How plant parts work together

Agriscience foundations: 05.03 Examine the processes of plant growth, including photosynthesis, respiration, transpiration, absorption, transfer, storage, reproduction, etc….

Background:

Last week we worked to learn the different parts of a plant and what their functions are! However, this week we are going into more detail on how the parts of the plant work together to provide the plant with the nutrients that it needs to survive. In the following worksheet, you all are going to work to describe how water moves through plants, and we are going to go over leaf structure specifically.

Instructions:

This assignment has two parts: water’s movement through the plant and leaf structure. For the water’s movement section, you will need to visit the attached website and read the information to be able to answer the questions on the attached worksheet. For the Leaf parts section, you are going to need to watch the attached YouTube video. I would watch the video two times once to understand what they are talking about and the second time to be able to answer the attached questions. After watching the video for the leaf section, you are going to need to identify the different levels of the leaf. You are going to have a word bank and will need to place them in order from top to bottom.

Expected progress:

I expect this assignment to take you all two days to complete. You should begin the assignment on Monday and finish the assignment on Tuesday.

Waters movement through the plant

Website: <https://sciencing.com/how-water-moves-through-plants-4912679.html>

1. what are the steps that water takes to move through the plant?
2. What is the chief water movement for plants?
3. What does the Xylem transport through the plant?
4. What are the cells called that make up the xylem?
5. What are the Stomata?
6. Where are they located?
7. What do they release?
8. What does the phloem transport?
9. What are different about the phloem’s cells?
10. What is evapotranspiration?
11. How much water can a corn plant loose in one day?
12. What about large hardwood trees?

Leaf structure

Video: <https://www.youtube.com/watch?v=co0JdqUlycg>

1. what does photosynthesis create?
2. Where are the cells that specialize in trapping sunlight located?
3. What are these cells called?
4. What is the green chemical that absorbs light called?
5. What to the stomata open to bring into the leaf?
6. What are the stomata controlled by?
7. Where does water enter the leaf?
8. Specifically, which cells are responsible for photosynthesis?
9. What part of the leaf seals it to ensure that the only way in or out is the stomata?
10. List the structures of the leaf we discussed from top to bottom

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| --- | --- | --- | --- | --- |
| Cuticle | Upper epidermis | Palisade mesophyll | Spongy mesophyll | Stoma |

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