

TC Name: Michal Ross	Date of Teaching: Tues. October 19, 2015	Time Frame: 52 min
Content Area & Topic: Cell Characteristics Webquest		Grade: 7

Lesson Design Frame

This frame is designed to help you in the construction of your lesson plans. It is meant to serve as a scaffold. Questions are intended to scaffold considerations that will become habits of mind as you plan. For now, write brief responses to each so supervisors/instructors can “see” your thinking. Please change column widths to fit your needs.

Overarching Instructional Considerations:

Instructional Considerations	Questions to Consider	Responses
Standard(s)	<ul style="list-style-type: none"> What are content/practice and ELD standards? (Cut & Paste numbers and text, citing only the relevant parts to your lesson planning). 	<p>Develop and use a model to describe the function of a cell as a whole and ways parts of cells contribute to the function of a cell as a whole and ways parts of cells contribute to the function. [Clarification Statement: Emphasis is on the cell functioning as a whole system and the primary role of identified parts of the cell, specifically the nucleus, chloroplasts, mitochondria, cell membrane, and cell wall]</p> <p>[Assessment Boundary: Assessment of organelle structure/function relationships is limited to the cell wall and cell membrane. Assessment of the function of the other organelles is limited to their relationship to the whole cell. Assessment does not include the biochemical function of the cells or cell parts.]</p>
Understanding(s)	<ul style="list-style-type: none"> What do you want students to learn (know, understand, and be able to do)? Where does this learning fit within the curriculum/unit plan? How is it linked to the central focus of the unit? How does the learning build on what students currently know and can do, as well as be further developed in future lessons? 	<p>Students will be able to navigate an interactive website to answer questions on a separate worksheet</p> <p>This online activity follows structured note taking and reading about organelles. Students will gain an understanding of organelles in relation to each other inside the cell and they will see a new visual representation of animal and plant cells. The online activity will give students additional exposure/discover of organelles and functions in relation to the entire cell.</p>
Students	<ul style="list-style-type: none"> What might stand in the way of your students learning this content (specific misconceptions, lack of prior knowledge, etc.)? How does the proposed lesson address students’ backgrounds, interests, and needs, including levels of English language proficiency and Individualized Educational Plans (IEPs) or 504 plans? 	<p>Some misconceptions:</p> <ul style="list-style-type: none"> - cells are flat, 2-D objects - all organelles are the same size - there is nothing smaller than a cell <p>Some students may have more of an understanding than others about organelles. This activity challenges students who know the organelles to navigate through the activity to find the answers in the context of the website. Students who have a more limited understanding of organelles are challenged to use clues on the worksheet to find answers on the website. Students who move quickly through the front of the worksheet will be asked to work on the more challenging extension piece on the back</p>

Learning Objectives	Given (learning activities or teaching strategies), the learners will (assessable behaviors) in order to demonstrate (connection to standards).	Given a worksheet and interactive cell website, students will explore cell parts, organelle functions, and organelle relationships in order to answer worksheet questions and demonstrate knowledge of the primary roles of organelles and greater relationship to the whole cell.
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Assessment Activity:

Assessment Considerations	Questions to Consider	Responses
Assessment tool(s) <i>Consider informal & formal and diagnostic, formative & summative</i>	<ul style="list-style-type: none"> What tools will you use (performance task, selected response task, open-ended writing prompt, oral response, presentation, project...)? Why are the tools appropriate to assess students' attainment of the lesson's objectives? How will they allow for multiple opportunities and methods for all students to demonstrate understanding? What accommodations and/or Modifications are needed for students with IEPs or 504 plans? 	<p>Knowledge of organelle functions and relationships will be assessed in an informal matching quiz tomorrow and a more formal fill-in-the-blank/ short answer assessment on Friday</p> <p>The website is used as a tool to provide each student with an opportunity to explore organelle functions and relationships at his/her own pace. The website provides students with visuals of each organelle and an experience that helps students form an association with knowledge that may be helpful in the future</p> <p>This activity does not lend itself to multiple opportunities to demonstrate understanding but it is being used alongside other lessons incorporating artistic representations and small-group discussion.</p> <p>I will be roaming around class to assist students who have difficulty navigating the website and locating organelles or explanations.</p>
Evidence	<ul style="list-style-type: none"> What evidence will you collect with each tool? What might the evidence tell you or not tell you? 	<p>Completion of the worksheet will provide evidence that students have worked with the website and have been exposed to the organelles through the website</p> <p>Completion will not provide evidence whether the students actually spent time exploring the organelles or whether they gained understanding versus only writing the answers</p> <p>Students will complete an online practice quiz tomorrow to make their knowledge visible and ensure students are aware of what they are expected to know</p>
Evaluative Criteria	<ul style="list-style-type: none"> How will you evaluate student performance to determine if they met the learning objectives? If you are using a rubric, attach it. If you are using other criteria please explain. 	<p>I will evaluate student performance on the worksheet activity by roaming class, assisting when necessary, and looking over shoulders to make sure students are making progress and exploring the interactive website</p> <p>After students take the online quiz, I will look at results to determine the level of student understanding before going into the high-stakes test on Friday</p>

Feedback to students	<ul style="list-style-type: none"> How will you provide effective (timely, specific, growth oriented) feedback to students? Consider the method (written/oral, whole group/individual), form (questions, remarks, identification of misconceptions...), and alignment to learning objectives. 	<p>I will post the answer key to the worksheet online after class so students can evaluate their own work. I will emphasize to students that simply copying down the answer will not enhance understanding but instead, they should explore the website to find the incorrect answers</p> <p>The informal practice quiz will reveal correct answers to students for instant feedback. I will also post completed cell diagrams online as a study tool.</p>
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Academic Language (AL):

AL Considerations	Questions to Consider	Responses
Language Functions	<ul style="list-style-type: none"> What are students doing with language (compare-contrast, infer, inquire, explain...) in your lesson? How does this use of language relate to learning objectives? 	<p>Students will use a website to define organelles and explain the function in relationship to the entire cell.</p> <p>Students have varying degrees of experience with these terms. The learning objective is for students to use the interactive activity to gain understanding of these new words.</p>
Language Forms	<ul style="list-style-type: none"> What are key content words in this lesson? What are the key language structures, grammar, and discourse (<u>sentence frames</u>, writing genres, and other content specific language forms...) in this lesson? 	<p>New academic terms: cytoskeleton, lysosome, golgi apparatus, cytoplasm, nucleus, mitochondria, vacuole, photoreceptor cell, parenchymal cell</p> <p>Students will need to listen to audio associated with each cell part and also read 1-2 sentences in order to define each organelle and relate the function to the entire cell</p> <p>The worksheet includes sentence frames with an extension piece on the back for students who work at a faster pace.</p>
Supports	<ul style="list-style-type: none"> What kinds of scaffolding, bridging, and contextualization do you provide (use of students' prior knowledge and experiences, visuals, realia, graphic organizers, sentence frames, pair/group work, hands-on activities, modeling...) so that students can access and practice AL to participate in the lesson? In what ways do you provide opportunities for scaffolds to be eventually removed? 	<p>Students who have a hard time paying attention in class or who have ADHD will likely have trouble staying engaged in the activity and controlling their patience to take time exploring the website versus knowing exactly where to find answers. If this is an issue, I will guide them with additional hints about where to find the information.</p> <p>2 ELLS with very limited English may struggle because the worksheet has a lot of English text that is similar but not identical to information on the website. I will provide them with a translator app on the iPad so these 2 students can work together to answer questions and explore at their own pace.</p>
Language Objectives	<p>What do you want students to be able to do with language (identify, give examples, compare, use, design, judge)?</p> <p>Given (supports), the learners will (function) in order to (connection to learning objectives and content standards).</p>	<p>Given section headings and fill-in-the-blank questions, learners will use context clues in order to navigate the website and locate target practice activities in order to understand the role of organelles in the greater function of the cell.</p>

Materials List:

(if you wish) that considers will and students will need for this lesson.

- Chrome Books
- Cells WebQuest worksheet

Time	Activities & Instructional Strategies	Purpose	Management/ Materials
10:24 – 10:32 (5-8 min)	<p>Do Now</p> <ol style="list-style-type: none"> 1. Write names of all students at your new table group 2. Do you work better alone or in groups? 3. What do you like about working in groups? What can be challenging about working in groups? <p>Discuss #3 with table groups. Share out #3 as a class. Discuss why I like having table groups and importance of asking questions – emphasize that asking questions doesn't mean lack of knowledge</p>	Students have just changed seats and may not know everyone's names. This gives them a chance to write names and have reference for the future. It also allows me to find out which students prefer to work alone.	<p>Move around class to make sure students are at least writing SOMETHING.</p> <p>Prep students at table groups to be ready to share out in a class discussion.</p>
10:32 – 10:37 (5 min)	<p>Transition to exploring inside a cell in more detail. Today will be a self-guided exploration. Hand out worksheet. Give worksheet tips:</p> <ul style="list-style-type: none"> - navigate to resources page of NEO to use hyperlink to website - only required to complete the front side, back is extra challenge - show slider that zooms to see smaller items - give hint about moving on if you can't find answer to a question 	Give useful info to be successful with the worksheet.	I will be at the front of the room giving instruction. I will pass out worksheets to students so they can follow along and preview the worksheet as I am giving helpful hints.
10:37 – 11:00 (20-23 min)	<p>Give students OK to open ChromeBooks and navigate to the website Allow uninterrupted work time so students can explore on their own Offer helpful hints as the need arises.</p>	Give students freedom to work at their own pace. Headphones are OK because of audio on website.	Roam around class and help students if/when needed. Give students tips about where to find answers on the website but I will not give out answers.
11:00 – 11:08 (8 min)	Put answers on DocCam so students can check their work and take time to finish the activity	Students are responsible for using resources and opportunities to correct their answers and have a study tool	
11:08 – 11:15 (5-7 min)	<p>Log off Chrome Books. Dismiss by table to return Chrome Books to the computer cart. No Homework but remind students that answers to both sides of the worksheets will be posted online if they still need to check answers</p>	Relaxed clean up and reminder about potential resources.	Dismiss each table group separately to return Chrome Books. Assign 1-2 students to help put computers away.
11:16 Bell	<p>Exit Ticket (if needed before 11:14):</p> <ol style="list-style-type: none"> 1. List as many organelles as you can remember from the activity today. 2. What did you find most challenging about the activity today? 	Instant feedback about what students remember short-term. Modify my own teaching in the future according to what students found challenging.	Use pieces of scratch paper by the classroom door.

