

Name _____

Class _____

The Importance of Plants Final Packet

3/21/2016-4/8/2016

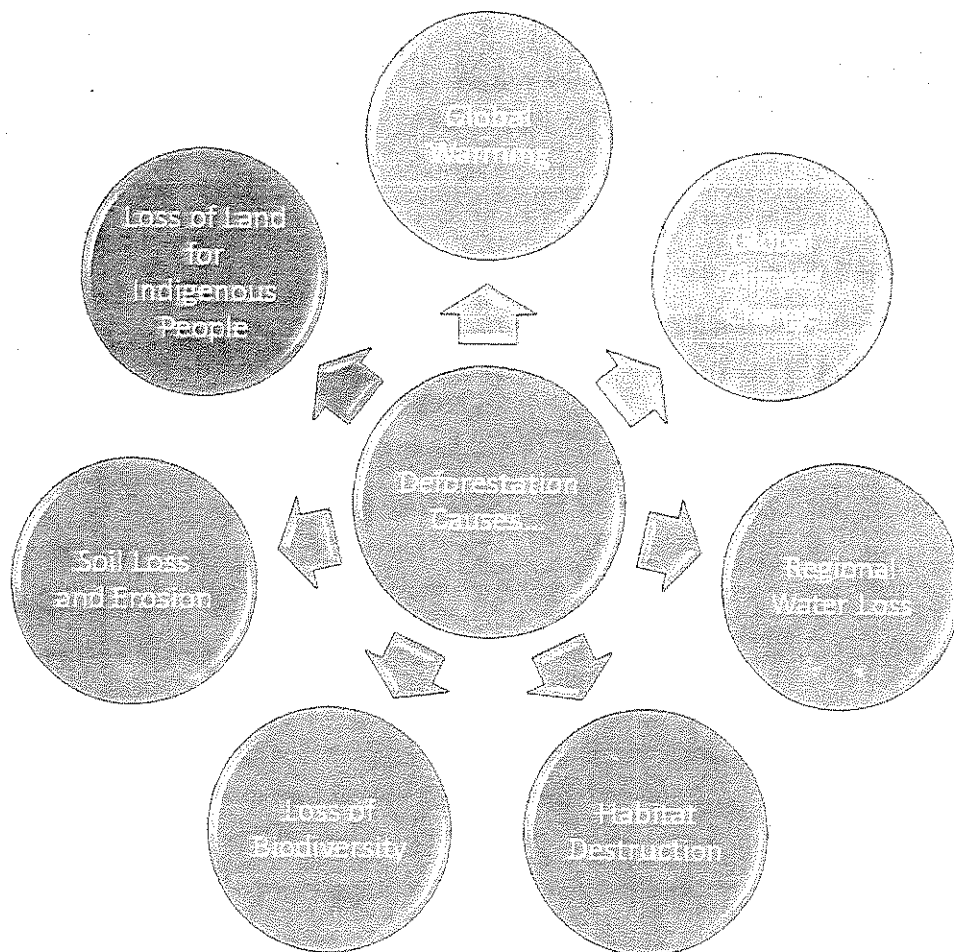
Assignment	Assessment
Historical Plant Studies Worksheet	/15
Historical Plant Studies Poster/Presentation	/15
Photosynthesis Quiz (do not turn in)	
Exit Ticket	
Plant Unit Summary Worksheet	
Final Model	/13
Final Evidence-Based Explanation	/23
Total	/66

Summary Table

Activity we did	What we found	How this helps us answer the Driving Question
Historical Plant Studies	Plants photosynthesize which is the process where plants get their energy from the sun to make food out of carbon dioxide and water. During photosynthesis they release oxygen. Plants absorb water through their roots. Most of the water they absorb is transpired through their leaves.	Deforestation causes global warming because methods such as slash and burn release carbon into the atmosphere because trees are made out of carbon. Lots of trees reduced the amount of photosynthesis. This decrease the amount of oxygen in the atmosphere and increase the amount of carbon dioxide because there are less plants and trees to take it in. Carbon dioxide is a greenhouse gas that contributes to the greenhouse effect.
Transpiration Demonstration and Discussion	Plants play a vital role in cycling water to the atmosphere through transpiration. Plants transport water from the roots to the xylem and out through the leaves.	Deforestation makes it so there are less plants and trees to transpire. This affects the water cycle.
Testing Models with NASA	The amount of carbon dioxide in the atmosphere changes with the seasons. In the winter trees shed their leaves, which causes less carbon dioxide to be absorbed from the atmosphere.	The Amazon is green all year round. Deforestation of the Amazon rainforest will increase the amount of carbon dioxide in the atmosphere because the Amazon is a major carbon sink during the entire year

Causes of Deforestation and the Driving Question

Use this as a reference for your explanation. This figure shows the causes that affect deforestation. Remember, we are trying to figure out and explain *what causes the regional and global effects seen as a result of deforestation*. We specifically talked about how photosynthesis changes the atmosphere and how much of the rain in the Amazon is produced through transpiration.



Final Model

Your model should do more than explain important concepts about plants. The purpose of this model is to answer the Driving Question using what we have learned about plants.

The following concepts are **explained** by the model and are **connected** to the Driving Question and the Phenomenon.

Concept	Present	Connected to Driving Question and the Phenomenon
Plants require sunlight for photosynthesis		
Plants require carbon dioxide and water for photosynthesis		
Plants produce oxygen through photosynthesis		
Plants play a vital role in cycling water to the atmosphere through transpiration		
Plants store carbon		

Before turning in your model, make sure that:

1. It could be understood by someone who has never been in this classroom
2. It is answering the Driving Question.
3. You have connected the important concepts about plants to the Driving Question and the Phenomenon (specifically effects such as global warming and decreased rainfall).

Group Work Evaluation for Models

Evaluation	Fully Participated 3	Usually Participated 2	Rarely Participated 1
Group/teamwork Self Evaluations	Worked to complete all group goals. Contributed equally to complete the group project.	Usually helped to complete group goal. Assisted team members in the creation of the project but was absent one day while team members worked. Date: _____	Occasionally helped complete group goal. Missed several days while team members worked. Date _____
Peer 1 Evaluation _____	Worked to complete all group goals. Contributed equally to complete the group project.	Usually helped to complete group goal. Assisted team members in the creation of the project but was absent one day while team members worked. Date: _____	Occasionally helped complete group goal. Missed several days while team members worked. Date _____
Peer 2 Evaluation _____	Worked to complete all group goals. Contributed equally to complete the group project.	Usually helped to complete group goal. Assisted team members in the creation of the project but was absent one day while team members worked. Date: _____	Occasionally helped complete group goal. Missed several days while team members worked. Date _____

Final Score: 1/3

Name _____

Class _____

Evidence-Based Explanation Rubric

Criteria	3	2	1	0
Phenomenon Explanation	The phenomenon is clearly introduced in the introduction paragraph and connects to the Driving Question and the Big Idea.	The phenomenon is mentioned, but is only connected to the Driving Question or the Big Idea.	The phenomenon is mentioned, but not connected to the Driving Question or the Big Idea.	The phenomenon is not mentioned.
Connection between the Phenomenon, Driving Question, and the Big Idea.	The Driving Question is connected to the Big Idea, highlighting the importance of the Phenomenon.	The Driving Question and the Big Idea are connected, but the Phenomenon is not included.	The Driving Question or the Big Idea is connected to the Phenomenon, but not both.	There is no connection between the Phenomenon, Driving Question or the Big Idea.
Introduction Paragraph	Four or more effects caused by deforestation are described.	Two effects are described.	One effect is described.	No effects are described.
Photosynthesis	Photosynthesis is explained in the context of the phenomenon and driving question using evidence from specific studies examined in class.	Photosynthesis is explained in the context of the phenomenon and driving question, but no evidence is used.	Photosynthesis is explained with no connection to the driving question or phenomenon, and no evidence is used.	Photosynthesis is not explained.
Carbon Sink	The concept of a carbon sink is explained in the context of photosynthesis, the driving question, and the	The concept of a carbon sink is explained in the context of photosynthesis, the driving question and the	The concept of a carbon sink is explained in the context of photosynthesis, the driving question or the	The concept of a carbon sink is not explained.

Name _____

Class _____

	phenomenon. Evidence from specific studies are used.	phenomenon. No evidence is used.	phenomenon, but not all three. No evidence is used.	
Transpiration	Transpiration is explained and connected to the driving question and the phenomenon using evidence from class.	Transpiration is explained and connected to the driving question and the phenomenon. No evidence is used.	Transpiration is explained and connected to the driving question or the phenomenon, but not both. No evidence is used.	Transpiration is not explained.
Conclusion Paragraph	Summarizes the phenomenon, the answer, the driving question, and the big idea.			
Grammar	N/A	N/A	Correct spelling and grammar	Incorrect spelling and grammar
Organization	N/A	N/A	Writing is fluid and transitions are present	Writing is disorganized
Total Score	/23			

Additional Feedback:

Name _____

Class _____

	phenomenon. Evidence from specific studies are used.	phenomenon. No evidence is used.	phenomenon, but not all three. No evidence is used.	
Transpiration	Transpiration is explained and connected to the driving question and the phenomenon using evidence from class.	Transpiration is explained and connected to the driving question and the phenomenon. No evidence is used.	Transpiration is explained and connected to the driving question or the phenomenon, but not both. No evidence is used.	Transpiration is not explained.
Conclusion Paragraph	Summarizes the phenomenon, the answer, the driving question, and the big idea.			
Grammar	N/A	N/A	Correct spelling and grammar	Incorrect spelling and grammar
Organization	N/A	N/A	Writing is fluid and transitions are present	Writing is disorganized
Total Score	123			

Additional Feedback:

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Criteria	3	2	1	0
Phenomenon Explanation	The phenomenon is clearly introduced in the introduction paragraph and connects to the Driving Question and the Big Idea.	The phenomenon is mentioned, but is only connected to the Driving Question or the Big Idea.	The phenomenon is mentioned, but not connected to the Driving Question or the Big Idea.	The phenomenon is not mentioned.
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Carbon Sink	The concept of a carbon sink is explained in the context of photosynthesis, the driving question, and the	The concept of a carbon sink is explained in the context of photosynthesis, the driving question and the	The concept of a carbon sink is explained in the context of photosynthesis, the driving question or the	The concept of a carbon sink is not explained.