|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| M. Angileri ♣ 4 -9-18 | **6th grade science** | | **Lesson Plans: Anatomy of a cell #2** | | | | |
| NGSS Standard | **MS-LS1-2**  DCI (A)  DCI (A)  MS-LS1.2.A  S & E practices  CCC | | Develop and use a model to describe the function of a cell as a whole and ways parts of a cell contribute to the function.  **Structure and Function** All living things are made up of cells, which is the smallest unit that can be said to be alive. An organism may consist of one single cell or many different numbers and types of cells.  **Structure and Function** Within cells, special structures are responsible for particular functions, and cell membrane forms the boundary that controls what enters and leaves the cell  **Developing and Using Models:** Phenomena: Develop and/or use a model to predict and/or describe phenomena.  **Structure and Function:** Analysis of Structures: Complex and microscopic structures and systems can be visualized, modeled, and used to describe how their function depends on the shapes, composition, and relationships among its parts; therefore, complex natural and designed structures/systems can be analyzed to determine how they function. | | | | |
| Vocabulary: | | **Multicellular:** An organism made up of more than one, often different cells.  **Cell:** Basic structural and functional unit in living organisms.  **Cell Theory:** Theory that states the cell is the basic unit of all living things.  **Unicellular:** An organism made up of one cell.  **Organelle:** Membrane-bound structure inside a cell that has a particular function,  **Prokaryote:** Organism whose cells lack a nucleus and membrane-bound organelles.  **Eukaryote:** Organism whose cells have a true nucleus and membrane-bound organelles.  **Nucleus:** The dense area in a eukaryote cell that contains nucleic acids, the chemical instructions that direct the cell’s activities. ( A membrane bound structure in eukaryotic cells that contains DNA)  **Chloroplast:** The structure of the plant cells in which food is made. ( Membrane bound organelle in plants tha tis the site of photosynthesis)  **Cell Membrane:** A lipid barrier that encloses the cytoplasm and controls what enters and exits the cell.  **Cell Wall:** The tough protective barrier that surround the outed membrane of some cell types.  **Mitochondria:** Organelle in cytoplasm of eukaryote cells that functions in energy production, the power factory of the cell. | | | | | |
|  | | **MONDAY** | | **TUESDAY** | **WEDNESDAY** | **THURSDAY** | **FRIDAY** |
| Content Objective: | | SW demonstrate knowledge of plant and animal cells by identifying structures and functions that occur in those cells. | | SW demonstrate comprehension of how parts of a cell contribute to the function by describing the structure and function of various cell parts. | SW demonstrate analysis of cells and the special structures that are responsible for particular functions by distinguishing the importance of the function of a lysosome. | SW demonstrate knowledge of energy and chemical processes that take place during photosynthesis by identifying things that take place during the process. | SW demonstrate knowledge of scientists and cell theory by identifying important information for their poster. |
| Language objective | | SW write to recount structures and functions of cells using sentence starters. | | SW write to describe how parts of the cell function using sentence starters. | SW write to defend their “claim” distinguishing the importance of the function of a lysosome using content specific vocabulary and complete sentences. | SW write to describe the energy and chemical processes that take place during photosynthesis using sentence starters. | SW orally describe how scientists used tools and information to form our present day cell theory using content specific vocabulary. |
| **Essential Question:** | | **How are cells like organisms?** | | **How are cells like organisms?** | **How are cells like organisms?** | **How are cells like organisms?** | **What is cell Theory?** |
|  | | Hook: Plant verses Animal  Do 1: Functions of cells | | Do 3: Plant cells Vs Animal cells  Article/diagram | Video: What is a cell  Organelle Sort card  CER writing | APK Photosynthesis  Hook Soaking up the sun. | Present Cell Theory Posters  Peer review of CER writing |
| Learning Target | |  | |  |  |  |  |

**The Verbs:** What should students be doing? **Construct an argument:** Say what you think and why. **Use an argument:** Make use of what you think. **Present an argument:** Show and tell people about what you think. **The Nouns**: What key terms are found in the standard? Motion energy: Kinetic energy Kinetic energy: Energy of motion Energy: Controls the amount of change that can occur within a system; without enough energy, change cannot occur

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Enrichment | Read Hoot Chapter 15  Project: Complete Cell part and function to the characters in Hoot | Hoot chapter 16  Plan for courtyards | Chapter 17  Vocabulary Posters | Chapter 18 | Recycling |