strong westerly winds, \_\_\_\_\_\_\_\_ disappears

El Niño – \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ over the ocean are changed changes in the \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

El Niño

El Niño ( Southern Oscillation) – unusual \_\_\_\_\_\_\_\_\_\_\_\_\_ of the eastern tropical \_\_\_\_\_\_\_ Ocean.

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ systems flip-flop between the eastern tropical Pacific and the western tropical Pacific.

Indonesia and Australia – normally have large amounts of \_\_\_, go into a \_\_\_\_\_\_\_ during El Niño.

North and South Americas – normally \_\_\_\_\_\_\_, have a lot of \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.

El Niño can also cause severe and extreme weather events, such as \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ in unusual locations.

Weather Changes in the United States

Western and Southern states – \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.

The Southern states – \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.

Note: The number of hurricanes hitting the Caribbean and North America is \_\_\_\_\_\_\_\_\_.

The Western states (especially California) – most severe weather impacts, such as \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.

Alaska, the Northeast, and the Pacific Northwest – \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.

La Niña

La Niña (“The Girl” – opposite of “The Boy”) –\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ in the tropical Pacific Ocean

United States – the \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ tend to be \_\_\_\_\_\_\_\_\_ and cooler than normal summers

**Directions: Answer either true or false.**

1. \_\_\_\_\_\_\_\_ Even without pollution, climate can change by itself.

2. \_\_\_\_\_\_\_\_ El Niño is when the Pacific Ocean is much warmer than usual.

3. \_\_\_\_\_\_\_\_ Pollution can change climate.

4. \_\_\_\_\_\_\_\_ Scientists don't think that global warming is happening.

5. \_\_\_\_\_\_\_\_Sunlight is important in making climate.

6. \_\_\_\_\_\_\_\_ Recycling helps to not change climate by mistake.

7. \_\_\_\_\_\_\_\_ Climates can change in a few weeks.

8. \_\_\_\_\_\_\_\_ El Niño is a good thing for some places on Earth.

9. \_\_\_\_\_\_\_\_Volcanoes can change climate with their smoke.

10. \_\_\_\_\_\_\_Water is important in making climate.

**Discussion Questions**

1. What are the main things that control climate?

2. If the Earth does get warmer, what changes would you predict?

3. What are some of the things on Earth that change very slowly?

4. What things do people do that might cause climate to change?

5. If climate changes, can you think of ways that it might be good?

6. What do scientists think about the Earth getting warmer?

7. What things tell us what the climate was like hundreds of years ago?

8. What things in nature can make climate change quickly?

9. Why do some cities have cold, snowy winters while other cities never get snow?

10. What would happen if all the ice in glaciers melted?