**Patterns of Circulation in the Ocean Study Guide**

| 1- What is a current? | A large body of moving water that flows through the Ocean. |
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| 2- What causes surface currents? | Surface currents are caused by global winds. |
| 3- What are three factors that affect surface currents? | * Global wind belts * The Coriolis effect * Land |
| 4- Explain how to read Figure 2. | * You can look at the key * Blue arrows are cold currents * Orange arrows are warm currents * Look at where the arrows are pointing |
| 5- What is el nino? What impact does it have on the weather? | A climate event that takes place every two to seven years in the Pacific Ocean. Changes the wind, currents, and weather patterns. |
| 6- What is la nina? What impact does it have on the weather? | An event that makes stronger winds blow above the Pacific Ocean, causing more warm water to move west. It makes the weather colder than normal winters, greater precipitation, and makes the ocean temperature change all over the world. |
| 7- What causes deep ocean currents? | Deep ocean currents are caused by differences in the density of ocean water. |
| 8- What is the global ocean conveyor belt? What are two ways in which it impacts the Earth? | The global ocean conveyor belt is a loop that the ocean currents make around Earth’s bodies of water.   * It circulates water and oxygen. * Transfers heat throughout the interconnected ocean basis. |
| 9- What holds more moisture- cold air or warm air? Why? | Warm air because cold air holds less moisture than warm air, it results in a cool and dry climate for the land areas. |
| 10- What makes ocean currents move in a curved path? | The Coriolis effect causes ocean currents to move in a curved path. |
| 11- How do ocean currents affect the climate of an area? | The ocean currents affect the temperature of the area because the air above the water is causing the air to be warmer or colder so that makes the warmer or colder air hold more air or less air. |
| 12-How does the gulf stream affect climate? | It affects the climate because the gulf stream brings cold and warm water to the surface and eventually flows back along the surface of the Atlantic. |