



Rotation Project

Owl – Lincoln: Toddler Program

Background

The Toddler program at Owl - Lincoln completed a Rotation Project! It began May 2017 and continued until August 2017. The toddler teachers at the time of the project were Elaine Goldberg, RECE, Deb Wintrip, RECE and Sarah Simpson, RECE. There were 15 children and they ranged in age from 18-30 months

Phase 1: Beginning the Project

The rotation project came to be as throughout the toddler's free play the staff started noticing that they gravitated to playing with cars, driving them across the tops of shelves and down ramps. They were drawn to the large wooden spool outside; pushing it around and watching it roll. As well as balls, pushing, throwing, or kicking them and chasing them around the playground. When we sat down to discuss what all these had in common, it became apparent that the toddlers are interested in rotation.





As we started the project, we gathered the children around the table and showed them various toys found around the room that rotated. We asked the children What They Know? What They Want to Know? and Whom Could We Ask? about rotation. At first, we were met with some puzzled faces, for the toddlers this was a completely new word. Setting a few different toys on the table was a different approach, this allowed the toddlers to share with us what they saw happening. Some of them were able to answer, but some of them would point to the toy and in one word describe what it was doing (spin, roll, turning, sliding).

What the toddler know?	What the toddlers want to know?	Who can we ask?
That balls roll	What rotates?	Wonderopolis
Wheels spin	Why do things rotate?	Google
Balls go through the tunnel	How fast can we make things go?	Dance instructor
Things spin		

Questions we had asked the Toddlers:

What Rotates?	James- "its roll" as the ball rolled across the table
Why do things rotate?	"Go fast" - Benjamin
How do we make things go?	"Push" - Rhys
How fast can we make it roll?	"Fast" - Chase

Phase 2: Developing the Project

Starting with a survey, we asked the children and their parents to bring home a sheet that asked them to look for things around their house that rotate. Most of our friends brought back a sheet filled with items they had found around their home, or things that they regularly play with that rotate. Items such as balls, doorknobs and fans were the most common ideas checked off, but it was the extra ideas that were jotted down that surprised and intrigued us the most. Many of the children had found items such as a tape dispenser, toilet paper roll, microwave plate, a record player, blades in a blender and even the children themselves as they roll their bodies during play as other interesting and intriguing ideas. This opened our eyes to all the possibilities rotation can bring upon us, for use in our curriculum activities and in general throughout play.

One of the main curriculum experiences we started with combined rotation with a familiar structure we already had outside and had already been utilizing for many different purposes. This was the eaves trough. The toddlers spent a lot of time sending different sized balls down it. Easing into rotation was something the toddlers were already comfortable with seemed logical and we knew it would be enjoyable. The children pointed out that the balls were “rolling” down the eaves trough. From this activity, many other ideas came about. We watched as the children found cars with rotating wheels to put down the eaves troughs, pinecones and rubber rings for a ring toss game we had. This showed us that the toddlers were able to scaffold and expand their own learning experiences that specifically taught them about rotation.



One exciting discovery Benjamin made was the new umbrella that had been added to a table (made out of a spool) on the playground. Climbing onto the table, he began turning the pole, the umbrella on top quickly began to turn as well. We watched him for several moments as he twisted the pole one way, and then back the other. This caught the attention of many of his peers, soon everyone wanted to have a turn making the umbrella spin. This became a regular activity for the toddlers while on the playground and is still being explored today.



Using the children's ideas of putting the cars and rings down the eaves troughs, we expanded them into a few other rotation activities:

- We fostered our senses as we placed the car wheels into paint and sent the cars rolling down a plank of wood with paper on it, watching the tracks the wheels made.



- We watched how far we could roll the rings on the grass outside.
- We incorporated a can of paint into the rolling and spinning actions as we kicked a can full of paint (with paper in it) and watched it roll. We then opened the paint can to see what had happened to the paper with the paint inside.



- We explored a projector in our room and the children discovered that when the red knob was turned, the overhead part goes up and down casting light on the wall.



- We used a paint roller to paint on paper that was attached to the fence. As we dipped the roller into the paint and moved it front and backwards, we observed how the paint was changing colours on the tray.



- Using a salad spinner, we put paint and paper inside and rotated the handle in circles. When we took off the lid, we noticed that the paint was covering the paper.
- Rhys discovered how to make a hula-hoop rotate around his middle. He worked on getting the hoop to spin over and over, until it finally circled his body.



Throughout the rotation project, we continued to add to our vocabulary list, as the toddlers began to use new words during their play.

Vocabulary List

Rolling
Spinning
Whirling
Turning

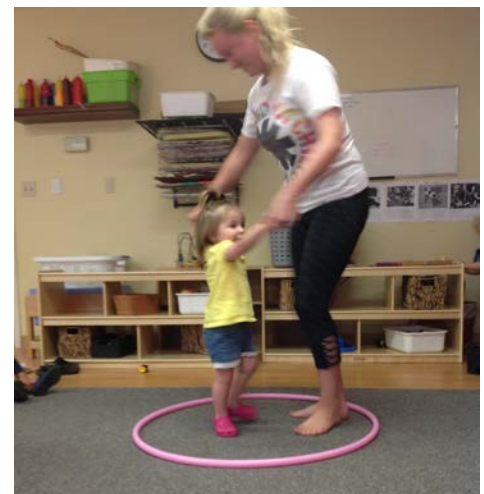
Twirling
Twisting
Curling
Looping

Rotating
Sliding

For our field study, we had a special guest come to visit. Georgina; a dance instructor, came ready to have the toddlers moving their bodies and focused on how they could rotate different parts of their bodies. We rotated our arms in a circular motion, first quick little circles then while using scarves we rotated them in a large circular motion.



With the use of a hula-hoop, the children grabbed a hold and walked in a circle while singing, “Ring around the Rosie”. The toddlers followed along with Georgina’s many actions, moving fast, slow and spinning their whole bodies around.



Informal Definition: Rotation

1. The action of turning, spinning and rolling

Formal Definition: Rotation- *noun*
noun: **rotation**; plural noun: **rotations**

1. The action of rotating around an axis or center. "the moon moves in the same direction as the earth's rotation"

Synonyms: revolving, turning, spinning, gyration, circling

We also created a song about rotation to sing with the toddlers.

Song

(Sung in the same tune as "Going to Kentucky")

Spin & rotate Spin & rotate
Until you fall to the ground
Then get back up and turn & twist
Until you fall back down

Phase 3: Concluding the Project

For our large group project, we decided to create a ball drop with the use of eaves troughs and concrete pour form tubes. After the holes were cut out, the eaves troughs were glued together with silicone; it was time to paper Mache. The prospect of sticking paper into the flour/glue/water mixture was very exciting until some of the toddlers (who were excited to participate in the activity at the beginning) decided it was not for them as they stuck their hands and paper in to the gooey paper Mache. We did have a few toddlers who enjoyed this sensory activity and soon both tubes were covered in sticky wet paper.



Once the paper Mache was dry, it was time to paint the ball drop. We gave the toddlers a choice of yellow, blue, red or green and green was the chosen colour. Soon the whole project was covered in green paint and so were our bodies and teachers feet.



After a night to let the paint dry, it was time to explore! The top eaves trough was a little high for us to reach on our own, so we brought in a few step stools, which made it easier to reach. This was a great gross motor activity, as we had to step up to reach to drop a ball but also to step down. As we dropped the balls, one by one we watched (while moving our head from left to right to left again) the balls rotate and rolled to the bottom where they came out the side of the tube. We also brought over rings and cars and soon discovered that the rings were too big to fit through the holes. The cars worked great and we enjoyed seeing them roll down the eaves troughs also. The toddlers enjoyed seeing if they could catch the balls in the middle but the balls always seemed to roll too fast. We learned to time it so that after we dropped the ball in the top, we went straight to the middle and opened our hand to receive the ball before it rolled all the way to the bottom.



Teacher Reflections

Getting started on this project threw us into a few loops and turns. At first it was hard to grasp the idea that we could really do a whole project on such a broad term (“Rotation”) even for us teachers the term rotation has a lot of meaning and can become a little overwhelming when you are not sure where to start. Once we handed out the surveys that asked the children and their parents to explore their house for their ideas of what “rotates” in their own homes, it was clear that this could really be an amazing project to research and explore. I was amazed by all the unique ideas our families had found and me personally how much fun we can have when our community gets together to explore an idea. As we continued through the project we as teachers were learning alongside the children and I felt as though it opened my eyes to new possibilities when it comes teaching the children I have in my care. It does not have to be all the same idea; there is a world of information waiting for us to learn. I absolutely enjoyed seeing the children find new experiences on their own and show us adults that play will always be a means to learn. **Sarah Simpson, RECE**

To look back on when we first started the project to now, it is amazing to see that at first the toddlers did not know a whole lot in terms of rotation to now knowing a whole lot more. It amazes me to see the benefits of doing a project with toddlers, as they are always open to learning and exploring new curriculum ideas everyday. I was not sure how much of the survey was going to be answered when it was first given out. As they came back over the next week, my eyes were opened to how many things at home the toddlers and their parents found that had to do with “rotation.” As the curriculum for the project was placed out for the toddlers to explore, it was amazing to see what they would do with it and how they worked together to learn a concept they were unsure of at first. To see their amazement and curiosity was amazing to me as an ECE as I look forward to coming into work each day to see what we are going to explore that day. **Elaine Goldberg, RECE**

Getting started on a project is sometimes the hardest part; talking with your teaching team to get down to what the children are interested in, can sometimes lead to a difference of opinion. In this case, we looked at what we were seeing in the classroom and on the playground. Wheels, balls, driving cars and riding bikes wondering where we take it from here. As we talked, we discovered that rotation was something in common for everything we were observing. Once getting the ball rolling, I was excited to see where our learning would lead. The survey we sent home was quickly returned with some amazing answers that I had never even considered. I figured we would receive papers stating “wheels, fans, balls and clocks” but I was surprised by how many different things were written down that never even crossed my mind; such as “a flushing toilet, can opener and record player”. As we continued the project we became co-learners with the children; watching as an activity or items we set out with preexisting ideas of an outcome was used in a completely different way than expected. Benjamin’s umbrella discovery was one of my favourite moments. Watching as a new shady spot on the playground quickly revealed some of his learning, alongside the excitement of his peers as they all saw how to get the umbrella spinning; which continued to be a favourite thing to do for several weeks while outside. The children’s learning became more apparent as I began to hear phrases such as “look it’s spinning” or “it’s rolling fast” during their play. **Deb Wintrip, RECE**