



# Changing Leaves

Owl - Saint John Paul II: Infant Room

## Background

The infants along with Connie Cunningham, RECE, Jen Silva, RECE, Judy Hackbart, RECE and Tami Sutton, RECE started a leaf project at the end of September 2019. The infants ranged in ages from 9 to 15 months. We finished the project on November 13, 2019.

## Phase 1: Beginning the Project

The leaf project started one day when we went for a walk into the woods and noticed that the leaves were starting to change colours and were all over the ground. Jen noticed that Alicia was curious about the leaves. Alicia explored the leaves by touching them in her hands feeling the texture of the wet leaves and dry leaves. Tami showed the infants the different colours of the leaves from green, red, yellow, brown and orange. The questions the educators thought the infants would want to explore are 1) Why are they different colours? 2) Why do they make sound? 3) What is their purpose? Jen thought we could look on YouTube for an arborist or find an educational video about answering our questions on leaves.



What do we know?	What do we want to know?	Who can we ask?
<ul style="list-style-type: none"><li>We know that the leaves were on the ground in the forest.</li><li>We noticed some were dry and wet.</li></ul>	<ul style="list-style-type: none"><li>Why are they different colours?</li><li>Why do they make sound?</li><li>What is the purpose of leaves?</li></ul>	<ul style="list-style-type: none"><li>Educational science videos</li><li>Arborist</li></ul>

## Phase 2: Developing the Project

To begin the investigation, the infants, along with the educators, went for a neighbourhood walk and found two big plants in a driveway with gigantic leaves and fruit on the plant. Unsure of what type of plant it was Tami decided to knock on the door and ask. We learned the type of plant was not a plant at all, but a tree. A fig tree. The owner of the tree shared fig leaves with us and figs, which we were able to try. Some of the infants didn't care much for the fig and showed tactile discrimination by spitting it out. The fig had a soft sweet seedy centre.



To continue the exploration of leaves, families were given a questionnaire and encouraged to go for a walk in their neighbourhoods on a leaf investigation. To answer the questions; what colour leaves did you see? What is the biggest leaf and smallest leaf you found? What kinds of leaves did you see on your walk? What is your favourite leaf? As the questionnaires and leaves started to come in Jen wanted to give the leaf their proper name and label them for the infants. With some searching Jen found a website called Tree Atlas, which allowed her to select the region of Ontario we live in and look at different pictures of leaves and find out the name of the leaf.

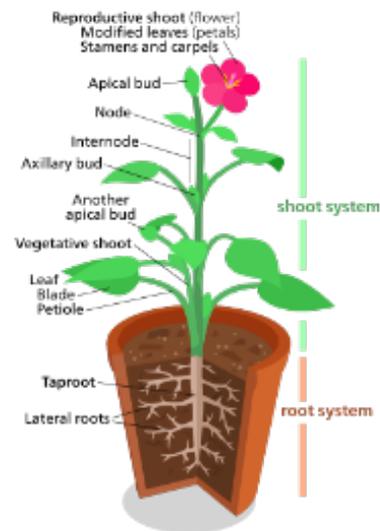
The infants and educators continued to explore leaves and different ways they could incorporate them into our world. Connie invited them to use food colouring and defusing paper in the shape of a Maple leaf as a creative experience. The Infants increased their fine motor skills to squeeze the bulb of the eye dropper, which picked up the food colouring and squeezed again to release the food colouring on to the leaf. Some of them needed help with the squeezing as they are developing their fine motor skills.



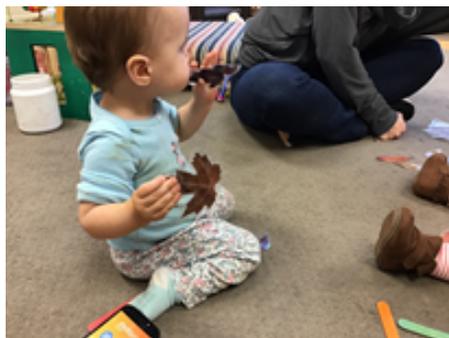
Activities were continuously being added into the program room for discovery and exploration. Tami brought in branches of tree leaves to put on the top of our cozy book nook. Elise soon realized if you shook the post the leaves made a sound like they were blowing in the wind. Jen brought in an Ivy plant, which quickly drew in Bear during his morning bottle before going to sleep. He reached for the leaves as he would take in his bottle. Jen would point out the green leaves and the newly growing leaves on the plant.

The library books that Connie brought in helped introduce the infants and educators to new words and parts of the leaf and plant. Words introduced were Maple, Oak, Elm, node, stem, bud, stalk, and veins.

The infants explored leaves out on the playground as some were scattered in front of the building. Jen brought them into the playground where she picked them up and sang “All the leaves” and buried Mackenzie, who then would roll around on the ground moving her body in different ways.



Forest exploration was another activity we did as we worked our large muscles to walk along the path with buddies and played in leaves, as well as collect various types to go along with the book “Leaf Man”. Jen took the leaves we collected and laminated them and created Leaf Man as she read the story. “A Leaf Man’s got to go where the wind blows,” she read as she blew leaf man away. The next day she taped a variety of leaves on the table for us to explore and create, but the infants liked to just pull the leaves off the table and explore them orally and increase their fine motor skills to pick the tape off using their index finger.



Elise demonstrated for her peers how leaves make sounds. Tami had brought in some tree branches filled with beautiful leaves of different colours and put them on top of our book canopy. Elise was looking up at the leaves one day and was holding onto the canopy wall, when she realized that if she shook the wall the leaves moved and made sound. It was pointed out that the movement she was creating was acting as wind to rustle the leaves. Later milk weed was added into the leaves and again when Elise shook it because the milk weed had dried out, the seeds from the milk weed started to float to the ground very slowly. Elise observed in awe the seeds float down as she shook the wall of the canopy.



Connie conducted a Chromatography science experiment with the infants. Which helped to explain why the leaves change colour. Connie shared with us why leaves are green and explained that leaves have lots of colour in them, but when we have the warmer months all that we see are green leaves because of the chlorophyll. In the colder months the chlorophyll breaks down and moves into lower parts of the tree to keep it nourished throughout the winter. The infants increased their social skills as they helped Connie to rip up the dry leaves and put them into jars, developing our sorting skills to keep the like colours together and creating a sense of belonging and feeling a part of the group.



The next step was to add some rubbing alcohol and then put the jars into hot water. We left the jars to sit over night with a few shakes by the infants to help release the pigment. Connie had cut up some coffee filters into strip and placed the strips in the jars of leaves and colours. This was to show the various shades of colour in the leaves. Unfortunately, as the strips of colour dried the only colour present was a brown, which is ok. As we could see the true colour in the jars, which the infants explored during the project.



## Phase 3: Concluding the Project

As the weather was getting colder and the leaves were almost all on the ground and the infants are no longer interested in our project anymore the decision was to wrap up our investigation. In the first part of the project Jen thought we could talk to an arborist. When googled, it was realized that an arborist's main focus is the planting and taking down of trees, so it didn't seem like they would be able to answer our initial question. Jen then turned to YouTube and found a video, Why Do Leaves Change Colors in the Fall? by scishow kids. Which also gave us new words to add to our words list and taught us a lot about the season. As a final project we decided to make leaf cookies of different colours like the leaves we have discovered on our walks. This activity was a nice way to conclude our project as most of the infants wanted to be involved as we measured, mixed and poured ingredients together. The children also realized the leaf cookies we created were much tastier than the ones in the forest.



## Teacher Reflections

In the exploration of leaves the infants had the opportunity to explore various types of leaves and were provided with different activities to do with them. One of my fall favourites is playing in leaf piles. Introducing this activity and watching the infants take it in and decide whether they enjoy it makes me chuckle. Their facial expressions are the best. As the leaves fall and brush their little faces, they either cringe or smile with delight. The way they move their bodies to roll around in the leaves or to quickly be free of them gives them a sense of coordination and control. This creates a sense of belonging as it brings everyone together out of wonder and curiosity in the magic of the trees losing their leaves. Jennifer Silva, RECE

The leaf project was definitely a very visual subject for the infants, their families and us educators. It was easy to explore leaves both in an outdoor and indoor environment. Bringing the leaves into the playground really made the project come to life for the infants. Their toddler friends would join in with the leaf play so it was a very social experience for everyone. As adults we all remember how we as children played with the fallen leaves so it was a delight to be part of creating experiences with the infants. Judy Hackbart, RECE

During these few months we explored the different textures, colours and sounds of the leaves. Interacting with the infants we sorted the leaves in different colours, they ripped them and put them into different jars. We then watched the clear rubbing alcohol absorb the different colours of the leaves. This was fascinating to both the educators and the infants. Over the next weeks the infants continued to come back to the jars, pick them up and look through the coloured liquid. Some even looked through the jar up to the light. The colours that we explored inside and outside were so vivid. It is so exciting when I share my love of baking with the children to see that they are eager to come see what we are making and help with every step. After watching myself, Adeline, Zoey, Jack, Liliana and Zoë all tried cutting the butter into the flour and icing sugar. Next Elise helped squish the dough together. Alicia was very interested in watching the different colours we put into the dough: green, yellow, orange, red, brown and multi coloured. We then put the tubes of dough into our cookie press and they took turns to press them out onto the cookie sheets. They all agreed that we made great cookies. With fall being such a beautiful time of year it was great to expand on the infants learning and learn about why leaves change colour. Connie Cunningham, RECE

Our project on leaves gave our excursions purpose as we went on walks with specific ideas in mind. The infants all responded quite differently in many locations. Some enjoyed the ambiance when we walked the path in the forest wandering into the brush to investigate and gather the things that caught their eye (leaves, sticks, bark, rocks). Others seem to be more confident when we were out in the open on the community trail (walking with a buddy) and meeting other pedestrians. The freedom to lay and roll on the ground as leaves were fluttering down brought joy and was visible on their faces. We often gathered leaves to sprinkle as we sang "All the leaves are falling down" and made it personal to each infant. We had an opportunity to watch some leaf blowers in action when we were out in the neighbourhood, this caused a variety of reactions and was another learning experience tied into leaves. The leaf project built into that overall sense of well-being, knowing themselves and what their individual needs were while communing with nature and being out in the fresh air. Tami Sutton, RECE