

Unit Plan - Integrated Learning Segment

Key Assessment

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ECED 4450-201 Spring 2020

Focal Science Standard(s): TN-Science (2018-19) - Life Science (From Molecules to Organisms: Structures and Processes). 1.LS1: 1) Recognize the structure of plants (roots, stems, leaves, flowers, fruits) and describe the function of the parts (taking in water and air, producing food, making new plants).

Theme/Topic: POLLINATION

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Introduction and Rationale (a)

This Unit Plan is about the First Grade Science Standard 1.LS1: From Molecules to Organisms: Structures and Processes 1) Recognize the structure of plants (roots, stems, leaves, flowers, fruits) and describe the function of the parts (taking in water and air, producing food, making new plants). The main focus is pollination.

Background

The two-week unit will focus on pollination, where it is located, how it is transferred, and the part bees play in the pollination process. The Unit Plan integrates language arts, mathematics, social studies, music, art, and movement into the focal science standard. There will be many activities that are hands-on, and inquiry based. This group of children are already so knowledgeable about plant structure and function that I expanded my focus to the process of pollination.

Rationale: Diverse Learning Needs and Relevance to Specific Students

My unit plan topic is good for this age because they are studying plant structure and function. This group of children are already knowledgeable about the structure of a plant, so I decided to focus on the function of making new plants that is pollination. Based on the constructivist theory, children are more likely to benefit from social experiences that are meaningful to them, along with hands-on learning experiences (Slavin, 2018). It is always a goal of mine to make connections to a child's real life to help with the meaningfulness of a topic, along with the hands-on experiences to overall enhance the learning.

5Es Framework

Children will have the opportunity to practice inquiry through many activities about pollination. I follow the 5Es framework (Bybee, 2014) for this early childhood experience, which includes the phases Engage, Explore, Explain, Elaborate, and Evaluate. My first activity meant to Engage the children is watching a clip from *Bee Movie* and asking them about their thoughts about the clip and if they think bees are needed in our environment. Next, during the Explore phase, the children will partake in discussions about stickiness, how it works and participate in an activity with Velcro and felt that reflects bees collecting pollen, and document what occurred during the activity in their science journals. The Explain phase will consist of watching a video about bees, along with reading three different texts about them. The Elaborate phase will focus on wants and needs and how we need pollination in order to produce more plants, as well as listening to a song about bees and dance and illustrate about what is being sung. Finally, the Evaluate phase will include the children drawing and explaining what occurred during the interactive pollination activity and share their reflections with each other.

References

Bybee, R. W. (2014). The BSCS 5E instructional model: Personal reflections and contemporary implications. *Science and Children*, 51(8), 10-13.

Slavin, R. E. (2018). Effective Learning Environments. In *Educational Psychology: Theory and practice* (12th ed., pp. 102-112). New York, NY: Pearson Education.

Tennessee State Board of Education. (2016) *Tennessee Academic Standards for Science*.

Nashville, TN: Tennessee Department of Education.

<https://www.tn.gov/education/instruction/academic-standards/science-standards.html>

Standard/s Addressed, Goals, and Objectives for the Unit (b)

Standard addressed. The primary standard for my Unit Plan is for first grade from the TN-Science, 1.LS1: 1)” Recognize the structure of plants (roots, stems, leaves, flowers, fruits) and describe the function of the parts (taking in water and air, producing food, making new plants).” (p. 23; State Board of Education, 2016).

Goals. The goals of this unit are for children to be able to identify and discuss the importance of pollination and the role of bees in the pollination process.

Objectives. The objectives of this unit are to identify and discuss the structure of plants and their function through the creation and labeling of a plant, recognize the process of pollination and identify bees and their role in pollination through an interactive bee activity, and engage in activities that promote exploration and self-evaluation.

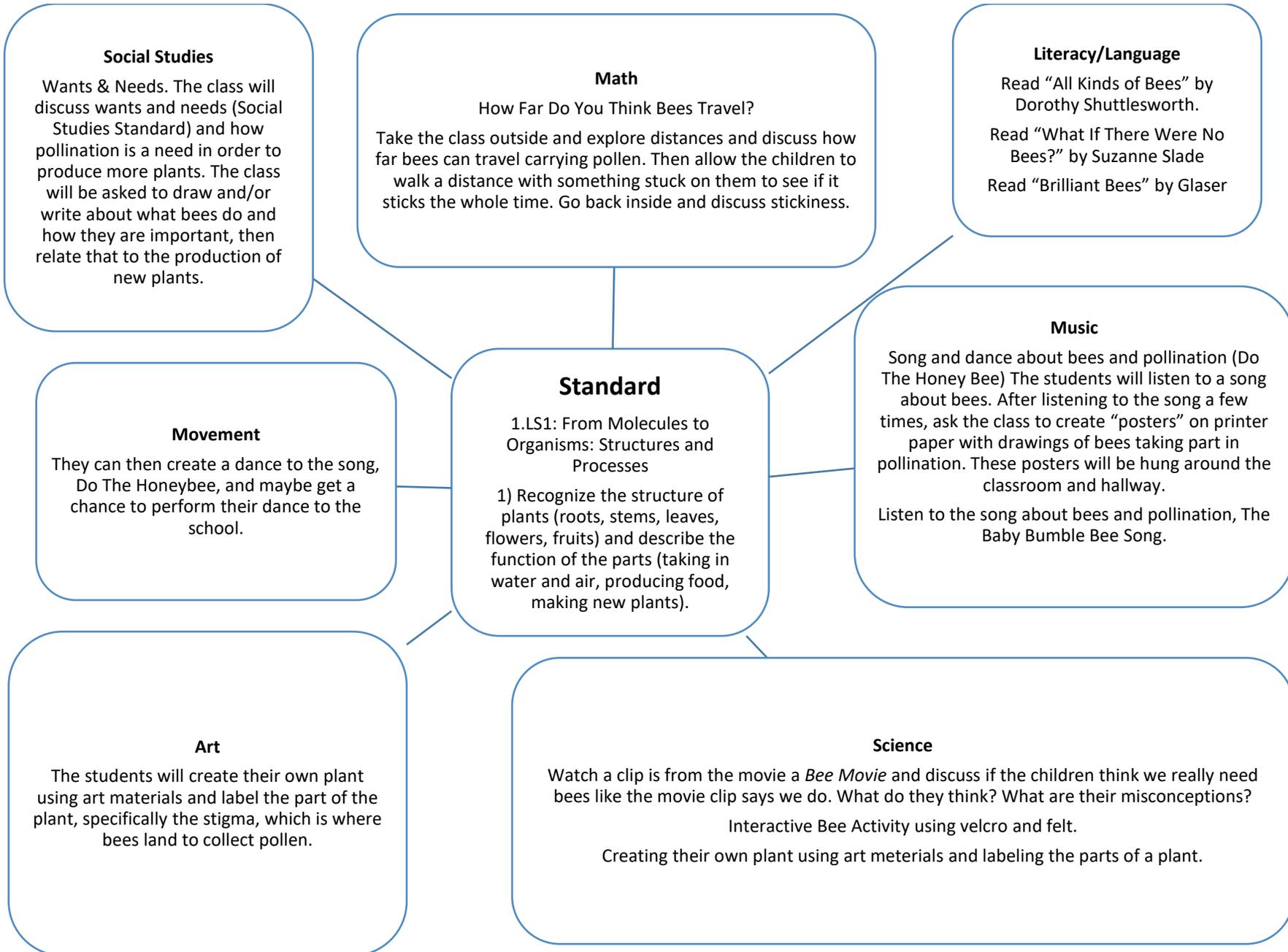
References

Tennessee State Board of Education. (2016) Tennessee Academic Standards for Science.

Nashville, TN: Tennessee Department of Education.

<https://www.tn.gov/education/instruction/academic-standards/science-standards.html>

A Curriculum Web (c)



Title and Description of Learning Experiences (d)

Overview

In this set of learning experiences, children will explore pollination and the importance of bees in the pollination process. In a nutshell, the focus of this unit plan will be on the pollination process with some review of plant structure. The 5 E's are guiding this unit, which means that there will be opportunities for engagement, exploration, explanation, elaboration, and evaluation throughout this unit plan.

Below is a 2-week schedule of major activities as well as descriptions of each activity. The unit will start out with discussion about if we need bees. Then the unit will lead into an interactive bee activity where the learners act as bees collecting pollen from flowers. It will end with an evaluation of what they have learned about bees and pollination through an activity, in which the children will illustrate and write about the interactive bee activity and what it represented.

Calendar

Week 1 of 2

| Schedule | Monday | Tuesday | Wednesday | Thursday | Friday |
|--------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------|--------------------------|-----------------------------------------|------------------------------------------------------------------------------------------------------------------------------|
| 8:00-8:30 Morning Routine | | | | | |
| 8:30-9:30 Phonics/ LA | | | | | |
| 9:30-11:30 Specials | | | | Create a plant and label the structures | Baby Bumblebee Song https://www.youtube.com/watch?v=Ke-7xqGvCHg |
| 10:30-11:30 Science | Watch clip from a <i>Bee Movie</i> and have discussion https://www.youtube.com/watch?v=A0YubpFbwLg | | Interactive Bee Activity | | |
| 12:00-1:30 Math | | Measure how far bees can travel | | | |
| 2:00-3:00 SS/ Writing | | | | | |

* Complete lesson plan

| Schedule | Monday | Tuesday | Wednesday | Thursday | Friday |
|--------------------------------------------|-----------------------------------------------------|---------------------------------------------------|---------------------------------|-------------------------------------------------------------------------|--------------------------------------------------------------|
| 8:00-8:30 Morning Routine | | | | | |
| 8:30-9:30 Phonics/ LA | Read "What If There Were No Bees?" by Suzanne Slade | Read "All Kinds of Bees" by Dorothy Shuttlesworth | Read "Brilliant Bees" by Glaser | | |
| 9:30-11:30 Specials | | | | | Song and dance about bees and pollination (Do The Honey Bee) |
| 10:30-11:30 Science | | | | | Write about Interactive Bee Activity |
| 12:00-1:30 Math | | | | | |
| 2:00-3:00 SS/ Writing | | | | Wants & Needs- Pollination is a need in order to produce more plants | |

* Complete lesson plan

Titles and Descriptions

Week 1

Day 1 - Movie Clip and Discussion (Engage)

- <https://www.youtube.com/watch?v=A0YubpFbwLg> (END at 2:52) – This clip is from the movie a *Bee Movie*. During this scene, they are discussing what the world would be like without bees and why they are important.
- We will discuss if the children think we really need bees like the movie clip says we do. What do they think? What are their misconceptions?

Day 2 - How Far Do You Think Bees Travel? (Explore)

- Take the class outside and explore distances and discuss how far bees can travel carrying pollen. Then allow the children to walk a distance with something stuck on them to see if it sticks the whole time. Go back inside and discuss stickiness.

Day 3 - Interactive Bee Activity (Explore)

- The students will wear a shirt with Velcro and there will be pieces of felt spread out. They will be asked to get through the maze and encouraged to bump into the walls which are covered with felt pieces. Once they make it out, they will observe their shirts and the amount of felt they collected. This is a demonstration of bees collecting pollen when they fly.

Day 4 - Create a Plant (Explore)

- The students will create their own plant using art materials and label the part of the plant, specifically the stigma, which is where bees land to collect pollen.

Day 5 - Watch a video about bees and pollination (Explain)

- The Baby Bumble Bee Song - <https://www.youtube.com/watch?v=Ke-7xqGvCHg>
- The video will be watched as a whole group. Talk about protecting bees and how they help with pollination. Also protecting bees.

Week 2

Day 6 - Read "All Kinds of Bees" by Dorothy Shuttlesworth (Explain)

- Discuss the book and its key points

Day 7 - Read "What If There Were No Bees?" by Suzanne Slade (Explain)

- Discuss the book and its key points

Day 8 - Read "Brilliant Bees" by Glaser (Explain)

- Discuss the book and its key points

Day 9 - Wants & Needs (Elaborate)

- The class will discuss wants and needs (Social Studies Standard) and how pollination is a need in order to produce more plants. The class will be asked to draw and/or write about what bees do and how they are important, then relate that to the production of new plants.

Day 10 - Song and dance about bees and pollination (Do The Honey Bee) (Elaborate)

- The students will listen to a song about bees. After listening to the song a few times, ask the class to create "posters" on printer paper with drawings of bees taking part in pollination. These posters will be hung around the classroom and hallway.
- They can then create a dance to the song and maybe get a chance to perform their dance to the school.

Writing About the Interactive Bee Activity (Evaluate)

- The children will write and draw about what occurred during the Interactive Bee Activity (see activity 3) and present it to the class. This will serve as a summative evaluation and self-evaluation

Two Complete Lesson Plans (e)

Complete Lesson Plan #1: Bees and Pollination

Lesson Title: Bees and Pollination

Grade/Level: 1 Date/Learning Experience #: 5/4/2020

| Curriculum Standards | Essential Question(s)/I Can Statement(s) | |
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| <p><i>State Curriculum Standards – Underline your language/vocabulary words</i></p> <p>1.LS1: From Molecules to Organisms: Structures and Processes</p> <p>1) Recognize the structure of plants (roots, stems, leaves, flowers, fruits) and describe the function of the parts (taking in water and air, producing food, <u>making new plants</u>).</p> | <p><i>What question(s) or I Can statement(s) drive your instruction?</i></p> <p>I can recognize the job of bees in pollination. I can create my own opinion about whether I think bees are needed during pollination.</p> | |
| <p>Lesson Objective(s) – Student Learning Outcome(s) for this learning experience</p> | | |
| <p><i>Objectives use active verbs, are measurable (if applicable), and link to standards. Consider using Bloom’s Taxonomy or Webb’s Depth of Knowledge.</i></p> <p>The learner will be able to recognize and understand the job of bees in the pollination process with 85% accuracy by identifying their job and creating their own opinions about the need of bees.</p> | | |
| <p>Knowing Your Learners</p> | | |
| <p><i>Describe pre-requisite skills students already know that will help them meet the lesson objective(s). What is your evidence that students need this/these skills(s)? This may include pre-assessment data; student personal, cultural or community assets you have gathered and observations you have made concerning your students.</i></p> <p>This group of children are already knowledgeable about the structure of a plant, so I extended the focus to the function of making new plants that is pollination. According to the standards, first graders have been learning about plants since preschool.</p> | | |
| <p>Assessment/Evaluation</p> | | |
| <p><i>How will students demonstrate understanding of lesson objective(s)?</i></p> <p>The learners will participate in group discussion about bees.</p> <p>How will you monitor student progress towards lesson objectives as you are teaching? (i.e., formative, informal, and/or formal assessments)</p> | <p>Assessment/Evaluation Modifications <i>What modifications will you make on assessments/evaluations for students with diverse and/or</i></p> | |

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| <p>The teacher will authentically assess the learners by listening to the conversations being discussed among learners.</p> <p>What evidence will you collect and how will you document student learning/mastery of lesson objective(s)? (i.e., formal OR summative)</p> <p>The teacher will informally assess the learners by documenting learner responses to questions.</p> <p>Academic Feedback: <i>How will you give academic feedback? How will your academic feedback promote student understanding of the learning objective(s) or state standard(s)?</i></p> <p>The teacher will give academic feedback verbally to the learners during the discussion. This will promote the learner’s understanding of the topic by encouraging on-topic conversations that have purpose.</p> <p>The teacher will give academic feedback individually to the learners who are struggling more with the concept of bees.</p> | <p><i>special needs (i.e. students with IEP or 504, struggling learners, advanced learners) and will these modifications be within/for small groups or individuals?</i></p> <p>Provide the learner with extra time to discuss.</p> <p>Allow the learners to watch the video more than once, if needed.</p> <p>Arrange to have a one-on-one discussion with the learners who need it.</p> |
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Academic Language Demands

Function and Product of the Lesson *The function is the verb, usually a Blooms verb (e.g., analyze, interpret, recount), that guides the language objective of the lesson. This includes a product that students will either write, say, present, or do that involves Academic Language (e.g. essay, present, recount).*

The learners will be able to recognize and understand the job of bees in pollination.

Academic Vocabulary *What specialized terms and phrases do students need to understand what they are expected to do? How does this vocabulary connect to the objectives, state standards and function of the language demand?*

- Recognize: To know and remember because of previous knowledge or experience
- Understand: To grasp the meaning of
- Purpose: The reason why something is done or used

These vocabulary words could be more difficult for this grade level to understand. Most of them have been previously discussed and are now are being recalled. The standard is to describe the function of making new plants, which is pollination. The objective is to recognize and understand the job of bees in pollination. The learners will need to recognize and understand the expectations, which are to recognize and understand the purpose of bees.

Content Vocabulary *What are the key vocabulary words, symbols, or sounds in this lesson? How does this vocabulary connect to the objectives, state standards and function of the language demand?*

- Bees: An insect with four wings that gather pollen and nectar from flowers to make honey
- Pollination: Process that allows plants to reproduce
- Plant: Living organism that covers land, including grass, trees, and flowers

These vocabulary words have been previously mentioned within the year and previously. The standard is to describe the function of making new plants, which is pollination. The objective is to recognize and understand the job of bees in pollination. The learners will need to know what each of these words is and what their role is in the making of new plants.

Syntax and/or Discourse, Mathematical Precision (math only). This section is not required for Early Childhood or Special Education.

Syntax *What are the specific ways or conventions for organizing symbols (e.g., linear, horizontal), words (grammar), phrases, or graphics that students need to know to be able to do what you are asking?*

Discourse *What are the specific ways in which members of a discipline (e.g., scientist, historian, etc.) talk, write, and communicate knowledge that students need to know to be able to do what you are asking (e.g., essays, presentations, performance, journal, debate, historical account, signal)?*

Language Supports *What general instruction will you provide to help students in the whole class (e.g., word walls, learning partners, guided notes) learn the discourse/syntax? What focused instruction (e.g., Venn diagrams, graphic organizers, outlines, student examples, sentence stems) will you provide to help students learn the discourse/syntax (can be completed in small groups)? What individual instruction that targets the needs of an individual student(s) will you provide to help that student(s) learn the discourse/syntax? What opportunities will you provide for students to practice language/vocabulary and develop fluency? What tools (e.g., EQ or vocabulary board, Venn diagram, anchor chart, vocabulary cards, graphic organizer, peer support, sentence stems, pictures, table, chart, thinking map, modeling, sort, song, body movements, games) will you use to help students meet the language demands?*

General Supports – *Strategies used to support the whole class and may be used to support more than one demand (e.g., Venn diagram, learning partners, word wall, anchor chart, vocabulary cards, graphic organizer, sentence stems, pictures, table, chart, thinking map, modeling, sort, song, body movements, games). These strategies can cross disciplines and be used in a variety of lessons.*

The teacher will provide the vocabulary word in print on the Smart Board.

The teacher will play the video multiple times, if needed.

The teacher will begin the discussions and ask questions.

Targeted Supports – *Strategies that focus toward a specific language demand (e.g., Venn diagrams, graphic organizers, outlines, examples, sentence stems). These may be addressed during small groups. These can be general supports that are modified for specific students or groups of students.*

The teacher will use repetition of the vocabulary words.

The teacher will provide a visual of the vocabulary words.

The teacher will provide the proper pronunciation of each word to hear aloud.

Individual Supports – *Supports used to target the specific needs of an individual student (e.g., ELL, student with autism, struggling reader or writer, student with significant language delays). These students may or may not have been formally identified and may or may not have an IEP or 504 plan.*

Have a copy of the vocabulary words and examples of the words in an ELL's native language.

Instruction – When designing your instruction, consider when you will implement formal and informal assessments/evaluations, when you will provide feedback, and when you will teach academic language. Therefore, this section should include aspects written above.

| Lesson Part | Description of Activities and Instruction (Teacher Does) | Description of Activities and Instruction (Students Do) | Meeting Individual & Group Needs <i>Plans instruction to meet the needs of individual students. Adaptations are tied to learning objectives. Specific individual or group learning includes requirements in IEP or 504 plans.</i> |
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| <p>Set/Motivator: <i>Restate and address your Essential Question. How do you engage student interest in the content of the lesson? How does this relate to previous learning? Use knowledge of students' academic, social, and cultural characteristics.</i></p> | <ol style="list-style-type: none"> 1. The teacher will tell the learners “When you get inside the classroom, we are going to have a seat in your spot on the carpet.” 2. TTW ask, “What do you think about bees? Raise your hand.” 3. TTW write “bee” on the Smart Board. 4. The teacher will say, “We are going to watch a video about bees.” | <ol style="list-style-type: none"> 1. The learners will go inside the classroom and have a seat in their spot on the carpet. 2. TLW raise their hands and answer with their opinion about bees. 3. TLW watch as the teacher writes on the board. 4. TLW be quietly sitting on the carpet and listening to the teacher as she speaks. | <p>If a learner cannot sit still on the carpet, allow them to sit in a chair to have more movement.</p> <p>IEP and 504s will be identified appropriately.</p> |
| <p>Instructional Procedures/Learning Tasks: <i>Provide specific step-by-step details of lesson content aligned with objectives, utilizing a variety of teaching strategies.</i></p> | <ol style="list-style-type: none"> 5. TWL put the video on. 6. TTW ask the learners, “Do you think we need bees like the movie clip says?” | <ol style="list-style-type: none"> 5. TLW watch the video. 6. TLW raise their hands to answer the questions. 7. TLW raise their hands to answer. | <p>IEP and 504s will be identified appropriately.</p> <p>If a learner has a hearing impairment, provide a visual of</p> |

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| | <p>7. TTW ask, “Why do you think that?”</p> <p>8. TTW asked, “What kinds of things did the video mention about bees that you did not know”</p> <p>9. TTW write down some of the things mentioned on the Smart Board.</p> <p>10. TTW ask, “What would happen if we did not have bees?”</p> <p>11. TTW ask, “Is there anything else anyone would like to share about bees or what we watched?”</p> | <p>8. TLW raise their hands to answer the question.</p> <p>9. TLW watch as the teacher writes the things mentioned on the board.</p> <p>10. TLW answer the question.</p> <p>11. TLW raise their hands if they would like to share.</p> | <p>the words and illustrations to help identify them.</p> <p>If the learner has an attention deficit, have the video for them to listen to alone with headphones.</p> <p>ELL learners might benefit more from have illustrations of the words to help identify them.</p> |
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| <p>Questions and/or activities for higher order thinking: <i>These are open-ended and cannot be answered by yes or no. These can be asked at various points throughout the lesson and guide rather than direct student thinking.</i></p> | <p>12. TTW ask “What do you think about bees?” (seen in step 2)</p> <p>13. TTW ask “Do you think we need bees like the movie clip says? (seen in step 6)</p> <p>14. TTW ask “What kinds of things did the video mention about bees that you did not know?” (seen in step 8)</p> <p>15. TTW ask “What would happen if we did not have bees?” (seen in step 29)</p> | <p>12. TLW answer with many different responses, such as “They hurt, they are fast, they like flowers.”</p> <p>13. TLW answer with answer, “yes” or “no”</p> <p>14. TLW answer with many responses, such as “Bees help with more than just honey, they help pollinate plants that help produce flowers and fruit.”</p> <p>15. TLW answer, “There would be no flowers, plants would die, and there would be no honey.”</p> | <p>Provide an ample amount of time for the questions to be thought out and answered.</p> <p>IEP and 504s will be identified appropriately.</p> |
| <p>Closure: <i>Makes clear connections to real-world situations and requires students to reflect on and apply their learning through verbal or written expression.</i></p> | <p>16. TTW say, “We are starting a unit plan about bees and pollination.”</p> <p>17. TTW say, “Throughout this unit we will review plant structure and talk learn about the role of bees in pollination.”</p> <p>18. TTW ask the class, “Do we know what pollination is?”</p> | <p>16. TLW listen as the teacher is speaking.</p> <p>17. TLW listen.</p> <p>18. TLW answer either “yes” or “no.”</p> <p>19. TLW listen as the teacher speaks.</p> | <p>IEP and 504s will be identified appropriately.</p> <p>If a learner needs more one-on-one assistance, call on them last to ensure they do not feel rushed. The assistant teacher could even begin the next lesson if one particular learner</p> |

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| | <p>19. TTW say, “We will be working on this for two weeks. Tomorrow we will begin with a fun exploration activity.”</p> | | <p>needs longer time with the main teacher.</p> |
| <p>Material/Resources: <i>What do you need for this lesson? Identify, within a bulleted list, the specific materials and resources that you will use. Describe how these materials and resources add value, depth, and extend students’ learning.</i></p> <ul style="list-style-type: none"> • Computer with YouTube access. • Carpet setting: Helps incorporates group instruction. • Smart Board: This will be used to provide examples of homophones. | | <p>Technology: <i>(a) Describe the technology you plan to use in your lesson, (b) How does the identified technology in your lesson improve student learning? If applicable, (c) explain how you will use this technology to support a variety of student needs within the learning environment, and (d) If you used this technology to design and implement formative and/or summative assessments, please explain. Did you use the technology to collect and/or analyze your data to inform instruction? Explain.</i></p> <ul style="list-style-type: none"> • The teacher will use the Smart Board to write down the things that were learned about bees from the video. (see General Supports and Steps 9) | |
| <p>Co-Teaching Strategies Used: <i>(highlight and explain all that apply):</i> One Teach, One Observe; One Teach, One Assist; Station Teaching; Parallel Teaching; Supplemental Teaching; Alternative (Differentiated); Team Teaching</p> <p>One Teach, One Observe – The main teacher will be teaching the lesson to the learners while the teaching assistant is observing that the learners are understanding the lesson and gathering information for each child’s checklist.</p> | | | |
| <p>Management</p> <p>Management: <i>Explanation of processes and/or procedures, transitions from one activity to another, strategies for gaining attention, motivating students to engage in the lesson and focus on learning (e.g. work boards, posted procedures, modeling, positive feedback, redirection). If management decisions were addressed above, please bold those processes and procedures.</i></p> <p>The teacher will use a safe transition to get the children from their tables to the carpet for reading time, as seen in step one.</p> <p>The teacher will be sitting on the carpet with the students, and the students will be in their assigned spots that they are familiar with.</p> <p>The teacher will ask discussion guiding questions to the learners.</p> | | | |
| <p>Theory/Rationale</p> <p>I am using repetition to help familiarize the learners with the content vocabulary in this lesson (Morrow, 2012).</p> <p>I am using whole group discussion to help enhance collaboration and comprehension of the topic (Morrow, 2012).</p> | | | |

I am using a movie they have most likely already seen to discuss an object they already know about, creating a meaningful and social experience (Slavin, 2018).

I am using the 5 E's Framework to conduct this Unit Plan, specially the Engage phase in this lesson (Bybee, 2014).

Bybee, R. W. (2014). The BSCS 5E instructional model: Personal reflections and contemporary implications. *Science and Children*, 51(8), 10-13.

Morrow, L. (2012). *Literacy development in the early years: Helping children read and write* (8th ed.). Boston, MA: Pearson

Slavin, R. E. (2018). *Effective Learning Environments*. In *Educational Psychology: Theory and practice* (12th ed.). New York, NY: Pearson Education.

Complete Lesson Plan #2: Pollination Review

Lesson Title: Pollination Review

Grade/Level: 1 Date/Learning Experience #: 5/15/2020

| Curriculum Standards | | Essential Question(s)/I Can Statement(s) |
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| <p><i>State Curriculum Standards – Underline your language/vocabulary words</i></p> <p>1.LS1: From Molecules to Organisms: Structures and Processes</p> <p style="padding-left: 40px;">1) Recognize the structure of plants (roots, stems, leaves, flowers, fruits) and describe the function of the parts (taking in water and air, producing food, <u>making new plants</u>).</p> | <p><i>What question(s) or I Can statement(s) drive your instruction?</i></p> <p>I can identify the role of bees in the process of pollination.</p> <p>I can illustrate and explain the process of pollination by bees appropriately and legibly?</p> | |
| Lesson Objective(s) – Student Learning Outcome(s) for this learning experience | | |
| <p><i>Objectives use active verbs, are measurable (if applicable), and link to standards. Consider using Bloom’s Taxonomy or Webb’s Depth of Knowledge.</i></p> <p>The learner will be able identify, illustrate, and explain pollination and the role of bees in the process with 95% accuracy by illustrating and explaining it correctly through an activity sheet.</p> | | |
| Knowing Your Learners | | |
| <p><i>Describe pre-requisite skills students already know that will help them meet the lesson objective(s). What is your evidence that students need this/these skills(s)? This may include pre-assessment data; student personal, cultural or community assets you have gathered and observations you have made concerning your students.</i></p> <p>This group of children are already knowledgeable about the structure of a plant, so I extended the focus to the function of making new plants that is pollination.</p> <p>According to the standards, first graders have been learning about plants since preschool.</p> <p>We have been exploring bees and pollination throughout the last 2 weeks.</p> | | |
| Assessment/Evaluation | | |
| <p><i>How will students demonstrate understanding of lesson objective(s)?</i></p> <p>The learners will complete a handout that illustrates and explains the process of pollination (see attached).</p> <p>How will you monitor student progress towards lesson objectives as you are teaching? (i.e., formative, informal, and/or formal assessments)</p> <p>The teacher will authentically assess the learners by walking around and listening to the conversation and looking at the illustrations being made.</p> | <p>Assessment/Evaluation Modifications</p> <p><i>What modifications will you make on assessments/evaluations for students with diverse and/or special needs (i.e. students with IEP or 504, struggling learners, advanced learners) and will these modifications be within/for small groups or individuals?</i></p> | |

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| <p>The teacher will informally assess the learners by using the thumbs-up/sideways/down method to assess the students understanding of the term.</p> <p>What evidence will you collect and how will you document student learning/mastery of lesson objective(s)? (i.e., formal OR summative)</p> <p>The teacher will provide a handout with an empty box and lines for the learners to illustrate and write about pollination and bees based on their Interactive Pollination Activity. (see attachment).</p> <p>Academic Feedback: <i>How will you give academic feedback? How will your academic feedback promote student understanding of the learning objective(s) or state standard(s)?</i></p> <p>The teacher will give academic feedback verbally to the learners after they finish their activity. This will promote the learner’s understanding of the standard by encouraging them to think about the topic and explain it correctly. The teacher will give academic feedback individually and verbally to the learners who are struggling more than others. An example of the activity can be done directly with the teacher to help understand the topic in a more one-on-one setting.</p> | <p>Provide the learner with extra time to work on their handout.</p> <p>Arrange to have an oral assessment for a learner who might struggle with writing.</p> |
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Academic Language Demands

Function and Product of the Lesson *The function is the verb, usually a Blooms verb (e.g., analyze, interpret, recount), that guides the language objective of the lesson. This includes a product that students will either write, say, present, or do that involves Academic Language (e.g. essay, present, recount).*

The learners will be able to identify, illustrate, and explain pollination and the role of bees appropriately.

Academic Vocabulary *What specialized terms and phrases do students need to understand what they are expected to do? How does this vocabulary connect to the objectives, state standards and function of the language demand?*

- Identify: To recognize a specific person or thing.
- Illustrate: To supply with pictures or diagrams to explain or make something clear
- Explain: To make something clear to easy to understand; to tell or show the reason or cause of something.

These vocabulary words could be more difficult for this grade level to understand. Most of them have been previously discussed and are now are being recalled. The standard is to describe the function of making new plants, which is pollination. The objective is to identify, illustrate, and explain pollination and the role of bees in the process. With this being said, the learners will need to identify, illustrate, and explain the process.

Content Vocabulary *What are the key vocabulary words, symbols, or sounds in this lesson? How does this vocabulary connect to the objectives, state standards and function of the language demand?*

- Bees: An insect with four wings that gather pollen and nectar from flowers to make honey
- Pollination: Process that allows plants to reproduce
- Plant: Living organism that covers land, including grass, trees, and flowers

These vocabulary words have been previously mentioned within the year and previously. The standard is to describe the function of making new plants, which is pollination. The objective is to identify, illustrate, and explain pollination and the role of bees in the process. The learners will need to know what each of these words is and what their role is in the making of new plants.

~~Syntax and/or Discourse, Mathematical Precision (math only). This section is not required for Early Childhood or Special Education.~~

~~**Syntax** What are the specific ways or conventions for organizing symbols (e.g., linear, horizontal), words (grammar), phrases, or graphics that students need to know to be able to do what you are asking?~~

~~**Discourse** What are the specific ways in which members of a discipline (e.g., scientist, historian, etc.) talk, write, and communicate knowledge that students need to know to be able to do what you are asking (e.g., essays, presentations, performance, journal, debate, historical account, signal)?~~

Language Supports What general instruction will you provide to help students in the whole class (e.g., word walls, learning partners, guided notes) learn the discourse/syntax? What focused instruction (e.g., Venn diagrams, graphic organizers, outlines, student examples, sentence stems) will you provide to help students learn the discourse/syntax (can be completed in small groups)? What individual instruction that targets the needs of an individual student(s) will you provide to help that student(s) learn the discourse/syntax? What opportunities will you provide for students to practice language/vocabulary and develop fluency? What tools (e.g., EQ or vocabulary board, Venn diagram, anchor chart, vocabulary cards, graphic organizer, peer support, sentence stems, pictures, table, chart, thinking map, modeling, sort, song, body movements, games) will you use to help students meet the language demands?

General Supports – Strategies used to support the whole class and may be used to support more than one demand (e.g., Venn diagram, learning partners, word wall, anchor chart, vocabulary cards, graphic organizer, sentence stems, pictures, table, chart, thinking map, modeling, sort, song, body movements, games). These strategies can cross disciplines and be used in a variety of lessons.

The teacher will provide the content vocabulary words in print on the Smart Board.

Targeted Supports – Strategies that focus toward a specific language demand (e.g., Venn diagrams, graphic organizers, outlines, examples, sentence stems). These may be addressed during small groups. These can be general supports that are modified for specific students or groups of students.

The teacher will use repetition of the vocabulary words.

The teacher will provide a visual of the vocabulary words.

The teacher will provide the proper pronunciation of each word to hear aloud.

Individual Supports – Supports used to target the specific needs of an individual student (e.g., ELL, student with autism, struggling reader or writer, student with significant language delays). These students may or may not have been formally identified and may or may not have an IEP or 504 plan.

Have a copy of the vocabulary words, examples, and handout in an ELL's native language.

Instruction – When designing your instruction, consider when you will implement formal and informal assessments/evaluations, when you will provide feedback, and when you will teach academic language. Therefore, this section should include aspects written above.

| Lesson Part | Description of Activities and Instruction (Teacher Does) | Description of Activities and Instruction (Students Do) | Meeting Individual & Group Needs <i>Plans instruction to meet the needs of individual students. Adaptations are tied to learning objectives. Specific individual or group learning includes requirements in IEP or 504 plans.</i> |
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| <p>Set/Motivator: <i>Restate and address your Essential Question. How do you engage student interest in the content of the lesson? How does this relate to previous learning? Use knowledge of students' academic, social, and cultural characteristics.</i></p> | <p>20. The teacher will tell the learners “When you get inside the classroom, we are going to have a seat in your spot on the carpet.”</p> <p>21. The teacher will say, “Today we will be thinking back on our Interactive Bee Activity that we did last week. Do you remember?”</p> <p>22. The teacher will ask, “What did we do during that activity?”</p> <p>23. TTW ask, “Who were you supposed to represent?”</p> <p>24. TTW ask, “What did the felt represent?”</p> <p>25. TTW say, “I am so proud of you all for remembering the activity.”</p> | <p>20. The learners will go inside the classroom and have a seat in their spot on the carpet.</p> <p>21. TLW be quietly sitting on the carpet and listening to the teacher as she speaks and answer either “yes” or “no.”</p> <p>22. TLW raise their hand to explain what they did during the activity.</p> <p>23. TLW raise their hands to answer, “A bee.”</p> <p>24. TLW raise their hands to answer, “pollen.”</p> <p>25. TLW listen as the teacher speaks</p> | <p>If a learner cannot sit still on the carpet, allow them to sit in a chair to have more movement.</p> <p>IEP and 504s will be identified appropriately.</p> |

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| <p>Instructional Procedures/Learning Tasks: <i>Provide specific step-by-step details of lesson content aligned with objectives, utilizing a variety of teaching strategies.</i></p> | <p>26. TTW say, “I would like for each of you to work individually and draw a picture of what was occurring during the activity. After you draw your picture, I would like for you to write a few sentences about what is occurring in the picture.</p> <p>27. TTW ask, “Does this activity make sense to everyone? Show if you understand the activity with a thumbs up, sideways, or down.”</p> <p>28. TTW dismiss the class to their tables by table number where activity sheets are waiting for them.</p> <p>29. TTW write the words “bee,” “pollination,” “pollen,” and “plant” on the Smart Board for the learners to refer to when writing.</p> | <p>26. TLW listen as the teacher speaks.</p> <p>27. TLW listen and show if they understand with a thumbs up, sideways, or down.</p> <p>28. TLW be dismissed to their tables.</p> <p>29. TLW watch as the teacher writes the vocab words on the board.</p> <p>30. TLW be working on their activity sheet.</p> <p>31. TLW be listening and working. If finished early, TLW color their pictures.</p> <p>32. TLW share their pictures and sentences with a neighbor.</p> <p>33. TLW raise their hands and some will get to share their work on the ELMO Projector.</p> | <p>IEP and 504s will be identified appropriately.</p> <p>If a learner has a visual impairment, provide a visual of the words and illustrations to help identify them.</p> <p>The teacher may need to remind some learners how to spell correctly.</p> <p>ELL learners might benefit more from have illustrations of the words to help identify them.</p> |
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| | <p>30. TTW walk around observing the learner's working.</p> <p>31. TTW say "If you finish before time is up you can color your pictures</p> <p>32. Once the learners are finished, TTW tell the learners to share their pictures and sentences with a neighbor.</p> <p>33. TTW ask the class "Can someone share with the class their picture and sentences?" TTW chose on multiple learners to share their work and project them via the ELMO Projector.</p> | | |
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| <p>Questions and/or activities for higher order thinking: <i>These are open-ended and cannot be answered by yes or no. These can be asked at various points throughout the lesson and guide rather than direct student thinking.</i></p> | <p>34. TTW ask, “What did we do during that activity?” (seen in step 3)</p> <p>35. TTW ask “Who were you supposed to represent?” (seen in step 4)</p> <p>36. TTW ask “What did the felt represent?” (seen in step 5)</p> <p>37. TTW ask “When do you think you might need to know about pollination (seen in step 20)</p> <p>38. TTW ask, “What would happen if there were no longer bees?” (seen in step 21)</p> | <p>34. TLW answer “We were showing what occurs during pollination.”</p> <p>35. TLW answer, “A bee.”</p> <p>36. TLW answer “pollen.”</p> <p>37. TLW might answer “When gardening.”</p> <p>38. TLW might answer, “There would be no flowers, plants, or honey.”</p> | <p>IEP and 504s will be identified appropriately.</p> <p>Provide an ample amount of time for the questions to be thought out and answered.</p> |
| <p>Closure: <i>Makes clear connections to real-world situations and requires students to reflect on and apply their learning through verbal or written expression.</i></p> | <p>39. TTW ask “When do you think you might need to know about pollination?”</p> <p>40. TTW ask “What would happen if we no longer had bees?”</p> <p>41. TTW tell the class “I am so proud of how hard you all have worked these past 2 weeks.”</p> <p>42. TTW ask the learners to turn in their handouts in to the teacher one by one when called on.</p> | <p>39. TLW might answer “When gardening.”</p> <p>40. TLW answer “There would be no flowers, plants, or honey.”</p> <p>41. TLW listen as the teacher is speaking.</p> <p>42. TLW walk their handout to the teacher when called on.</p> | <p>IEP and 504s will be identified appropriately.</p> <p>If a learner needs more one-on-one assistance, call on them last to ensure they do not feel rushed. The assistant teacher could even begin the next lesson if one particular learner needs longer time with the main teacher.</p> |

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| <p>Material/Resources: <i>What do you need for this lesson? Identify, within a bulleted list, the specific materials and resources that you will use. Describe how these materials and resources add value, depth, and extend students' learning.</i></p> <ul style="list-style-type: none"> • Activity Sheet • Desk setting: Gives the learners space to explore what they are learning and execute it onto a graphic organizer. • Carpet setting: Helps incorporate group instruction. • Pencils and Crayons • Smart Board: This will be used to provide vocabulary words. • ELMO Document Camera: This will be used to show the learner's work to the class. | | <p>Technology: <i>(a) Describe the technology you plan to use in your lesson, (b) How does the identified technology in your lesson improve student learning? If applicable, (c) explain how you will use this technology to support a variety of student needs within the learning environment, and (d) If you used this technology to design and implement formative and/or summative assessments, please explain. Did you use the technology to collect and/or analyze your data to inform instruction? Explain.</i></p> <ul style="list-style-type: none"> • The teacher will use the Smart Board to provide the vocabulary words. (see General Supports and Steps 10) • The teacher will use the ELMO Document Camera share the learner's work with the class. (see and Step 14) | |
| <p>Co-Teaching Strategies Used: <i>(highlight and explain all that apply): One Teach, One Observe; One Teach, One Assist; Station Teaching; Parallel Teaching; Supplemental Teaching; Alternative (Differentiated); Team Teaching</i></p> <p>One Teach, One Observe – The main teacher will be teaching the lesson to the learners while the teaching assistant is observing that the learners are understanding the lesson and gathering information for each child's checklist.</p> | | | |
| <p>Management</p> | | | |
| <p>Management: <i>Explanation of processes and/or procedures, transitions from one activity to another, strategies for gaining attention, motivating students to engage in the lesson and focus on learning (e.g. work boards, posted procedures, modeling, positive feedback, redirection). If management decisions were addressed above, please bold those processes and procedures.</i></p> <p>The teacher will use a safe transition to get the children from their tables to the carpet for reading time, as seen in step one.</p> <p>The teacher will be sitting on the carpet with the students, and the students will be in their assigned spots that they are familiar with.</p> <p>The teacher will call table names to transition the students to their tables and observe to assure safety, as seen in step fifteen.</p> <p>The teacher will observe the learners as they are executing the activity.</p> | | | |
| <p>Theory/Rationale</p> | | | |

I am using repetition to help familiarize the learners with the content vocabulary in this lesson (Morrow, 2012).

I am using small group work to help enhance collaboration and comprehension of the objective (Morrow, 2012).

I am using Think, Pair, Share to help increase the comprehension of the topic (Morrow, 2012).

I am using an activity sheet as a summative assessment to assess the understanding of the unit (Morrow, 2012)

I am using the 5 E's Framework to conduct this Unit Plan, specially the Evaluate phase in this lesson (Bybee, 2014).

Bybee, R. W. (2014). The BSCS 5E instructional model: Personal reflections and contemporary implications. *Science and Children*, 51(8), 10-13.

Morrow, L. (2012). *Literacy development in the early years: Helping children read and write* (8th ed.). Boston, MA: Pearson

Interactive Pollination Activity Assessment

Draw a picture representing the Interactive Pollination Activity and write about it.



Unit Evaluation Plan (f)

Overview

I will use both formative and summative assessment during this Unit Plan. The evaluations will assess whether or not the children have learned the science content and practices related to my life science standard. The teacher will use a variety of methods to assess students understanding along the way, such as taking anecdotal notes, filling out checklists, getting feedback from the students, and a formal summative assessment. The assessment plan takes into consideration children's individual abilities and cultures by allowing them to interpret an experiment that was conducted and record their knowledge through a drawing and writing portion.

Formative

The teacher will use formative assessment during each of the major activities to assess understanding. During the *Engage* phase, the class will watch a video clip a *Bee Movie* where they are talking about what the world would be like without bees and why they are important. Discussion will be held afterwards where the learners discuss if they think they need bees like the movie clip says and what they think about it.

During the *Explain* phase, the students will be given opportunities to read books and watch videos about bees and the pollination process. They will be encouraged to discuss and record information they are learning in their science journal. In addition, the teacher will use methods such as thumbs up or thumbs down for students to indicate if they understand a concept. For example, after the students have read a book about bees or have watched a video about bees and pollination, the teacher will ask the children to give their thumbs up or down to identify if the video or book was helpful and if she should go a different direction before continuing. The teacher will observe, take anecdotal notes as the students work individually or in groups, filling out checklists as the students begin mastering content, and giving feedback to each child as they complete assignments and journal entries. It is important for the teacher to constantly observe the students to check whether the students are engaged in the experiments and investigations.

Summative

During the final experience of the Unit Plan, the individual students will draw a picture about the Interactive Bee Activity that they conducted and share it with the class. The teacher will ask the students to explain their drawings in the writing portion. The students will be assessing their own learning through the writing portion. The teacher will use a checklist to record what the students understand.

A Letter to Parents (g)

May 4, 2020

Dear Parents and Guardians,

I am very excited to share with you the upcoming unit plan we will be conducting in your child's class!

Starting May 11th, we will begin our Unit Plan, *Let's Pollinate*, which will include the study of the pollination process. We will begin by engaging in the topic of bees and if they are needed. Then the unit will expand to help the learners understand the importance of bees and their part in the pollination process. During this unit, your child will be partaking in hands-on, inquiry-based experiences that will enhance their science skills.

This specific group of children is extremely knowledgeable about plant structure and function, so this unit is a way to focus on one specific function, making new plants through pollination. While exploring this topic, we will be engaging in the 5E's Framework. This framework gives the children the opportunity to practice inquiry through engaging, exploring, explaining, elaborating, and evaluating.

I am very excited to begin this unit with your child! If you have any questions, feel free to contact me via email or my cell, which I will provide. If you would like to volunteer in or visit the classroom, send me an email and we can arrange for that to happen. Also, if you have any questions, please feel free to contact me via email or cell.

Sincerely,

Ms. Karcher

Email: karcher@etsu.edu

Cell: (504)460-4448

List of References (h)

Teachers

Bybee, R. W. (2014). The BSCS 5E instructional model: Personal reflections and contemporary implications. *Science and Children*, 51(8), 10-13.

Slavin, R. E. (2018). Effective Learning Environments. In *Educational Psychology: Theory and practice* (12th ed.). New York, NY: Pearson Education.

Tennessee State Board of Education. (2016) Tennessee Academic Standards for Science.

Nashville, TN: Tennessee Department of Education.

<https://www.tn.gov/education/instruction/academic-standards/science-standards.html>

Families

6 simple ways your family can protect honey bees. (2019, June 5). Whole Kids

Foundation. <https://www.wholekidsfoundation.org/blog/6-simple-ways-your-family-can-protect-honey-bees>

Honey bees as pollinators, their habitats and products. (2018, September). University of Missouri

Extension | MU Extension. <https://extension2.missouri.edu/m403>

Smith, S. J., & Hickner, S. (Directors). (2007). *Bee Movie*. DreamWorks Animation.

Children

Pollination – Kids growing strong. (n.d.). Kids Growing Strong – bringing a garden into every child's

life. <https://kidsgrowingstrong.org/pollination/>

List of Resources Used in the Unit (i)

Materials and supplies

- Activity Sheets
- Art supplies (felt, markers, etc.)
- Pencils
- T-shirts
- Books (listed below)

Print and non-print

Glaser, L. (2011). *Brilliant bees*. Millbrook Press.

Shuttlesworth, D. E. (1967). *All kinds of bees*. Random House Books for Young Readers.

Slade, S., & Schwartz, C. (2010). *What if there were no bees?: A book about the grassland ecosystem*.

Capstone.

(2010, September 19). YouTube. <https://www.youtube.com/watch?v=A0YubpFbwLg>

(2019, July 17). YouTube. <https://www.youtube.com/watch?v=Ke-7xqGvCHg>

Technology resources

- Computer
- Smart Board
- ELMO Projector

Other

- Classroom Areas: Carpet, Art, Tables
- Hallway
- Playground