**Lesson #: 2**

**Created By:** David Giesbrecht

|  |  |
| --- | --- |
| **SUBJECT:** Life Sciences**Lesson Topic:** Plant Phyla (classifications) | Grade Level: 6Length of lesson: 45 mins |
|  |  |

 **Stage 1 – Link to Big Idea**

|  |
| --- |
| **Essential Question(s)** What are the essential characteristics that make one plant different than another, and how are they classified?**Gaining access to topic**: It is important to know what characteristics scientists deem important. Plants are incredibly diverse and classifying them helps us to understand them and their diversity better. |
|  **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)** How plants are classified, and the different classification categories, or phyla |  |
| **Student Objectives (Specific Outcomes):** Put a plant into its proper phyla, based on observing or studying its characteristics  |
| **Stage 3 – Assessment Evidence** |
| *How will I know the students have met the specific objectives?* * **Formative - For/As Learning**:
	+ Observation as they study and teach their assigned phyla, and as they are outside observing plants
* **Summative - Of Learning**:
	+ Worksheet handed in with appropriate plants in each category.
 |  |

|  |
| --- |
| **Stage 4 – Learning Plan** |
| ***Preparation:*** | Before class begins… |  |
| ***Section*** | **Structure of Lesson** |  **@ Time** |
| **I. HOOK** *(to lesson topic)***II. MAIN****III. Closure***(to lesson topic)* | Brief review that plants are categorized based on their characteristics. Then highlight the events of the upcoming lesson, that we’ll have a chance to learn what those characteristics are, and then go outside to observe the plants ourselves. Also use this time to remind students of proper conduct when outside, and proper use of technology for school purposes only. 1. Class is split into 4 groups. Each group is given a particular phyla (classifications). They include Bryophytes, Pteridophytes, and Spermatophytes which is split into two groupings, Gymnosperms and Angiosperms. They will study the information about that phyla from their textbook, particularly what characteristics of plants it consists of. They will also give a list of a couple of plants that fit in that phyla. Finally, they will briefly present that information to the class, teaching them about that phyla.
2. Students, in groups of 4-5, will go outside, with a length of string handed out by the teacher. They will take that string and try to find an area with as many plants as possible that can fit within that length of string, which then must connect. Within that string, they will take a picture (with an Ipad or ipod) of every different type of plant they can find within that length of string.
3. Once they have taken a picture of every plant within their string, as a group they will keep searching for plants until they have found an overall total of 15-20 different types of plants

Afterwards, they must come back inside, and for each plant that they have, they must try their best to put it into its proper phyla. Groups will be awarded for whichever has the most different types of plants within its string, and whichever can have the most different types of phyla within their string, and finally the most types of plants overall  | 5 mins20 mins10 mins5 mins 10 mins |

**Considerations/Adaptations/Extensions:**

*How will I meet the needs of various learners/offer differentiated learning activities and strategies?*

|  |  |
| --- | --- |
| **Adaptations:** | **Extensions:** |
| A student may stay inside and search different types of plants, either on the internet or from their textbook, and put them into the proper categories.  | If ipads are available, teams that are finished early may search the plants that they found, trying to find their name and their physical characteristics on the internet of their ipad  |

**Materials/Resources:**

*What materials and resources/resource people will I need to gather?*

|  |  |  |
| --- | --- | --- |
| **Materials:** | **Resource people:** | **Resources:** |
| Textbook, ipod or Ipad for taking pictures, length of string for each group, worksheet handed out  |  | Textbook  |

**Additional Notes:**

**Plants Search:** Name:

|  |
| --- |
| Bryophytes: No roots or stems, have thin hairs to attach to damp surfaces.  |
| Pteridophytes: Have roots, stems, and leaves, but no seeds or flowers.  |
| Gymnosperms: Has seeds which are found in cones |
| Angiosperms: Plants that have seeds which develop inside a flower  |