Table of Content Representation

Topic: Transport in Plant

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No	Question	Part of plants are involved in plant transportation	There are several nutrients that can be up taken by the plant	The main force that draws water from the soil and through the plant is caused by a process called transpiration	The xylem sap which consists of sucrose and amino acids are transported in the phloem is called translocation.
1	What you intended the students to learn about this idea	These parts of the plant involved in plant transport: - Leaf - Stem - Epidermis - Vascular bundle (Xylem and Phloem) - Vessel (available in xylem) - Sieve tubes (available in Phloem) - Cortex and pith - Root	These nutrients can be up taken from the soil and distribute to all parts of the plant: - Water (mineral) - Sugar	- Definition of transpiration - The process of transpiration - The importance of transpiration for the plants - The role of stomata in transpiration - The factors that can influence the rate of transpiration	- Definition of translocation - The process of translocation - The substances that is transported by translocation
2	Why it is important for students to know this	- Written in national curriculum - Because they need to know the function of each plant's part to understand	- Written in national curriculum - Because they need to know which nutrients that can be up taken	- Written in national curriculum - The students need to know the detail process about transpiration as	- Written in national curriculum - The students need to know the details process of translocation

		what will happen in those parts later	from the soil to know the next process later	well as the function of transpiration for the plant	
3	What else you know about this idea that you don't intended students to know yet	What will happens in each part of the plants, the students only need to know about the name of the part and each function first	The chemical reaction between the water, and another nutrients	There is another way of plant transport named extravascular transportation (Transport in plant that does not pass through the xylem)	The chemical reaction of amino acid, sucrose and other nutrient that can be transported by translocation
4	Difficulties or limitations connected with teaching this ideas	- The students have to go to lab and use microscope to see the shape, and the location of xylem and phloem in the stem	- The student cannot visualize by their own eyes the process of nutrients that are being absorbed by the root - Limitation of time if the teacher are going to conduct the experiment, because the up taken process is not instant	- The student cannot visualize by their own eyes the process of transpiration - If the teacher want to do the experiment, it will take time because the process of transpiration is not instant	- The student cannot visualize by their own eyes the process of translocation - If the teacher want to do the experiment, it will take time because the process of translocation is not instant
5	Knowledge about students' thinking which influences your teaching of this idea	- Students might think that only root that is responsible to absorb the water and nutrient from the soil - Students might think that the stem only has function to support the plant so it can strongly stand	- Students might be wondering how the soil contained so many substances - Students might think that only water than can be up taken from the soil - Students might be wondering how the	- Since light intensity is one factor that can influence the rate of transpiration, student might think that transpiration only occur during the day - Students might be wondering how the plant	- Students might think that amino acid is only needed by human

			kitchen salt, and sugar can be absorbed by the root	has power to absorb all the water from the soil	
6	Other factors that influences your teaching of this ideas	Advertisement about artificial fertilizer that can make some parts of the plant grow faster, bigger, and better	Misconception about plant watering, not all of the plants needed the same amount of water	Students might assume that transpiration in plant is similar to the process of transpiration in human	Students might assume that amino acid is released by human to the soil, and the plant absorb it
7	Teaching procedures (and particular reasons for using these to engage with this idea)	- Teacher gives the clue about transport in plant - Students are asked by the teacher to mention all the part of the plants that may involve in plant transport - Teacher clarifies students' answer - Teacher prepares the slide that are containing the plant's part that involve in plant transport - Teacher explains each part of the plant including its function - Teacher shows the video to make the students more understand about the material - Teacher let the students to ask some questions	- Teacher ask the students what kind of plant nutrients that can be absorbed by the plant - Teacher clarifies the students answer - Teacher tells the students that they are going do an experiment - Teacher prepares the material and apparatuses for the experiment - Students do the experiment to prove that plant can absorb the water - Teacher asks the student to deliver the conclusion for the experiment and the material that has	- Teacher asks the student what they know about transpiration - Teacher clarifies the students' answer - Teacher delivers the material about transpiration - Teacher shows video that can help to visualize the process of transpiration to the students - Teacher let the students to ask some questions - Teacher asks the students to conclude the material that has been delivered by the teacher	- Teacher asks the students what they know about translocation - Teacher clarifies students' answer - Teacher delivers the material about translocation - Teacher shows the video that can help to visualize the process of translocation to the student - Teacher asks the students to conclude the material that has been delivered by the teacher

		- Students are being asked to conclude the material that has been delivered by the teacher	been delivered by the teacher		
8	Specific way of ascertaining students' understanding or confusion around this idea (around likely range of response)	- Ask student to recall the part of the plant that is involve in plant transport - Ask another students to explain each function of it	- Ask the student what are the nutrients that can be absorbed by the plant	- Ask the students what transpiration is - Ask them to mention the process of transpiration - Ask them to mention the factors that can influence transpiration - Ask the student what is the effect of transpiration toward the plant	- Ask the student what translocation is - Ask them what is the things that make translocation differ to transpiration - Ask them to recall the process of translocation - Ask them what kind of substances that cab be transported by translocation
9	The use of technology in teaching idea	Use video that will describes the structure of the parts of the plant, and help the student t to visualize some part of the plant that cannot be seen by naked eye	Use video that can visualise how the nutrients is being absorbed and distributed to all plant parts	Use video that can visualise how the transpiration happens in a plant	Use video that can visualise how the translocation happens in a plant
10	How to compensate the absence of technology	Draw the parts of the plant in a sheet of big paper and use it as teaching media	Draw how the absorption of the nutrients will look like and use it as teaching media	Draw a scheme of how the transpiration works and use it as the teaching media	Draw a scheme of how the translocation works and use it as the teaching media