

Araceli Garcia

Cooperative Learning Lab: Science

Big Idea: Students will be able to recognize the life cycle of a plant as well as the needs to sustain a life of a plant.

Standards: The lesson being taught to the students will be according to the grade level being taught. Since we have different grade levels among our group team, we will go into specifics of what each of our grade level students will do. The following are the standards for each of our grade level:

- (Grade K) NGSS LS1.C: Organization for Matter and Energy Flow In Organization – All animals need food in order to live and grow. They obtain their food from plants or from other animals. Plants need water and light to live and grow.
- (Grade 1) NGSS LS1-1. Use materials to design a solution to a human problem by mimicking how plants and/or animals use their external parts to help them survive, grow, and meet their needs.
- (Grade 5) NGSS LS1-1. Support an argument that plants get the materials they need for growth chiefly from air and water.

I. Formation of Groups:

- The students will form groups by using a human graph depending on their knowledge on knowing the 5 needs of a plant/ what a plant needs to survive. Students will be placed in a heterogeneous group. So it will contain 2 to 3 students who know a lot of information about plants and who know little information about plants. Students will be divided in groups containing 4-5 members

II. Role Assignments: Beginning with the Checker all roles are assigned to the right (clockwise). Although each student will have a role assignment. All of them will contribute to the worksheets, graphic organizers, and interactive experiments that they will be given. These role assignments are an extra responsibility that they will be doing. Students will be given directions as to what each role assignment will be doing before they are assigned a role. This way students have a clear understanding as to what their role will be.

Comment [SFB1]: Will the directions be both verbal and visual? It is important when first introducing cooperative learning.

A. *Materials Manager/ Encourager:*

- Student will be collecting the materials that will be needed for their group. At the same time, they would be positively encouraging their group members throughout the process. They would encourage their members to listen to one another before giving an opinion. They would then complement each of their

member's idea whether it was a good or bad idea. This way each member in the group is given a compliment throughout the lesson. At the end of each lesson session, the student is responsible for collecting any of the remaining materials and/or creations they have done to place it at the teacher's table.

Comment [SFB2]: Will students know that this behavior is both expected and assessed?

B. Checker/Timekeeper

- Student will be responsible for making sure that the group is focusing on the lesson and making sure that the group is remaining on task. The checker will have a checklist of what will be expected to be complete during this day's activity. They will observe to see that the other team members are on task. They will make comments about how the group members are doing throughout the activity. They will also be in charge of managing the time. They will alert the group of how much time they have left.

C. Recorder

- This person will be responsible to make sure that they are writing down the information that is shared by the teacher and members. This way they will be able to keep record of what has been discussed and shared throughout the lesson and activities.

D. Observer/Reporter

- This person will be responsible to observe what the members are doing. They will also have a checklist that has the responsibilities that each member needs to accomplish (ex: listening to one another, participating in the lesson, giving opinions/thoughts, etc.). At the same time, the student will be reporting what has been accomplished. They will report their results at the end to the teacher.

Comment [SFB3]: Important inclusion!

E. Other: Traveler/Spy--Can be the checker

- This person will be responsible for going around the room and looking at how other groups are doing. This way they are able to get ideas from other groups so that they can share it with their own group. At the same time, students will be able to find a variety of ways and/or strategies they can use that were inspired from other groups. They would not copy the other group, but instead make it in a way that is for their own group.

Comment [SFB4]: This is a helpful strategy.

III. Task (See Big idea and Standards)

- A. The Big Idea for each grade level is for them to recognize the life cycle of a plant, the needs for a plant to live, and the sustainability of the plant. Although there are three different grade levels that each of our group members are focusing on (K5, 1st, and 5th grade), they will all meet the points of each aspect of the plant.
- B. The objective/goal for the students is that students will be able to understand and recognize the aspects of the plants. Each of the objectives/goals will be demonstrated in the lesson plan for each grade level.

C. The ultimate task is for the students to complete worksheets and activities that are determined for their grade level. This will be reflected on the lesson plans.

D. Delivery of Instruction (**PLEASE REFER TO CSUN LESSON PLANS TO SEE DIFFERENTIATION OF EACH TEACHER AND GRADE LEVEL.**)

- The class will begin with pictures displayed on the ELMO. The pictures will be of plants and images pertaining to plants as well (e.g., flowers, sprouts, soil, water, sunlight, air). With the pictures displayed on the board, the students will be given time to turn and talk to their table group to try to decipher what the Science lesson will be about.
- After, the topic of Plant Life is revealed, the students will be told the objective of the lesson, which will be being able to recognize the life cycle of a plant as well as the needs to sustain the life of a plant.
- **Activities will be introduced and completed determined by the grade level.**
- **PLEASE REFER TO CSUN LESSON PLANS TO SEE DIFFERENTIATION OF EACH TEACHER AND GRADE LEVEL.**

Comment [SFBS]: I would love you to check out the NASA ECOSTRESS project if you wish to continue this lesson as a PBL.

IV. **Time Limits:** The overall lesson will take 60 minutes

- The first engagement activity where students discuss possible ideas of what they will be creating will take about **five minutes**. This will give students enough time to look over and connect how the images displayed are similar.
- The second portion of the lesson will be introducing the lesson topic as well as creating the human graph. This will take about **five minutes**.
- The body of the lesson will differ on grade level. **PLEASE REFER TO CSUN LESSON PLANS TO SEE DIFFERENTIATION OF EACH TEACHER AND GRADE LEVEL.** This part of the lesson will take **40 minutes**.
- For the closing of the lesson, the Materials Manager will return all materials to the teacher. The teacher will conduct an informal assessment by providing an exit ticket to see if the objective was met. This part of the lesson will take **10 minutes**.

V. **Social Skills and or Habits of Mind to Engage/Assess:**

- Positive communication (overall)
- Disagree with the idea-not the person (overall)
- Sharing (team activities)
- Flexibility in thinking (team activities)
- Attentive listening (during guided instruction)
- Praising others- no put downs
- Perseverance

VI **Level of Voice:** (Classroom Level 2 – Normal Voice Table Talk)

- Students will be using a classroom level 2 - normal voice for teaming activities.
- Students will also be using a classroom level 2 voices during the think-pair-share activities.
- During teacher instruction, the classroom level should be at a 0 - no talking, so that students are able to hear the important information provided concerning plants. Individual students who are responding to questions, participating in discussion, or presenting their team's flag to the class should think about/try to speak at a level 3- strong speaking voice.

Comment [SFB6]: Will you display a voice-level poster for them to follow during the different steps of your lesson?

VII. Processing--Questions for groups and individual reflections:

- We will have prepared a worksheet with a list of questions that relate to the science lesson of plants. This will be their form of exit ticket to show us what they understood from the content being taught. At the same time, it will reflect how much they were able to retain information. Each grade level will have their own form of exit ticket.

Comment [SFB7]: How will their performance on this outcome be evaluated?

VIII. **Assessment Content:**

- Assessment of Cooperation/Collaboration and Student
 - The teacher will circulate the classroom with a checklist to see if students are meeting objective. **Each checklist is different depending on the grade level expectation. (PLEASE REFER TO CSUN LESSON PLANS TO SEE DIFFERENTIATION OF EACH TEACHER AND GRADE LEVEL.)**
- **Self-Assessment of Collaborative Performance**
 - Once all the presentations and assessments have been completed, the students will have a self-reflective journal entry where they are able to assess themselves in how they contributed to their group and content.
 - Students will be able to pick any one of the following questions to answer so that they will be able to self-assess themselves:
 - What did I contribute to the group?
 - How did I work with my members?
 - Did I put in my best effort?
 - What would I have done differently?
 - What part of the lesson did I enjoy? What part of the lesson did I not enjoy?

- Peer Assessment (Rate Your Mates)

Rate Your Mates!

Comment [SFB8]: This title can be changed to team work self assessment.

What did we do?	Student 1	Student 2	Student 3	Student 4
I listened to my team!				
I solved conflicts reasonably				
I respected everyone's ideas				
I did my best work!				
I completed all tasks!				

VIII. Encouraging Energizer:

- Each group would have an encouraging energizer that they have picked beforehand. Once the student and group members have shared what they did, the rest of the class will do the encouraging energizer.

Comment [SFB9]: I am pleased that you included this aspect.

IX. The 5-E Framework

- Engage
 - To *engage* the class with the lesson before the lesson is specifically addressed, the hook will be implemented to capture student interest. Students will view pictures of materials and turn and talk to their partners to guess the topic.

- Students will receive a broken-down explanation to understand the life cycle of a plant as well as the needs. This will be done differently by every grade level, but will follow the format of “guided” to independent practice.
- For student assessment, the checker/observer will fill out the “Rate Your Mates”. This is to see how collaborative the students were in their group and to push on improvement with communication. With an encourager, this will push students to strive to do well collaboratively as well as recognize what steps it takes to be a great team player.
 - K/TK The checker/observer will fill out the checklist and bring it to the teacher, where they can explain why they did/ did not give certain students checklists.
 - 1st: Students will use the checklist provided and turn in with the rest of the materials.
 - 5th: Students will use the checklist provided and turn in with the rest of the materials.
- For student reflection, when the students have completed their work, they are to refer to the reflective questions on the board. This self-reflection will help students reflect on the work they did and the collaborative effort they put into the activity.
 - K/TK Students will reflect orally as a turn and talk activity done when the group is complete with their activity. As a group they will discuss personal reflections and group reflections.
 - 1st: Students will write in their daily journals based on the reflective questions on the board. This is an individual activity to be done when the students finish the independent work of the lesson.
 - 5th: Students will self-assess the work and effort they have put into the activity. They will write three sentences for every question. This will push them towards actual self-assessment, and self reflection. There will also be one question that asks how their group members were, they will also answer this question in 3 or more sentences. At the end of their reflection time, we will reflect as a whole class; “What did you like about the lesson?”, “What did dislike about the lesson?”, “If there was something you could change, what would it be?”, “What would you like to learn more about?”.
 - **PLEASE REFER TO THE LESSON PLANS TO SEE THE VARIETY OF CONTENT THAT THE STUDENTS WILL BE ABLE TO REPRESENT.**
- Explore
 - To get students to explore the topic, the life cycle of a plant, students will think about what necessities we (humans) need in order to survive. After some thinking time, students will pair-share their thoughts. This allows students to

Comment [SFB10]: See note above

Comment [SFB11]: Hm. If you do this, then remove the word “I” from the checklist and have the group member’s name at the top.

get their thoughts out before speaking up to the entire class. Also, allowing students to connect themselves to the topic being taught, students are more likely to retain and connect the information.

- K/TK: Students will think about what they need everyday in order to survive. Although some students may mention some things that aren't considered a "necessity" to everyone, this will allow discussion to occur in the classroom and teach them what "necessities" are truly needed in order to survive. Then they will be shown a picture of a dying/wilted plant and asked why they think the plant looks "sad" or unhealthy. This will then create a transition into the lesson.
- 1st: Students will be shown two pictures, a healthy plant and a dying/unhealthy plant. They will then be prompted on what the difference is between the plants. This will allow students to refer to their prior knowledge and make connections with what will be taught. Once students have had enough time to think, they can share their thoughts with their table partners and answer the question "What is the difference between both plants?" This question can be answered in a variety of ways, but it will allow whole class discussion and create a transition into the lesson.
- 5th: Students will observe plants that have been treated differently. There will be 4 plants (a healthy plant, a dying/unhealthy plant, a pot with a seed and completely dry soil, and one plant tightly covered in cling wrap/ clear wrap/ saran wrap) that the students will observe, group by group. Students will work collaboratively and answer the question "What is the difference between all the plants?" After some discussion, students will all come back together and share their thoughts. This will then create a transition into the lesson.
- Extend/Elaborate:
 - To *extend*, we will integrate this lesson with another subject. This can be related to physical education by having students become the plant. As student start off from a seedling and mature to an adult plant, they will be asked to do a certain tasks based on the stations.
 - Each grade level will have different variations of these stations based on their student's ability level along with the spacing at their school.
 - K/TK:
 - First station, students will start as a seed and then they will walk quickly to the cones that are zig zagged. This will represent the roots of the plants growing.
 - Second station, students will collect "water droplets," which are the bean bags and deposit them in the buckets.
 - Third station, there will be three mini stations set up.

Comment [SFB12]: I really like the way you have planned this lesson.

Comment [SFB13]: This is well considered, imagined and described. I would love to watch this lesson unfold at the various grade levels. What you have essentially accomplished here is lesson design study.

Comment [SFB14]: Clever way to integrate and make meaningful for young learners.

- First mini-station, they will do five crunches (represent the baby plant)
 - Second mini-station, they will do five high-knees in place (represent the medium plant)
 - Third mini station, they will stretch out to be as big as they can be (represent the adult plant)
 - Once students finish, they will be able to start all over again.
- 1st:
 - First station, students will start as a seed and then they will walk quickly to the cones that are zig zagged. This will represent the roots of the plants growing.
 - Second station, students will collect “water droplets,” which are the bean bags and deposit them in the buckets.
 - Third station, there will be three mini stations set up.
 - First mini-station, they will do five crunches (represent the baby plant)
 - Second mini-station, they will do five high-knees in place (represent the medium plant)
 - Third mini station, they will stretch out to be as big as they can be (represent the adult plant)
 - Once students finish, they will be able to start all over again.
- 5th: Students will be given materials to prepare a plant for potting with their group. Students will be using their observations of the four plants in the classroom, to decide where they will plant their potted plant. Students will be told to keep record of the plants growth based on the necessities they learned plants need in order to grow and survive.
 - Students will choose what seed their group would like to grow.
 - Decide where they will post their plant.
 - Keep record of their plant type, where it is posted, and when they planted it.
 - This allows students to explore how a plant grows and what is needed for a plant to grow.
- **Explain:**
 - To *explain*, each group will have an opportunity to share what they have done collaboratively. This gives them an opportunity to present in front of the class what they have learned from the content and one another.
 - Each grade level will have their own worksheets and activities that they will be able to do.
 - K/TK: Students had the opportunity to learn the life cycle of a plant by doing a worksheet where they need to sequence the cycle of a plant.

Comment [SFB15]: Again, this is a clever, enactive plan for young students.

Comment [SFB16]: Do you mean place?

Comment [SFB17]: Yes. They access and express the knowledge acquired.

As a group, the students needed to collect the materials to help one another in planting a plant. They worked collaboratively as a group, but they each individually planted their own plant.

- 1st: Students had the opportunity to learn about the life cycle of a plant by sequencing each step. As a group and individually, students learned different kinesthetic movements that would help them learn about the plant life cycle.
- 5th: Students will share their observations with the class and explain why they believe the plants are in their states. Students will then create a flow map, collaboratively, illustrating how their group thinks a plant grows. Students will be asked to think from plant-to-seed based on their observations of the plants in the classroom. Having students deconstruct the growth of the plant will allow students to refer to their prior knowledge on the topic.

- **PLEASE REFER TO THE LESSON PLANS TO SEE THE VARIETY OF CONTENT THAT THE STUDENTS WILL BE ABLE TO REPRESENT.**

- **Evaluate:**

- Students will be assessed in three areas: collaborative/individually, self, and peer. These 3 areas will show how each student was able to contribute as a member to their team and how they individually learned.
 - Collaborative/Individual Assessment: The teacher will roam around the classroom with a checklist/commentary clipboard. She will be observing how each student is doing individually as well as how they are contributing to the group.
 - Self-assessment: The student will be writing a journal entry where they will be answering one of the questions (refer to section VIII: Assessment Content) to reflect on what they have done to contribute to the group and what they have learned individually.
 - Peer Assessment: The checker and observer will be the ones in charge of the peer assessment. They will each have a checklist where they will be able to rate how each of their members in the group did. They will have a checklist where they will put a checkmark to show if their classmates were able to accomplish the certain task (refer to section VIII: Assessment Content-Peer Assessment).

Comment [SFB18]: Good formative assessment of the content.

Comment [SFB19]: A well thought-out plan.

Candidate Christina Luc and Jessica Dominguez Cotzajay	Date 7 April 2019	Grade level 1st
Subject Area & Topic Science/P.E. Life Cycle of a Plant	Single-day lesson Multi-day lesson	Whole-class lesson Small-group lesson
English Language Development levels of students in the class or group: Emerging Expanding OR Bridging English Only IFEP (Initially Fluent English Proficient) RFEP (Redesignated Fluent English Proficient)	ELD 1 (Beginning) ELD 2 (Early Intermediate) ELD 3 (Intermediate) ELD 4 (Early Advanced) ELD 5 (Advanced)	Name of instructional model Direct instruction Inquiry or problem-based lesson Formal lesson evaluation ? (rubric, criterion list) Yes No

Lesson Objective(s):

- 75% of learners will label the six steps of the plant life cycle.
- 75% of learners will be able to act out the six steps of the plant life cycle.

Lesson's language objective:The learners will improve verbal production of English by retelling and/or improve ability to comprehend verbal English by analyzing the steps of the plant life cycle.

Common Core or Content Standard(s):

- NGSS 1-LS1-1 Use materials to design a solution to a human problem by mimicking how plants and/or animals use their external parts to help them survive, grow, and meet their needs.

California English Language Development Standard(s):

- 1.I.A.1 Exchanging information and ideas with others through oral collaborative conversations on a range of social and academic topics.
- 1.I.B.5 Listening actively to spoken English in a range of social and academic contexts.

Materials, including technology and visual aids:

- Cones

- Bean Bags
- Scissors
- Glue Sponges
- Plant Life Cycle Handout
- Interactive Whiteboard

Classroom Management Strategies, including room arrangements and student grouping plan:

- There will be stations during our movement activity. Students will be separated into two groups. One person from each group will go first. Once the student in front of the student finishes a station, the next student may go.
- Students who are actively participating and engaging, will be asked to move their colors up.
- Students who are not following classroom behavior expectations will be given a verbal warning. If this were to continue, they will be asked to move their color down.
- Students who are not following classroom behavior expectations will also be kept in close proximity.

Comment [SFB20]: I understand that you need to apply these "assertive disciplin" strategies in your classroom, but hope you will discard them in your own positive discipline classroom. You will see a remarkable difference in student response.

Strategies for Differentiation, Modification, Adaptation, SDAIE, and varied Communication Mode to be implemented:

- For the students who have IEPs, there will be a chart with the plant life cycle. This will be used to scaffold the assessment for the students.
- For English Learners, there will be picture cards along with the designated activity.
- For advanced students, they will be challenged by asking if they can name the stages of the plant cycle.

List Academic Language to emphasize:

- Seed
- Rooting
- Sprouting
- Baby Plant
- Medium Plant
- Adult Plant

List New Vocabulary from lesson or text to introduce:

- Garden
- Gardening
- Zig-Zag

- Collect
- Jump

Assessment Plan:

Rate Your Mates!

What did we do?	Student 1	Student 2	Student 3	Student 4
listened to my team!				
solved conflicts reasonably				
respected everyone's ideas				
did my best work!				
completed all tasks!				

Comment [SFB21]: I remain confused as to how you will implement this. Will each student place peer name in the column and complete the checklist with a yes or no? If so – remove the word "I"

On the other hand, if each student completes this as a self-assessment it no longer seems like it is a Rate Your Mates.

Sequence of Lesson Procedures

Opening (5 minutes)

- Engage
 - Students will be shown picture of materials then asked to use those as clues to try to figure out what we are going to work on in class today.
 - I will then introduce the objective of the lesson to the student. Our objective today is... *An objective is what we are going to learn. We are going to learn the stages of the plant life cycle.*
 - We will have the materials manager then come up to the class and grab any needed materials. During this time, students will be assigning roles to

themselves based on where they are seating (whether clockwise or counter clockwise).

Body of the Lesson (20 minutes)

- Explore
 - To have students explore and relate to this topic, I will have them think-pair-share their ideas as to what we need to have as humans to survive.
 - Once doing so, students will share their ideas out loud.
 - Students will then be shown two plants a healthy plant and an unhealthy plant.
 - They will be asked *What is the difference between the two plants?*
- Explain
 - Using the interactive smart board, I will go through the six stages of the plant cycle:
 - First is the **seed**, the seed is planted into the ground/soil
 - Second is **rooting**, in this stage roots start to grow and as the roots grow, they collect water.
 - Third is **sprouting**, from the tiny seed a new tiny plant sticks out.
 - Fourth is **baby plant**, this is when the leaves are starting to grow, I would relate this to the kids on how we all start off as babies.
 - Fifth is a **medium plant**, we start to get more leaves, I would relate this to the kids and tell them it is similar to how we move MIT as a big kid.
 - Lastly, is the **adult plant**, which is when we are all grown up!
 - While explaining the stages, I will use images that are similar to their worksheet because they will be asked to glue the order of the plant life cycle on the [worksheet](#).
 - Students will also be asked to share with their partners what their own meaning of each stage is.
- Extend
 - Afterwards, we will to work on our movement activity. I will explain the activity to the students.
 - First station, students will start as a seed and then they will walk quickly to the cones that are zig zagged. This will represent the roots of the plants growing.
 - Second station, students will collect “water droplets,” which are the bean bags and deposit them in the buckets.
 - Third station, there will be three mini stations set up.
 - First mini-station, they will do five crunches (represent the baby plant)

Comment [SFB22]: For this grade level you could introduce music. See Hap Palmer's "There are so many things that grow."

- Second mini-station, they will do five high-knees in place (represent the medium plant)
- Third mini station, they will stretch out to be as big as they can be (represent the adult plant)
 - Once students finish, they will be able to start all over again.
- I will model this for the students, then I will have a few students model it as well.
- Evaluate
 - Students will be asked to sequence the plant life cycle. They will then glue the sequence in their science journals. These items will be already cut ☺ so the students can focus on putting them in the correct order. Students will then write in their science journal their definition of each step of the plant life cycle.
 - The checker and observer of the group will then assess students on their collaborative work based on the rubric given to them in the beginning.

Comment [SFB23]: Good plan.

Closing(5 minutes)

- I will re-check for understanding of the objective by asking students to share with their partner what we learned today. *Today we learned about the plant life cycle.*

Comment [SFB24]: I am missing the voice-level instruction, verbal or visual. I also wonder if you have created a checklist or rubric for the expected assessment of their plant life sequence page.

Candidate Araceli Garcia	Date March 19, 2019	Grade level K
Subject Area & Topic Science/ELA Sunflower Planting	Single-day lesson Multi-day lesson	Whole-class lesson Small-group lesson
English Language Development levels of students in the class or group: Emerging Expanding OR Bridging English Only IFEP (Initially Fluent English Proficient) RFEP (Redesignated Fluent English Proficient)		Name of instructional model Direct instruction
ELD 1 (Beginning) ELD 2 (Early Intermediate) ELD 3 (Intermediate) ELD 4 (Early Advanced) ELD 5 (Advanced)		Formal lesson evaluation ? (rubric, criterion list) Yes No

Lesson Objective(s): Students will be able to correctly sequence the steps to planting a sunflower as well as be able to individually plant their own sunflower at 75% accuracy.

Comment [SFB25]: Be sure to create a rubric that enables you to fairly and objectively determine this.

Lesson's language objective: The learners will improve verbal **production** of English by transitional words during sequencing. They will also improve their ability to **comprehend** verbal/written English by practicing reading transitional words as well as new vocabulary.

Common Core or Content Standard(s):

NGSS LS1.C: Organization for Matter and Energy Flow In Organization – All animals need food in order to live and grow. They obtain their food from plants or from other animals. Plants need water and light to live and grow.

CCSS.ELA W.K.3 Use a combination of drawing, dictating, and writing to narrate a single event or several loosely linked events, tell about the events in the order in which they occurred, and provide a reaction to what happened.

California English Language Development Standard(s):

Corresponding ELD Standard(s), Grade K: Part III: Using Foundational Literacy Skills

- **No or little spoken English Proficiency:** Students will need instruction in recognizing and distinguishing the sounds of English as compared or contrasted with sounds in their native language (e.g., vowels, consonants, consonant blends, syllable structures).
- **Spoken English proficiency:** Students will need instruction in applying their knowledge of the English sound system to foundational literacy learning.

Materials, including technology and visual aids:

- Sequencing Picture Cards
- Plastic Cup
- Soil
- Sunflower Seeds
- Sunflower Sequencing Worksheet
- Sunflower Number Worksheet
- ELMO Projector

Classroom Management Strategies, including room arrangements and student grouping plan:

- All students will stay in their seat prior to starting the lesson. As well as be reminded to focus with the following: *Eyes on me, ears on listening, mouths on quiet, hands on lap.* Students will be shown pictures pertaining to plants.
- **Students will form heterogeneous groups depending on their knowledge on plants.**
- After working on the picture cards, they will be asked to move back to their group to work on the Sunflower worksheet **collaboratively**.
- They will then plant their seeds as a group, referencing the sequence.

Comment [SFB26]: Will you use energizers to assure that they are motivated to move quickly and quietly? At this grade level teachers often lose time when these important transitions are not accomplished effectively,,

Strategies for Differentiation, Modification, Adaptation, SDAIE, and varied Communication Mode to be implemented:

- For the student with an IEP that is considered an ID, she will be with the class and be given space to sit and stand as needed. Her paraprofessional will also guide her through the activities while focusing on her IEP goals, such as holding a pencil independently, cutting paper, and using a glue stick.
- For the students who have IEPs that are considered an SLD, full sentences will be encouraged, slow and clear speech will be emphasized and “repeat after me” will be implemented when working with the high frequency words.
- English Learners will be given more think and wait time. They will also be given picture examples in during the hook to aid them during the independent work. SDAIE strategies will be implemented by encouraging thumbs-up when the students are ready to move on, and thumbs-down if the students need more time.
- For unmotivated students, they will be encouraged by their teacher and peers to refocus on the **assignment**.

Comment [SFB27]: Well thought through😊

List Academic Language to emphasize:

- Seed
- Rooting
- Sprouting
- Baby Plant
- Medium Plant
- Adult Plant
- Soil
- Air
- Space
- Sunlight

List New Vocabulary from lesson or text to introduce:

- Sunflower
- Assessment Plan:

Rate Your Mates!

Comment [SFB28]: See my comments on Jessica's plan above.

What did we do?	Student 1	Student 2	Student 3	Student 4
I listened to my team!				
I solved conflicts reasonably				
I respected everyone's ideas				
I did my best work!				
I completed all tasks!				

Sequence of Lesson Procedures

Opening (10 minutes)

Engage

- Students will be shown materials that pertain to the lesson, then asked to turn and talk to their table members to use those as clues to try to figure out what we are going to work on in class today.

Explore

- I will then introduce the objective of the lesson to the students, being to focus on the life cycle and review needs of a plant.
- Students will be asked how much they remember about plants, based on what we have done in class
- Students will be asked to form a human graph to form their heterogeneous groups.

- We will have the materials manager then come up to the class and pick up any needed materials. During this time, students will be assigning roles to themselves based on where they are seating (whether clockwise or counter clockwise)

Comment [SFB29]: Not a good idea at this age and stage. Do have a thought through plan for role and task assignment.

Body of the Lesson (40 minutes)

Explain

- As a whole class (and collaboratively within groups) students will watch the teacher model how to plant a plant. They will be asked guiding questions on what a plant needs in order to review what they know about the needs of the plant
 - Why are there holes on the bottom of the cup?
 - Can I just put the seeds in dry soil?
 - Will the plant grow if I leave them in the dark? Why?
- Students will work on a sheet sequencing the steps of planting a sunflower as a group. At this time, students will be pulled by groups to prepare their plant with the teacher.

Extend

- If students finish the worksheet early, they have a coloring worksheet they can do to work on their color sight words.

Evaluate

- While the students are pulled they will be asked to recall the five needs of a plant and the life cycle of a plant.

Comment [SFB30]: The importance of elaborate-extend is for students to consider and express what they have learned and connections they have made. How might you assure this occurs at this level of the 5e framework?

Closing (10 minutes)

- Students will be shown the finished product of their planting. They will be reminded to water their plants every day.
- I will re-check for understanding of the objective by asking students to share with their group what they learned, focusing on the reflection questions.

Candidate Adriana Morgan	Date April 7, 2019	Grade level 5th
Subject Area & Topic Science – Life Cycle of Plants	Single-day lesson Multi-day lesson	Whole-class lesson Small-group lesson
English Language Development levels of students in the class or group: Emerging (Beginning) Expanding (Early Intermediate) Bridging (Intermediate) ELD 4 (Early Advanced) English Only IFEP (Initially Fluent English Proficient) RFEP (Redesignated Fluent English Proficient)	OR ELD 1 ELD 2 ELD 3 ELD 5 (Advanced)	Name of instructional model Direct instruction Inquiry or problem-based lesson Formal lesson evaluation ? (rubric, criterion list) Yes No

Lesson Objective(s): The learners will explore the life cycle of plants by observing sample plants in collaborative groups and conclude what necessities plants need in order to sustain life with a 75% accuracy. The learners will also write whether plants only need two types of necessities to survive, and support their claim by stating their observations or information they learned.

Comment [SFB31]: See my earlier note on how you will create a rubric that will assist you in assessing the content outcomes (criteria) that result in students showing 75% accuracy.

Lesson’s language objective: The learners will improve verbal and written production of English by partner sharing their thoughts or predictions within their collaborative groups and/or improve ability to comprehend verbal and written English by reading and listening to instructions and discussions within their group or whole class.

Common Core or Content Standard(s):

- NGSS LS1-1. Support an argument that plants get the materials they need for growth chiefly from air and water.

Comment [SFB32]: I am missing your NGSS here.

- CCSS. ELA – W.5.2a. Write informative/ explanatory texts to examine a topic and convey ideas clearly.

California English Language Development Standard(s):

Interacting in Meaningful Ways – C. Productive (10): Writing literacy and informational texts to present, describe, and explain ideas and information, using appropriate technology.

- Expanding: A) Write longer literacy and information texts collaboratively and with increasing independence by using appropriate text organization. B) Write increasingly concise summaries of texts and experiences using complete sentences and key words.
- Bridging: A) Write longer and more detailed literary and informational texts collaboratively and independently by using appropriate text organization and growing understanding of register. B) Write clear and coherent summaries of texts and experiences using complete and concise sentences and key words.

Materials, including technology and visual aids:

- 4 conditioned plants (healthy, unhealthy, dry soil, tightly wrapped)
- Science journals
- Collaborative worksheets
- Whiteboard
- Pots
- Different seeds
- Soil

Classroom Management Strategies, including room arrangements and student

grouping plan: All students will be at their seats until groups are determined. Once groups have been established based on their knowledge of plants, students will sit in their collaborative groups and wait for further instruction. The teacher will then bring out the plants and display them on a table. Information of the plants will not be given; they will only be told to observe individually and quietly. Group by group will come and observe the plants, and then return to their seats after 3 minutes. Once all groups have observed the plants students will begin to discuss and determine what the topic of the lesson will be. To regain their attention “If you can hear me clap once. If you can hear me clap twice”. Once all attention is back to the front, with quiet hands students will be asked to share what they observed. After discussion, students will collaboratively begin to create an explanatory piece stating that plants need more than only two necessities. Students will work based on their roles and hold everyone accountable until the end of the lesson.

Comment [SFB33]: Do include the plan for roles and individual tasks that will increase the efficiency of each group.

Strategies for Differentiation, Modification, Adaptation, SDAIE, and varied Communication Mode to be implemented: At each group, there will be sentence frames to help start collaborative discussion. This will support the learners who have IEPs for speech, and it will support the ELD students. Directions and instructions will also be posted on materials that each groups have in order to support the learners who need to read the instruction in order to understand them. The teacher will speak clearly and concisely, to ensure all students can understand what is being explained. The teacher will also ask students to rephrase what was explained. This is one form of **assessment**, but also a scaffolding method to support all learners and their language levels.

Comment [SFB34]: Yes. But how would you show evidence that you had assessed this?

List Academic Language to emphasize: ===== List New Vocabulary from lesson or text to introduce:

- | | |
|---------------|-------------|
| - Life cycle | - Sunlight |
| - Necessities | - Energy |
| - H2O | - Soil |
| - Glucose | - Nutrients |
| - Oxygen | - Explain |
| - Carbon | - Observe |

Assessment Plan:

Rate Your Mates!

Comment [SFB35]: See my earlier question about how you will use this assessment.

What did we do?	Student 1	Student 2	Student 3	Student 4
I listened to my team!				
I solved conflicts reasonably				

I respected everyone's ideas				
I did my best work!				
I completed all tasks!				

Sequence of Lesson Procedures

Opening (10 mins)

- Engage
 - Students will see different pictures posted around the classroom (sun, water, soil, dead plants, life plants, etc.) and begin to make connections with their prior knowledge.
 - Learning objective: Teacher will introduce students to the objective of the day, "All live things go through a life cycle, today will learn about the life cycle of plants and determine what necessities are needed in order for plants to live healthy lives".
- Students will be placed in groups based on their knowledge of plants and/or the life cycle of plants. They will then discuss and assign roles to each other (materials manager/ encourager, checker/timekeeper, recorder, observer/timekeeper, traveler/spy).
- Materials manager will come and retrieve all the materials that will be needed for the lesson.

Comment [SFB36]: OK here you indicate you will have assigned roles. Do place this above.

Body of the Lesson (25 mins)

- Explore
 - The teacher will then display four plants at the front of the class
 - Students will observe 4 differently conditioned plants. They will come up to the front of the class with their collaborative groups and their science journals, but observe the plants individually, writing down as much as they can based on what they see.
 - Once everyone has observed the plants, students will share their ideas with their group, writing down what observations they all made on one of the Life Cycle Worksheets.

Comment [SFB37]: I love the inclusion of science journals. Will there be a rubric for this? Perhaps one that was introduced at the outset of the year?

Comment [SFB38]: Please submit a sample. Are these to be done individually or as a group?

- Students will think about the question posted on the whiteboard, “*What is the difference between all the plants?*”
- Based on their observations, students will create a flow map illustrating how they think a plant grows from seed-to-plant solely from observing and exploring the plants in the classroom.
- To clear misunderstanding, students can send their spies to different groups for 30 seconds to 1 minute.
- Explain
 - Students will share their observations with the class and explain why they believe the plants are in certain states. Rather than thinking from seed-to-plant, they will think about plant-to-seed. Deconstruct the growth of a plant.
 - Teacher will explain the life cycle of a plant by presenting a time lapse of a plant. Based on the visuals/ images students will learn about what conditions are needed for a plant to survive.
 - Students will create a flow map illustrating the life cycle of a plant and write what necessities plants need in order to survive. A prompt will be posted on the board, “*Do think plants only need water and air to survive?*”.
- Extend
 - Using their original flow map or edited flow map, students will then be given materials to plant one plant per group and instructed to keep record of the growth of their plant based on the necessities they believe their plant needs in order to survive. Their flow map will be used as a blueprint for the growth of their plant.
- Evaluate
 - Groups will be asked to appear in front of the class to begin planting their potted plants. The teacher will ask the students, “*Do you think plants only need water and air to survive?*”. Students will then collaboratively explain their reasoning before continuing onto the planting activity. Students will discuss and decide where they will want to post their potted plants and what conditions they know are needed in order for a plant to begin its life cycle.
- **Closing (10 mins)**
 - The Recorder from each collaborative group will share where they posted their potted plant and why they posted their plant in a specific location. They will be reminded that every other day during science, groups will be allowed to observe and record their plants growth in the science journal.

Comment [SFB39]: Again, how will this performance/product be evaluated? Will they have a rubric or checklist?

- Before dismissal/ transition, students will be asked what the objective of the day was for the lesson and share what they or their whole group learned.
- Exit slip: Self-Assessment worksheet and Rate Your Mates worksheet

Comment [SFB40]: Well developed lesson with many opportunities to assess. Please complete one of the formative assessments that will enable you to objectively evaluate student performance.