Click to verify

☰ Menu Introduction This webquest is designed to help you explore and learn more about the different biomes that are found on Earth. Biomes are different regions of the Earth that have similar climates and similar plant and animal life. This webquest will culminate in a group project that will be presented to the class Task Your task in this webquests is to become familiar with the different biomes and to choose one which you will explore in more detail. Task 1 - Fill out the spreadsheet on the climates, animals and plants found in each biome and answer some questions. Task 2 - Color a world map showing the different biomes around the world. Task 3 - Complete the Great Graph Match activity Task 4 - Draw out a Climate Graph on a city found in your chosen biome Task 5 - Choose two articles and complete the worksheet that goes with the articleT Task 6 - Complete a group project which will include a poster or PowerPoint and class presentation Process Section 1 - Introduction to Biomes A. Go to the following websites and check out the different links for the terrestrial biomes Using the information that you found on these two websites, fill out the spreadsheet describing the climates, plants, and animals that are found in the different biomes B. Answer the following questions after you have reviewed the websites Note that each website, while having several of the same biomes, also has several that are different from each other. Explain why this may be. Look in your textbook and compare the terrestrial biomes on the two websites with the biomes shown in the book. Which ones are the same? Which ones are different? Using the information from the two websites and your book, combine and/or separate the biomes into the world-wide biomes you think should be used. You should have at least eight biomes, up to twelve biomes Section 2 - World Map Pick up a map from the classroom and using the biomes you created above color the world map showing the areas of the different biomes. Remember to use a key to identify each biome Section 3 - Climate of Biomes Each biome has similar climates. Scientists most often look at the average monthly temperature and average monthly rainfall for the different locations within a biome. Although these will not be exactly the same generally they show similar trends. At the website below, The Great Graph Match, you can review the biomes (on the right side of the page) and see graphs that show the average monthly temperatures and rainfall. Enter the mission, choosing Advanced Users and complete the activity (go for 100%). Print or save the screen shot to show me you have completed the activity. Section 4 - Climate Graphs A. Most of the time scientists will show both the average monthly temperature and average monthly rainfall on the same graph for the climate graphs of biomes. You can see examples of these graphs in your textbook and below. B. You will go to the following website to find the data needed to draw a climate graph. Graph paper is available if needed. First, choose one of your biomes Go to the following website and pick a country found in your biome 3.Then choose one of the cities from that country 4.Using the average temperatures and average rainfall, hand-draw a monthly climate graph for that city. Remember to include the following information: The name of the biome Keys identifying the biomes Labeling of the temperature and rainfall including units Title of your graph Section 5 - Articles At the back of the classroom there are several articles that are related to biomes. Choose two of these articles and complete the worksheets that are found in the file with the articles. Ask your teacher is you have questions about what to do! Section 6 - Collaborative Project Working with one or two other students sign up for a biome as listed in the textbook. Using the information that you have gathered from this webquest and from other sources that you will cite, you will create a poster or PowerPoint on your chosen biome. The poster or PowerPoint will need to include map of your biome information on the typical plants and animals found in the biome information on climate (soil type, rainfall, temperatures, etc) pictures of typical plants and animals climate graph of a city found in your biome (this graph must also be hand-drawn) cited resources Your group will present your poster or PowerPoint presentation to the class Evaluation Section 1 - Spreadsheet 12 pts Complete & correct 9 pts Partially complete and correct 6 pts Partially complete and partially correct 3 pt Incomplete and partially correct 0 pts Incomplete and incorrect Section 1 – Questions Answered 8 pts Answered completely and correctly 6 pts Partially answered and correct 4 pts Partially answered and partially correct 2 pt Answered incompletely and incorrectly 0 pts Not answered Section 2 – World Map 12 pts Colored completely and neatly; key is complete 9 pts Colored completely, not neatly; key is complete 6 pts Colored partially and neatly; key is incomplete 3 pts Colored partially and not neatly; key is incomplete 0 pts Not colored; key is incomplete or missing Section 3 – The Great Graph Match 7 pts Correctly identified all biomes 6 pts Correctly identified 6 biomes 5 pts Correctly identified 5 biomes 4 pts Correctly identified 4 biomes 3 pts Correctly identified 3 biomes Section 4 – Climate Graph 12 pts Hand-drawn, neat, instructions followed correctly 9 pts Hand-drawn, sloppy, instructions not followed correctly 6 pts Not hand-drawn, instructions followed correctly 3 pts Not hand-drawn, instructions not followed correctly 0 pts Climate graph not completed Section 5 – Collaborative Project 20 pts All elements included and correctly done; neat 15 pts All elements included and correctly done; sloppy 10 pts All elements included, not correctly done; neat 5 pts Not all elements included; not correctly; sloppy 0 pts Not completed Section 5 - Collaboration 8 pts All members participated equally and put forth effort 6 pts All members participated equally, but did not put forth effort 4 pts Not all members participated equally; put forth effort 2 pts Not all members participated equally; did not put forth effort 0 pts Members did not participate or put forth effort Credits Teacher Page This webquest was developed for high-school Biology students. I hope this gives you some ideas or is helpful in your class. Grace Gratias The world is made up of many different biomes. Biomes are large regions of the world with similar plants, animals, and other living things that are adapted to the climate and other conditions.1 There are many different classifications of biomes, but we will focus on six major terrestrial (land) ones: 1) Tundra 2) Taiga 3) Rain Forest - tropical and temperate 4) Desert 5) Grasslands - tropical and temperate 6) Temperate Deciduous ForestA biome is made of many similar ecosystems. Ecosystems are the interactions between the living things and the nonliving things in a place. In an ecosystem, the plants, animals, and other organisms rely on each other and on the physical environment – the soil, water, and nutrients, for example. An ecosystem is often much smaller than a biome, although the size varies.2 At any given time, ecosystems may get out of balance and will adapt/change.Within each biome, the living organisms have adaptations to help them survive in these sometimes extreme environments. For example, a rabbit in the tundra may have larger feet to hop on the snow and white fur to hide from its enemies.The unique climate and living conditions of each biome create wide variety on our wonderful planet. You are an ecologist who is researching the biomes of the world and the adaptations of the plants and animals that inhabit the different biomes. What does each biome look like? How does the climate in a particular biome affect the lives of the living things that live there? How have plants and animals adapted to survive in each unique biome? It is your challenge to find out!You are an ecologist who discovered a new animal in the Polar biome. It is not surviving there. Based on the adaptations of that newly discovered animal, you need to persuade members of BEANS (Biome Ecologists for the Advancement of New Species) of the suitability of this new animal to survive in one of the other biomes of the world. Your team will research the six major biomes and determine the biome best suited for the survival of your new animal. You will then use your knowledge of the climate and common animal characteristics of a biome to design adaptations that give your new animal the best chance of survival in that biome.1. Biome Map: Click on and print the world map at the link below. Biomes are typically classified by their average temperature and precipitation. Then, color the blank world map to show where different biomes are located. (Use the Biomes of the World link for reference.) Be sure to create a key for your colored map and write the definition of "biome" on the map.Blank World MapBiomes of the World2. Biome Web Research: First, the class will research one example biome with your teacher to understand the process. Then, the class will be divided into teams with each student on the team assigned to research one of the major biomes. Your research includes a biome description, climate, plants, animals, and adaptations made by living things in the biome. You will plan your research and record data using the Research Form below. Biome information can be found using the Internet Links below and other online resources found on the Science resources page. Your biome research can be supplemented using your textbook, encyclopedias, and other non-fiction books. 3. Scrapbook: After completing your biome research, you will create a "biome scrapbook" document that presents the important information from your research and provides pictures supporting your research. This document must meet the requirements as outlined in the link below, including a title page, a description/climate page, animal pages, and plant pages. The instructions also include options for extra credit. If you are working with others, the scrapbook instructions include a planning sheet to determine who will complete each part of the assignment. You will present your scrapbook to the class, discussing the adaptations of the plants and animals in that biome necessary for survival. Once each scrapbook review is complete, all members of the class should have a good understanding of the critical details of the six major biomes.Scrapbook InstructionsScrapbook Example4. New Animal Survival: You will be assigned to a team of ecologists, one with expertise in each of the major biomes. As described above, your team of ecologists has discovered a new animal in the Polar biome and it is not surviving there. You need to find a new place on Earth for this animal to live. Based on the adaptations of that newly discovered animal, you need to persuade members of BEANS (Biome Ecologists for the Advancement of New Species) of the suitability of this new animal to survive in one of the other biomes of the world. Based on your research, the team should select the biome best suited for the survival of your new animal. You can use the online resources found on the Science resources page to help support your decision. The team should create a short persuasive argument (one or two detailed paragraphs) explaining why the animal is best suited for life in a particular biome. This includes physical and behavioral adaptations necessary for living in the climate, avoiding predators, and accessing food sources. The following example presents this argument using Blabberize.com. Example of Blabberize Team 1 Team 2 Team 3 Team 4 Team 5 Team 6 5. Adaptations: You will then use your knowledge of the climate and common animal characteristics of a biome to design adaptations that give your new animal the best chance of survival in that biome. You will create the "perfect" animal suited to live in that biome. You will detail what your animal looks like, how it behaves, and why it is suited to a particular biome. As in the previous step, think about the physical and behavioral adaptations necessary for living in the climate, avoiding predators, and accessing food sources. Use the planning sheet to organize the information for your request, and then use the relocation application to submit the request (persuasive essay) for your adapted animal to be moved to a new biome. Adaptation Planning SheetAnimal Species Relocation ApplicationEnrichment and Extension ActivitiesCreate biome posters to illustrate the differences found in the climate, landforms, plants, and animals.Create a diorama that has a model of the created animal as well as features of the biome in which it will be best suited.Do an oral presentation to introduce the new animals to the class and reasons for adaptability to a particular biome.Create a life cycle chart to illustrate the life cycle, including stage names, for the new animal.Websites to Learn MoreIntroduction | Task | Process | Evaluation | ConclusionAdapted from webquest created by Jennifer Cooper and Kelby Moul, Park Hills Elementary,South Western School District, Hanover, PA.Updated by Robert James on July 31, 2023.