

The Project Approach to Learning at

RisingOaks
Early Learning

Lincoln Road



Project Name: Ants

Age Group: Preschool (2.5 to 5 years)

Project Start Date: May 12, 2021

Project End Date: July 6, 2021



RisingOaks
Early Learning

Growing minds through play

Background

Our Ant project officially started on May 12, 2021 with Mary Klug, RECE, Nidya Oosterveld G., RECE, Chenoa Pattison, RECE, and Melissa Miller, RECE. It finished on July 6, 2021. We had a group of 20 children whose ages ranged from two years to five years old.

Phase 1: Beginning the Project

The Spring weather had us going for many walks in our neighborhood. Every walk led into conversations about ants and if we would see them, where they would go, where their home is and if it was too cold for them. One cool day, Mary went for a walk on her lunch and noticed hundreds of mini anthills on the school playground just up the road. After playing our gross motor activities, she led the children on an Ant Hunt to this area. The educators divided the children into groups of two or three and gave them an anthill spot. This gave children the opportunity to observe and communicate with their peers about the ants. When we got to the field we talked about how we would spread out and observe the ants, but we would not touch them. Here, we spent about twenty minutes just watching the hills for action. It was quite cold and we only observed two hills with a few ants coming out and right back in. We concluded as a group that the weather was just too cold for them to be out of their home. Bentley L stated it was because they did not have their winter coat or fur on yet.





Later on May 12, the children noticed an ant in the classroom. This brought up a discussion with Mary about bugs and how we should not kill them, but take them outside instead. This discussion and interest in ants in particular continued outside. The kids began looking for ants in the playground. They would find one and watch it in the dirt, get very excited and call their peers over to see. Avery found a stick and began picking up ants with it and watching them crawl around on it. Every afternoon this continued around the garden.

One morning, Reeve, Beau, and Levi, while playing at the block center, decided to create an “ant park.” They explained to Nidya that their structure had a high tower for the queen and the king to stand and watch the other ants; a crib made of the semicircle blocks for the baby ants, and a pool out of a circular block. This one was the first one of many others, as this topic continued to be one of children’s inspiration for their building.

On Friday May 14, just before outside time, Mary noticed a few ants trying to make their way into the classroom. The children showed great interest in them, so we carefully watched what they were doing before removing them. When Melissa arrived outside, she brought out the insect containers for the children to use. They caught one using a stick again; they put it inside the container and watched it crawl around. The lid of the container has a magnifying glass on it and the children noticed that the ant looked bigger and that they could notice the body parts and the legs. Due to the growing interest in ants, the educators decided to start an ant project.

After observing the ants and their home, we went back and created our webs and charts of what the children knew and what they wanted to learn.

As a class, we tried researching about songs, specifically on ants. Of course, no one can beat the famous, "Ants go marching." Below are the lyrics to this lovely song.

The ants go marching one by one, hurrah, hurrah
The ants go marching one by one, hurrah, hurrah
The ants go marching one by one,
The little one stops to suck his thumb
And they all go marching down to the ground
To get out of the rain, BOOM! BOOM! BOOM!

The ants go marching two by two, hurrah, hurrah
The ants go marching two by two, hurrah, hurrah
The ants go marching two by two,
The little one stops to tie his shoe
And they all go marching down to the ground
To get out of the rain, BOOM! BOOM! BOOM!

The ants go marching three by three, hurrah, hurrah
The ants go marching three by three, hurrah, hurrah
The ants go marching three by three,
The little one stops to climb a tree
And they all go marching down to the ground
To get out of the rain, BOOM! BOOM! BOOM!

The ants go marching four by four, hurrah, hurrah
The ants go marching four by four, hurrah, hurrah
The ants go marching four by four,
The little one stops to shut the door
And they all go marching down to the ground
To get out of the rain, BOOM! BOOM! BOOM!

The ants go marching five by five, hurrah, hurrah
The ants go marching five by five, hurrah, hurrah
The ants go marching five by five,
The little one stops to take a dive
And they all go marching down to the ground
To get out of the rain, BOOM! BOOM! BOOM!

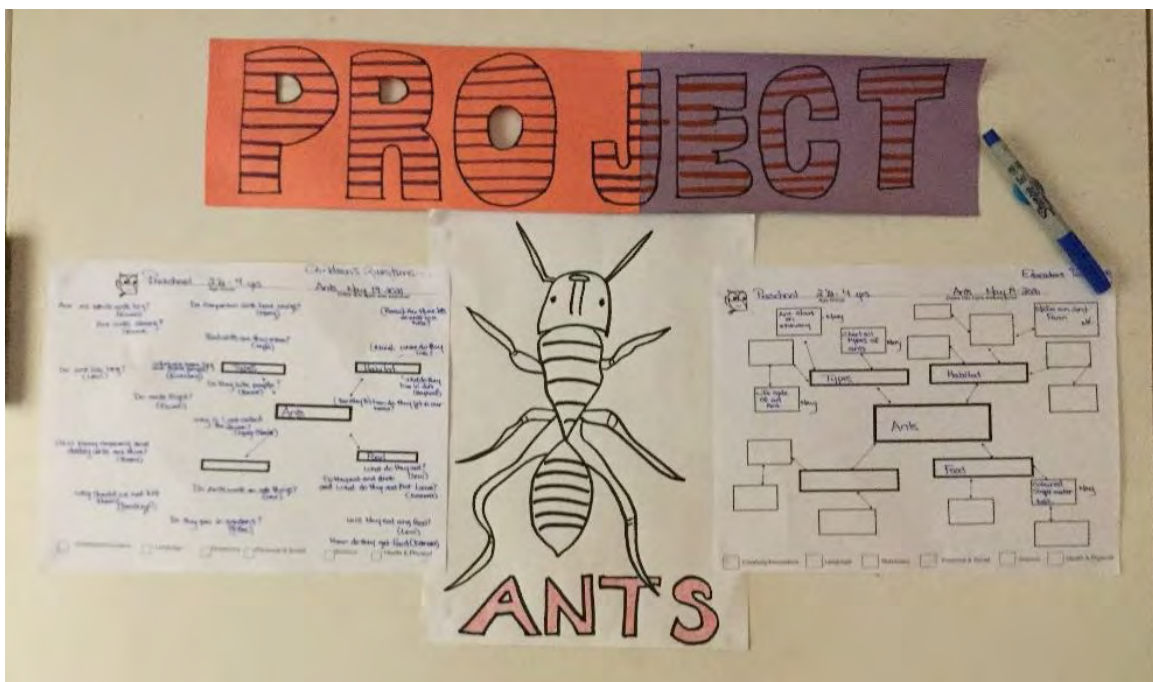
The ants go marching six by six, hurrah, hurrah
The ants go marching six by six, hurrah, hurrah
The ants go marching six by six,
The little one stops to pick up sticks
And they all go marching down to the ground
To get out of the rain, BOOM! BOOM! BOOM!

The ants go marching seven by seven, hurrah, hurrah
 The ants go marching seven by seven, hurrah, hurrah
 The ants go marching seven by seven,
 The little one stops to pray to heaven
 And they all go marching down to the ground
 To get out of the rain, BOOM! BOOM! BOOM!
 !

The ants go marching eight by eight, hurrah, hurrah
 The ants go marching eight by eight, hurrah, hurrah
 The ants go marching eight by eight,
 The little one stops to roller skate
 And they all go marching down to the ground
 To get out of the rain, BOOM! BOOM! BOOM!

The ants go marching nine by nine, hurrah, hurrah
 The ants go marching nine by nine, hurrah, hurrah
 The ants go marching nine by nine,
 The little one stops to check the time
 And they all go marching down to the ground
 To get out of the rain, BOOM! BOOM! BOOM!

The ants go marching ten by ten, hurrah, hurrah
 The ants go marching ten by ten, hurrah, hurrah
 The ants go marching ten by ten,
 The little one stops to shout "The End"



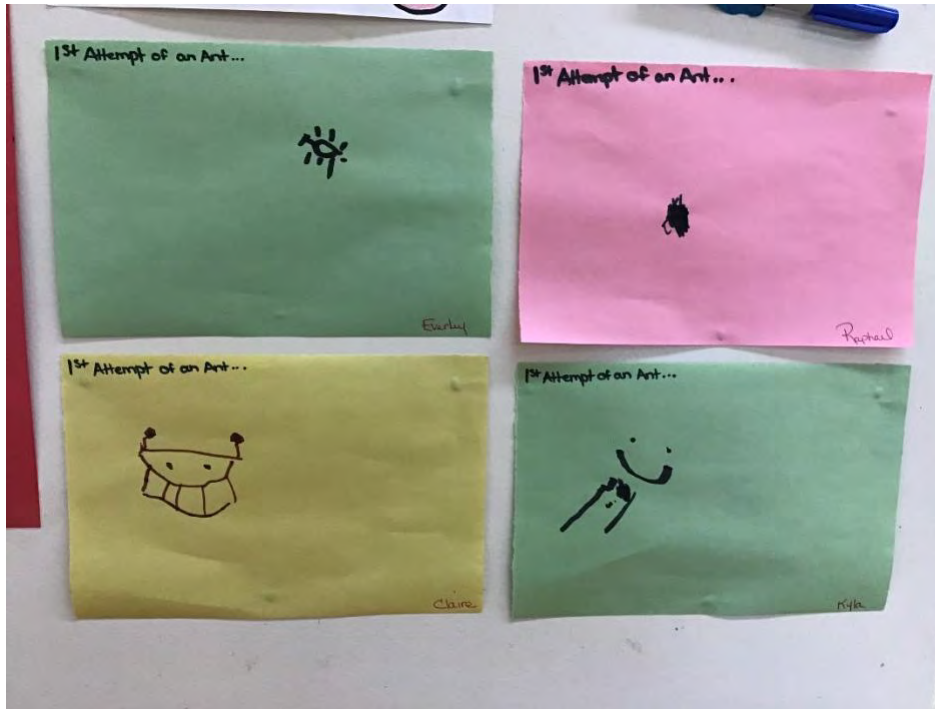
Below is a chart of what the children know and what they wanted to know:
 The educators worked on answering these amazing questions.

Child's name	what they know	what they want to know
Ewan	Some are big some small	Are all black ants big? Do ants fight?
Kamara	They like food	What do they eat?
Levi	I like ants	Where do they live? Do ants walk on everything? Do ants live long?
Etta	We have ants at my home	Do they pee in gardens?
Bentley L	They are yucky	Why should we not kill them?
Beau	Why are they black?	Do they eat and drink? Are there a lot of ants in one hole?
Claire	They live outside	Why is there only 1 queen ant?
Kyla	I don't like bugs	Are red ants mean?
Reeve	They live in gardens and homes?	Do they bite people?
Raphael	They are big and petite	Why do they live in dirt?
Everley	I see ants everywhere	Why are some ant big and some small?

Due to the recent pandemic, we were unable to ask any experts about ants so we compromised and used the iPad to conduct our research and answer our questions.

Phase 2: Developing the Project

One day, the children asked to draw at the table; so we asked the children if they could draw a picture of what a single ant would look like.



Below are the children's thoughts of what certain words mean and the real definition.

WORD	CHILD'S DEFINITION	REAL DEFINITION
Ant	A bug (Levi) Big and small (Raphael)	A small insect often with a sting that usually lives in a complex social community with one or more breeding queens
Insect	A bug outside (Everley)	A small arthropod animal with six legs and one or two pair of wings
Omnivorous NEW	Space (Reeve) Moon Bad name (Levi)	Animal or person who feeds on both plants and animals
Thorax NEW	A movie I watched (Avery)	The part of a body between the neck and the body

Antennae	Ears like a butterfly (Everley)	Long thin sensory appendages on the head of an insect
Tunnel	A hole in the ground (Beau)	An artificial underground passage one built under a hill, or road
Queen ant	The boss ant (Bentley L)	aka the GYNE and adult reproducing ant in an ant colony
Mandible	A music instrument that makes noise when you blow it (Beau)	The jaw or a jawbone, especially the lower jawbone in mammals and fishes.
Foraging ant NEW	Walks fast (Beau)	An ant (as the driver and army ant) that goes out in search of food in companies
Colony	A perfume	Zoology a group of the same type of animal or plant living or growing together, especially in large numbers

During the week of May 17-21, the children continued to look for ants in our playground. Some children getting braver would try to pick them up, but sadly, they would kill them while doing so. With Mary, they sat and discussed ways on how to interact with the ants and pick them up without using our pincer grasp, which is just too strong for their tiny bodies and we end up squishing them. The children came up with a solution by using a woodchip or a tiny stick that they could crawl on. Mary suggested using tweezers. Three great ways to pick them up and hold them!

When we returned from the long weekend, the children were right back to hunting for ants on the playground. They looked at the bark on the trees, under the rocks in our garden and around the sandbox. This gave Mary an idea as she was observing the children closely for a few days. Mary proceeded to ask the children if they wanted to make an ant farm and keep it in the classroom. Some children worried they would get out and eat our food while others did not hesitate to say yes.

Using the iPad, we learned we needed a large clear container, a small glass jar with a lid on it, sand and soil mix, a cotton ball and water.

As we prepared our materials, we were ready to build our home May 27. The children gathered outside, on our wood bench, listened to the instructions, then followed the directions of either sifting the soil and sand or looking for ants. The children returned to Mary ready to put this farm together along with ants to go in it.

We placed our farm on the counter, for children to observe at any time. They enjoyed watching the ants during quiet time, observing their every move as they began making tunnels.



On Friday, Jaxon arrived and asked, "Where did the ants go?" When the container was on the table for him, he looked closely and said, "They are gone." Jaxon walked away until the other children started to arrive. Jaxon told them the ants were gone which seemed to intrigue everyone. Bentley L found one near the top and said they are looking for food. This sparked a new conversation and many questions with Beau wanting to know what they will eat. Claire quickly responded with "maybe our cake," referring to the cake they were having for snack; Beau then said "crackers" Levi thought maybe they ate grass, Reeve thought they could eat a mouse. After snack, we had crumbs from our cake. We decided to put that in our container and watch what the ants would do.

The group chose to try the cake crumbs first, but after about five minutes of observing, the group said that ants do not like our cake. Beau asked, "Can we try crackers now?" The children broke off small pieces of cracker and Mary opened the lid for them to put the crackers in. Immediately, this brought out our ants as they went right to the cracker crumbs trying to pull them down into the sand. Beau was so excited with joy laughing and jumping that our viewing group got bigger.

Our observation had us looking up on our iPad "foods ants eat". Below is what we found: Ants are omnivorous and they eat everything dead or alive. They will even eat their own dead. Any food or liquid that is sweet candy, crackers, cheese, sugar, milk, fruits and fruit juices, sap from trees and plants, etc.

We discovered that the ants in our farm responded well to the wet cotton ball for water and the crackers over the cake.

Beau asked if ants poop and the answer is YES just like humans. They have one dedicated spot in their tunnel as a washroom and all the ants in the colony use that area.



On Monday May 31, the children had the opportunity to learn the anatomy of the ant, fostering their literacy and communication skills as they learned how to pronounce each of the parts of an ant. After picking a tag with the part name on it, we, as a group, discussed what we thought it meant, before we learned the proper meaning of the word, how to pronounce it properly and where it belonged on our chart.

As the children focused on the anatomy on paper, they were able to observe our ant farm to compare the anatomy parts.



On June 2, our science activity was based on ants and what they like. Outside, children helped Nidya to prepare yummy food to attract ants.

The first ingredient we had was "small white crystals" that we poured into small lids. The preschoolers were debating on if it was salt or sugar, so Nidya inquired how they could find out. Nobody came up with ideas, so Nidya gave a small pinch of the crystals to each child. The children looked at it closer, but the disagreement continued, as they could not tell for sure what it was. Nidya suggested smelling it, but still this did not help. When Nidya was about to give them the answer, Ari decided to step in and used his tongue to lick the crystals from his hand; Ari smiled to the sweet flavor and right away, the older preschoolers mimicked his actions. "Sugar" children said almost in unison.

Having clarified that, we continued preparing the food by adding water and a drop of food colouring to each lid. Then, carefully, the children took the lids to the garden, where we hoped for the ants to come eat. After a while, we saw an ant coming closer, but it seemed it wasn't interested as it walked away. As nothing was happening, we moved some of the lids to different areas of the playground hoping to have better luck. Mary "helped" one ant to come closer to a lid, and the ant liked it, staying around for a while.



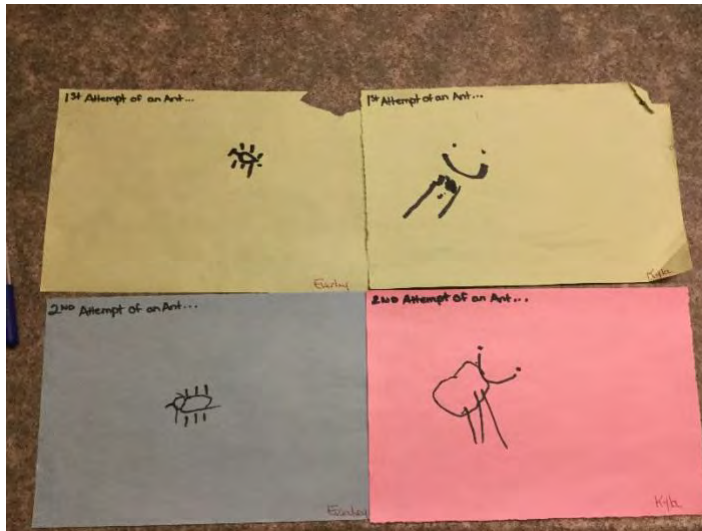


June 3rd was a rainy day, so we decided to watch an episode of Magic School Bus about ants. Through the movie, we learned that the ants have different roles in their colony. The **foraging** ants search for food. The **guard** ants keep the anthill safe. The **food carry** ants transport the food within the colony. The **nurse** ants take care of the babies (larvae's) moving them from place to place to keep them warm. The **builder** ants fix and repair the nest. The **queen** ant, the biggest one, who is the only one that lays eggs.



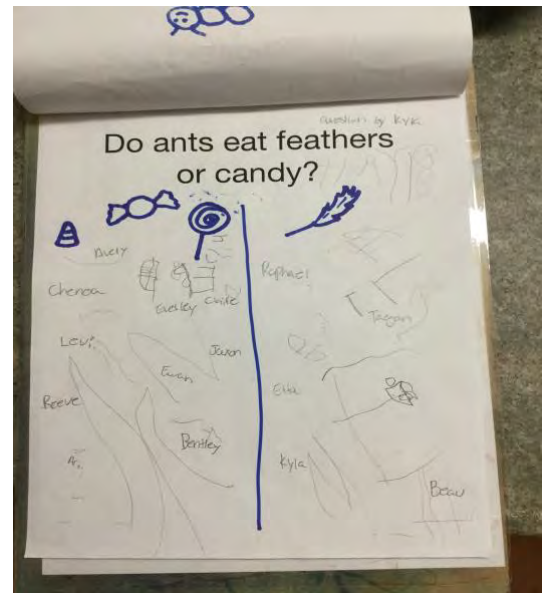
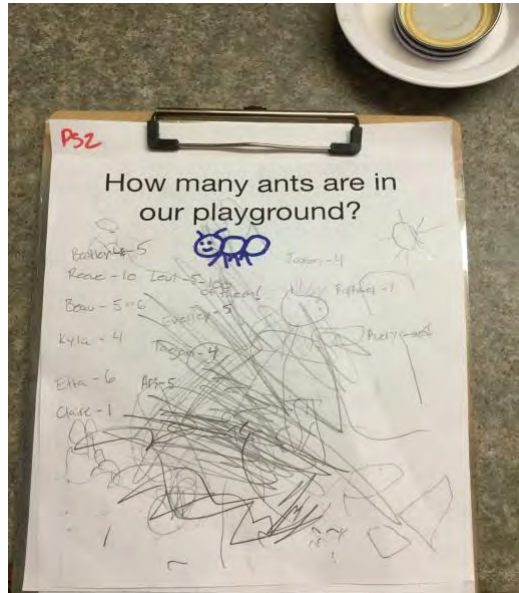
June 4, we decided to pay a visit to the anthills we observed back at the beginning of spring. However, it was a little harder to find them. Finally, we discovered that the high grass was hiding most of them and the only visible ones were the ones built in the dry areas. We divided our class in two groups and sat at two different spots to have a better view of the anthills. Children observed how some of the ants would come out and right back into the holes, and we agreed they were probably the guard ants who were trying to protect their colony, as we learned during the movie the day before. We also noticed that some other ants would walk further away from the anthill and concluded they were the ones looking for food or the foraging ants. Even though we saw some ants going back and forth, there was not much activity going around the anthills; children did point out that the ants on the field were smaller than the ones we have seen in the classroom and the ones in our ant farm. We agreed on continuing looking for more ants during our walks to see what else we can find and learn.

After all the observations and learning activities about ants we completed our second drawing. The children were asked once again to draw an ant from memory. Most of the older children recalled each part of the ant such as the antennas and the mandibles, including them in their drawings.



June 8, the preschoolers enhanced their literacy and social skills today as we did a survey on two subjects. The first one was "how many ants are on our playground?" and the second, suggested by Kyla asking, "Do ants like to eat candy or feathers?" Children who participated wrote down their name and answers. Many of the preschoolers made small guesses of the amount of ants on our playground, discussing how many they thought would be. When we get outside, we will keep an eye out and try counting them. Most of the children had also answered candy over feathers as the ants preferred meal. They write down their name on the side of the survey they thought was most likely.





June 9, we worked on our 3D representation of the ants. In groups of two, children sat at the art table ready to explore with playdough. While working, we reviewed the parts of the body of the ant, as it was a topic already discussed with Mary a few weeks ago. All the children recalled they have a head, legs and antennas; some of them mentioned the mandibles, but all the preschoolers needed help to remember the thorax and abdomen. As children manipulated and sculpted the playdough, they were fostering and developing their fine motor skills, but also their visual-spatial skills, as they had to interpret visual information from their memories to create the 3D representation.



July 6th, the children worked on their fine motor, hand eye coordination and cognitive thinking. On the table were sheets with a maze on them. Not any ordinary maze either, it was an anthill maze!

The children needed to go through the maze to help the lost ant by using their fine motor skills and hand eye coordination to trace the way out. Many of the older children did fairly well, trying to keep a straight line from point A to point B. Other children had a difficult time understanding the functionality of the maze, but still managed to help the ant get out of the anthill. A few of the children had found multiple ways, in many directions, for the ant to travel as well. After the children were finished they thought the picture needed to be jazzed up, so using their creative talents, the preschoolers coloured the picture.

This activity was ant-mazing!



July 9, the children worked on their creativity, memory and visual perception. At the art table, the children had a sheet of paper with only half an ant. The preschoolers had the task of finishing the other half of the ant by using their visual perception. Most of the older children seemed to have a better grasp of the concept, while the younger preschoolers had fun colouring their ant. In small groups, the children discussed each part of the ant. "They use antennas to smell," Levi stated. Kassia drew some candy on her paper for the ant to eat, while Reeve made his ant a queen by making wings and eggs. The preschoolers demonstrated the knowledge they have obtained since starting our ant project. As a group, we had also counted how many legs they had, 3 on each side making a total of 6!



Phase 3: Concluding the Project

Jul 9, it seemed like our ant project ended. As the children observed the ant farm, they noticed there was no more food in the container and no movement. After adding their favorite food, which seemed to be crackers, there was no movement. The schedule for how the ants were fed and watered changed. After a small group watched for over half hour with Mary, having conversations of what we learned about caring for them, we decided to take our farm outside and dump it out in our garden. This gave us our conclusion that, yes, all our ants were indeed deceased. Claire turned to Everley and Reeve and said, "Well no more ants so our project is done, what should we learn about next?" Here the three sat together and recalled all the information they gained as they appeared to watch the dirt for any movement. Claire then came to me and said, "well we were right, there are none left, they all died, so sad," before running off to play. On July 9 we said a final goodbye to our ant farm and to the project.



Teacher Reflections

Chenoa Pattison RECE

The amount of interest in this project was amazing to see during these short few months. The preschool children were always looking for ants and showing the knowledge they had. The best part of it all was the respect the children had for the ants near the end of our project. Most children would remind their peers about being gentle with them. This just goes to show how kind and caring these preschoolers are. My favorite part would be the ant farm the children had helped Mary with, as this helped the children to learn and wonder more and more about these tiny creatures.

Mary Klug RECE

I have done projects and studies on ants in the past and did not realize with a different group of children how much fun they made this time around for me. The children were so fascinated with the anthills that we observed in the school field that this became my focus. How could we make an ant farm that was easy enough for the children to participate in. We researched that we needed a glass jar, a tall thick container, a little soil some dry sand, and cotton balls. After gathering the items, we took them outside and the children were given containers to gather sand and soil. Going through each step, we wrote out and working together, we made a simple ant farm; and now it was time to gather our ants. The children learned how to place their hand down on the ground and wait patiently until one of them crawl up on them before careful transferring them into the container.

The best part of this experience was how each morning the children would arrive and ask to see their farm. This became the morning routine were I would place it on the table, along with a new wet cotton ball (for someone to replace), three different containers of food for someone to feed them, and a paintbrush to sweep of the top of the lid were the wet cotton ball sat.

The children learned about compassion, caring and kindness to all creatures because they could see that what they were doing daily for our ants, the ants in return were so busy that it gave the children the chance to observe them working and doing what ants do best.

Nidya Oosterveld G., RECE

I am not a bug person at all, but seeing the children's enthusiasm and eagerness to learn more about ants got me excited enough to go for it. As a co-learner, I learned how to pick up an ant to add it to our farm, I learned about all the different jobs they do and how well organized they are. I loved the children's facial expressions every time they observed the farm; it was a mix of excitement and wonder. I was fascinated with it as well since I had never had seen ant's tunnels from that perspective. I had many ideas to implement with the children, but some of them could not come true as I was away from the room for a month and by the time I returned, children had already lost interest. This project gives me mix emotions. I am happy for the learning gain along with the children, but I am disappointed that it did not go as deeper, in my case, as I wanted.

