**Ocean Currents Unit**

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

Due Date: **March 20, 2014**

**The Big Idea: What is the cause for currents?**

**The Big Question: What causes deep currents and what effects to they have?**

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| Directions | Examine the activities you can do to learn the unit objectives. All of the activities and the dates we are doing them are listed below. They are due at the latest on **March 20, 2014.** No work will be accepted after **March 20** unless you are absent that day.  **The activities in bold are required for every student to do**. These will help you master the unit. After you have mastered the basics, you will complete a take home test.  **“A” and “B” work will not be offered this unit.**  When you complete an activity, you must turn it in to receive feedback. **YOU MAY NOT TURN IN MORE THAN ONE ACTIVITY PER DAY. Including the last day of the unit.**  As always, if you have questions ask or email. |
| Objectives | * Identify what causes surface currents and explain how surface currents affect climate. * Identify the causes of deep currents and describe the effects that the currents have. * Analyze why the temperatures at the equator and poles differ. * Investigate the effect of water temperature on the way water moves. * Locate some of the major ocean currents on a map and a globe. * Analyze the effects of ocean currents on global climate. |
| State Standards  Addressed | INQC Investigate  Collecting, analyzing, and displaying data are essential aspects of all investigations.  INQE Model  Models are used to represent objects, events, systems, and processes. Models can be used to test hypotheses and better understand phenomena, but they have limitations.  INQF Explain  It is important to distinguish between the results of a particular investigation and general conclusions drawn from these results.  ES2B The Sun is the major source of energy for phenomena on Earth’s surface, such as winds, ocean currents, and the water cycle.  PS3B Heat flows from warmer to cooler objects until both reach the same temperature. Conduction, radiation, and convection, or mechanical mixing are means of energy transfer. |

Use the calendar to document your progress each day.

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| **Monday** | **Tuesday** | **Wednesday** | **Thursday** | **Friday** |
| **3/3** | **3/4**  Introduce Unit  Global  Exploration | **3/5**  Global  Exploration  Continued | **3/ 6**  A Human vs the  Planet  Temperature  Layers of the  Ocean | **3/7**  Engineer’s Day |
| **3/10**  Temperature  Layers of the  Ocean  continued | **3/11**  “Turtles in  Trouble”  Article Discussion | **3/12**  Current Trends  Stations | **3/13**  Current Trends  Stations  Continued  SLAM | **3/14**  Current Trends  Stations  Continued |
| **3/17**  Current Trends  Stations  Continued | **3/18**  Ocean Routes | **3/19**  Ocean Routes  Continued  Take Home Test  Due Tuesday  March 25 | **3/20**  All Assignments are due today at 3:00pm | **3/21**  No School |

**“C” Activities**

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| --- | --- | --- | --- |
| Description | **Points**  **Possible** | **Due Date** | **Completed** |
| **Global Exploration** | 10 | 3/7 |  |
| **Temperature Layers of the Ocean** | 20 | 3/12 |  |
| **Turtles in Trouble Writing Prompt** | 10 | 3/11 |  |
| **Current Trends – Station Rotations** | 30 | 3/19 |  |
| **Station Poster** | 10 | 3/19 |  |
| **Ocean Routes** | 20 | 3/20 |  |
| **Take Home TEST** | 100 | 3/25 |  |