Kacey Duchak

Grade: Grade 3
Main Topic: Seeds & Growth
Main Subject and Curricular Outcome: Life Science: Plant Growth and Changes PL Outcomes PL3.1 Investigate the growth and development of plants, including the conditions necessary for germination. (CP, SI)
Additional Subjects and Outcomes: **SOCIAL STUDIES**: Dynamic Relationships DR3.2 Assess the degree to which the geography and related environmental and climatic factors influence ways of living on and with the land. **Arts Education** Critical/Responsive Respond to arts expressions that use the environment (natural, constructed, imagined) as inspiration.
Projected Time: 2 months
Areas of the classroom used for the project: Tabletop area
Materials Needed: - Soil - Seeds - gardening tools - paper - clip boards - colouring materials

- clear bags
- paper towel
- water

Philosophy/Rational for Experiential Learning and Project Based Learning:

I am using both experiential learning and project-based learning in this lesson. Experiential learning happens along the way in this lesson, and I will use this type of learning to assess the children's knowledge of the topic. The project-based learning is a whole class learning experience because we will all be working together to create a common thing, i.e. a growing seed.

Role of the Teacher:

Observer- watching kids explore and learn
Documenter- take pictures
Listener- listen to kids questions, and wonderings
Creator of Stimulating Environment- bringing the project to life in the classroom
Facilitator of learning- guiding the learning process
Partner with families- connecting school and family

Parent Engagement Opportunities:

Field trip support
Research partner.

Anti-Bias Elements:

"Children will be aware of and value the many kinds of work that family members do, paid and unpaid, both in the home and in the wider world" (Derman-Sparks & Edwards, 2020)
"Children will feel pride in their family's efforts to care for them and earn a living. They will feel love and approval separate from gifts and objects" (Derman-Sparks & Edwards, 2020)

-learning about farming around the world, and how it differs then here
- how do Indigenous people view the land?
- we might eat different foods, farm differently, but we all use plants, and we all need to eat
- food is for eating

List of Resources: (field trips, websites, books, guest speakers, etc.)

FIELD TRIPS

https://reginafloralconservatory.ca/educational-tours/

https://sherwoodgreenhouses.com/

https://condieseed.ca/

ONLINE RESOURCES

https://artsandscience.usask.ca/scienceoutreach/grade-3-resources.php#top **(videos and activities)**

https://www.youtube.com/watch?v=tkFPyue5X3Q **(how do seeds become plants?)**

https://www.youtube.com/watch?v=BDoV4I0XQSs **(farming around the world)**

https://www.youtube.com/watch?v=GMFq1hhNod4 **(learning from the land, Indigenous perspective)**

BOOKS

National Geographic Readers: Seed to Plant- Author: Kristin Baird Rattini

How Do Plants Grow? Author: Julie Lundgren

Soil - Author: Annette Whipple

From Seed to Plant Author: Gail Gibbons

I See Seeds Author: Tim Mayerling

Plants Need Sunlight Author: Christine Peterson

DK Eyewitness Books: Plant: Discover the Fascinating World of Plants Hardcover – by David Burnie

GUEST SPEAKER EXPIERENCE

https://aitc.sk.ca/programs/seed-survivor-1 Seed Survivor Mobile is housed in a 36-foot trailer unit that travels to pre-registered schools, offering an immersive, interactive experience. Students learn about plant needs and soil nutrients through an engaging presentation and interactive games.

Project Description

Phase One:

Spring has Sprung! I would begin my project with inquiring questions about spring. As well as putting out one or two key books on a display shelf to bring wondering eyes. What happens in Spring? Who do you know that has a garden? What do you do with that garden? What do the farmers do? How do farmers help us? When the children start engaging with the questions, I hope they would give me responses like, “plants, and animals come back, or we grow veggies in the garden! Farmers farm food!”

During this conversation I hope that the “children will feel that they belong and are valued, whatever their home culture.” (Derman-Sparks & Edwards, 2020) and we can engage in meaningful conversations about farming, and gardening. I would then show the children the video of how people farm around the world, https://www.youtube.com/watch?v=BDoV4I0XQSs in hopes to enlighten the children that everyone in the world farms and needs to eat. Inquiry questions, like what are our favourite foods?

Now that we know that everyone needs to eat, and farmers farm, and we can grow veggies and fruits in the garden, I will ask the children if they know how this food comes to be? Plants! What do we know about plants? How do plants start? How do they grow? The goal would be that we get onto the topic of seeds. After all this talking the children would need a break so we would head outside to do a learning walk. I would give out paper, clipboards, and colouring materials while asking the children to search for plants, and seeds and to document them by drawing a picture and writing the word if able.

Phase Two:

Now this is where the fun begins! I would begin by bringing out all our spring, seed, and farming books, pictures, and tabletop activities! We know that "Through play with loose parts, children are empowered by choice and have the autonomy to center their own theories, ideas and learning." (Bynoe & Thompson, 2023) so on our tabletop activity center, I would include dirt, pots, gardening tools, play flowers, and a variety of seeds. I would include in this invitation books about seeds, from the book list up above. Another tabletop area would be for farming fun. Books about farming, and food from around the world would be eye catching for the children. "For children to create and take ownership of their learning we must gift them with the tools necessary to achieve new understands" (Bynoe & Thompson, 2023) I would include dirt, toy tractors, combines, small hand rakes, and assorted colours of rocks, sticks, beads etc. to be pretend food.

This phase would also include a field trip to Sherwood Green House, while we were here, we would learn about diverse types of plants and seeds and what they need to thrive and grow. We will learn if all plants need the same amounts of seed, soil, water, and sun, or if it varies from plant to plant. The children will be able to experience plants up close and personal and see plants in various stages of development.

When we return to the classroom, I would allow students to follow up on what they learned at the greenhouse. I will have a selection of seeds for the children to choose from and they will be able to research what that specific plant needs to grow the best it can. I will encourage them to research their specific plant with their grownups over nights. The next day we will plant our seeds! Students can choose to start their seeds right in the soil, or in a clear bag with wet paper towel, the choice is theirs. The children will be responsible to take care of their seeds and can make a group to care for each others seeds.

Now that our seeds are planted, I will assess what the children know with a summative assessment. I have already created portfolios having collected their information sheets from our learning walk, their research information from their seed and took pictures during our learning process. I would separate the kids into groups for them to brainstorm together to explain how a plant grows. They can show me via picture, acting out, creating a model, or a writing story.

Phase Three:

Wrapping up our Plants project, I would bring students back to the beginning of our journey to our questions we had. We would discuss the questions we had and if we had found the answers to our questions. Once we had discussed the answers we had found, I would ask if the students had learned anything new about plants and farming that they thought was interesting.

We would be checking in on our plants and seeing what has happened with them. If they had grown, if they did not grow. We could discuss reasons why this is, or why some of the plants grew bigger than others. Some of the seeds were bigger, the plant was smaller than others, this one had sun, this one did not, this one got over watered, this one had not enough water etc.

During this time, our tabletop centers would be put away and I would transition into our next learning topic. I think it would be a suitable time to discuss how other people view the world. We learned a little about farming around the world, but it would be neat to learn about how "culture encompasses the specific rules and patterns of behaviour, language, values, and world beliefs of various groups." (Derman-Sparks & Edwards, 2020) We could watch a video such as https://www.youtube.com/watch?v=GMFq1hhNod4 to spark interest.

Assessment:
For assessment I would use a couple forms:
Portfolios created through out the project timeline with pictures/ collected materials.

The summative assessment: I would separate the kids into groups for them to brainstorm together to produce a way to explain how a plant grows. They can show me via picture, acting out, creating a model, or a story.

Reference List:

Derman-Sparks, L., & Edwards, J. O. (2020). Anti-Bias education for young children and ourselves.

Bynoe, K. N., & Thompson, A. (2023). The Gift of Playful Learning ebook. Default- TCM.

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