

Lesson Plan

Teacher Candidate: Daniel Eckel

Date Lesson Taught: October 30th, 2019

Lesson Title: Parts of a Plant Cell

Grade Level and Course: 4th Grade Math and Science and Inquiry

Time Segment of Lesson: 40 minutes

Standard(s) Addressed in Lesson:

NGSS: 4-LS1-1: Construct an argument that plants and animals have internal and external structures that function to support survival, growth, behaviour, and reproduction.

Vocabulary (and other literacy skills):

Visualization, function, organelle, nucleus, mitochondria, vacuole, cell wall, cell membrane, chloroplast, and cytoplasm

Student Diversity and Differentiation of Instruction

Student Diversity	Differentiation of Instruction
<i>ESL Learners</i>	The walkaround activity has each part of the cell highlighted to make it easier for these students to identify. We also will finish the class with a pronunciation exercise which can benefit the ESL learners the most.
<i>High Level Students</i>	When these students finish, there will be a labelling activity for them to do which they can do only with their notes. The other students can finish the first activity.
<i>Middle Level Students</i>	These students will have a variety of activities to help them which involve sitting, walking around, and discussions. They will have to write and record their answers.

Formative and Summative Assessments

Formative Assessment	Summative Assessment
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<ol style="list-style-type: none"> 1. Discussion in pairs: I will be observing and jumping in when necessary. 2. Discussion as a group: I can gauge the classroom and individual knowledge of the class. 3. Writing Sheet for recording the cell functions as they do a walk around: I will see what they observed and recorded during the walk around. 4. Pink Notebooks: I check these on a weekly basis. 	<p>The summative assessment will happen on Friday.</p>
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Big Ideas to be Addressed in the Lesson:

Cells are the basic unit of life.

The organelles in a cell work together to make it function.

Plant cells are different from animal cells because plant cells make their own food.

Discussion Questions

What is the most important part of the plant cell?

How do the plant cell organelles work together (what does what?)

How do plant cell and animal cells differ? How are they the same?

How does a plant make its own food?

21st Century Knowledge and Skills

21st Century Knowledge and Skills	Teaching Strategies
<i>Social Skills</i>	Students will do pair discussions to describe how a plant makes its own food.
<i>Flexibility</i>	Students will need to go around the classroom to disordered cell parts and make sense of the whole through the parts.
<i>Information Literacy</i>	Students will need to draw the main idea from text found in the organelle description.

Teaching Strategies and Related Student Activities (Include Web 2.0 activities as appropriate):

Teaching Strategies and Activities:

1. Begin the class with a visualization activity. Have the sound of a garden on as the students walk in. Have them sit down and listen to the sounds of the garden. After a minute ask what they heard. Get to the subject of plants and then go into the discussion activity after going over the word visualization.

2. Have the students work in pairs to discuss the question: how to plants make their own food. Let them talk together for a few minutes and have them meet back. Do a whole class discussion about this.

2. Do a quick vocabulary lesson on the words function and organelle so the students know how to do the exercise about plant cells.

3. Give instructions on the worksheet and have the students get up and walk around the classroom learning about the parts of a cell. Have them record their answers. Observe and ask questions to stimulate learning.

Review: The students know some of the processes about plants because last year they did a big project. However, they don't know the names of the plant cell organelles and thus this exercise will help them to learn these names.

Materials and Resources for Lesson

Materials, Technology, and Websites	Required Preparation
<i>Whiteboard and markers</i>	Self-explanatory
<i>Plant cell worksheet, sticky tack.</i> (https://www.superteacherworksheets.com/cells/plant-cell-bw.pdf?up=1510658848)	Blow up the A4 to A3 using a copier and then make 7 copies. Color in the necessary organelle and stick it to the wall with sticky tack. Make sure posters are spread out.
Recording Sheet	I made a recording sheet on word that has three columns (organelle, function, and mini drawing).
Pink notebooks	For notes

Reflection on Lesson

I think the lesson went well although I did spend too much time on visualization and less time on the content and objectives of the lesson. I did do a more direct instruction approach but I had different activities in there to allow for my young learners to move around and engage in interesting content. The lesson had various assessments that were formative in nature, such as me listening to the conversation, helping discussion groups that needed help, students writing the information of plant cells down on their worksheet, listening to students and asking the students questions while they walked around the room, and then the pronunciation feedback. I wanted my students to identify the parts of a plant cell, and know each parts general function. However, I tried to relate it to other classes (adaptation), and literacy. That is where I did the cross-disciplinary skills. I also knew the students did a big project last year and tried to feed off that project.

Ideas to change the lesson

I would put a timer up. I would make the posters more attractive. I did not have much time. I would talk less and think of another engaging visualization activity.

References

<https://www.superteacherworksheets.com/cells/plant-cell-bw.pdf?up=1510658848>