**Air Masses, Fronts and Winds Review Guide Answer Key**

To study for the test, answer and study the following questions.

1. What causes winds? **Differences in air pressure. Warm air creates low pressure areas and cold air creates high pressure areas. Air moves from areas of high pressure to areas of low pressure.**
2. How are local and global winds different from each other? **Local winds occur over small areas and distances, global winds occur over a large area and distances.**
3. Draw a sea breeze and explain how it forms.



**Sea breezes occur because land heats faster than water. The warmer land heats the air above it creating a low pressure zone and air moves from areas of high pressure to areas of low pressure.**

1. Draw a land breeze and explain how it forms.



**Land breezes occur because land cools faster than water. The warmer water heats the air above it creating a low pressure zone and air moves from areas of high**

**pressure to areas of low pressure.**

1. What is the Coriolis Effect? **The Earth’s rotation makes winds curve**
2. What are the 3 most important instruments used to study and forecast the weather? Explain what each is used for.

**Doppler Radar. They are used to track storms**

**Satellites: Used to track weather systems**

**Computers: Used to interpret large amounts of data**

1. What are the two major wind belts that effect weather in the continental United States? What direction does each blow?

**Prevailing Westerlies blow west to east.**

**The Jet Stream blows west to east.**

1. In what direction do air masses/weather move across the United States? What causes this?

**West to east. The prevailing westerlies and the Jet Stream**

1. Compare and contrast how a warm and cold front form. Draw the map symbol and include an arrow that shows the direction it is moving.

Same Different Symbol

Warm Front **Different temperature air mass Warm air mass** 

 **over taking each other**  **overtakes** **cold air mass**

Cold Front **Different temperature air mass Cold air mass overtakes** 

 **over taking each other warm air mass.**

1. What warms faster, soil or water? **Soil**
2. What cools faster, soil or water? **Soil**
3. How are air masses classified? **By temperature, humidity and air pressure.**
4. Identify the 4 major types of air masses that affect the weather in the United States.

Name Humidity Temperature Where are they formed?

**Maritime Tropical Humid Warm Over oceans**

**Maritime Polar Humid Cold Over oceans**

**Continental Tropical Dry Warm Over land**

**Continental Polar Dry Cold Over land**