**Lesson 2:** Internal features of Protista

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| **SUBJECT:** Life Sciences**Lesson Topic:** Protista (internal) | Grade Level: 6Length 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 min20-30 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
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