**Lesson 2:** Internal features of Protista

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| **SUBJECT:** Life Sciences  **Lesson Topic:** Protista (internal) | Grade Level: 6  Length of lesson: 45 min |
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**Stage 1 – Link to Big Idea**

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| **Essential Question(s)**:  - Do Protista have a brain?  - What organs do they have? How do they work?  **Gaining access to topic**: *What is it about this lesson topic that makes it important to know? What is emotionally engaging about this topic? What within the topic can evoke wonder/interest?*  - Using a hands-on, inquiry based approach to get messy and explore how Protista work. | | |
| **Stage 2 – Desired Results** | | |
| **Prescribed Learning Outcomes (PLOs):**  Distinguish between life forms as single or multi-celled organisms and belonging to one of five kingdoms:  Plantae, Animalia, Monera, Protista, Fungi | | |
| **Enduring Comprehension(s)** *Students will come to understand:*  - Simple does not necessarily mean “easy”. There is an elegance in the simplicity of how Protists are designed. |  | |
| **Student Objectives (Specific Outcomes):** *Students will be able to:*  - Identify the internal elements of a Protist including Nucleus, Cytoplasm, and Cell Membrane | | |
| **Stage 3 – Assessment Evidence** | | |
| *How will I know the students have met the specific objectives?*   * **Formative - For/As Learning**:   + Does the student participate in group collaboration and engage in discussion? * **Summative - Of Learning**:   + Students will write a reflection on the activity: “What did you learn about Protists?” | |  | |

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| **Stage 4 – Learning Plan** | | |
| ***Preparation:*** | Have a variety of materials laid out and ready for students to try to use. |  |
| ***Section*** | **Structure of Lesson** | **@ Time** |
|  | Hook and Explicit Teaching **(Optional and based on students prior knowledge)**  **Activity**  In this activity, a variety of materials are presented that mimic the microscopic elements of a Protist. Students are asked to imagine they were able to enlarge a Protist to be a visible size.  **Task:** Working in groups of 2-3, use the materials in any way you wish to create a protist.Students are encouraged to try to make everything within an enclosed cell membrane and to experiment with different liquids or lack of liquid to represent the cytoplasm of a cell.  **Extension:**  After the protist is created, students could attach paper labels to the different elements and organelles and then photograph it. | 10-20 min  20-30 min |

**Materials:**

*What materials will I need to gather?*

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| **Materials:** |  |  |
| **Liquids:**   * Corn Syrup * Water * Dish Soap   **Solids:**   * Styrophome Balls * Other Various solid materials * Glitter   (If you can tolerate it)  **Membranes:**   * Transparent Latex Gloves * Semi-transparent balloons * Cling-Wrap | **Other:**   * Pipe Cleaners * Tape * Elastic Bands * Blank Paper |  |