Ecosystem Encounter

WebQuest Description: This WebQuest will let the students explore the nature of Ecosystem through applying their critical, metamorphic, and creative thinking skills in encountering the types, components, and its sub-types, the food chain, and the food web.
Grade Level: 9-12
Curriculum: Science
Keywords: Ecosystem, natural ecosystem, man-made ecosystem, biotic, abiotic, food chain, food web, producer, consumer, decomposer, autotrophs, heterotrophs, saprotrophs, law of conservation of energy
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Introduction

You basically heard the word ecosystem, but have you ever really thought about it? What does an ecosystem really talks about? What makes up an ecosystem? These are few of those many questions waiting for you to be answered correctly as you go on with this WebQuest. So get ready to pack your things and set your minds for this adventure! Just like what scientists do, you will act as detectives and investigators to perceive how things are done in an ecosystem. In this WebQuest, you need to showcase your critical, metamorphic and creative thinking skills in order for you to accomplish the tasks given. So are you ready to take on the task? If YES, click the TASK on the categories.

Tasks

I salute you for taking the risk to take the task in this encounter. So in answering the questions, you are expected to:distinguish abiotic from biotic including their sub-types;recognize the difference of natural and man-made ecosystems, determine the roles of each trophic level in a food chain;formulate and organize your ideas in order to create a poster of an ecosystem and a food web of a given area/topic that the teacher will be giving.THIS TASK SHOULD BE FINISHED WITHIN THE ALLOTTED DAY. FAILURE TO MEET THE DEADLINE WILL HAVE DEDUCTION POINTS.

Process

There are provided websites every after question where you can read articles and concepts, watch videos and see different examples. Gather the important information needed in order for you to generate a brief yet substantial answer.INSTRUCTION: Your answers should be encoded in the MS Word Document which is located below, print it and submit it the next day. Drawings and Posters should be done separately on a bond paper.FORMATFont style: Comic SansFont size: 12Margin: 1 all sidesShort bond paperTAKE NOTE: Take time to read the guidelines on each step. This is an INDIVIDUAL WORK that you will be presenting to your teacher at the end of the class. Step 1: The information you learned on this level will help you to successfully accomplish the BIG QUESTION on the next level. Don't jump yet on the next question unless you have finished the first one. Every question is a prerequisite to the next question. Failure to follow the guideline will lead you to unsuccessfully answer the big question.1. Comparison Chart of Biotic and Abiotic Components of an ecosystem.   BIOTIC ABIOTIC Introduction   Examples   Factors   Affects   javascript:nicTemp();javascript:nicTemp();javascript:nicTemp();javascript:nicTemp();2. In connection with the first question, enumerate the sub-types of each component and give at least four examples on each sub-type.javascript:nicTemp();javascript:nicTemp();javascript:nicTemp();javascript:nicTemp();For number 3 and 4 use these given links:javascript:nicTemp();javascript:nicTemp();javascript:nicTemp();javascript:nicTemp();3. Draw at least 3 examples on each of the two types of ecosystem.4. Cite the ten major differences of the two types of ecosystem. TWO TYPES OF ECOSYSTEM   Differences 1.   2.   3.   4.   5.   6.   7.   8.   9.   10.   5. Name the four trophic levels. What is the specific role of each of level in a food chain or a food web? Explain and give five examples of food chain utilizing the trophic levels. NOTE: follow how food chain is being illustrated in the websites given. No repetition of examples given in the websites provided below._____

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_____Five Examples of Food Chain Trophic Levels 1st 2nd 3rd 4th   Step 2: Great! You have finally accomplished the first step. Thanks for cooperating and following the guidelines. Here is the BIG QUESTION: Draw an ecosystem poster of a rice mill. Through your poster, create a food web of the ecosystem given. Include as many organisms as you can, as long as it is occurring on the said topic. The more organisms involved, the higher points will be given. Be creative and critically think in order to have an excellent output.

Evaluation

The rubric below will be used in grading your outputs.It will be evaluated as regards to: how you organized your ideas,how did you understand the concepts and widen your knowledge, how you neat and creative you are in creating your ecosystem poster,and if the components of the food web you created are aligned and appropriate. Criteria Points (4) (3) (2) (1) Student Score Excellent Good Fair Poor Organization 20 The student presents the information in great detailed, logical and interesting manner. The student presents the information in an interesting manner but not much detailed and logical. The student jumps around in presenting information that creates a difficulty for the audience to understand. The student presents a poor quality information that the audience cannot understand.   Content Knowledge 40 The student displays excellent knowledge on answering the questions, provided with detailed explanations and useful examples. The student shows good knowledge on answering the questions with great explanations. The student only shows effort in answering the question with moderate information. The student fails to answer the questions with quality information and without any explanation.   Creativity and Neatness 15 The student's work is clean, polished, and shows individual creativity. The student's work is clear, a little polished and meets the requirements. The student's work is messy and fairly meet the requirement.   The student's work is not clean, polished and did not show creativity.   Food Web 25 The student clearly and accurately depicts the food web in the ecosystem given. The student adequately depicts the food web in the ecosystem given The student shows some conclusion when depicting the food web in the ecosystem given. The student did not accurately depict the food web in the given ecosystem.   Total: 100

Category and Score					Score
				Total Score	

Conclusion

CONGRATULATIONS!You have seen how things occur in an ecosystem. Now that you already come to the end of the encounter, I bet have already a clear understanding what truly is an ecosystem, particularly its components, types, processes, and importance. I hope that the concepts you learned in this WebQuest have boosted your knowledge that could help you in attaining a high mark on your upcoming quiz. As you strengthen these concepts, you may also impart the correct concept of ecosystem, to others.HAVE A GOOD DAY & MAY THE FORCE BE WITH YOU ALWAYS!

Teacher Page

Standards

Credits

Other