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| **Teacher: Dr. C. Oden** | | | **Grade/Subject: 7th SCIENCE** | | | **Date: 3/16/15-3/20/15** | | | | | |
| **Differentiated Instruction Grouping** | | | **Strategies Used** | | | | | | | | |
| **TOTAL GROUP** | | | **PRESENTING NEW INFORMATION**: Identifying vocabulary words in textbooks in order to have a better understanding of the standard. A six step process sharpens the instructional focus of the students: 1) Read text to determine its purpose, 2) Identify words easily known 3) Identify connections and relationships between the words 4) Choose words needed prior to reading 5) Decide which words students only need to know incidentally and therefore do not require direct teaching and finally 6) Determine what needs to be discovered as it relates to the standard.  **MODELING NEW SKILLS**: How to Effectively Gather Evidence from textbooks to effectively equip students with knowledge to incorporate answers to more detailed questions | | | | | | | | |
| **SMALL GROUPS** | | | **TIERED WORKSHEETS** Students will be grouped based on ability. Each group will receive a different activity which categorizes animals in the food chain. The groups will be categorized based on ability levels (prerequisite-needs additional assistance before they can begin, ready-possess the prior knowledge necessary to delve into the activities, and advanced learners-possess skills that require complex, higher level thinking analysis activities). Scores made on Benchmark III will determine the tiered based groups. The ability levels are as following: The prerequisite-needs group provides additional assistance before students can begin, the ready-possess group requires the prior knowledge necessary needed to investigate into the activities, and the advanced learners-possess group possesses skills that require complex, higher level thinking analysis in order to complete activities).  **PROBLEM SOLVING**: Students will work in varied groups to identify given ways to protect existing biomes. | | | | | | | | |
| **PARTNERS** | | | **PROCESSING INFORMATION**: Students will work in pairs to complete partner tasks required to complete food chain activity worksheet.  **CHECKING FOR UNDERSTANDING**: Students will think-pair-share throughout the unit to collaborate and provide feedback from their peers in order to complete worksheets in a timely manner. | | | | | | | | |
| **INDIVIDUAL** | | | **JOURNAL**: Students will reflect on and evaluate the successful factors of biomes  **TICKET OUT THE DOOR**: Students will participate in tickets out the door so that the teacher can gather data on the terms and concepts students have mastered, almost mastered, or have yet to master. This data will be used to create mini-lessons or one-on-one instruction to reinforce the skills. | | | | | | | | |
| **List Behaviors**  **(what students should be able to do; focus on**  **essential vocabulary words)** | | **List Content**  **(what students should know; focus on concepts)** | | | **Determine DOK**  **(align to instruction and assessment)** | | | | | | |
| Cite evidence from texts, determine meanings of words, use prior knowledge, determine the central idea of vocabulary words, analyze how vocabulary words make connections, spell the given vocabulary words correctly, use correct punctuation when writing vocabulary words in sentences acquire and use accurate vocabulary words. | | **Using the given vocabulary words,**  Producer         Food Chain Consumer        Herbivore  Carnivore         Omnivore Scavenger Biome          Decomposer     Food Web  **Students should know:**  \* How to identify vocabulary words in examining the dependence of organisms.  \* How to cite evidence to strongly support how to comprehend and excel in understanding biomes  \* The definitions of difficult vocabulary to recognize and comprehend the changes in environmental conditions.  \* How to use vocabulary words categorizing relationships between organisms | | | **DOK Levels** | | | | | **DOK Ceiling** | |
| **Level 1:**  Students will recall essential vocabulary words, use prior knowledge, determine place word in a sentence, analyze how vocabulary words make connections to real word situations, spell words correctly, and use vocabulary correctly in a sentence. | | **Level 3:** Students will support ideas with evidence from the textbook, use appropriate data to characterize the task and provide better understanding. | | | | **Level 4:**  Students will connect and illustrate how vocabulary words are found, apply the vocabulary words learned from chapter reading in the textbooks, determine the validity of given vocabulary words, how those vocabulary words  can be used to provide accurate analysis of  vocabulary words while relating the  vocabulary words to real-world connections, dig deeper into the texts by applying the  vocabulary words to characterizing real world biomes. |
| **Monday: 3/16/15** | | | **Standard(s): S7L4. Students will examine the dependence of organisms on one another and their environments.**   1. Recognize that changes in environmental conditions can affect the survival of both individuals and entire species. 2. Categorize relationships between organisms that are competitive or mutually beneficial. 3. Describe the characteristics of Earth’s major terrestrial biomes (i.e.   tropical rain forest, savannah, temperate, desert, taiga, tundra,  and mountain) and aquatic communities (i.e. freshwater,  Estuaries and marine). | | | | | | | | |
| **Opening/Warm-Up: (5 mins)** | | | After reading page 166, Consider yourself studying biomes so you would use a complete sentence to give one suggestion on how to improve surrounding biomes | | | | | | | | |
| **Essential Question: (5 mins)** | | | How does geographic location determine the type of biome? | | | | | | | | |
| **Work Period: (40 mins)** | | | 1. Review the essential questions – (5 mins)    1. Three random students will be chosen to answer the question and their response will promote a class discussion 2. Complete pretest (to give some insight on previous knowledge) – (20 mins) 3. Introduce the 5 major types of biomes (description & animals) – (15 mins)    1. Students will take Cornell Notes       1. Aquatic (2 basic regions: fresh & marine)       2. Deserts (4 major types of deserts: Hot& Dry, Semiarid, coastal & Cold)       3. Forests (3 major types of forests: Tropical, Temperate, boreal forest - Taiga)       4. Grasslands (two main divisions of grasslands: Tropical & Temperate grasslands)       5. Tundra (2 two types: Arctic & Alpine) 4. Using given worksheet, complete the 10 essential Vocabulary words | | | | | | | | |
| **Closing: (5 mins)** | | | **T.O.T.D.** - Identify a biome, give an example of one you have experienced while citing evidence from your text to develop a logical argument for its survival. | | | | | | | | |
| **Technology:**  Class computer &Personal cell phone  Complete pretest (**test will be projected on overhead**)  [www.biologyisfun.com/ecology/quizzes](http://www.biologyisfun.com/ecology/quizzes)  Use the link below for small group activity (using classroom computers)  [**http://edtech2.boisestate.edu/pattymcginnis/502/jigsaw.html**](http://edtech2.boisestate.edu/pattymcginnis/502/jigsaw.html) | | | **Resources:**  Issued text books  Overhead Projector  Clasroom Handouts | | | | | **Homework:**  Using given worksheet, complete the 10 essential Vocabulary words – Teachers will give instruction during distribution | | | |
| **Tuesday: 3/17/15** | | | **Standard(s): S7L4. Students will examine the dependence of organisms on one another and their environments.**  C. Recognize that changes in environmental conditions can affect the survival of both individuals and entire species.  D. Categorize relationships between organisms that are competitive or mutually beneficial.  E. Describe the characteristics of Earth’s major terrestrial biomes (i.e. tropical rain forest, savannah, temperate, desert, taiga, tundra, and mountain) and aquatic communities (i.e. freshwater, estuaries, and marine). | | | | | | | | |
| **Opening/Warm-up: (5 mins)** | | | Design an environment, pick an organism and explain how it will survive based on the environmental conditions.  EXAMPLE:   |  |  |  | | --- | --- | --- | | Biome | Name of Organism | Survival Explanation | | 1. Desert | Coyote | * Coyotes they adapt to different habitats * Adjust their hunting style to what foods are available. * Their population is stable. * They are omnivores, which means they will eat or try to eat just about anything | |  |  |  | | | | | | | | | |
| **Essential Question: (5 mins)** | | | **How does the amount of solar radiation determine the type of biome?** | | | | | | | | |
| **Work Period: (40 mins)** | | | 1. Discuss the Vocabulary words 2. Complete Food Exploration Activity using the Gizzmo 3. Complete Food Chain Activity worksheet 4. Using given worksheet, complete the new vocabulary words | | | | | | | | |
| **Closing: (5 mins)** | | | **T.O.T.D:**  Analyze the relationship between a tick and a dog and the critique their relationship | | | | | | | | |
| **Technology:**  Class computer &Personal cell phone  Complete Food Chain worksheet | | | **Resources:**  Issued text books  Overhead Projector  Clasroom Handouts  Vocabulary worksheet  Food Exploration Activity  **Vocabulary Words:**  Ecology Abiotic Environment Biotic  Herb Factors  Community Biome Population Habitat  Ecosystem | | | | | **Homework:**  Complete work sheet for new vocabulary words | | | |
| **Wednesday 3/18/15** | | | **Standard(s): S7L4. Students will examine the dependence of organisms on one another and their environments.**  C. Recognize that changes in environmental conditions can affect the survival of both individuals and entire species.  D. Categorize relationships between organisms that are competitive or mutually beneficial.  E. Describe the characteristics of Earth’s major terrestrial biomes (i.e. tropical rain forest, savannah, temperate, desert, taiga, tundra, and mountain) and aquatic communities (i.e. freshwater, estuaries, and marine). | | | | | | | | |
| **Opening/Warm-up: (5 mins)** | | | **How do the soil characteristics impact the plant and animal life of the biome?**  **Fill in the blank.**  The five biomes of the earth are the desert, grasslands, tundra, forest and aquatic. List the two animals from each biome | | | | | | | | |
| **Essential Question: (5 mins)** | | | Explain the relationship between a tick and a dog and the significance of the relationship in ecology | | | | | | | | |
| **Work Period: (40 mins)** | | | 1. Create and color an ecology pyramid foldable 2. Discuss Biomes and how it relates to ecologies 3. Complete a Biome Activity    1. **Culminating Build A Biome Activity:**  * Students will be researchers 500 years in the future after Earth as we know it has been destroyed. They work in teams that are assigned to restore a biome and all its organisms. They will identify and explain the importance of the relationships between the species. They will document how subtle and drastic changes in the environment can impact the survival of their biome for the next 500 years. | | | | | | | | |
| **Closing: (5 mins)** | | | **T.O.T.D.**  Examine the relationship between the energy in a biome and its carrying capacity | | | | | | | | |
| **Technology:**  Biomes Foldables -  https://www.pinterest.com/pin/96123773267269123/ | | | **Resources:**  Issued text books  Class computer & Personal cell phone | | | | | **Homework:**  Vocabulary Word list with picture | | | |
| **Thursday: 3/19/15** | | | **Standard(s): S7L4. Students will examine the dependence of organisms on one another and their environments.**  C. Recognize that changes in environmental conditions can affect the survival of both individuals and entire species.  D. Categorize relationships between organisms that are competitive or mutually beneficial.  E. Describe the characteristics of Earth’s major terrestrial biomes (i.e. tropical rain forest, savannah, temperate, desert, taiga, tundra, and mountain) and aquatic communities (i.e. freshwater, estuaries, and marine). | | | | | | | | |
| **Opening/Warm-up: (5 mins)** | | | How do the soil characteristics impact the plant and animal life of the biome? | | | | | | | | |
| **Essential Question: (5 mins)** | | | Identify the symbiotic relationship between a wasp and a caterpillar. Create an environment that reverses their roles in the environment | | | | | | | | |
| **Work Period: (40 mins)** | | | 1. Complete Good Buddies Activity  * Students will explore the relationship between organisms and identify the different types of symbiotic relationship.  1. Complete class Biome Bingo Questions using given work cards with accessories 2. Complete study guides | | | | | | | | |
| **Closing: (5 mins)** | | | **T.O.T.D. - True** or **False. If False give reason why**  1) Hermit crabs live in shells made - True  2) Heartworms do not develop inside a dog’s heart – False (it does develop in the hear)  3) Stork and bees have a commensalism - True  4) Mistletoe harms spruce trees. True  5) Oxpeckers do not fee off rhinos – False (Oxpeckers feeds ticks off rhinos) | | | | | | | | |
| **Technology:**  Activity source:  <http://www.nclark.net/biome_builder.pdf>  <http://sciencespot.net/Media/GoodBuddies.pdf> | | | **Resources:**  Issued text books | | | | | **Homework**:  Complete & Review Study Guides | | | |
| **Friday: 3/20/15** | | | **Standard(s): S7L4. Students will examine the dependence of organisms on one another and their environments.**  C. Recognize that changes in environmental conditions can affect the survival of both individuals and entire species.  D. Categorize relationships between organisms that are competitive or mutually beneficial.  E. Describe the characteristics of Earth’s major terrestrial biomes (i.e. tropical rain forest, savannah, temperate, desert, taiga, tundra, and mountain) and aquatic communities (i.e. freshwater, estuaries, and marine). | | | | | | | | |
| **Opening/Warm-up: (5 mins)** | | | **EQ:** Give characteristics that fully describe your biome. | | | | | | | | |
| **Essential Question: (5 mins)** | | | Using two sentences, clarify how Ostriches and gazelles can be mutually beneficial of each other? | | | | | | | | |
| **Work Period: (40 mins)** | | | 1. Review any unanswered questions students have questions about 2. Distribute post quiz 3. When students are done taking their test, they will submit their completed study guides | | | | | | | | |
| **Closing: (5 mins)** | | | **T.O.T.D.**  How your performance on the post test reflects the grade you obtained and identify ways you can improve future performances on tests? | | | | | | | | |
| **Technology:**  Class computer & Personal cell phone  [www.biologyisfun.com/ecology/quizzes](http://www.biologyisfun.com/ecology/quizzes) | | | **Resources:**  Issued text books | | | | | **Homework:** | | | |
| **Assessment for Learning** or **Assessment of Learning**  The culminating assessment will call for students to incorporate the techniques they’ve learned throughout the *Units of Study* bend in a sophisticated and fluid manner. | | | | | | | | | | | |
| **TAPS 2, 3, 4** | **Content**  **(What students will learn)** | | | **Process**  **(How students will learn)** | | | | | **Product**  **(What students will produce to show comprehension)** | | |
| **Advanced**  (SKILL: students are able to successfully identify ecologies and biomes. They will be exposed to a number of formative assessments that will build the skills needed to progress) | Students who possess the necessary prerequisite and ready skills in identifying and applying the different biomes (determined by previous formative assessments which monitored student growth) will be asked to evaluate common ecologies. Students will be challenged to determine specific biomes and analyze how the author uses factors to define ecologies. | | | Students will participate in a self-directed learning activity where they will be asked to conduct research based activities. This strategy will assist students in building the following skills: collecting and organizing data through note making, making sense of academic vocabulary, draw conclusions, test inferences, compose clear, coherent explanations, and construct plans to address questions. | | | | | Students will produce coherent investigations of ecologies in today’s society and objectively evaluating the text and organizing documented evidence to enhance ideas. | | |
| **Ready**  (SKILL: students are able to successfully identify and distinguish between types of biomes and ecologies. They will be exposed to a number of formative assessments that will build the skills needed to progress to the “advanced” indicators) | Students who possess the necessary prerequisite skills in identifying and distinguishing between biomes and ecologies and they will be asked to analyze the effects these parts have on their daily lives. Students will be challenged to defend their analyses with textual evidence. Students will also identify the differences between various biomes | | | Students will work in cooperative pairs to investigate different biomes. In this investigation, students will successfully demonstrate their growth by providing textual evidence to support their reasoning. Investigating allows students to build their analysis and evaluation skills and allows students to explore/dissect various biomes. | | | | | Students will produce coherent investigations of biomes and objectively evaluating the text and organizing documented evidence to enhance ideas that support reasoning for biomes creation. | | |
| **Need Prerequisites**  (SKILL: students are biome.. Students have struggled to distinguish between biomes and ecologies. They will be exposed to a number of formative assessments that will build the skills needed to progress to the “ready” indicators) | Students who possess skills in explaining and defining the different types of biomes (determined by previous formative assessments which monitored student growth) will be asked to identify patterns in ecology. Students will be challenged to extend their responses by incorporating examples. | | | Students will work in small groups to identify common patterns of conflict in literature. Students will be able to enhance the following skills, citing textual evidence, using context clues, identifying patterns, and developing a purpose for scientific testing. | | | | | Students will produce coherent investigations of biomes and objectively evaluating the data and organizing it to document the evidence to enhance ideas. | | |