Scaffolding Activities
Bloom's Taxonomy and Hess's Depth of Knowledge

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Project Title: TRAVELING CELLS: AN ADVENTURE THROUGH CELLS & THEIR ORGANELLES

Date: February 11, 2017

Objectives:

- Students will be able to compare and contrast Eukaryotic and Prokaryotic cells.
- Students will be able to compare and contrast Animal, Plant, Bacterium and Protista cells.
- Students will be able to compare and contrast the functions of cell organelles to the functions of the human body system.
- Students will be able to identify the function and structure of cell organelles in Animal, Plant, Bacterium and Protista cells

Essential Question(s):

- What defines a living thing?

Unit/Project Question(s):

- Why is each part of the cell essential to survival?

Content Questions:

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- How do plant and animal cells differ?
- How do bacterium and Protista cells differ?
- How do Prokaryotic and Eukaryotic cells differ?
- How do the functions of cell organelles help the overall cells?
- What structures (organelles) are in eukaryotic cells and prokaryotic cells?
- Are these organelles the same in each cell? How do they differ from one another?

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Bloom's Level	Activities	Assessment	Hess's Depth of Knowledge
Creating	Students will evaluate the evidence collected through the unit to create an argument as to which cell is the most important. Students will defend their argument and opinion using evidence collected.	Argument will be scored with a letter grade by using a rubric.	**Extended Thinking** Students will apply concepts learned in order to create complete plans and sketches for a final project. Students will connect important concepts and design a 3-D model of a cell with its organelles. Students will then analyze & critique their own models.
Evaluating	Students will construct a 3-D model of a cell. Students will design the model by creating a blueprint model first. Students will plan their design and model collaboratively in their groups. Students will create scientist statements that reflect their experiences and	Evaluation & reflection will be scored using a letter grade. 3-D models will be scored with a rubric. Scientist statements will be scored using a rubric.	
Analyzing	Students will compare and contrast the various types of cells. Students will	Analyzing structures and functions of cells will be scored with a letter grade by using a rubric.	**Strategic Thinking** Students will draw conclusions on how the cell organelles help a cell thrive.

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	determine the various structures of the cells and their purposes.		
Applying	Students will apply their knowledge of cells to answer questions posed by the teacher.	Implementation and demonstration of understanding while writing in a science journal will be scored with a rubric and be given a letter grade.	**Skills & Concepts** Students will make observations about cells and their organelles, & interpret how their organelles, their structure and their function, help them survive.
Understanding	Students will paraphrase their learning in their summaries.	Each assignment will be scored using a letter grade. Teacher will assess for student's clear descriptions & explanations.	**Recall & Reproduction** Student will read about and research the structure and function of each cell. Students will answer questions about the different cells in order to develop their understanding. Students will label, define and recall the cell organelles and illustrate their understanding using small, simple and complex assignments that will report on the cells and cell organelles.
Remembering	Students will define vocabulary terms. Students will complete fill-in-the blank notes.	Each assignment will be scored using a check system. Teacher will assess student ability to define and repeat.	