

The Project Approach to Learning at

RisingOaks
Early Learning

Saint John Paul II



Project Name:	Trains
Age Group:	Preschool 2 (2yr to 3yrs)
Project Start Date:	October, 2020
Project End Date:	March 4, 2021



RisingOaks
Early Learning

Growing minds through play

Background

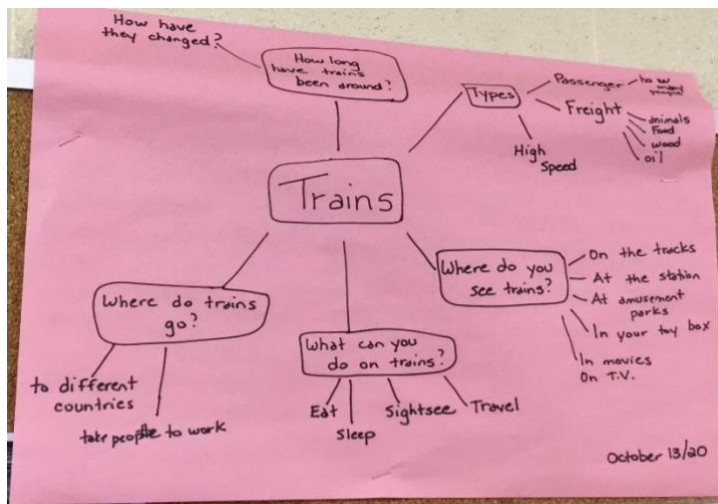
The children in the preschool two room are all 2 to 3 years of age. We have 19 children that participated in the project over a four-and-a-half-month span. The project began in October 2020 and we completed the project in March 2021. Kathleen Verbeke RECE and Lisa Erb RECE are the educators involved with the project.

Phase 1: Beginning the Project

In October some of the children began showing an interest in trains. We brought some trains and tracks into the room for the children to explore. They really enjoyed playing with the trains, learning the names of all the different trains, finding ones that match and are the same.

Kayleb used the tires in the playground to build a train which enticed the other children to join in. A week later they gathered the chairs and made a train with them. They had some great conversations about where to go on the train, to where each one should sit. As they played I looked up train sounds on the iPad and played the sounds of a train going down the tracks, the horns, and the sound it makes at a railroad crossing. Cadence was so excited she said "it sounds like we are on a real train!" Sam laid down across two chairs and Kira asked him what he was doing, he said "sleeping!" That began a conversation about if you can sleep on trains. So that was the start of our project.

What do we know about trains?	What do we want to know about trains?	Who can we ask about trains?
<ul style="list-style-type: none"> • Thomas the train – Cadence and Kayleb • Have choo-choo whistles – Cadence • They have smoke stacks and cars – John • They carry people – Simona • They carry boxes – Cadence 	<ul style="list-style-type: none"> • Which trains have smoke stacks – John • What do they carry – John • Do they have beds – John • Do they have seats – Kayleb • What do trains drive on – Jake • What makes a train go – All 	<ul style="list-style-type: none"> • We can ask the person on a train – Kayleb • The iPad – Cadence



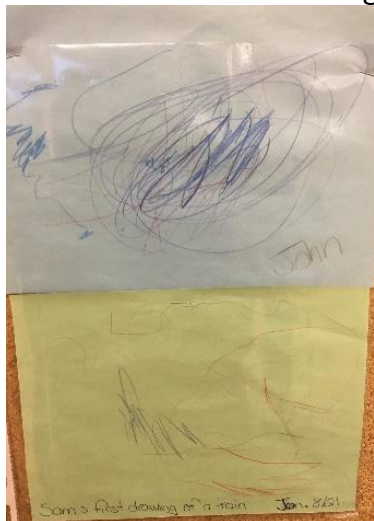
1 Train Web

Phase 2: Developing the Project

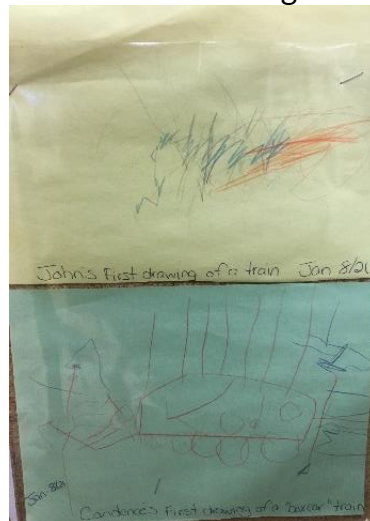
To involve our families in our project we sent a survey through sandbox asking the children and their families the following questions:

Have you ever been on a train? If yes, who and when were you on a train?	Have you gone on the ION as a family?	Have you been on a train outside of Canada and where was it to?
Yes - 10 No - 4	Yes - 3 No - 10	Yes - 6 No - 8
Destinations: Polar Express X 3 Holiday Train Kingston - Upper Canada Village Huntsville (Steam train) Waterloo-Elmira Sweden Manhattan		Destination: India (mom) Hawaii Disneyland and Disney World Sweden/England Manhattan Europe and Asia

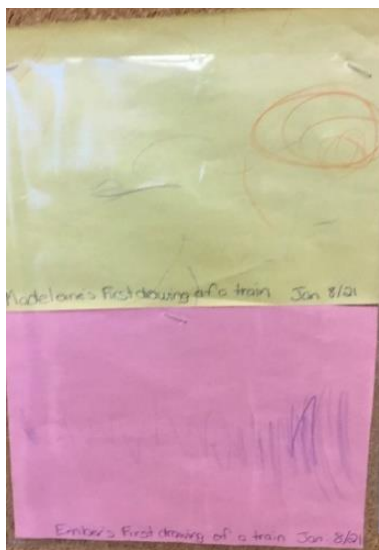
As the children's interest grew, we asked them to make drawings of trains.



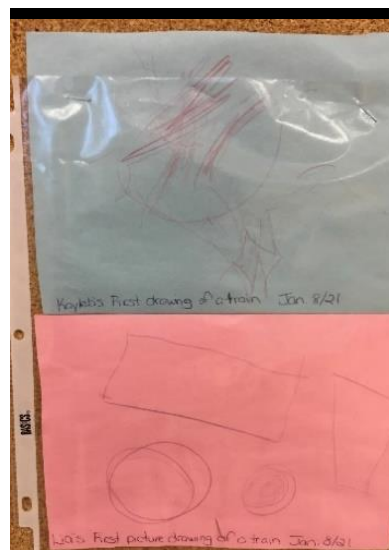
4 John and Sam 1st representation of a train



3 John and Cadence 1st representation of a train



4 Madeleine and Ember 1st representation of a train



2 Kayleb and John 1st representation of a train

As the project began we started a vocabulary list of train related words. As the children's knowledge grew we added newly learned words to the vocabulary list.

Our Train Vocabulary List:

- Wheels
- Platform
- ION
- Boxcar
- Electric train
- Amtrak
- Express train
- Engine
- Station
- Locomotive
- Diesel train
- Tracks
- Carriages
- Railroad Crossing
- Bridge
- Steam Engine
- Passenger train
- Cargo
- Railroad
- Sleeping car
- Air brakes

These are the trains that the Preschool 2 children were mainly interested in learning about. We watched a short iPad clip about trains that inspired lots and lots of learning fun "all about trains." This was a great video that described the different trains and what they carry and what makes them go. As we used the iPad to research, we were able to answer several of the children's questions:

We learned that a Passenger, Commuter and Automated People Movers are trains that carry people. Freight trains carry materials and cargo. All of those trains work on electricity. Steam engines run on steam pressure.

Passenger trains: They can be fast and are often really long so that they can carry more passengers. Long-distance trains are built for travels between different cities or a region of a country. They even cross through several countries at times. They usually have a restaurant or dining car so that passengers can have a pleasant meal during the course of their journey. Trains that travel overnight also have sleeping cars so that passengers can rest during the travel.

Commuter trains: The main purpose of the regional train is to take passengers to and from work. These trains are usually scheduled for rush hours and weekdays.

Automated People Mover: The Automated People Mover (APM) is a small scale guide-way transit system used in small areas like airports and theme parks.

Freight trains: are also referred to as goods trains since they transport materials or cargo. They are not designed to carry passengers at all. Most of the world's freight is transport by such trains and they are essential to the industry. In many countries, the railway system is mostly used to transport goods rather than passengers. Trains also carry enormous amounts of corn, wheat, soybeans, and other grains; fertilizers, plastic resins, and a vast array of other chemicals; cement, sand, and crushed stone to build our highways; lumber and drywall to build our homes; autos and auto parts; animal feed, canned goods, corn syrup, flour, frozen chickens, beer, and countless other food products; steel and other metal products; crude oil, liquefied gases, and other petroleum products; paper products; iron ore and scrap metal for steelmaking; and much more.

Steam engine: is a heat engine that performs mechanical work using steam as its working fluid. The steam engine uses the force produced by steam pressure to push a piston back and forth inside a cylinder. This pushing force is transformed, by a connecting rod and flywheel, into rotational force for work.

We were able to answer the question “can you sleep on a train.” We researched on the iPad and found a couple of sites that explained about how some passenger trains have sleeper cars on them. The children were able to see pictures of the sleeper cars which helped to understand what they look like.



6 Kayleb 3years, looking at a picture of a train on a bridge



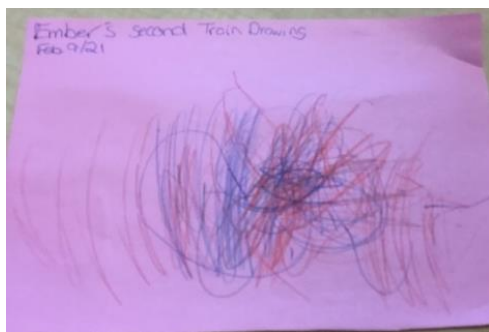
7 Kira, Lia, Sam, Simona and Cadence all 3years, looking at different train pictures



8 Sam 3years, looking at train pictures

Kathleen brought in train pictures and posted them around the classroom. By looking at the pictures it helped to answer the questions - can you eat on a train and do they have seats. We also were able to answer the question "what do trains drive on?" by looking at the pictures, researching on the internet and providing trains and tracks in the class to play with.

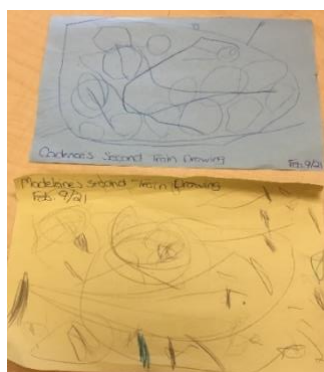
At the conclusion of our train project, we asked the same children that did the primary drawings of trains to do a secondary drawing to see how their understanding/knowledge of trains may have changed.



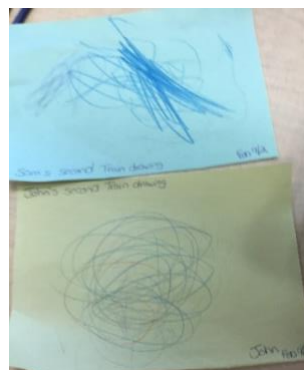
9 Ember's second representation of a train



10 Lia's 2nd representation of a train



11 Cadence and Madeleine's 2nd representation of a train



12 Sam and John's 2nd representation of a train



13 Madeleine 3 years, creating a 3D representation of a train using Lego



14 Cadence 3 years, creating a 3D representation of a train using playdough

Throughout the project the children created their own 3D representations of their learning as they built many trains and train stations using different materials including play dough and Lego. Here are some of their designs.

Phase 3: Concluding the Project

We knew the project was ready to be finished because we noticed that the children's interests were gravitating into new areas and showing less interest in trains.



15 Children talking with special guest Ross from CN rail

Lisa's cousin Ross Schneider works for the CN Rail. He was our field expert and answered the children's questions through email. On Thursday March 4, 2021 we completed our project with a zoom call to Ross at his CN Rail office. He answered

their questions in person that the children came up with in phase one of the project. Kayleb asked Ross if all the trains have seats? Ross answered that passenger trains have seats for passengers traveling on the train, while freight trains only have seats for the engineer and any other worker that would be on the train. Cadence asked if trains carry cats? Ross said that most likely a long distance passenger train could carry a cat or pet. The children also brainstormed some additional questions he was able to answer. Although it wasn't the same as having someone in to the building they were excited to see him and happy he was able to answer their questions.

Teacher Reflections

Lisa: It was great to watch and hear what about trains the children were interested in. How it started with Kayleb building a train using the tires outside to taking the chairs and lining them up in a row and playing train sounds. Watching the children stand at the train pictures and studying so carefully taking in everything they saw with great curiosity. Observing their creativity as they incorporate trains into their play, such as Legos, playdough and imaginary play. Hearing their conversations and stories about trains over the four months and the growth and knowledge they gained in that time. I also liked how trains were all inclusive, inviting each and every child to engage and feel a sense of belonging.

Kathleen: The train project proved to be a great learning experience for everyone – even me. I learned that there are several different types of trains that also have various jobs. During our parent survey I was surprised to find out that only three families had used the ION. Hopefully it will get more use after the pandemic is over. The children really put their growing knowledge of trains to good use by using this knowledge throughout the classroom. Trains were built out of tires outside and LEGO and chairs inside. You could see them role playing as they pretended to be conductors and passengers. They were also able to have great conversations about trains as they attached the tracks together for the toy trains to drive on. Their conversations expanded as their knowledge expanded. Looking at the pictures of the trains also became a daily activity and the children communicated a lot as they observed them. All in all, this was a fun project for everyone involved!