



Little Cloud

Owl - John Sweeney: Preschool 1

Background

Our Cloud project began on September 22, 2016. We decided to call our project “Little Cloud” as suggested by Lucy C. after we read “Little Cloud” by Eric Carle. Our Preschool 1 class at Owl-John Sweeney consists of 30 preschoolers aged 2.5 - 4 years of age, with 3 educators; Michelle Hiebert, RECE, Ashley O’Connor, RECE and Jessica Rau, RECE. We had both full time and part time children involved in our project. The project lasted 6 months, finally concluding at the end of March 2017.

Phase 1: Beginning the Project

Our Little Cloud project began when our group of Preschool 1 children were encouraged to paint the world around them on the windows in our classroom. Many of the children drew the clouds they saw in the sky and began to ask questions about them. We started noticing the different types of weather we came across and began tracking it. We completed a survey of our favourite type of weather in our class and only three children chose cloudy. Although cloudy was not a popular choice, it still seemed to be what the children wondered about the most. We began to create webs and charts about what the children knew about clouds, what they wanted to learn and whom we could ask that might know about clouds (Table 1). We also created a teachers’ web about where we thought the project might take us (Table 2). We thought the children might be interested in the different types of clouds, the rain cycle, how far away the clouds are from us, and how they form. We were wrong! Our class wanted to learn more about the clouds themselves, like how they become full of water, why they change colours, how thunderstorms are made and what they are made of. We created a web of activities and experiments we wanted to do with the children as the project began to unfold.

Table 1.

What Do We Know?	What Do We Want To Learn?	Who Can We Ask?
Out the windows - Scarlett	Why are they full of water? - Davis	A teacher - Davis
They fly up in the sky - Lucy	What color are they? - Lucy	Me - Reewaz
They are outside up in the sky. The clouds come up with the sun - Ben L	Stormy clouds and thunder - Ben L	I am telling mommy to take me to the library so we can get a cloud book to show - Audrey
They are outside. When the sun comes up, the clouds go away - Landon	Thunder storms - Max H	Eason – Max. H
They look like clouds - Theo	Are clouds made of flour and water? - Audrey	Minions - Kier

It has rain in it - Kier	How does rain fall out? - Violet	Liam - Lucy
The thunderstorm is in the clouds - Max H		
Rain and thunder, Clouds look like zig zags - Audrey		
It's going to rain if there are clouds - Savannah		
They have rain - Abby		
The rain comes down from the cloud. They are grey when rain comes out - Estella		
They go away when it's nighttime. During the day they come back - Violet		

Table 2.

Clouds	
Terminology	
Rain Cycle	
Distance	
Going to a news stations	Asking a meteorologist to come in
How do they form	What causes thunderstorms
Types of clouds	

With the help of Jessica, we drew a calendar on the window and began observing the weather outside in our playground. Every day the children would take turns drawing what type of weather they saw outside our window.



Phase 2: Developing the Project

Way up high in the sky, I see....CLOUDS. On September 13, the Preschool 1 children spent time looking up in the sky to see what clouds looked like. They then made their own sky pictures by using light or dark blue paper, glue and cotton balls. Davis stretched the cotton balls out to make “line clouds”. Savannah watched closely as the glue dripped from the glue stick. Estella used her fine motor skills to squeeze the glue out of the squirt bottle. Kolton left his cotton balls “big and fluffy, just like the clouds outside”.



Davis (3) stretching his cotton balls to make line clouds



Estella (3) was choosing her favourite weather on our survey chart. She chose sunny and drew a sun around her name.





On September 22, 2016, Abby (3) and Liam (2) were working together to create the scene they were looking at outside. Gwen (2) drew a sun as the cloud had moved and started to shine through the classroom window.



The children began creating their first drawings of what they believed a cloud looked like. They used pastels so they could choose the colours they thought clouds would be. Eason (3) said, “I’m choosing different colours because the clouds change”.



Eason (3) First Drawing above



Estella (3) First drawing above,
Second below



We asked the children what they believed some words meant that had to do with clouds. Below are the definitions the children gave for the following words; cloud, thunderstorm, precipitation, drizzle, fog and meteorologist.

- Cloud:
 - It has rainbows – Savannah
 - It's full of rain – Ben L
 - It's zigzags – Audrey
 - It's white – Max H
 - It's in the sky – Violet
- Thunderstorm
 - Rain and it is dark, it has lightning – Abby
 - A thunderstorm has lightning and comes rain – Ben L
 - Rain, Clouds – Kier
 - Clouds – Audrey
- Precipitation
 - A hand up – Abby
 - Snowing – Audrey
 - It is going to rain – Violet
 - Four O'clock – Max H
- Drizzle
 - Jewelry – Audrey
 - It is going to rain – Violet
 - It is fluffy outside – Abby
 - It is about to rain- Ben L
 - It is not sunny- Violet
 - Rain – Kier
- Fog
 - Fall time, changing leaves – Abby
 - When you turn into the school it's foggy – Ben L
 - You cannot see – Audrey
 - It's outside – Scarlett
 - It means a rainbow – Estella
- Meteorologist
 - Clap your hands – Abby
 - To make and colour stuff – Violet
 - A police man - Audrey

Making Music

Once we began collecting and expanding our knowledge on clouds we began to create our song about clouds. Preschool 1 decided to name the song Fluffy Cloud. The lyrics were as follows:

There are clouds up in the sky, in the sky, in the sky, there are
clouds up in the sky white fluffy clouds!

When the clouds turn dark and grey, dark and grey, dark and grey,
when the clouds turn dark and grey It's going to rain!

Thunder and lightning can be scary, can be scary, can be scary,
thunder and lightning can be scary, we just stay inside!

When the storm has come and gone, come and gone, come and
gone, when the storm has come and gone, there are puddles
everywhere!

There are clouds up in the sky, in the sky, in the sky, there are
clouds up in the sky, white fluffy clouds!

The children were very proud that they were able to create a song that they sang it repeatedly throughout the day, not just during cloud learning moments.

Making a Cloud- Science Experiment

On September 23rd, the children gathered around the table with Michelle as we set out a science experiment. “How can we make a cloud?” Michelle had asked them. We received many good answers, such as “Fly up in the sky a take one” or “We have to make it rain” but no one was sure how we could make one in our classroom. Michelle introduced a science experiment that included hairspray, a glass jar, ice and hot water. First, we poured hot water in the bottom of the jar and sprayed hairspray all around the inside. Then, as quickly as we could, we put the lid of the jar on top with the ice inside the lid. Once that was all set up we waited and counted to 30. As we counted, we could see the condensation forming inside the jar. “Why is it smoky?” Abby had asked. Michelle explained that it was actually condensation forming and then we talked about what condensation is and that clouds in the sky are made up of condensation. Once our jar was filled with condensation, we lifted up the lid and released our cloud. Max H was so excited to see the cloud escape from the jar. Savannah asked if we could make another one. We continued to make more and more clouds throughout the morning. This experiment was definitely a hit!



Making Rain Clouds- Exploring how clouds fill up with water

On September 29th, 2016, we created our own mini rain clouds in the classroom. The children came into the classroom talking about the rain that was falling outside in the morning on their way to school. Max H told Jessica that the rain was falling from the clouds. To explore how clouds fill with water before they become too full and rain, the children used white cotton balls and blue water paint to create rain clouds inside. We used the cotton ball to represent the white fluffy clouds outside, and used eyedroppers and blue water paint to represent the water build up in the cloud. The children were able to add rain to the cotton balls, while changing the colour of their “clouds”. Alexis added lots of water to her cloud; she wanted them to turn blue. Eason added only a little water at a time, while

Reewaz squeezed all the water out of his eyedropper onto his cloud. Reewaz laughed as the water came out of his eyedropper. Scarlett touched her clouds and noticed the more she squished the cotton ball, the more the water would drip out.

Lucy (2) and Davis (3) measuring and squeezing their eyedroppers.



Kier (3) dripping his blue water carefully, and Max (2) sucking up as much of the water as possible.

Reewaz (2) and Abby (3) watching their cotton balls turn blue with all the “rain.”



Cloud Bread

On October 5, 2016, the children were asking if we could do some baking. When we started our search for a recipe using the iPad we found a recipe on Pinterest called Cloud Bread. The recipe was very simple and only included 4 ingredients; eggs, cream cheese, cream of tartar and sweetener. As a group, we read over the instructions together then we went to the kitchen to collect the ingredients.

We took turns mixing the ingredients together. Max H was interested in watching how we separated the egg yolks from the egg whites. He thought that it would be a tastier bread if we used all of the egg. Jessica explained that when baking you must follow exactly what the recipe tells you to do, because if we used the entire egg our Cloud Bread would be too heavy and would not rise and be fluffy.

As Davis G took his turn stirring, he noticed that the mixture was more yellow than white. "Clouds are white," he said. Kier B stirred very slowly so that he did not spill any "yummy bread out". As we continued passing the mixture around the table so everyone could have a chance to stir, Jessica read a book to us titled Little Cloud by Eric Carle. In the book, the little cloud becomes all sorts of things, changing his shape to become a sheep, an airplane, trees, and a hat all before joining with other clouds and raining.

Once the book was finished and we had mixed our batter, we spooned out the dough onto a cookie sheet and placed it in the oven to bake. To our surprise, the wet batter became fluffy, dry and white once cooked. We tasted our Cloud Bread along with afternoon snack that day. Most of us liked the taste of our bread, but we all agreed it did not taste as good as the bread you buy at the store.



Cloud Jumping October 11, 2016

Ever wish you could touch the clouds? The Preschool 1 class jumped from cloud to cloud outside while we practiced our shapes and colours. Using chalk Eason, Lucy, Alexis, Estella, Scarlett, Liam, Kolton, Landon, Audrey, Theo and Gwen worked with Jessica to draw cloud shapes on the cement in the playground. In each cloud, Jessica drew a different shape. Large and small circles and squares, different colored stars, diamonds, triangles and ovals were some of the shapes inside of the clouds. Then as a group, we would jump to each shape that was being called out. Scarlett knew each shape that was being called, however, she thought the diamond looked more like a kite flying up in the sky.

Eason wanted a turn calling out what shape we would jump to next. He had us jumping back and forth between the triangle and the circle. Audrey suggested we all hop on one foot to make it to our next cloud. Cloud jumping turned out to be more fun than puddle jumping!



On October 17, 2016 we sent out a questionnaire to our Preschool 1 families. They were asked to take the time to answer the questions together with the children at home. The questions we asked were related to our project on clouds. The first question we asked was, “do you know where rain and thunder come from?” Four of our families answered from the sky, six answered from the clouds.

Liam's family answered from evaporation off lakes and rivers, while Nathan thought rain came from the sky but thunder from wood. The second question on the questionnaire was, "have you ever seen the clouds out the window of an airplane?" Only five of the children in our class had seen clouds out of an airplane window (Bennett, Eason, Estella, Liam and Isla). The third question asked to the families was, "do you like rain or snow? Which one is your favourite?" Snow was the most liked by our families, with eight families answering snow was their favourite. This was in comparison to only five families that listed rain as their favourite. The last question we asked was, "do you know what a cloud looks like? Draw a cloud below." Each families drawing of a cloud was different and unique. Some drew clouds that were fluffy while others were storm clouds with rain falling from them.

Flour Clouds

The children were defining a cloud by its colour and its shape, Max H said they are white and Ben L knew that when the clouds are big, they are full of water. Audrey had a different question; she wanted to know if clouds were made of flour and water. On January 10th, we explored this idea, by mixing flour and water together to see if we could create a cloud. Gathering around a table with her peers Audrey asked the question "Are clouds made of flour and water?" Max H, Eason, Daniel, Gwen, Kier and Reewaz all believed they were. In a bowl, we started to mix flour and water together. Audrey took the first turn. She used one scoop of water and one scoop of flour and poured it into the bucket at the same time. She stood there and studied the bucket for a minute, then turned to Jessica and said, "It doesn't look like a cloud." Max H suggested we shake the container, as he reached towards the bucket. He started shaking it while saying, "I think it will make a cloud now." As the flour and water started to mix, it also started spilling out of the container from all the shaking. Audrey offered the idea of using a spoon. The children took turns mixing the flour and water together with a spoon. Savannah wanted to use her hands to mix the mixture together. As she mixed with her hands, she described the mixture as feeling soft, "just like my panda". Abby used her hands as well, "It is soft," she said. Audrey did not want to touch the mixture because "it looks too messy". Violet and Reewaz watched as their friends touched and mixed the flour with the water. Violet noted that it was starting to look like milk, while Reewaz thought it looked more like ice cream. Reewaz wanted to taste the "ice cream". In a separate glass, we mixed a little flour and a little water together. Reewaz took a little taste. "Yuck!" he said, as he stuck out his tongue. It looked like ice cream but Reewaz was certain it did not taste like ice cream. Audrey and Eason continued to watch their peers explore the mixture, adding a little more water and a little more flour each time to the container. Together they came to conclude that even by adding more of each ingredient that clouds were not made of flour and water.

Survey

On January 23, 2017, the children identified three questions they wanted to ask multiple people within the centre. Their questions were "Do you like rain?" "Do you like clouds?" and "Do you like snow?" After they completed their questions, they then decided whom they wanted to ask. Jen, Janeth, Deb, Kelley and Holly were on that list. The children then grabbed their clipboard and set out on the mission. It was concluded that four people liked rain, all five people liked clouds and only three of the people surveyed liked snow.



Making it Rain- Science Experiment

On January 24th, the children helped Michelle attempt to make it rain in our class by using ice, hot water and a pop bottle that had been cut in half. First, we filled the top of the bottle with ice. Everyone wanted to feel how cold the ice was. “It’s going to freeze my fingers off!” Davis announced. Then, we passed around a juice jug that had hot water inside. The children carefully looked inside and felt the sides of the jug to feel the warmth coming through the jug. Reewaz helped Michelle carefully pour the hot water into the bottom of the bottle. We placed the top of the bottle with the ice inside the bottom of the bottle that held the hot water. Next was the hard part, we had to wait!

While we waited, we chatted about the science behind the experiment. As the hot water warms up the ice, and the ice cools down the hot water, it causes condensation in the bottle. That condensation is what clouds are made of and when the cloud is very heavy with condensation, it releases the water causing it to rain. After a while, the children began to see “rain drops” falling down the sides of the bottle. We were all very excited to see our science experiment had worked! We left the bottle on the counter so we could see it rain throughout the day while we played.



Thunder Stick

On March 22, 2017, Judy brought in a special musical instrument for us to try. It was called a Thunder Stick. It was a tube with a metal spring like “tail” (Max H). Noah and Davis were very interested in this new instrument. Judy demonstrated how to make it work. It wasn’t hard to learn how to play a thunder stick, all you had to do is shake it. Noah gave the stick a shake, and a loud noise was heard. Davis covered his ears. “That thunder is loud!” he said. Noah passed the stick to Davis who shook the instrument a little more gently so that it would not sound so loud.

Our Special Guest

On March 22, 2017, Neil a meteorologist from The University of Waterloo weather station came to visit our classroom and talk to us about weather and clouds. He engaged us in a few different activities such as how clouds are formed, what it is like inside a rain cloud and what types of items they use to predict the weather.



Phase 3: Concluding the Project

We knew our cloud project was finished as we answered all of our questions about clouds and then some! The children had begun to move onto another topic and the interest was fading. On June 7th, we had our Spring Concert and sang our cloud song up on the big stage in the gym. We invited the parents to come back to our room after the concert to see what we have been learning about over the past few months. We set up our project board in the classroom to highlight our learning, as well as set up a cloud racing game on the table so our children challenge their parents to a race. It was one of our favourite activities we did throughout the project and the children really enjoyed racing against their parents. We also proudly showed off our big fluffy cloud pillow we created as the final project. We were lucky enough to have our volunteer, Linda, come in and help the children create the pillow. First, the children drew pictures of what shape of cloud they wanted our pillow to be in, and then Linda drew it out on the giant sheet. We all gathered around the sewing machine to watch our pillow come to life. Once finished, we stuffed the case with smaller pillows and zipped it up. We put our fluffy cloud pillow under the book nook where it continues to be used on a daily basis!

Teacher Reflections

As the cloud project ended, it was fantastic to see how much the children really did learn about our weather and how clouds form. The children pay more attention now to the weather outside as they arrive to the centre, and when they come into the room, they are excited to tell us what shade the clouds are and how the sky looks. They make predictions as to what the weather will be for the day when they look up at the sky. We enjoy listening to them discuss with one another about the weather and the shapes of the clouds they see as they stand in front of the classroom windows. Through all our activities and experiments we did with the children, we found that they enjoyed talking about how rain falls from the clouds. They were fascinated with the idea of precipitation and why we can see lightning and hear thunder. Before this project, the children noticed the clouds in the sky, but never asked questions about them. After this project, the children have learned why the clouds are in the sky and use the clouds as a prediction of what the weather will be for the day.

The biggest challenge of this project was finding a guest speaker to come in to talk to us about clouds and answer our remaining questions. Once we found a meteorologist to visit us, the rest fell into place. The children really listened to what he was talking about and because they had already learned so much about the clouds, they understood his terminology and the experiments he showed them.

Throughout this project, the children were able to expand on many skills throughout the developmental process. During activities, the children were able to co-operate with one another, exchange ideas and engage in-group decisions. While working on little cloud we found that the children were able to expand their vocabulary learning new words such as “meteorologist”, “precipitation” and “drizzle”. By the end of the project, the children were using descriptive language with each other and with us to explain, explore and extend their learning as well as conversation when discussing the day’s weather and cloud situation.

We spent many days observing our environment using our outdoor surroundings as well as specialized books, we collected and organized information and took the time to ask questions and reflect on all the information we have learned.

We found that throughout this project us as teachers were able to co-learn as we dug deeper into what is really behind a cloud, so for us we found we learned just as much as they did!