



Garden Project

Owl - Our Lady of Fatima: Preschool

Background

This project took place in the Preschool room at Owl-our Lady of Fatima. We started the Project in May 2016 and concluded in November 2016. The children who participated in this project ranged from 2.5 to 4 years of age. During this project, we had 24 children participate at various points of the process. The Educators highlighted in this project are Cassandra P. RECE, Shannon B. RECE, Chloe F. RECE, Susan E RECE, and Ashley A. RECE.



Fig 1



Fig 2



Figure 3 James age 4.5

Phase 1: Beginning the Project

Our project emerged in the Preschool Room when the children created grass pets out of nylons and grass seeds (Fig 1 & 2) and began growing seeds in flowerpots in our classroom. The children watered the soil daily and watched the green emerge from the pots and the soil (Fig 3). Noting the intense interest in gardening the teachers added provocations to the room such as gardening gloves, spades, soil, buckets and seed packages. These items increased the children's interests in gardening, which resulted in the children and teachers creating a web together based on gardens (Fig 4).



Fig 4

Once the weather was suitable Susan and the children started to prepare the earth in the garden outside the Preschool classroom window. Nathan focused on digging out weeds while Isla focused on making small holes (Fig 5) James thought it was important to turn the soil in our garden tires and focused all of his attention there (Fig 6)



Fig 5 Isla age 3.11 years and Nathan age 4.1yrs



Fig 6 James age 4.5 years

Susan identified that the ground was very hard and not suitable for growing and discussed different ideas on how to create our garden in these conditions and it was decided raised gardens were the best option. It took several days of digging and raking the space to create a flat surface that the children were proud of and felt was ready for the next steps (Fig 7) Alongside with the children Cassandra (a student on placement) created a design of what we thought the garden would look like. Cassandra took all of the ideas home and created a visual layout for the garden based on the groups ideas (Fig 8) While reviewing the plan Cassandra asked the preschool group “What would you like to grow in our garden?” Isla said “I want pretty flowers in the garden. James said, “I want to eat some vegetables in the garden. Joanna identified that we will need to have watering cans to water the garden.



Fig 7

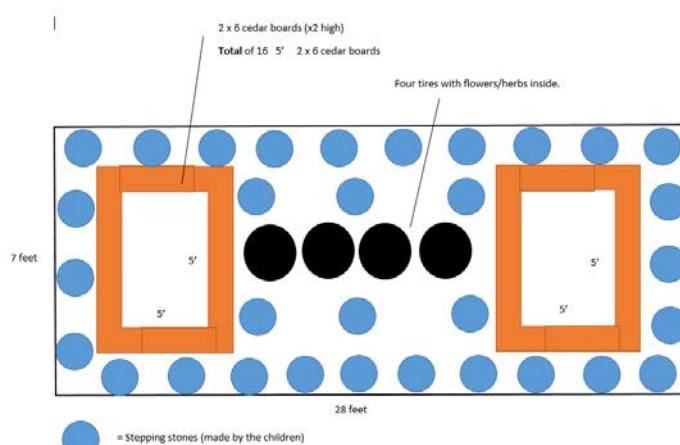


Fig 8

The group talked some more about what they wanted to grow in our garden Matthew wanted vegetables and colorful flowers while Anika wanted carrots, tomatoes and lettuce. Many of our Preschoolers began asking a variety of questions. Kara wanted to know if we can eat the food in our garden? Isla asked if we could have a garden party after our plants grow. This led to a discussion about what the children already knew about gardens and what they wanted to know about gardens. Anika knew that plants grow and Sariah wanted to know if some plants needed milk to grow? Our in depth discussions had us wondering who we could ask and where we could find the answers to our questions (Fig 9)

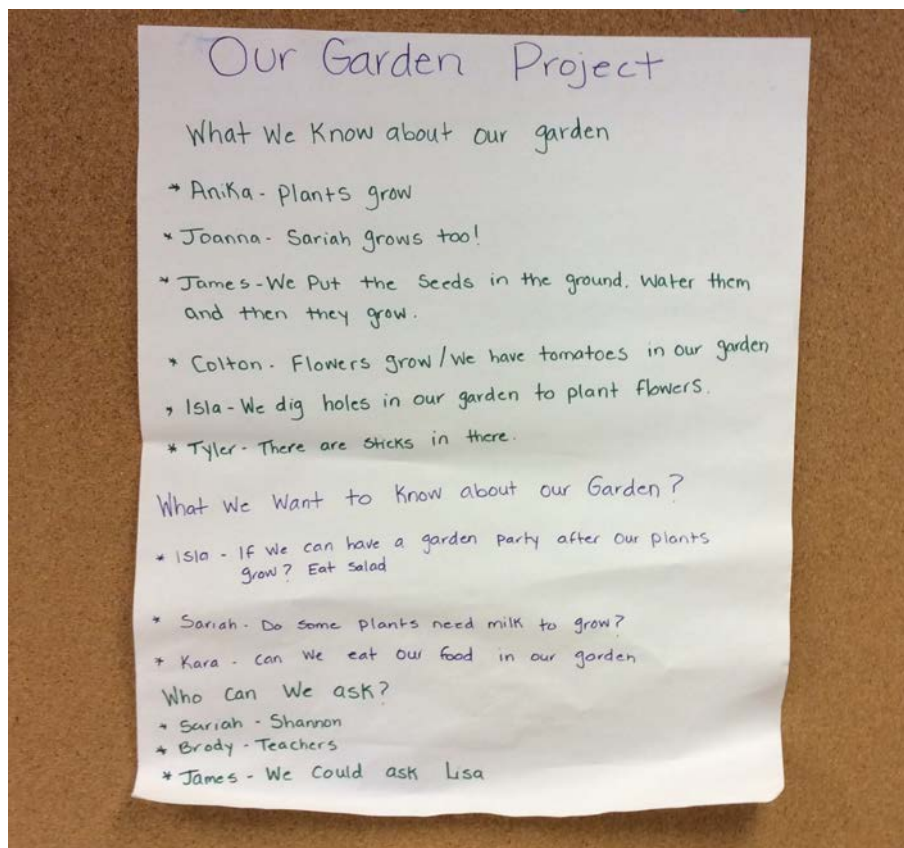


Fig 9

Outdoors the building of our garden boxes took place. To do this the children with help from Cassandra followed the below steps.

Step 1

We dug trenches in the dirt to establish a layout for the garden boxes to fit into once completed (Fig 8 & 9)



Fig8 James Age 4.5, Matthew Age 4.5, Isla Age 3.11 & Matthew Age 4



Fig 9 James Age 4.5 & Isla Age 3.11

Step 2

The children carried the heavy lumber over and assisted in the placement of the screws while Cassandra drilled them into place until a square formed (Fig10 & 11)



Fig10 Isla Age 3.11, Matthew Age 4.5, James Age 4.5 & Matthew Age 4



Fig 11 James Age 4.5 & Matthew Age 4.5

Step 3

We attempted to hammer in long wooden stakes to secure the garden boxes. The children used great force but were unable to drive them into the ground, as the dirt was too hard. Through a group discussion that children determined that the stakes were too long and would need to be cut (Fig 12 & 13)



Fig12 Matthew Age,4.5, Owen Age 3.1, James Age 4.5, Brayden Age 3.11 & Matthew Age 4



Fig13 Matthew Age 4, Owen Age 3.11, James Age 4.5 & Matthew 4.5

Step 4

The following day the preschool group began the build of the second frame on the other side of the garden. Following steps 1 & 2 they constructed a frame to fit in the trench. A second frame was then built on top of the original frame (Fig 14 & 15)



Fig 14 Grace Age 4.4, Colton Age & Emma Age 3



Fig 15 Grace Age 4.4

Step 5

Our now shorter pegs were then hammered into both garden boxes to ensure the structure was secure before filling the boxes with soil, plants and seeds (Fig 16 & 17)



Fig 16 Colton Age 4



Fig 17 Tyler Age 4.10

Step 6

The children brought the soil over to the garden boxes and assisted the teachers in filling the boxes (Fig18,19 & 20)



Fig 18 Isla Age 3.11 & Alina Age 3.6



Fig 19 Anika Age 3.5



Fig 20 James Age 4.5 & Lucas 3.2Age

Step 7

Using a variety of materials such as pebbles, tiles, gems and beads the children created stepping-stones out of concrete that were later added to the garden (Fig 21 & 22)



Fig 21 Lucas Age 3.2, Isla Age 3.11, Alina Age 3.6, James age 4.5



Fig 22 Michael Age 4, James Age 4.5

When our garden boxes were finished, we created a letter for our parents informing them of items we would need such as, soil plants, wood, fruits and vegetables. Many parents were committed to ensuring we could maintain a lovely garden. Immediately we received many donations such as, a raspberry tree, tomato, peppers plant, zucchini, flowers and extra soil. The children planted the

flowers around the tree stump (Fig 21 & Fig 22) before moving on to planting our donated plants in the first garden box. (Fig 23 & 24)



Fig 21 Joanna Age 3.5



Fig 22 Nathan Age 4.1



Fig 23 Owen Age 3.1



Fig 24 Grace Age 4.4

The preschool group decided to plant seeds in the second garden box. We chose to plant carrots, lettuce, green beans and beets. The children were excited to see and compare the growth of the established plants compared to the seeds.



Fig 26 Grace Age 4.4 & Owen Age 3.1



Fig 27 Anika Age 3.5

Phase 2: Developing the Project

While we nurtured and cared for our garden boxes outside, we continued the inquiry while inside. The children drew pictures of the mature plants based on the seeds sown in our garden. As a first drawing Brayden's picture represents the carrots he helped plant (Fig 28) he did his drawing from memory of what he knew carrots looked like. Colton's photo represents a second drawing in which he drew the carrots as he observed the garden growing (Fig 29)



Fig 28



Fig 29 Colton Age 4

While molding clay the children created 3D representation of garden items. While some of the children focused their attention on flowers and plants, James created worms out of clay. He informed us that worms lived in our garden and helped the plants grow (Fig 30 & 31)



Fig 30 James Age 4.5



Fig 31 James Age 4.5

Our Language and Literacy skills were enhanced as the children created a vocabulary list of new gardening words that were identified through research, discussions and storybooks (Fig 32) Using the information they had gathered the group created a Garden song. The song is sung to the tune of twinkle, twinkle little star (Fig 33)

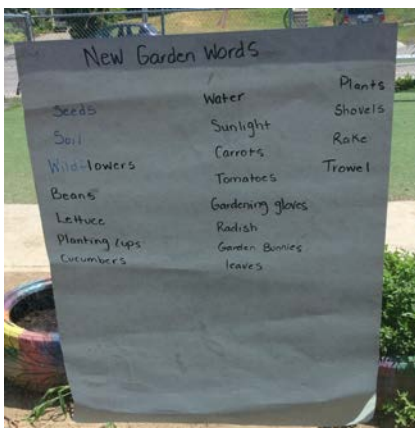


Fig 32

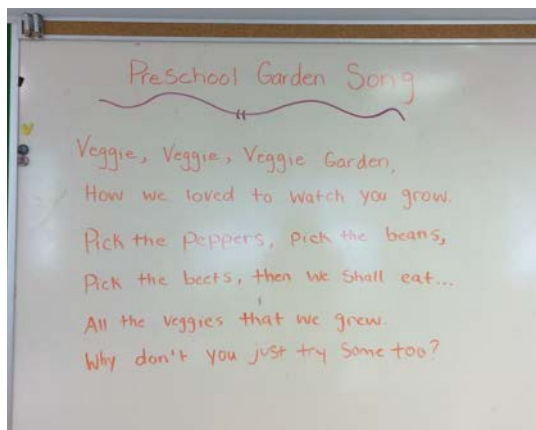


Fig 33

We visited a Farm in Cambridge called Marcy's Berries to complete our field study location, Nora and her Husband Ken were delighted to share with us how to pick blueberries and raspberries and assisted us in answering some of our field study questions (Fig 34) as well as new questions that arose while at the berry farm. James wanted to know how long it took a raspberry tree to grow? Nora explained that she will purchase the tree, plant it in the ground and within 2 years, the tree will be in full bloom. We also wanted to know if blueberries have seeds? She told us yes, blueberries do have a

variety of tiny seeds in them.” After we had our questions answered, we explored the farm and were able to pick the crops and place them in the containers we brought with us (Fig 35-37) We picked delicious blueberries, raspberries and strawberries. They were so delicious that the majority of them were eaten on the spot instead of packed up to take home.

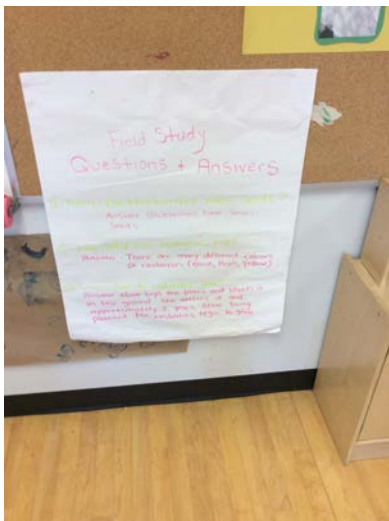


Fig 35



Fig 36 Matthew Age 4.1



Fig 37 Owen Age 3.2

Many friends loved preparing questions for survey's and manipulating the clipboards. The survey we completed was What is your favourite corn on the cob or bananas? The children used straight lines to complete their findings and count how many friends had answered the questions (Fig 38)

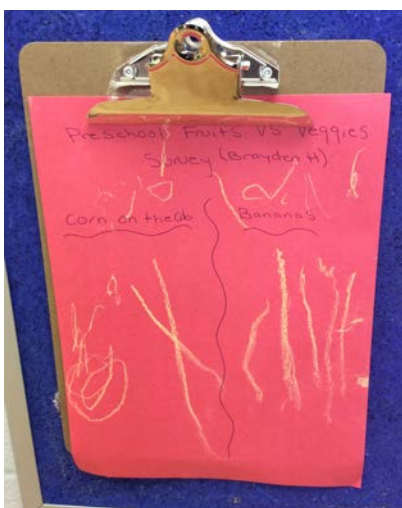


Fig 38

Each day during outdoor time, we watered our garden and as the vegetable grew, we began tasting them straight from the garden. We noticed a large cucumber growing one day and decided to take it into our classroom to cut and share with all of our friends. The children were very excited to discover that it tasted just like the cucumber they get from the grocery store (Fig 39 & 40)



Fig 39 Landon Age 2.7



Fig 40 Pepper Age 4.4

One day while searching for beans the children asked about some of the other vegetables growing that we had yet to taste. We picked a beet and discussed if we should taste it or not. Susan received a unanimous “No” from the group. She shared with the children that beets are one of her favourite vegetables and that she cooks them before eating them. They did not think that they would enjoy tasting them cooked or uncooked. Susan informed them that she had seen them made into chips before and asked if they would like to try to make some, to which they excitedly agreed. The following day Susan brought in a microwave chipmaker and mandolin so they could make beet chips. The children with teacher assistance helped peel then slice the beets before placing them in the microwave to cook. The chips were taking too long to crisp in the microwave so we found the centre dehydrator and placed the remainder of the sliced beets on it to cook. When both trays were finished, we sat down to taste them. James loved both of kinds of chips while the remainder of his friends thought they were disgusting. Colton was very shocked to discover he did not like the chips when his friend was enjoying them so much and asked to taste them again. Sadly, in his second tasting he still did not like the beet chips (Fig 41-43)



Fig 41 Alina Age 3.6



Fig 42



Fig 43

The children tried to convince Susan that the mint on the playground tasted just like gum. They loved to pick a leaf and chew it until all the flavour was gone. This led to a conversation on other ways they could taste the mint and some research on recipes. They decided that chocolate covered mint leaves and mint lemonade were the perfect recipes to try. The following day they picked a large amount of mint from the garden, brought it in to the room, washed, and dried it in a salad spinner before placing mint and water into ice cube trays to freeze (Fig 44-46)



Fig 44 Grace Age 4.5



Fig 45 Joanna Age 3.6



Fig 46 Colton Age 4.1

While we waited for the mint ice cubes to form, we moved onto melting chocolate chips to cover the remaining mint. Melted chocolate chips were used to cover the mint leaf. The children participated in this activity by selecting a piece of mint and carefully dipping it into the chocolate. A few pieces of the mint got away from us and we had to use tongs to retrieve them (Fig 47 & 48)



Fig 47 Tyler Age 4.1



Fig 48

That afternoon we made up a frozen lemonade mix. We read the instructions and noticed that we needed to add four cups of water to the frozen mix and stir. The children took turns measuring out the water and pouring it into the juice jug until we had four cups exactly. Each child then took a turn to stir our juice before we added fresh mint leaves and the premade mint ice cubes (Fig 49-51) That afternoon we enjoyed chocolate covered mint leaves and mint lemonade. Both were a hit with all of the children but they all agreed that they preferred picking and eating the mint right out of the garden.



Fig 49 Tyler Age 4.1 & Owen Age 3.2



Fig 50 Owen Age 3.2



Fig 51 Owen Age 3.2, Colton Age 4.1
Brayden Age 4.1

Phase 3: Concluding the Project

The summer quickly came to an end and some of the children headed off to kindergarten but it was observed that the interest in the garden remained for the children who stayed in preschool as the garden continued to grow. Our new group of preschool friends continued to eat the tomatoes and check for beans daily until one day they observed a change in the garden. Lucas observed that the tomatoes were no longer changing colour and that he was no longer able to find beans. As a group, they discussed that the season was changing and with the change the garden would no longer produce edible products. It was decided to dig up the garden and get it ready for the following summer when we would be able to plan new flowers and vegetables. Landon was eager to help pull out the plants and used his strong gross motor skills to pull the plants out of the soil and place them in the wheel barrow before taking it to the green bin (Fig 52-54)



Fig 52 Landon Age 2.8



Fig 53



Fig 54

While cleaning out the garden the children noticed our carrots that did not fully grow. We carefully dug them all out and took them inside where we investigated them. We reviewed the planting instructions from the package and determined that the carrots didn't grow because they had been planted too close together and needed to be planted earlier in the season to give them time to grow. The children did not want to taste the mini carrots so we turned it into a numeracy experience instead. We counted the number of carrots pulled from the garden, we sorted them based on size and shapes and compared them (Fig 55-57)



Fig 55 Avery Age 2.6



Fig 56 Kara Age 3.4



Fig 57

Now that the garden boxes were empty the children and teachers took some time to reflect on the past summer and all the learning opportunities and experiences that happened as a result of our garden. The children shared that they loved tasting the planted items and cooking with them. The teachers suggested they could make a cook book of the different items they had tried as well as include new recipes to try the following summer. We asked parents if they would help us with our cook book by submitting a recipe based on one of the items from our garden. We received many tasty recipes to include. We chose to make one of the recipes from the cookbook and invite our parents in to celebrate with us. They were able to taste the beet muffins we made as a group and took home with them a copy of the classes recipes (Fig 58). Like the garden, our cookbook social was a great success and we hope that many of our families have used the recipes



Fig 58

Teacher Reflections

From the beginning stages of this project, How Does Learning Happen (HDLH) was present in all of children's learning and discovery. Our children immediately felt included and a sense of belonging as they assisted making the planter boxes. Carrying wood, hammering nails and using a variety of tools that engaged and peaked their interests. You could see many children being physically active and confident in their abilities as they mixed concrete and carried large bags of soil to place into the planter boxes. The children were able to display engagement as they expressed joy and wonder with the environment, the natural world and other people. They were able to focus their attention, manipulate, investigate, create and problem solve as we created charts, field study questions and surveys. Together we were able to show expression and we participated in meaningful interaction and communication with peers.