Life Cycle of a Plant

Grade Level	2nd	**Subject**	Life Processes

Objective(s):
The student will investigate the different life stages of a plant and what happens during each one.

SOL Addressed:
Science –2.4 (b) The student will investigate and understand that plants and animals undergo a series of orderly changes as they mature and grow. Key concepts include:
b) plant life cycles.

2.5 The student will investigate and understand that living things are part of a system.

Common Core Standards:
(Georgia Standards)
S2L1. Students will investigate the life cycles of different living organisms.
c. Investigate the life cycle of a plant by growing a plant from a seed and by recording changes over a period of time.

Materials Needed Per Class of 30

and

Prior Knowledge

- Microscopes
- Plant Seeds
- Soil
- Pots
- Water
- Sunlight
- Notebooks & pencils for collecting data

Prior Knowledge: Review question from teacher: What are the parts of a plant?

Students must also know the terms: stem, root, flower, fruit, leaves, and seeds.

*****Before this lesson begins make sure to have materials out and ready for student use.**

Ways to differentiate this lesson plan

- **Extension –** For the higher level learner, they could be in charge of recording the temperature, amount of water, and amount of sunlight that each of their plants receives. They will make their own data chart with these findings.
- **Modifications –** Students will be grouped together in teams of 4 or 5 students, making sure that all strengths are represented in each group.

<table>
<tr><td></td><td colspan="2"></td></tr>
<tr><td>Introduction/
Anticipatory Set</td><td>Anticipatory Set: Review the terms stem, root, flower, fruit, leaves, and seeds.

The teacher will show a plant and have the students point out each part of the plant.

Questions to ask students:
What does each part of the flower do?
What would happen if one part was missing?
What does a plant need in order to survive?</td><td>Introduction:
The class will discuss the different parts of a plant.

The students will discuss the importance of each part.</td></tr>
<tr><td>Guided Practice</td><td colspan="2">Students will need to be placed into teams of 4 or 5 in a group. Each team has their own plant seeds, soil, 2 pots, notebook and pencils.
As a class, discuss briefly about what they will need in order for their plant to grow and what they think will happen if one of those things is missing.
The students will put the plants (each in a different location) wherever they want to.
2 times during the school day, the students will check their plants and record what is happening.
Predictions need to be made and recorded by student teams:
Which plant will survive and why?
Why do you think the second plant will not survive?
How long do you think the second plant will survive?</td></tr>
<tr><td>Independent Practice</td><td colspan="2">At the 2 chosen times daily, everyone will check on both of their plants.
The students will check on their plants, twice a day. If their plant needs water, and that wasn't the one thing they decided not to give their plant, they will water it.
At the end of each day or at the end of the week, have teams discuss and compare the results to their predictions. Then have them explain possible reasons for their results.
After the plants have grown, they will use a microscope to examine the different parts of a plant.</td></tr>
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	• After observing their plants, they will talk as a team as to the purpose of each plant part. • During the testing times, the teacher should be monitoring and questioning students about their results and why they believe these results happened the way they did.
Closure (Summary of Lesson)	Students should have their explanations of what happened with both of their plants. Each group should have a report typed up (in computer lab) to describe their findings. What are the parts of a plant? What are the purposes of each part of the plant?
CEED Building Application/ Sensor Data	The teacher will use the Dashboard from the CEED website (http://dashboard.intellergy.us/ceed/). The students will check the website daily, for a week, to check the rainwater storage (amounts), photovoltaic array, HVAC (temperature). The teacher will discuss how these things are important in allowing a plant to grow to its full potential.
Assessment	• Students collected data on the plant growth and the parts of a plant. Those journals will be collected and used as an assessment when completed. • Students will also be assessed by a short quiz at the end of the unit.