

Assignment: science and english



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BUSTER**

Click on the link below. You will need to read the first two pages of information on the Oceans' Origins. [Http://www. Moss.](http://www.Moss.Org/oceans/planet/change)

[Org/oceans/planet/change](http://www.Moss.Org/oceans/planet/change). HTML Assessment instructions: Submit your responses to questions one, two, three, and four in the Discussion on the following page. Make sure you use complete sentences and supporting information in your responses. Your responses should be well defined paragraphs summarizing the information including facts from the reading and your own thoughts on the subject 1 .

Explain the relationship between continental drift and the formation of the Earth's Oceans? 2.

How did volcanoes affect the origins of the seas? 3. Describe the hydrological cycle as if you were a particle of water going through it. . Develop a ship's log for three days as if you were a scientist aboard the HAMS Challenger.

For each entry, include a brief statement of where the ship is, what date you were there, and weather conditions – the weather can be very general and fictional. For Day One: Describe one of the tools that as a scientist, you would use aboard the HAMS Challenger. Include how the instrument is used, and describe what types of organisms or samples were recovered using the instrument.

For Day Two: You have the day off today! Describe what types of activities you participated in on board the ship with our other shipmates. Include a description of at least one full meal that you and your shipmates ate that

day. Describe how you feel being onboard the ship for such an extended period of time.

For Day Three: Uh-oh!! You are sick!! Describe what type of illness you have, what symptoms you have, how you might have gotten the illness and any possible remedies to the illness that might have been available aboard a ship in the sass.

Important: Dates do not need to be consecutive but remember you are on the Challenger. Use the first link on the following page to find out where and when they were in ACH location and then make sure your dates correlate with the location. 4. You have been appointed the lead environmental engineer (one who applies science and engineering principals to improve environmental resources and to improve polluted sites) on a project designed to protect a marine environment. It is your job to evaluate, advise and develop a plan that will restore, conserve, and/or preserve a specific marine environment.

Your presentation should utilize 3-5 efforts/causes and include the following information with each: A variety of efforts/causes (minimum of 3) Name of your effort/cause What is the focus Of the effort/cause? Is the effort/cause a form of preservation, conservation, or restoration? Rationale for choosing this effort Your presentation should be completed using a 21st century tool of your choice to present the required information or using the template. There are many 21 SST century tools available for creating and submitting work in the online environment.

For more information about tools your school recommends, please visit the resource tools area in your course or contact your instructor. Make sure you list all references used for information and images.

For information on how to avoid plagiarism, refer to this plagiarism tutorial before you complete the assessment. Take a look at the rubric to guide your work for this assessment 5. Write a letter to your state, local or federal government official expressing your opinion about the health of the oceans. The first step is to use the site Vote-Smart. Org to find out where your area's legislators stand on the environmental issues.

The intent of your letter should be to persuade them to be a protector of our marine environment. Include facts demonstrating the importance Of a healthy coastline. The FACTS and specific examples should be room your research on the pollution in your area of the state. Also include facts on the positive effects the coastline has on your district's health, both environmentally and economically (for example, the health of local wildlife for the environment and tourism for the economy).

Your one page, single spaced letter should be clear, concise, and persuasive. AFTER your letter has been graded and returned, you may e-mail it to your legislator's office if you choose. Please keep in mind that your letter will be sent to your legislators. Your letter should be positive and professional. Read the rubric to see what MUST be included in your letter. 6.

OBJECTIVE: Now that you have learned about phytoplankton, your job is to build your own. You can base it off one of the many types you have read and learned about or you can create a totally unique phytoplankton.

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Keep in mind that you want your phytoplankton to be successful so it will need to be able to withstand air and water tests (so avoid materials that will get completely soggy in water). PROCEDURES: Build: Your model can be made out of anything but you do need to BUILD something. Taking a cotton ball or crumpling up a piece of paper will not count as building.

The model needs to sink (drop) as slowly as possible so you will want to use light materials. The model should be as realistic as possible (with the exception of its size).

Provide a list of materials that you used to create your phytoplankton Write a paragraph explaining how you volubility phytoplankton and why you decided on those particular materials. The description of the construction process should be explicit enough that I or another member of the class could use your directions to build the same model. Take a picture of you and your model to send to me either electronically as a separate attachment. Take your picture BEFORE testing your phytoplankton since the testing may cause damage to the model.

Describe: Write a paragraph or two describing your phytoplankton's (1) shape, (2) environment, (3) needs, and (4) adaptations. Your paragraph should match the design you have developed. Think about the environment where your phytoplankton will live and the needs it will have. What shape will your phytoplankton (model) have? How large will your phytoplankton be? Your model will be much larger than an actual phytoplankton, but you need to consider what effect size will have on your model's sinking rate. How heavy will it be? What structures will it have to affect its sinking rate?

What color will it be? Test in air: To test your model, you will need to either stand on a chair or small stepladder – with supervision from your Learning Coach.

They will need to time the trials for you. Once you are ready: Drop your model from your chair or stepladder height Measure approximately from how high you drop your model. This can be an estimate. Use a stop watch or second hand to determine the exact amount of time it takes for the model to drop to the ground. Record the amount each time. Repeat the procedure for a total of five trials.

Make a data table to show the data you collected.

Test in water: You can test your phytoplankton in a pool or bathtub. You will need a partner help you time the sinking rate. Realize that you will probably need to let your model dry before the next trial – depending on what you constructed your model from of course! Once you are ready: Drop your model into the shallow end of your pool. Estimate the approximate depth of the water. Use a stop watch or second hand to determine the exact amount of time it takes for the model to drop to the ground.

Record the amount each time. Repeat the procedure for a total of five trials.

ANALYSIS: 1. Did your model drop at the exact same rate each time? .

What accounted for the differences in the drop rate? 3. What would cause differences in the sinking rate in the ocean? 4. Would you say that your model would be a successful phytoplankton? Explain why or why not? 5.

What could you change in your model to increase the amount of time it took

to drop to the ground? ASSESSMENT: Be sure to include: a picture of you with your model your paragraph describing your model a materials list a description of how you made the model and why you chose those materials your data table from BOTH of the trials the analysis questions Physical Science 1.

Using the scientific inquiry skills you have learned, implement the Steps Of the scientific method while performing a virtual lab experiment. Click on the link below to access the Introduction to Scientific Inquiry lab sheet.

Introduction to Scientific Inquiry 2. Click on the link below to access the “Boyle’s Law and Charles’ Law” Gizmo. The exploration guide found within this simulation will help you work through the Gizmo. Click on the Lesson Materials link, which appears on the top left corner of the screen once you enter the simulation, to access the student exploration sheet.

Print out the student exploration sheet and use it as you work through the Gizmo Warm Up and Activity B.

You are not responsible for completing Activity A. Use the Introduction to Scientific Inquiry worksheet as you complete the Gizmo. Boyle’s Law and Charles’ Law Once you have completed the assigned virtual lab, be sure to complete the diagrams and answer all of the questions on the Lab Instruction sheet. 3. Refer to the rubric to make sure you include all of the necessary components of the lab report. You will submit your lab report to your teacher.

Click on the link below to view the Intros action to Scientific Inquiry rubric for this portfolio assessment. 2 1 . Using your scientific inquiry skills, implement the steps of the scientific method while performing the following virtual lab experiment. Click on the link below to access the Phase Change: From Solid to Liquid lab sheet. Phase Change: From Solid to Liquid Tip: You may create a graph on graph paper and submit it using a scanner OR you may create a graph using Microsoft Excel and submit the file.

Click on the following documents to learn how to create a graph using Excel: How to Create a Table using Excel 2003 How to Create a Line Graph Using Excel 2003 Note: The documents provided in this lesson are for Excel version 2003. If you have Excel version 2007, similar documents are posted in the Virtual Library under Curriculum and Instruction > Connections Academy Courses > Science > Graphing Resources: Microsoft Excel 2003 and 2007. 2. Click on the link below to access the “ Phase Changes” Gizmo.

Use the lab sheet to help you work through the activity.

Complete all parts Of the virtual lab and write your answers and results on the lab sheets. You will submit the completed lab sheets to your teacher at the end of this lesson. Phase Changes 3. Once you have completed the assigned virtual lab, be sure to complete the isograms and answer all of the questions on the Lab Instruction sheet. 4. Link below to view the grading rubric for this Lab Portfolio assessment.

Virtual Lab: Changes Between a Solid and Liquid Rubric 3 In this lab, you will practice constructing models of molecules and compounds using the three methods-? electron-dot diagrams, space-filling models, and structural

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formulas. You will also use the structural formulas to determine bond angles between the atoms. Click on the link below to access the Modeling Molecules lab form. Modeling Molecules Lab Follow the instructions on the lab form. Complete all parts of the lab and rite your answers and results on the lab form. You will submit the completed lab form to your teacher at the end of this lesson.