Mogck Science 20

Dumbo in the Desert

Inquiry into Adaptations

In this project you will be asked to analyze the adaptations of a biotic organism allowing it to flourish in its habitat. Then, you will take them out of their happy place and force them to adapt to a new environment!

Step 1: Choose an Organism

- Note the common name of the organism
- Find minimum 3 pictures of this organism in its habitat
    - In a short paragraph, describe the natural habitat of this organism
- List minimum 10 adaptations (physical and behavioral) and explain how these adaptations allow the organism to thrive within the environment.
    - i.e. Owl's hunt at night (behavioral adaptation) in order to be protected and avoid being detected

Step 2: Choose a NEW Environment

- Describe (in a short paragraph) the NEW habitat that you would like your organism to thrive in
- Find a minimum of 2 pictures that accurately describe the new ecosystem
- List minimum 5 adaptations, that would have to develop or order for your organism to survive and explain how these adaptations allow the organism to thrive within the environment.
- List minimum 3 adaptations that are able to remain consistent between the 2 habitats and explain why

FAQs:

1. Can I choose any plant or animal???
   YES! Any BIOTIC factor!
2. Can my new ecosystem / habitat be out of this world?
   YES! As long as you research the ecosystem and apply the understanding of adaptations!
3. When is this due?
   Wednesday April 5, 2017
4. How do you want this presented???
   Please create a physical project that can be displayed in class!

Mogck Science 20

Rubric

	4	3	2	1
Organism in its Original Environment				
Name and Pictures	Project includes name of organism clearly stated. 3 or more quality colored pictures are included of the organism from multiple angles.	Project includes name of organism clearly stated. 3 or more pictures are included of the organism from multiple angles, however not colored or slightly blurry / unclear	Project includes name of organism clearly stated. 1-2 quality colored pictures are included of the organism from multiple angles. OR 3 or more quality colored pictures are included of the organism from multiple angles however name of organism is not included on the project	Project includes name of organism clearly stated. 1-2 pictures are included of the organism from multiple angles, however not colored or slightly blurry / unclear OR 1-2 colored pictures are included of the organism from multiple angles however name of organism is not included on the project
Description of Natural Habitat within the Ecosystem	Quality description of the habitat includes name of ecosystem inhabited by the organism, as well as explanation of both biotic and abiotic factors that are significant to the ecosystem	Description of the habitat includes name of ecosystem inhabited by the organism, as well as explanation of both biotic and abiotic factors that are significant to the ecosystem at slightly lower than Science 20 level.	Description of the habitat includes name of ecosystem inhabited by the organism, however explanation lacks either biotic or abiotic factors significant to the ecosystem.	Description of the habitat includes name of ecosystem inhabited by the organism, however explanation lacks both biotic and abiotic factors significant to the ecosystem.
List of Adaptations	10 or more RELEVANT adaptations were included in the project	6-9 RELEVANT adaptations were included in the project	3-5 RELEVANT adaptations were included in the project	1-2 RELEVANT adaptations were included in the project
Explanation of Adaptations	Explanation of adaptations include quality descriptions of how the adaptation allows for organism success within the environment. Explanation is related to biotic or abiotic factors within the ecosystem.	Explanation of adaptations include descriptions (slightly below science 20 level) of how the adaptation allows for organism success within the environment. Explanation is related to biotic or abiotic factors within the ecosystem.	Explanation of adaptations include quality descriptions of how the adaptation allows for organism success within the environment, however explanation is NOT related to biotic or abiotic factors within the ecosystem.	Explanation of adaptations include descriptions (significantly below science 20 level) of how the adaptation allows for organism success within the environment. Explanation is NOT related to biotic or abiotic factors within the ecosystem.
Organism in its NEW Environment				
Name and Pictures	Project includes name of new ecosystem clearly stated. 2 or more quality colored pictures are included of the ecosystem from multiple angles.	Project includes name of organism clearly stated. 2 or more pictures are included of the ecosystem from multiple angles, however not colored or slightly blurry / unclear	Project includes name of organism clearly stated. 1 quality colored picture is included of the ecosystem. OR 2 or more quality colored pictures are included of the organism from multiple angles however name of new environment is not included on the project	Project includes name of organism clearly stated. 1 picture is included of the ecosystem however not colored or slightly blurry / unclear OR 1 colored picture is included of the ecosystem however name of new environment is not included on the project
Description of NEW Habitat within the Ecosystem	Quality description of the habitat includes name of ecosystem inhabited by the organism, as well as explanation of both biotic and abiotic factors that are significant to the ecosystem	Description of the habitat includes name of ecosystem inhabited by the organism, as well as explanation of both biotic and abiotic factors that are significant to the ecosystem at slightly lower than Science 20 level.	Description of the habitat includes name of ecosystem inhabited by the organism, however explanation lacks either biotic or abiotic factors significant to the ecosystem.	Description of the habitat includes name of ecosystem inhabited by the organism, however explanation lacks both biotic and abiotic factors significant to the ecosystem.
List of Adaptations to Change	5 or more RELEVANT adaptations were included in the project	3-4 RELEVANT adaptations were included in the project	1-2 RELEVANT adaptations were included in the project	0 RELEVANT adaptations were included in the project
Explanation of Changed Adaptations	Explanation of adaptations include quality descriptions of how the adaptation allows for organism success within the environment. Explanation is related to biotic or abiotic factors within the ecosystem.	Explanation of adaptations include descriptions (slightly below science 20 level) of how the adaptation allows for organism success within the environment. Explanation is related to biotic or abiotic factors within the ecosystem.	Explanation of adaptations include quality descriptions of how the adaptation allows for organism success within the environment, however explanation is NOT related to biotic or abiotic factors within the ecosystem.	Explanation of adaptations include descriptions (significantly below science 20 level) of how the adaptation allows for organism success within the environment. Explanation is NOT related to biotic or abiotic factors within the ecosystem.
List of Remaining Adaptations	3 or more RELEVANT adaptations were included in the project	2 RELEVANT adaptations were included in the project	1 RELEVANT adaptations were included in the project	0 RELEVANT adaptations were included in the project
Explanation of Why Adaptations are Viable	Explanation of adaptations include quality descriptions of how the adaptation allows for organism success within the environment. Explanation is related to biotic or abiotic factors within the ecosystem.	Explanation of adaptations include descriptions (slightly below science 20 level) of how the adaptation allows for organism success within the environment. Explanation is related to biotic or abiotic factors within the ecosystem.	Explanation of adaptations include quality descriptions of how the adaptation allows for organism success within the environment, however explanation is NOT related to biotic or abiotic factors within the ecosystem.	Explanation of adaptations include descriptions (significantly below science 20 level) of how the adaptation allows for organism success within the environment. Explanation is NOT related to biotic or abiotic factors within the ecosystem.
Overall Project	Overall this project is amazing. I look forward to putting this project on the wall and keeping it as an exemplar.	Overall this project is well done. I will put this project on the wall to show off!	Overall this project seems rushed and underwhelming. I will struggle to put this on the wall.	Overall this project is garbage. It looks like it was thrown together in 15 minutes the night before it was due.