Oceans

1. Answer the following:
   - **a.** What is an ocean?
   - **b.** What is the difference between an ocean and a sea?
   - **c.** What percentage of the Earth is covered in ocean?
2. Complete the following regarding salinity:
   - **a.** Define salinity.
   - **b.** What is the salinity of the ocean?
   - **c.** Mix a solution representing the salinity of the ocean. Take a drop of your solution and taste it.
     - **i.** Why does the salinity of the ocean make it less viable as potable water?
     - **ii.** Sprout seven beans in a container and another seven in another container. Water one with fresh water and the other with saltwater solution you have mixed. Evaluate the growth after seven days.
3. Label on a blank map the Pacific Ocean, Atlantic Ocean, Arctic Ocean, Indian Ocean, Southern Ocean, Mediterranean Sea, Chukchi Sea, Philippine Sea and the East China Sea. Which ocean is the largest? Which sea is the largest?
4. Complete the following regarding ocean zones:
   - **a.** Draw a cross section of the ocean and label the following oceanic zones: intertidal zone, neritic zone, oceanic zone, benthic zone, abyssal zone, pelagic zone, aphotic zone, photic zone and the continental shelf.
   - **b.** Explain the difference between the photic zone and the aphotic zone.
5. Complete the following regarding wind:
   - **a.** Describe what causes wind.
   - **b.** Explain what causes global wind patterns.
   - **c.** Define the Coriolis Effect.
   - **d.** Label the following wind currents on a diagram of the globe: polar easterlies, westerlies, trade winds, and doldrums. Identify the wind currents in the hemisphere where you live.
6. Complete the following about tides:
   - **a.** What causes tides?
   - **b.** Describe the following types of tides: neap tides, spring tides, high tide, and low tide.
   - **c.** What dangers do tides present?
7. Complete the following about ocean currents:
   - **a.** What are surface currents?
   - **b.** What are deep ocean currents?
   - **c.** What is a rip current? How can you survive being caught in a rip current?
   - **d.** On a blank world map, sketch the global conveyor belt.
     - **i.** Use a blue writing utensil to represent the cold dense currents.

   ii. Use a red writing utensil to represent the warm less dense currents.
   iii. Label the oceans that the global conveyor belt passes through.
   d. Conduct an experiment of your choosing that demonstrates how the global conveyor belt works.
   e. What are tidal currents?
   f. Explain why the part of the ocean along western Europe is warmer than other areas at the same latitude.
8. How do oceans affect humans since we live on land?
9. Complete the following regarding threats to the oceans:
   a. Brainstorm a list of at least five of the greatest threats to our oceans. Compare your list with another reliable source.
   b. Research the cause of each of these threats and list 10 actions you can take to help.
   c. Write a plan for how you are going to act on one of your ideas. Implement your plan and report back to your instructor.
10. Be able to identify at least two organisms from each kingdom (Animal, Plant, Fungi, Bacteria, Archaea, and Algae) that live in the ocean.
11. Do one of the following:
   a. Tell a Bible story that involves an ocean (or sea).
   b. Write a song or poem comparing an aspect that you learned about oceans with a spiritual lesson.
   c. Memorize two Bible verses pertaining to oceans (or seas).
12. Do at least two of the following activities:
   a. Watch a video about oceans or the organisms that live in the ocean.
   b. Visit a zoo or aquarium that has an ocean exhibit. Think about which oceanic zones the creatures you see would live in.
   c. Put together a short video or slide presentation about what others are doing to help protect the oceans and its inhabitants from pollution. Include a few of your own ideas for helping the oceans.
   d. Draw or paint a picture of something that you enjoyed learning while studying about oceans.
   e. Visit an ocean or sea. Observe what you have studied regarding tides, currents, wind and wildlife.

Skill Level 2