



I've Been Working on the Railroad

Owl – St. Brigid: Preschool 1

Background

This project took place in the Preschool 1 room at Owl - St. Brigid. The project began on January 9th, 2018 and concluded on March 28th, 2018. 16 children participated in this project ranging from ages 2.5-4, however, not all at one time. The educators who took part in this project were Keri Neeb, RECE, Candice Reiner, ECF and Ashley Dekker, RECE. February 2nd the preschool rooms split, therefore leaving 13 children participating in the project, although not all at one time, followed by two educators of Keri Neeb, RECE and Candice Reiner, ECF.

Phase 1: Beginning the Project

While exploring our outdoor environment one afternoon the preschoolers stopped abruptly when they heard a loud sound in the distance. "What is that sound?" a few of them asked approaching the educators. Taking the lead, the educators began to walk over to the fence, encouraging the children to follow behind them so they could get a look at what was making the sound. "It's getting closer!" Ray, 3 years of age announced. After waiting for a few minutes, finally what was making the sound came into view. "TRAIN!" all of the children yelled as they began jumping up and down. "Was that the horn?" Ryan A. 4 years of age asked. This question sparked a few conversations with the children as they began asking various questions of everything they saw. Keri and Candice then began to explain to the children that a train sounds its horn to let people know that they are coming down the tracks. Together the team thought this would be an excellent opportunity to start a project with the preschool children.

The following day, the educators engaged in a small group activity, where along with the children's help, discussed what we already know about trains, and things we may want to know about trains. "The trains go on the tracks" a few of the children stated. "They have a whistle" some of the other's exclaimed. Follow along below as the preschoolers engage in various experiences both indoors and outside in the environment that will allow them to learn about trains in a whole new way.

What do we want to know	What do we want to know
<ul style="list-style-type: none"> • How many cars on a train? • How many wheels? • Where do they go? • What do they carry? • Do they carry animals? • Is there a schedule? 	<ul style="list-style-type: none"> • They make noise. “Chugga chugga Choo Choo”. - Miller and Grace • The wheels go round and round. - Taylor • They go on tracks. – Ray • They have a driver – Ryan A. • They are long – Ben • They have a whistle – Ben

Who can we ask?

Together with the children we came up with some ideas of who we can ask to learn more about trains. “The driver!” Ray shouted. “Maybe we could look at a video” Mason, 4 years of age exclaimed. We then talked about maybe reading some research and some books to learn more about trains as well.

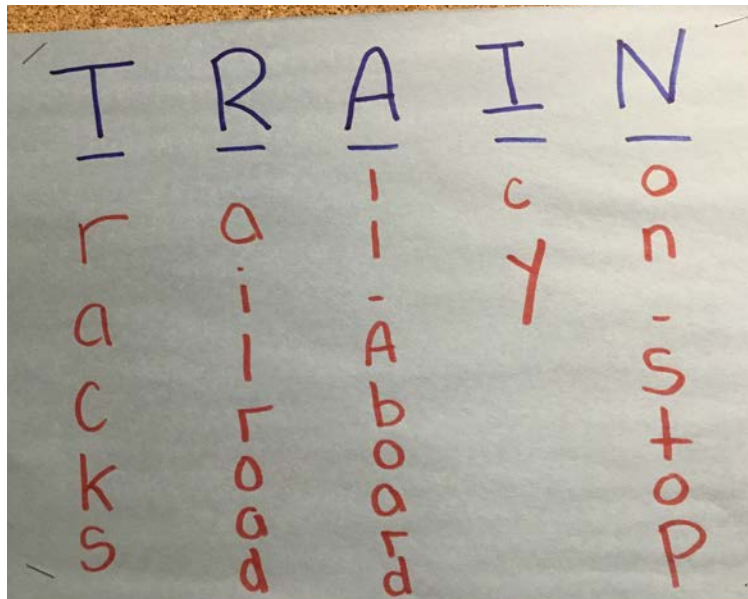
To further engage the children using technology we showed the children multiple videos all highlighting trains. The educators would overlook the viewing alongside the children and ask questions throughout the video to test their knowledge in what they were learning. We also read various books highlighting trains as well. Below is listed all of the videos and books we read throughout the entirety of the project.

Videos Watched & Books Read

How are trains made?
 Thomas the tank engine
 Train travelling through snow, water, mud
 Do you hear a train coming?
 How are tracks made? Let’s watch them being laid down
 Let’s learn about the trains schedules.
 How are trains made?
 Train travelling through snow.
 Helping a train back on the tracks.
 Trains: A Pop-Up Railroad Book – Robert Crowther
 Book of Trains: Seymour Simon

Our Train Poem

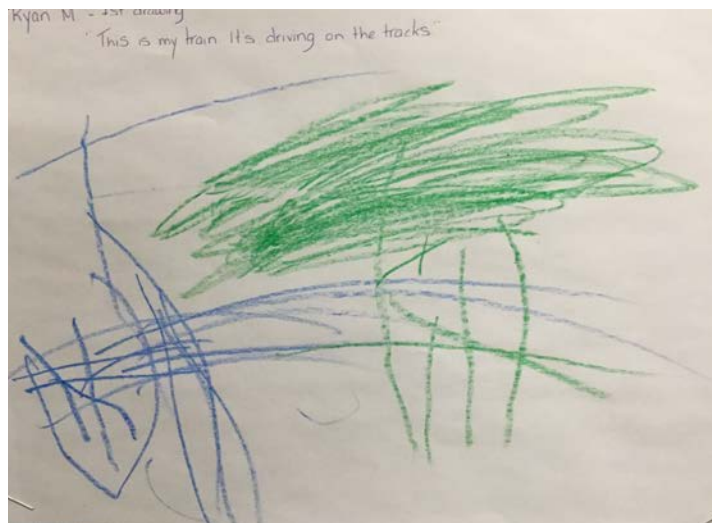
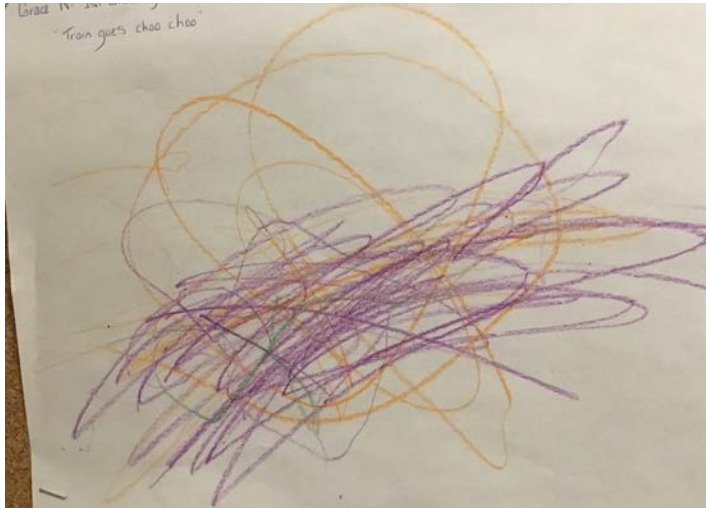
Collectively our preschool children came together as a team to create our very own poem to go along with our project. We decided to craft our poem using the word TRAIN as a template. As the educators announced the letter we were focusing on, the children began relaying back to them words that they had learned throughout the entirety of the project. Take a look below to see the finished poem created by non-other than the preschoolers.



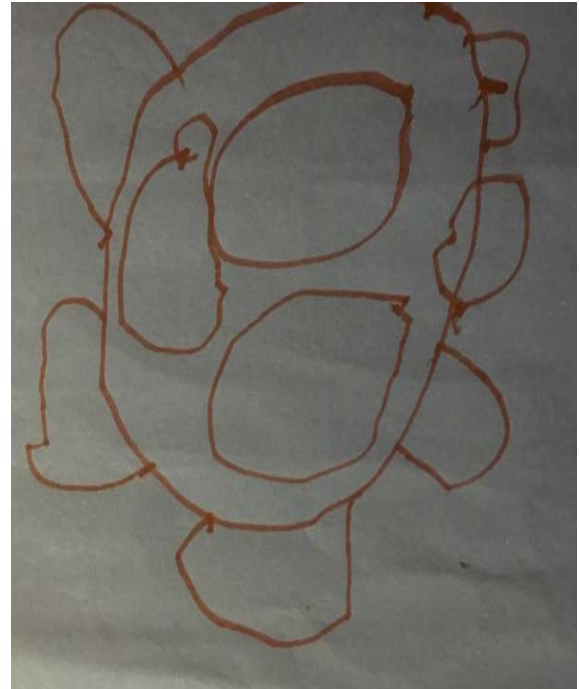
Phase 2: Developing the Project

How Does Learning Happen? states under the foundation of Engagement, “When children are able to explore the world around them with their natural curiosity and exuberance, they are fully engaged. Through this type of play and inquiry, they develop skills such as problem solving, creative thinking, and innovating, which are essential for learning and success in school and beyond.” Travel deeper into our project to see how the children grasped and experienced each of the 4 Foundations of Learning. (Belonging, well-being, engagement, and expression.)

First Drawings



Second Drawing



The images above highlight the children's interpretations of trains.

Vocabulary List

Tracks
Cars
Splitters
Locomotive
Wheels
Train gates
Wood

Round
Safety
Whistle
Conductor
Construct
Driver
Vehicle

Schedule
Fast
Slow
Tickets
Freight
Steam Engine
Arrival/Departure

Horn
Carry
People
Passengers
Ties
Connecting pieces

Train Survey/Questionnaire

The children participated in 2 surveys and questionnaires that highlighted what trains carry and how many cars they thought were on the train. The children were asked these questions and then gave their input on each question.

What do Trains carry?
 water - Parker
 adults - Ryan
 pigs - Ray
 people - Grace
 trucks - Lyndon
 Snow - Aarav
 nothing - Bria
 parts - Keri
 food - Candice

What is a train?

Formal definition:

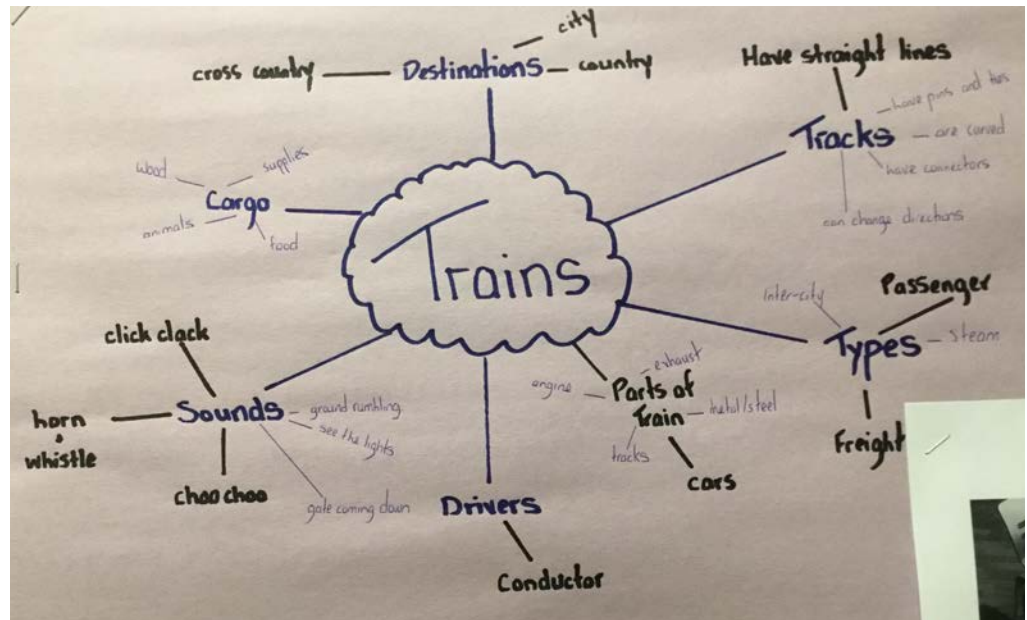
A connected line of railroad cars with or without a locomotive.

Informal definition:

Something that someone drives. Has a horn and goes choo-choo! – Ben A and Grace, 2 years of age.

Train Web

This is a web which highlights where the project started with the children and the angles in which the project took us. The major sub-categories researched were destinations, tracks, types, drivers, cargo, and sounds.



Let's look at a train video. What do you hear?

The educators decided to scaffold on the children's first interaction with trains by showing them a video on the iPad and asking them what they saw and heard. The experience allowed the children to use first their sense of hearing, followed by their sense of sight. The educators put a video of a train coming down the tracks on the iPad, however flipped it over so that the children's sense of sight was taken away. They were asked to listen to the video and share with their peers and educators what they heard. After hearing all of the noise and stating on what they heard, the educators played the video again, however this time turning the iPad over and allowing the children to use their sense of sight as well. The children showed many different emotions and expressions while watching this video as it gave them a whole new perspective. Below, highlights some of the conversation shared throughout the entirety of the videos.

Sense of hearing:

Miller, 3 years of age: "I hear trains!"

Grace: "I hear them too! It sounds loud."

Hunter, 3 years of age: "I hear a whistle."

Miller: "Elephants!" (The whistle sounded like elephants)

Sense of sight and hearing:

Ben, 4 years of age: "Look, the train driving on the tracks."

Parker, 3 years of age: "I can hear the engine. It's a train because it's going Choo choo."

Grace: "Yah, look it goes down the tracks."

Ryan A: "Look, the train is going down the tracks really fast."



This image highlights the children's learning and exploration using their sense of hearing and sense of sight.

Types of trains. How many trains are there?

“What kinds of trains are there Keri? Do they carry different things?” Ryan A. asked one afternoon. This question sparked quite the conversation in the preschool room as Keri asked some of the other children in the program what they thought about the different types of trains. “Maybe some carry people!” Mason stated. With this, both Keri and Candice decided that it would be beneficial to the project and the children’s knowledge to explore the variety of trains out there and the different things that they carry. Together, we used the iPad to look up on the internet and various videos to see what we could find out about trains. We discovered that there are countless different trains in the world that all serve different purposes. We looked at some of the trains highlighted below and started discussions on each one. Take a look at what the children came up with along with the knowledge that we took from the internet.

Steam train: one of the very first trains to be created. Runs on coal and works by steam.

- “I’ve seen one of those before. They make loud noises and whistles” – Grace
- “Look at all of the steam coming out of the top” – Ryan A.
- “Can they go as fast as the train outside?” - Parker

Freight train: carries variety of goods from liquids to solids.

- “It doesn’t carry people” – Hunter
- “Hey, that’s like the one behind our school!” - Mason

Inter-city train: low speed public transportation

- “I don’t think I’ve seen one of those before” - Grace

Rapid transit train: high speed. 300 km/h at times

Tram: slow public transportation, powered by electricity

How do tracks work? Let's make our own track.

After observing and researching into the variety of different trains, the preschoolers began looking at the tracks more closely. Candice sat down with a group of preschoolers and pulled out some books that she had gotten from the library regarding trains. Candice set the books down on the counter and observed as the children picked the books up and began to flip through the pages. As they went through the books, they were observing what they were seeing. Mason looked at Lyndon, 2 ½ years of age and said, “Look Lyndon, those things right there are the tracks. That is what the train drives on.” Grace said that she saw two sets of tracks, while Bria, 4 years of age shouted “those ones are wood.” Candice took this opportunity to explain to the children what the tracks were made of. As she was explaining that they were made of ties, connecting pieces and steel, she would point to each material and then ask the children some questions to go along with it. Through this discussion, we also explored the wheels of the train and how they play an important role of keeping the train on the tracks. They are specially designed with hook like edges so that they can grip onto the tracks. After we discussed all of these components, the educators then asked the children what they could use in the room to make their very own set of tracks. Grace ran over to the carpet, “Let's use these to make the tracks!” as she was holding the wooden blocks in her hands. All of the other children ran over to the carpet and together they worked at creating and constructing their very own tracks. “We have to make sure they are straight for the trains. We need two rails” Mason explained to his fellow peers.



The images above highlights the children becoming engineers in creating their own train tracks using a variety of wooden blocks and materials. Grace, Mason and Lyndon are placing the tracks down along with help from their fellow peers.

Graham cracker and banana trains.

The preschool children got creative with their snack one afternoon. A provocation was provided consisting of graham crackers and bananas. The educators asked the children if it was possible to make a train with the materials provided. No directions were given to the children other than asking them that one question. The educators stood back and watched as the children went about using their imagination and creativity to create their very own trains. Some of the children made their train lying down, while Aarav 3 ½ years of age decided to stand his graham cracker up and use the bananas as wheels to hold up his car body.



These images above highlight the creativity and imaginative processes, which is exploring and creating trains using bananas and graham crackers. Lyndon decided to place them around the train, while Aarav decided to stand his train up.

How do trains travel through different conditions? Let's look at snow, water, and mud.

The preschoolers gained new insight into their train project during a learning experience highlighting the various factors and conditions that trains have to travel through. Sitting down in a group we started out by grabbing the iPad and researching various videos. We looked at how trains travel through mud, water, and even snow. While watching the water video, Parker pointed out that when the train goes over the water, "the water splashes and goes over the train". Ray told his peers while watching the train go through snow that "the train disappears when it goes through the snow." As the train came back into view, the children giggled "look there it is again." Lyndon, Mason and Grace all said that when the train goes through the mud it would get dirty.

The educators decided to expand on the knowledge learned in the video and try to duplicate it using toy trains, and a bucket filled with water and snow. The children each got their own turn to drive the trains through the buckets and share what they saw or felt happening. “Look, the train goes into the snow and covers it” Ray and Mason both stated. “I can see the water splashing and the train getting wet” Parker and Grace announced. “Splash” Roenick, 3 years of age exclaimed.

This learning experience provided the children with not only the opportunity to see the trains through video, but also experience it firsthand using trains in the classroom. We are hoping to take a walk to the train behind our center soon so the children are able to see a close up of a train in action.



Exploring trains and snow.

Exploring what happens to trains going through water.

What are trains made of?

During an activity one afternoon regarding the different types of materials found throughout the room, the educators quickly turned this experience into a learning experience for our project. Keri asked the children a simple question of, “What can we find in the room that engineers would use to build a train?” At once, the children began throwing out answers. Aarav shouted “wood!” Mason and Ray both said, “Maybe they would use metal?” Grace exclaimed, “Wheels!” Keri then asked the children if they could go on a hunt throughout the room and collect some items that could be used. After the children brought the materials back to the table, Keri researched with the children using the iPad on what is used to create trains. We came together to create a list that included, steel, wood, metal, and even some plastic. The children then used their creativity to create their very own train using the materials that they found throughout the room.



Aarav holding up the metal Piece that he found for the Train



Let's explore with the toy trains?

The children were given the opportunity to explore with toy trains and tracks. The educators approached the table, and without saying anything, set out the toy trains and tracks as provocations onto the table. Once all of the pieces were set out on the table, Candice asked "Let's look at these. What do you think they are?" Lyndon responded, "They are train tracks!" The children began to pick up pieces of the tracks and started assembling the pieces together. Ray exclaimed, "Look at all of these tracks! I made a circle with them." The children utilized their fine motor skills as they put the pieces together. Parker began to push a train along the assembled tracks. He used his imagination as he said, "chugga chugga, Choo Choo!" Grace pushed a train on the tracks as well. She also used her imagination as she said, "chugga chugga, choo choo! Here I come!" The children used their color recognition skills as they labelled the colours of each train. Mason said, "I have the green train!" He joined in the imaginative play as he said "I'm going this way to the jungle!"

As the children were playing, they observed that there were a few smaller tracks assembled together, but they wanted to build one big track. Ray, Parker, Mason and Lyndon had used their problem solving skills as they decided that they should work together to build one big track. They disassembled the smaller tracks, and together as a team, built one big track.



Parker and Mason exploring and building with the train tracks.

Let's Talk about Schedules

The educators decided to explore various schedules with the children to find out if trains follow a specific schedule while on the tracks. Using the iPad we researched a variety of trains both near us and in different countries and came to the conclusion that they do follow a variety of schedules to make sure they are running smoothly and on time. When Candice and Keri asked the children how they would get on the trains, Grace, Ray, and Mason all shouted, "With some tickets!" The children then decided to create their own tickets to get onto their own train. Below is an example of a schedule that we looked at.

REGULAR WEEKDAY TRAIN SCHEDULE

Period	Time	No. of Trains	Headway
Morning	5:30 AM – 7:00 AM	12 Trains	5 minutes
AM Peak	7:00 AM – 9:00 AM	20 Trains	3 minutes
Off Peak	9:00 AM – 5:00 PM	15 Trains	4 minutes
PM Peak	5:30 PM – 7:00 PM	20 Trains	3 minutes
Night	7:00 PM – 11:00 PM	12 Trains	5 minutes

REGULAR WEEKEND TRAIN SCHEDULE

Period	Time	No. of Trains	Headway
Saturday	5:30 AM – 11:00 PM	12 Trains	5 minutes
Sunday	5:30 AM – 11:00 PM	11 Trains	6 minutes

Field Study – Let’s take a walk to the train tracks

One of the questions asked in the document *“How Does Learning Happen?”* states, “What opportunities are available in our community to build connections?” Our field study is a prime example as using the community and the environment as the third educator.

The Educators and preschoolers decided to take advantage of the sunshine one afternoon and take a walk down to the train tracks. As we embarked on our journey, we observed a street sign. When asked what the sign meant, Parker responded saying “That sign means that there is a train tracks coming up!” As Candice and Keri explained that that was exactly what the sign was, we continued on our walk. As we approached the tracks, the children observed the railroad crossing gates. They observed that there were lights and long arms standing up. Candice asked, “What are those things for?” Aarav said “They are eyes.” Keri and Candice explained that when a train is coming, the gates come down to stop the cars from driving over the tracks to keep them safe. Parker said “The cars might crash into the train if they don’t stop.”

We walked a few more minutes and found a comfortable spot to sit as we waited patiently for the train. As we were waiting, we discussed the senses that we can use to know if a train is coming. Keri asked, “If a train was coming, what might we hear?” Collectively, the children said, “Choo choo!” Candice then asked, “If a train was coming, what might we see?” Mason said, “We would see the train.”, and Ray said, “We would see the gates.” Candice asked, “What might you feel if the train was coming?” Keri and Candice then explained that we might feel the ground beneath us rumbling and vibrating as the train passes. Keri asked, “How might we know the train is passing by at night?”, and Mason replied, “The trains have lights so that we can see it at night.”

As we waited patiently for the train, the children observed school buses driving, and as they approached the train tracks, they stopped and opened their doors. Candice explained that the buses stop to look to make sure that the train is not coming and that they can cross over the tracks safely. All of a sudden, we all felt a rumble and Keri said, “Are those lights on the gates flashing?”, and then we saw the train coming! The children began to cheer and wave as the train passed by. They were all smiling and pointing at the train and saying “Choo choo!” After the train had passed, Aarav pointed to the crossing gates and said “The cars needed to stop.” We watched as the gates lifted and the cars began to drive away.

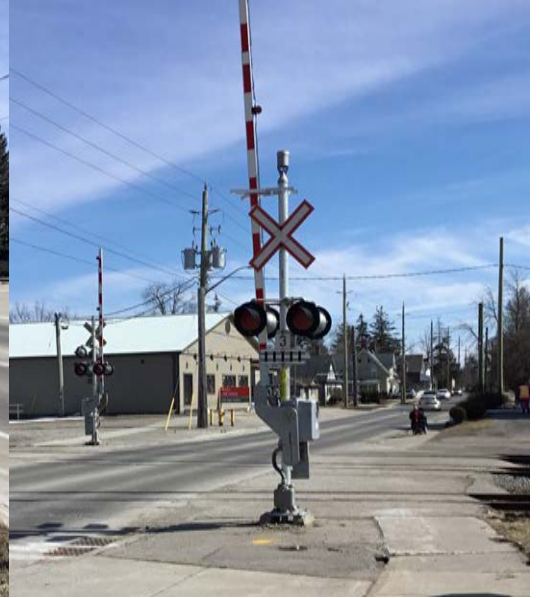
The next day, Keri had a discussion with the children so they were able to revisit their adventure from the previous day. She asked if they remembered what they had seen on their walk. She printed off the pictures that we had taken during the walk so the children could revisit the experience. The group talked about the street sign and what it meant. The children recounted the meaning of it and why it is necessary. They also talked about the railroad crossing gates and how the gates come down when the train is coming so that cars cannot proceed over the tracks. They discussed why the buses stopped at the tracks to ensure that it is safe to cross over them. They also talked about the different senses they could use to know that a train is coming; seeing the train and lights, hearing the train’s whistle or horn and feeling the ground rumble beneath us.



The children starting out.



Train crossing sign.



“Look, the train gates”



Train passing by!



The children watching as the train rolls by.

Phase 3: Concluding the Project

Our train project came to a conclusion when we had answered all of the questions put forward initially by the preschoolers. When the children were able to revisit trains and each activity we had partaken in daily and have the ability to explain what was going on, we knew then that the children had gained insight into the project as a whole. The children still run to the fence when they hear the train horn/whistle in the distance, however we as educators truly believe this will always be an aspect of excitement for the children within our program.

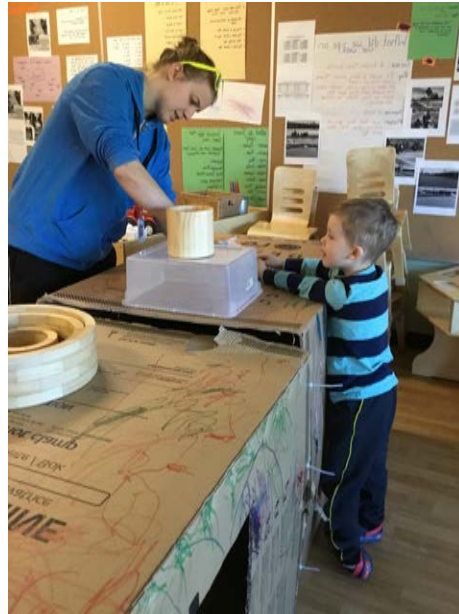
Our 3-D Train

Using cardboard boxes brought in by a parent, the preschool children used their imagination and created their very own train for the classroom. Complete with wheels, doors, windows, a steering wheel, and even a place for the steam to come out of the train, this train took the children on many adventures. “It’s going to the airport,” Aarav shouted. “Or maybe to the zoo” exclaimed Mason and Lyndon.

When creating the train, the children used their imagination to envision what their train would look like. Prior to building, Keri asked the children what they would like their train to have. Some of the things listed included doors, windows, wheels, tracks, and of course lots of color. After deciding as a group what would be included on the train, the preschool children and their educators got to work constructing our train. Some of the children cut, while others went to work coloring every square inch of the train. The children practiced their fine motor skills and engaged in risk taking by using scissors and even an exacto knife, with the assistance of an educator. This whole experience provided the children with a chance to let their imagination run wild, while also giving them the opportunity to combine all of the knowledge learned throughout the entirety of the project. The children are still exploring this train 2 weeks later; it even took a trip down the tracks outside! Take a look below as the photos highlight the process from start to finish with our train construction.



Parker and Lyndon decorating.



Mason helping Keri to place on our steam compartment.



Roenick and Mason cutting the door.



Grace and Mason using their hands to decorate.

Teacher Reflections

How Does Learning Happen states, “Pedagogical documentation supports educators in both including child development in their view, but also looking beyond development to capture broader aspects of experience for reflection.” It also states that the goal of the educator is “multidimensional” “Educators participate as co-learners with families and children – learning with children, about children, and from children.”

Throughout the entirety of this train project, both of us as educators feel that we have not only greatly benefited from this opportunity, but have also thrived in watching the children share their excitement and learning throughout every experience that we took part in. Engaging in a project alongside the children, we as educators found out quickly the way that children view the world and the things around them is vastly different from the way we as adults view it. It allowed us to take a step back and look at the simple things, as they ended up meaning the most. One of the most memorable experiences we as educators experienced throughout this project was on our field study. As we sat in view of the tracks alongside the children discussing and asking questions about what we saw in front of us, we heard the train whistle in the distance. We will forever hold the image and excitement of both us and educators and the children jumping for joy, screaming and waving as the train whizzed by us. The smiles on our faces, as well as the children will be forever engraved as the definition of *How Does Learning Happen?*. The environment truly is the third teacher. Our preschoolers relished from the very beginning of the project all the way to the end. We still find ourselves cheering alongside the children and running to the fence when the train goes by. Although we are sad to see this project come to a conclusion, along with the children we hold a sense of pride and accomplishment of all that we have taught one another about trains. We can’t wait to embark on our next project together.

Keri Neeb, RECE and Candice Reiner