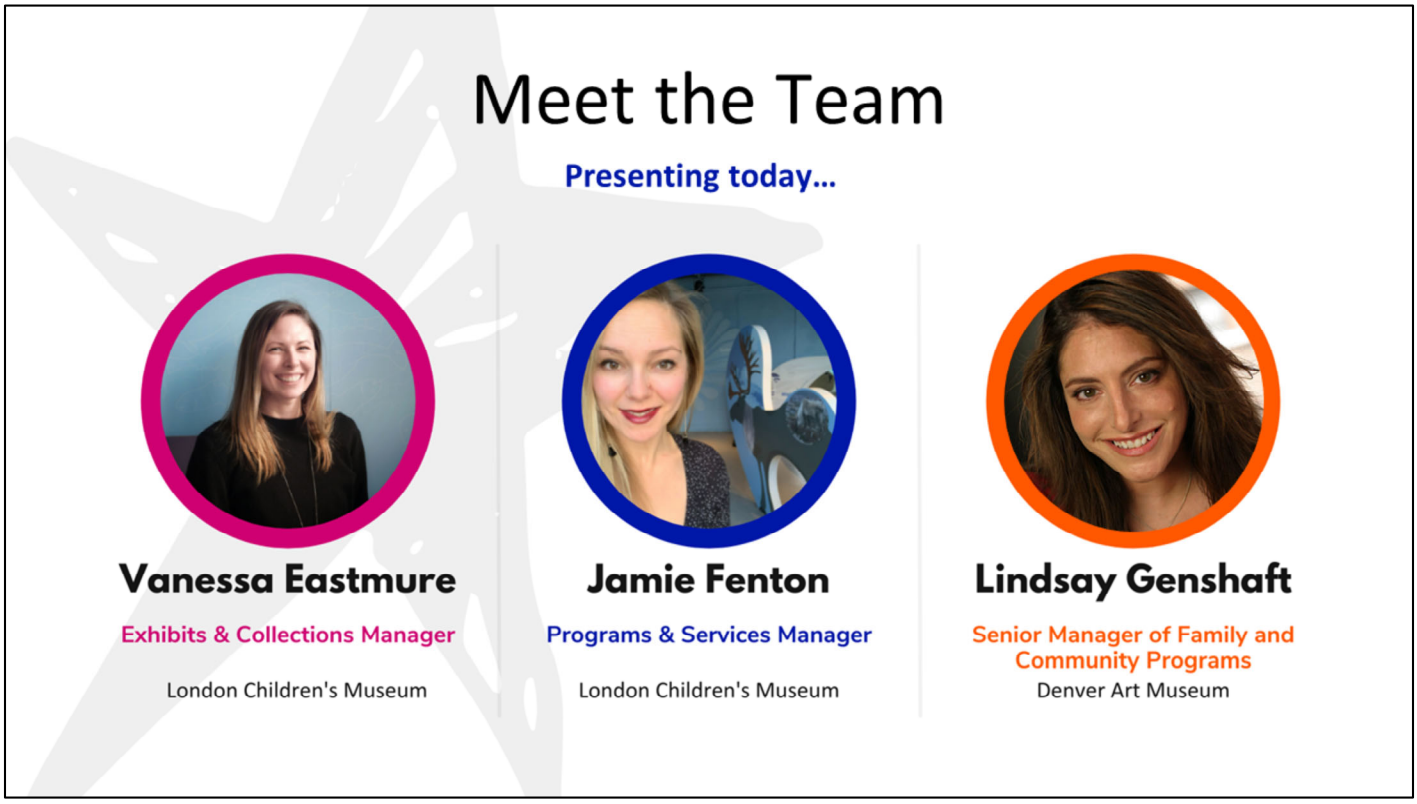
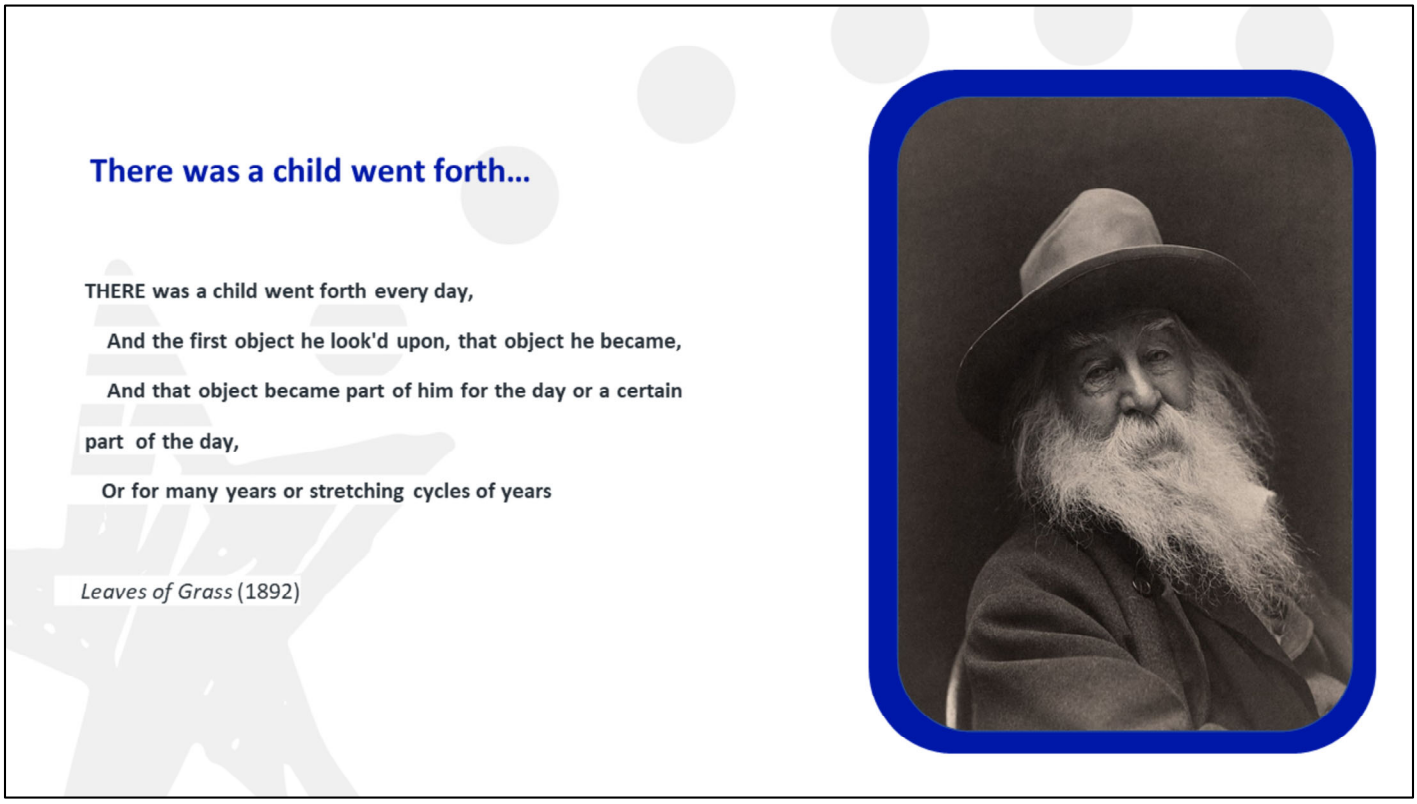


Jamie - Introductions
Hello everyone and thank you for choosing to participate in our session today.
Vanessa Eastmure - Exhibits and Collections Manager with the London Childrens Museum in Canada
Jamie Fenton - Programs and Services Manager also with the London Childrens Museum
And Lindsay Genshaft who is the Senior Manager of Family and Community Programs at the Denver Art Museum

Please join us this afternoon by exploring the box on your table. Each table should select a leader to open the letter ontop of the white box in the centre of your table.\ If you happen to finish your activity please feel free to wander around to explore the activities happening at other tables. We will have to return to your tables in 10 minutes.

We started today's session with an activity designed to provide some insight into what object-based programming can look and feel like. As we move through the presentation I'd like to invite you to reflect upon your experience today as well as your personal past experiences. As we talk through the impacts, opportunities and benefits of objects-based programming think about how they might apply in practice.

In preparing for this presentation, I spent a lot of time trying to concisely articulate what we are talking about here today, and I struggled to find quite the words. So I decided to look for some inspiration. Using a keyword search I went online to find out what's been said about some of the major themes and topics that we're covering in this presentation. And I found something. A poem. By Walt Whitman.



When I first read this poem I was so excited. It beautifully summarized exactly what we're going to go on to talk about today. And I knew when I read it that I needed to use it as part of this introduction to explain what we mean by object-based programming.

So jotted down the name of the poem and book and continued on with the rest of the presentation. And when I was ready, I went back online to copy the poem into my slides. So I typed the title into Google and I'm going to read you the poem that appears.

There was a child went forth every day,

And the first object he look'd upon, that object he became,

And that object became part of him for the day or a certain part

of the day,

Or for many years or stretching cycles of years

I really like this poem. I think it speaks to the physicality of learning, it illustrates that amazing way children can completely inhabit something thing or concept through play. And it talks about how some interests come in a flash and are gone or can carry on through time while still having once been all-absorbing…But there was a problem. This poem does not describe what our presentation is about. When I went back to retrieve the poem and read it a second time, it no longer resonated with me the way it did upon first reading it. And I couldn't understand why. I had been so sure that this was right to introduce this topic. But it's not.

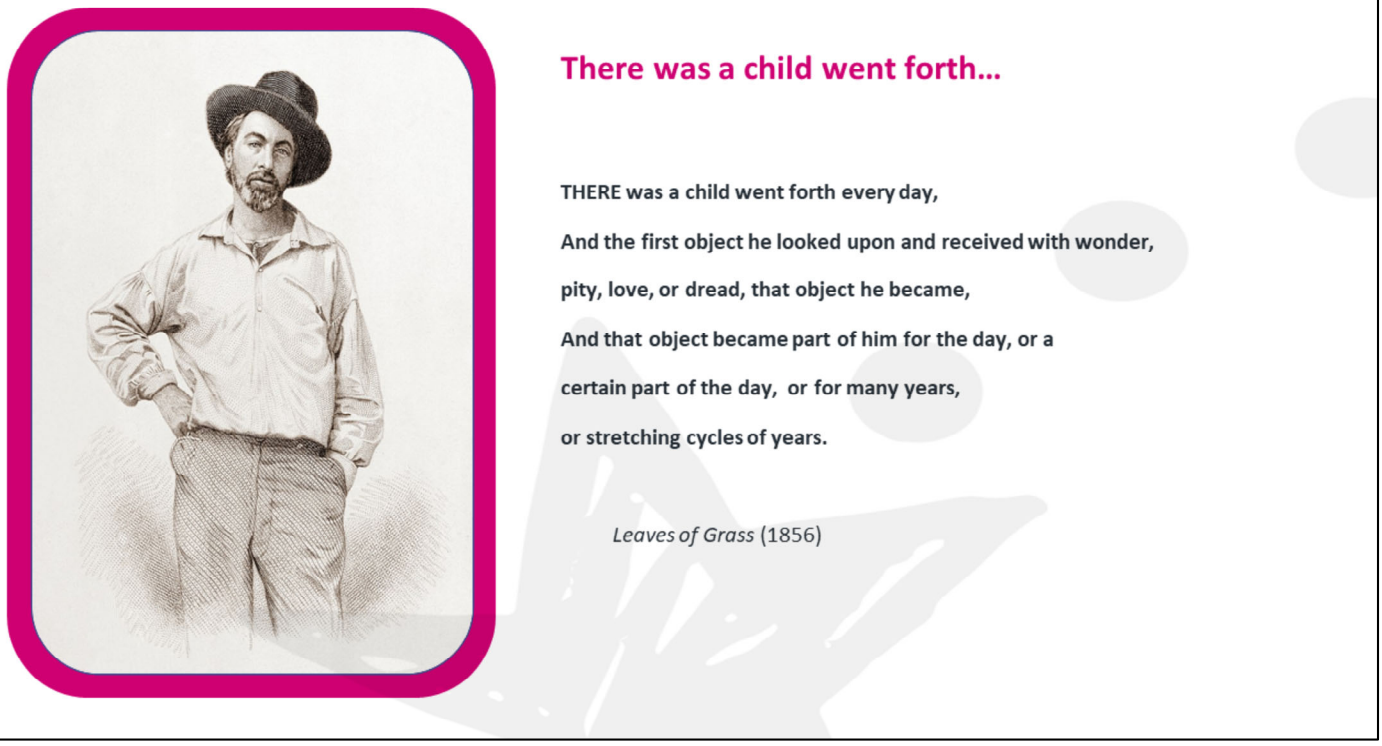
A wise person would just let it go. Leave the poem and look for inspiration elsewhere. And I did try to do that. But it just kept niggling at me. I kept going back and re-reading it trying to recapture the connection that I had made so quickly the first time. And I couldn't. So my solution was to dig into the life of Walt Whitman.

It turns out Walt Whitman was a bit of a perfectionist. *Leaves of Grass* was published for the first time in 1855, his first real foray into publishing. It was quite successful and so he followed it up with a second edition in 1856. Then another in 1860 and the another, and another and another. The final edition was published in 1892.

Often when authors release subsequent editions of their books, they might have new forwards or introductions, but Whitman went further than that. He viewed *Leaves of Grass* as a constant work in progress. Often his new editions included new poems, the book grew in size significantly over Whitman's lifetime. But he would also frequently revise poems that had been previously published. In 1892 when the final edition was released, Whitman knew that it was the last. He asked his publishers to release a public statement from him which essentially said, that even though this final edition of *Leaves of Grass* may not be perfect, it is as close as it will ever get. It is the most complete version of this book, and it should supersede all previous editions.

When you type the name of a Whitman poem into Google, you get the most recent version of that poem, the one the author felt was complete. The trouble was, I didn't discover this poem by typing its name into Google, I found it by creating a key word search, which turns up different results. It turns up an earlier version of the poem. This probably seems like a very long-winded way to tell you about a research error. But I do so with cause. When I finally found the earlier version again, I was right, it does sum up this topic beautifully. But the juxtaposition of the later and earlier versions does so even better. Because this 1892 version does a really good job describing what we are not talking about. Because when we say object-based programming we don't mean any object. We mean something much more specific.

So with all due apologies to Mr. Whitman, I am going to show you the earlier version of A child went forth.



THERE was a child went forth every day,

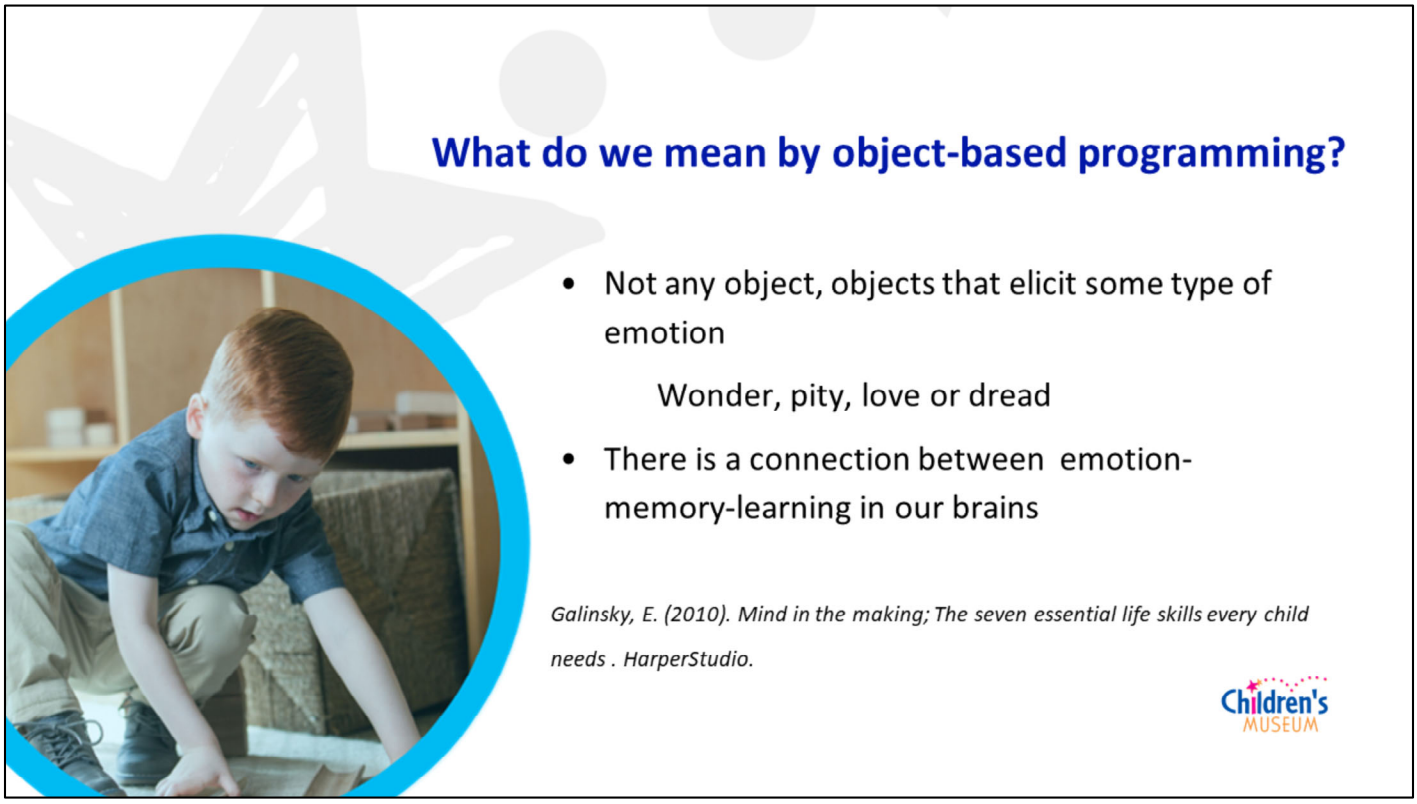
And the first object he looked upon and received with wonder, pity, love,

or dread, that object he became,

And that object became part of him for the day, or a certain part of the day,

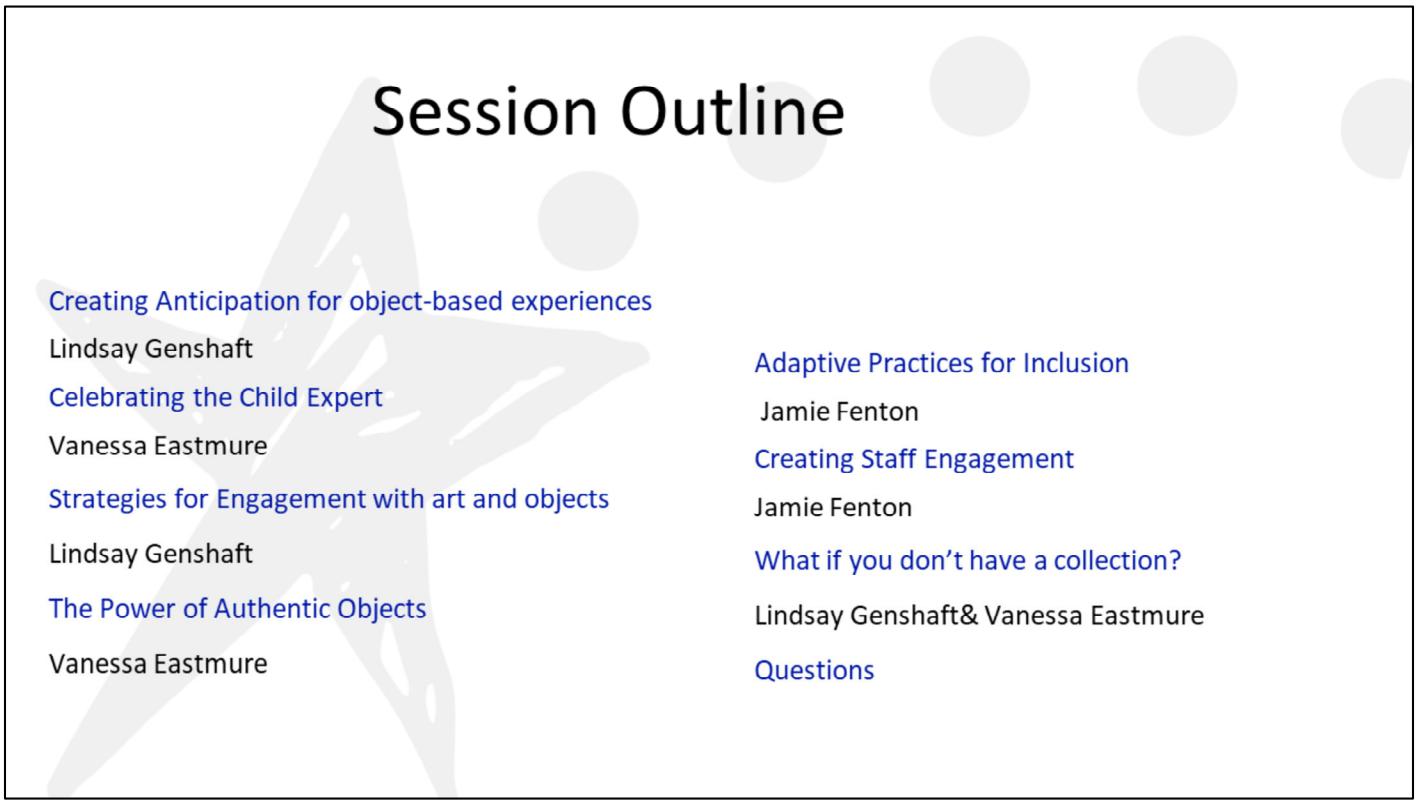
or for many years or stretching cycles of years.

Received with wonder, pity, love or dread. At its root, object-based programming uses objects that inherently elicit an emotional response or can create an emotional response during a program.



And not just wonder, pity, love or dread, but those other more nebulous but equally powerful emotions like empathy, excitement, anticipation, awe and curiosity.

Why is the emotional response important? What makes emotion a valuable tool for learning? We know that the parts of the brain responsible for emotion, those old primal parts of our brain, also play a huge role in memory creation and storage. We remember emotional experiences. And what is learning, but bumping new information up against your memories of stored information and making connections between them? When you can create a learning opportunity that engages visitors emotionally, you have a good chance of creating a really sticky memory and powerful experience.



Before we get into the content of this presentation I'd like to take a minute to talk a little bit about how we're going to move through this topic. In many of our early conversations when we discussed different programming approaches and the impacts, benefits and strategies we saw arising from them, we quickly noticed that the themes came up again and again. So rather than letting this become very repetitive, we decided to identify some of the largest impacts, benefits and strategies and use individual programs to illustrate how they happen.

The other thing I'd like to note is that both the London Children's Museum and the Denver Art Museum are collecting institutions. We both have formal accessioned collections that we use as resources in many of the programs that we'll talk about today. We would like to make it clear that not having a collection does not preclude your institution from making objects-based programming happen. First we'd like to tell you why this type of programming is valuable and worth doing, then we will address why and how they are possible to replicate with or without a collection.

Creating Anticipation fo
Object-based Experiences

Using Theater as an Anticipation Tool to Talk About Art and Engage Families with Objects

At the DAM, we use theater as a tool in programming often. Creating excitement and anticipation through theater speaks to object-based programming using objects that inherently elicit an emotional response or can create an emotional response during a program, supporting what Vanessa addressed earlier.

When visitors experience the combination of theater and art, there is an excitement that is built prior to seeing the actual objects later and conversations and experiences occur that might not otherwise happen – I call this way of thinking or programming, Anticipation Theory

For example…

Family Friendly Theatre at the DAM

Art Emergency is an example of the use of Anticipation Theory to support emotional connection to objects. We pull a figure from a painting or the artist who created the work or a concept from the object and create an entire play to help visitors have a meaningful connection with art and hype them up to see the real thing in the galleries. The play series we have focused the most on is called Art Emergency. These plays prove again and again success in connecting visitors to the art in a unique and fun way. They give a context for the art, make families feel welcome and comfortable, and instigate curiosity, connection, and creativity. We structure these plays to explore three different objects – we choose objects that have amazing stories attached to them or use the subject matter in the artworks as the story. In the photo at the top right, for example, we tell the story of the painting *Dream of Arcadia* by Thomas Cole. We dramatize the true story of the painting being lost for decades. It was known that our museum, the DAM had an

excellent copy of the painting, but surely it couldn't be the actual painting because the dimensions weren't the same size as the original and the artist's signature was nowhere to be found. In the 1950s, a scholar asked to come and view the DAM copy. As it was examined, the scholar asked if it could be removed from its frame. It was discovered that the painting was folded underneath itself and it was indeed the dimensions that matched that of the original. And there in the lower right corner was the artist, Thomas Cole's signature. We had the real painting all this time and had no idea as it was hidden away in storage in a frame too small for the entire artwork. Once the kids learned of this story of the *Dream of Arcadia*, they couldn't wait to see the real thing in the gallery upstairs and find Thomas Cole's signature. Had they not experienced this program, they would not have this insight or the anticipation to find the real object. So while this type of program does not allow the visitor to actually touch the object, they still experience that meaningful, curiosity filled connection through emotion

Another way we build that anticipation with art objects is through an early childhood program called *Foxy and Shmoxy: Art Detectives*. We invite families with very young children and their families to experience the collection in front of the actual artworks with the help of the Foxes from the artwork, *Foxgames*. *Foxgames* was a family favorite installation that has since been deinstalled where foxes invade a red café and cause mayhem as you can see in the lower right corner. The concept is that two of those foxes come to life and decide that the DAM needs them to be art detectives and solve all the mysteries in the museum. They wear typical detective coats and hats with ears and tails sticking out, of course. And most importantly, they have a magical magnifying glass to help them solve mysteries. The way it's used is that one fox holds up the magnifying glass to the artwork being focused on. The other fox jumps in between the magnifying glass and the artwork and magically becomes that artwork. For example in the photo above is an artwork

called *Super Indian* by Fritz Shoulder. The foxes use the magic magnifying glass to jump into that artwork and become the ice cream cone the figure is holding. This way, the ice cream cone can give valuable information the foxes are looking for to solve their case and the kids get excited to look closely at the ice cream and learn more about the painting and artist. This program propels visitors all over museum and has gained such a following that we get repeat visiting families every month. One kid even made his own magic magnifying glass and brings to look closely and talk to artworks all over the museum. He really understands the assignment!

Many, if not most of us have participated in some kind of collecting behaviour at some time in our lives. It's very common during childhood, but absolutely persists into adulthood for many people. Psychologically it's an interesting phenomenon as often collections have very little to do with the monetary value or usefulness of the items. So why do we do it?

According to neuroscientist Shirley Mueller, who both studies the behavior of collecting as well as collects herself, collecting is about emotion. It is pleasurable and entertaining. It's also about control and order. A collection is something that the collector has complete control over. For children collecting is also an incredibly beneficial learning opportunity.

In essence, collecting is an exercise in categorization. It's about grouping items according to their sameness, or differences and building an understanding of how things connect to one another. In her book *Mind in the Making*, Ellen Galinsky points out how important the skill of making connections is for building an understanding of the world. By recognizing relationships, seeking out and grouping objects based on those relationships, collecting children are building upon this skill.

Collecting is also an incredible way to gain knowledge about a given subject. We often see young children with intense interests in things like dinosaurs or geology that develop a very high level of expertise in their chosen subject. In order to get to this level of knowledge, children need to actively seek out information from a variety of sources, understand its meaning and incorporate it into their world view. Even if they were to go on to forget much

the specific knowledge, they will retain those skills they've built in knowledge seeking. What's more, children who participate in collecting behaviour are building these skills and knowledge independently, in a self-directed manner according to their own interests.

Children's museums don't need to do anything to ensure that children engage in collecting, these activities happen with or without adult intervention. But we can play a role in fostering, supporting and celebrating the collections of children and help make the learning visible. At the London CM we do this through our Community Curators program. This program invites children to curate, arrange and display their own personal collections for visitors.

Making Learning Visible

The evolution of Adam's rock collection- age 5

Adam's rock collection is a really good example of how learning is made visible through the Community Curators program. The collection's evolution demonstrates a goal driven, internally motivated development of knowledge that is supported by his own interest in geology.

Adam first brought his rock collection to the museum when he was about five and as you may be able to tell from the look of concentration on his face, he had a very specific idea of how they should be displayed. Adam had generally categorized his collection according to the location at which they were collected. This was particularly impressive as he arrived with the entire collection in one bag and was able to recognize each rock and the category it belonged to. He was beginning to recognize that rocks collected at specific locations often shared attributes with one another.

Developing Engaged Learning Skills

The evolution of Adam's rock collection- age 6

The following year Adam returned with his collection a second time. You'll notice that this time not only had the collection grown, but it also now arrived in its own organized container which Adam felt needed to be included in his display. The categories had changed somewhat as well reflecting a growing understanding about rocks and minerals. Adam was beginning to recognize the differences between rocks and minerals, identifying his birth stone, amethyst, and some geodes. He also chose to display some of his the resources he was collecting about his topic of interest.

Celebrating Achievement

The evolution of Adam's rock collection- age 7

The last time Adam brought his collection, most of the rocks he'd brought in the first year had disappeared, replaced with a more curated collection of gems and minerals. Adam's self-directed collecting behaviour led him to develop an expansive knowledge about geology that was quickly expanding into an interest in fossils. He didn't need the Community Curators program to have that engaged learning experience, but it did make that learning really visible, both to Adam as well as his care givers and visitors to the museum and celebrated his remarkable achievement.

Extending Knowledge Through Perspective Taking

What do you know that others may not?

Unlike the development of engaged learning skills that happen quite independently, the Community Curators program does help push children to extend that knowledge in new ways. One example of this is perspective taking. These are children know a lot of things about their collection, but now we ask them to put themselves in the role of visitors who do not have that same knowledge. They must decide, what is important for other people to know about this collection. This is a new, and more complex way for children to think about their topic of interest.

A really interesting example of what this can look like is represented by this collection of gems and minerals. Emily's collection reflects an intense interest in her topic. This intense interest had contributed to incredible literacy skills. At six Emily was writing all of her own labels, spelling the names of the items correctly. What's more Emily recognized that her ability to read, write and pronounce the names of these minerals was unusual. So when asked to think about what she knew that others did not, her mind sometimes gravitated this this skill. You'll notice in the centre of the display she has given one mineral arms and legs and shows it walking down a staircase. She does this to help others understand how to pronounce the name of the mineral, which is peristerite. So it's walking down stairs.

Declaring Identity

What does my collection say about me?

Another important role that this program can play is in helping children say something about who they are. In many ways the objects we choose to own, display and surround ourselves with say something to the outside world about who we are. So too do the items children collect, items that they feel deeply connected to, serve as a reflection of their individual identities.

We see this self-expression so clearly in community curators. Here is Iris who collects toys and memorabilia from the 1980s. You can see that even in her choice of clothing that her knowledge and interest in this era of history is something she proclaims proudly. In this image we see Zora and Zadie's collection of stuffed cats and dolls. You'll see that they have taken care to include photographs of themselves with their own pet cats.Their love of cats and dogs extends beyond their collection to their pets home, an important part of who they are.

Supporting the development of a positive self-concept helps to build children's confidence that their unique place and contribution in family, school, peer, and community environments is recognized and valued.

Acknowledgement

Affirmation of the importance of the child's voice

All of these benefits of the Community Curators program are wrapped up in the idea of acknowledgement. The vision of the London Children's Museum is to be , *A community where children's voices are honoured, play is valued, and lives are transformed by a love of learning.* We take that vision to heart and the Community Curators program is one really effective way to honour it. We are recognizing that collected objects are meaningful to the children who collect them and are therefore meaningful to us as a community. We are celebrating the incredible achievement of self-directed learning, knowledge and skill building that goes into the creation and display of these objects. We are telling the participants in the program, their caregivers, our staff members and every child and adult visitor to the museum that children's interests, thoughts and voices have an important contribution to make to our community and deserve the space in which to be heard.

Strategies for Engaging with Art and Objects

Strategies and Tools to Engage Everyone W
Art and Objects

- Storytelling
- Visitors in Role/Role Play
- Artmaking in Role
- Close looking through DAR

Here are some strategies which inspire creativity, foster curiosity, and help make abstract ideas more concrete in relation to objects. When using the following tools intentionally in object based museum family programming, we find high impact and meaningful experiences occur.

Storytelling – I covered this in my example before of using theater as storytelling - story helps us make meaning of the world and figure things out that we may at first not understand – when we use dynamic storytelling with art, it can be powerful and inspire creativity.

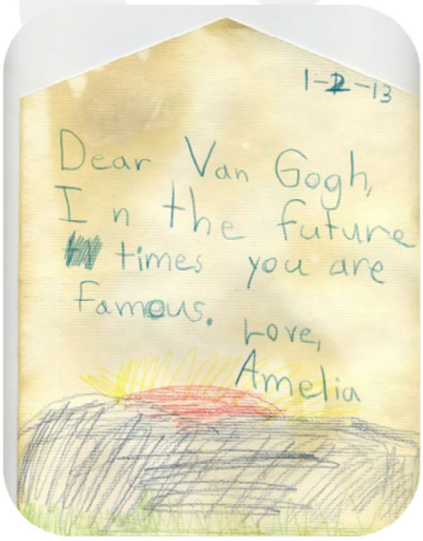
Visitors in Role/Role Play

Visitors in Role/Role play – Again, through the use of theater, we were able to put visitors in role and give them a problem to solve or a job to do. Role play gives visitors the freedom to speak and think as someone else, think of alternate perspectives and have buy in to the art

With the example of Art Emergency, all the visitors are put in role as the museum board of directors. This is very simple to do by greeting them as they enter with, "welcome, we are so honored to have you here today. We couldn't make this decision without you." and then starting the play with, "Welcome board of directors!" The kids and families immediately know they are important and have a job to do. Their job can be as simple as voting for which of the three works of art we cover to be in the prized spot in the exhibition. In our Van Gogh play, it was writing letters to cheer Vincent up, in our O'Keefe play, it was helping the artist find inspiration, in the Monet play it was recreating a "lost" painting, and in our Pollock

play called Art Court it was casting a vote as a jury member about whether or not one of Pollock's paintings should even be considered art.

Art-Making in Role



Artmaking in Role – an extension of in role work – when we combine art making that has a purpose with story, it can deepen the experience for the visitors

An example of this was seen in the Van Gogh play when the actors claim to have traveled forward in time. They are desperate to help their brother, Vincent Van Gogh, who is very sad and thinks no one likes his paintings. VanGogh's brother and sister take the audience through the journey of their brother to being an artist and explain that if he only knew how much everyone loves him in the future, he will be happy. They ask the kids and families to write letters to Vincent that they will then take back in time to him.

Kids took writing their letters very seriously and connected to the artist and his family in that way. I was also able to use the letters as creative evaluation to see what the kids were getting out of the experience

Close-Looking Through DAR

Close looking Through DAR– Close looking can reveal exciting details and even secrets about objects, supporting connection and curiosity and instigating conversation. We use the DAR method, this is a discussion technique used to analyze. It follows the same path as many visual thinking strategies with the words: Describe, Analyze, Relate. When discussing a work of art or object, ask descriptive questions such as: What do you see? What is in the forefront (or background) of the object? Then move to analytical and interpretive questions such as: What relationships are you seeing? What does the situation or story seem to be? Then move to questions of relevance or relating such as: What might this situation or story have to do with our world today? Have you ever experienced or know someone who has experienced a situation or story like this?

This method is so easy, anyone can learn it and then be able to lead a discussion on any object. This line of questioning can illicit amazing conversations and put

children in the conversation as the experts.

Procedure:

- When discussing a work of art or object, ask descriptive questions such as:

  What do you see? What is in the forefront (or background) of the object?

  If there are figures, how would you describe their body language? How would you describe their facial expressions?

  If more abstract, what textures are there? Colors? Lines?

- Then move to analytical and interpretive questions such as:

  What relationships are you seeing?

  What does the situation or story seem to be?

  Whose story is this? What do you think the artist is trying to say?

  If more abstract, why might the artist have chosen to use these colors/textures/lines?

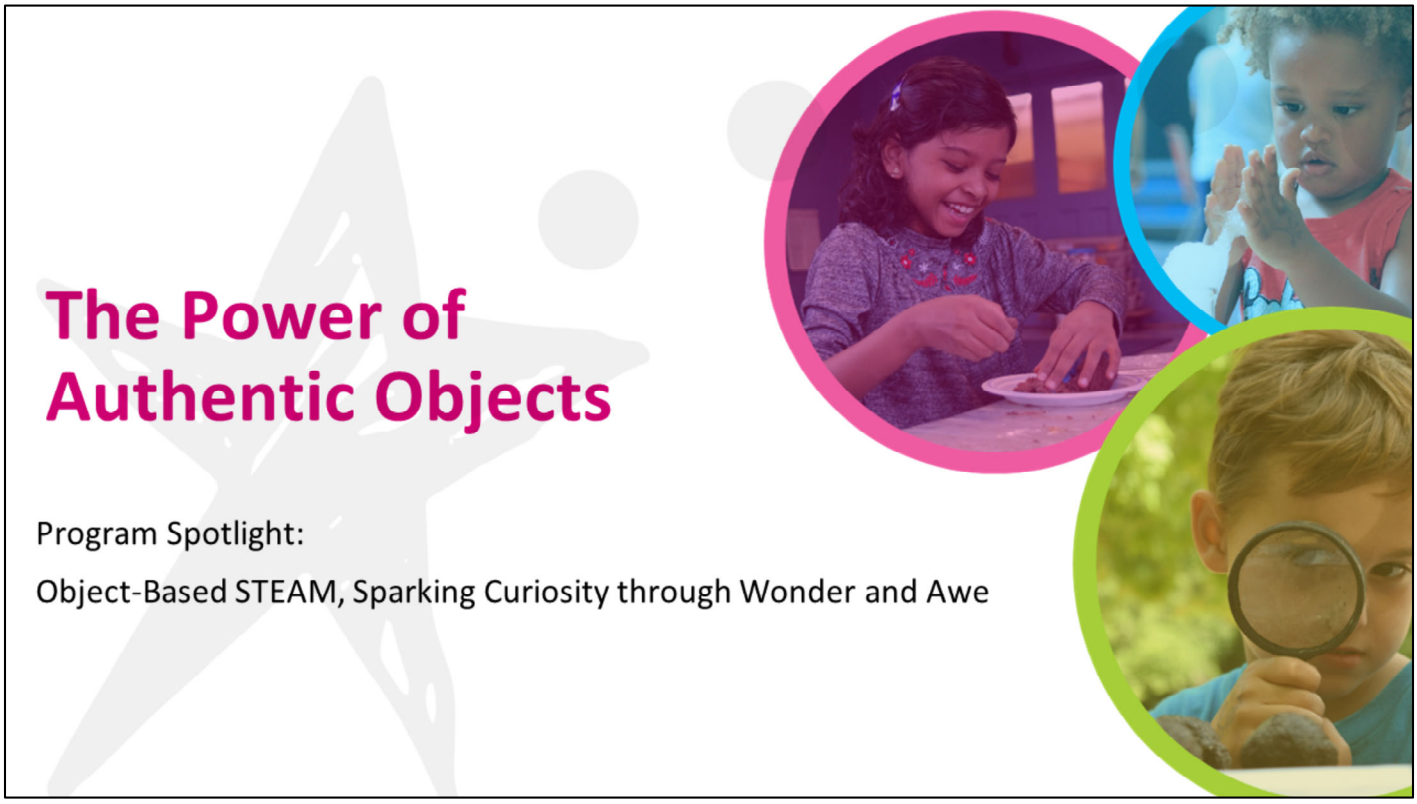
- Then move to questions of relevance or relating such as:

  What might this situation or story have to do with our world today?

  What are the similarities/differences?

  Have you ever experienced or know someone who has experienced a situation or story like this?

  How do you or don’t you personally connect to this work of art or object?



Topic Title Page

Spotlight: Object-Based STEAM- Vanessa

Family STEAM learning is a regularly scheduled program at the LCM designed to engage visitors in activities like science experiments, building challenges, coding and creative expression around the topics of science, technology, engineering, arts and math. These topics can sometimes feel quite abstract which is why a hands-on, materials-based approach to STEAM learning can be so effective in helping to communicate these complex ideas.

Another hugely important aspect to STEAM learning is developing and practicing skills that use a mindset that revolves around asking questions and planning to find the answers. It's not just about giving information, but rather encouraging the habit of asking why, how and what if. It's about asking children to develop a theory and test it to see if it's true. STEAM learning provides space for children to try, iterate, and try again, building their resilience to failure while also helping them develop knowledge about how the world works.

This type of experience is what children's museums do so well. So rather than go on to talk about the various benefits of STEAM learning I'd like to talk about how using authentic objects can harness curiosity to engage visitors in a multi-disciplinary educational

experiences.

Why do some objects seem more meaningful than others, where does that sense of wonder, the emotional response to an object come from? And what does authenticity have to do with it?

It's difficult to say definitively what creates awe and sparks curiosity, especially as it differs from person to person. But I think the concept of magical contagion comes very close. The term magical contagion refers to the belief that the physical history of an object, where it has been, who has touched it, stays with that object forever. When an object is in contact with a person, or animal, some essence of that person rubs off on to that object. At face value the idea sounds pretty fanciful, thus the magical part. But I think it is something that many if not most of us do subscribe to in some way. Magical contagion is the reason you might feel a sense of awe when in the presence of something that once belonged to a much-admired person. It helps explain the thrill we might get thinking that someone actually held, or wore, or used some item.

Is this something that is felt by children? Anecdotally I can attest to this through my own experience. When I present an authentic item to a child, it is almost always followed up with

the question, “Is it real?” The realness seems to matter.

There is other evidence to support this. In one study aimed at determining whether authenticity of objects was important to children, researchers found that children regularly valued authentic items over replicas, in this case of dinosaur fossils. In their reasoning, children cited physical contact with a dinosaur as being an important factor in what made something valuable. They saw an actual fossil and piece of clay with a dinosaur footprint as equally valuable because both had been touched by a dinosaur.

Authenticity in Object-Based STEAM

The real object as an entry point

We see the power of magical contagion a lot at the CM when using authentic objects. One of the most consistently “magical feeling” items that we have is a meteorite. In the case of the meteorite the question that most often follows “is it real” is “this has really been in space?” The excitement and joy that holding a real meteorite brings to visitors draws them into the related STEAM programming. Using bins with layers of different coloured sands and marbles, visitors can recreate the falling of the meteorite to Earth and observe the creation of craters. Different sized marbles held at different heights allows visitors to experiment to get different results. The activity serves to help visitors to fill in the story of the authentic object, where has it been and how is it here while also providing children with the opportunity to acquire knowledge about space, physics and earth sciences.

The combination of authentic item paired with the crater activity is key in how these programs become such powerful experiences. The object sparks questions, which the bin helps answer and vice versa. . In a study conducted at the Oxford University Museum of Natural History in 2016, researchers sought to discover how authentic vs. replica items would affect children’s information seeking behaviour. They found that children were significantly more likely to ask questions about objects that they perceived as authentic. What’s more, this information seeking behaviour increased when authentic items were

paired with items such as toys and models. Here we see children participating in creating impact craters and linking the experience to the authentic object. The manipulation of tools and materials allow visitors to fully develop the story of the meteor.

Letting Questions Lead the Way

Sparking Curiosity for a Child-Led Experience

Another very effective object-based STEAM program we have for sparking curiosity revolves around dinosaurs. The idea for this particular program is to explore the idea of trace fossils, meaning things left behind as evidence of a life lived, but not actual life. In the context of dinosaurs, trace fossils can be things like gizzard stones, footprints, skin impressions or, like the authentic item featured in this program, poop. The coprolite (which is the official name for fossilized poop) serves as the entry point for visitors who can go on to explore the concept by recreating trace fossils such as skin impressions and footprints with play dough and toy dinosaurs. It's the object interaction that really sets the stage for learning, putting children into a mindset of needing to know more.

When we put a piece of coprolite into the hands of a child and tell them what it is, what do you think they do?

They smell it. But coprolite doesn't smell. This is essentially a riddle. How can it be true that this is real poop, but it doesn't smell or look or feel like real poop? They need more information. And the answer to their question is fascinating. Fossilization is an incredibly complex process where organic material is essentially transforming into rock and mineral. Young children become deeply engaged in forming an understanding about the fossil record and how we extract knowledge from it.

Building Knowledge & Skill in Tandem

Creating richer and more memorable learning experiences

Children's thirst for knowledge and fascination with things like space and dinosaurs is an incredible opportunity to engage them in building a STEAM mindset and learning skills while providing them with the information they are seeking. Objects-based STEAM using authentic objects serves as a really strong example of how learning opportunities that focus on skill and knowledge building in tandem can create memorable, engaging, child interest-led educational experiences. What's more, these programs often have a profoundly positive impact on the visitor experience.

As vanessa was just explaining these are positive experiences, and are critical to inclusion of all forms. Today I want to touch a little bit about inclusion practices for children with IDDS

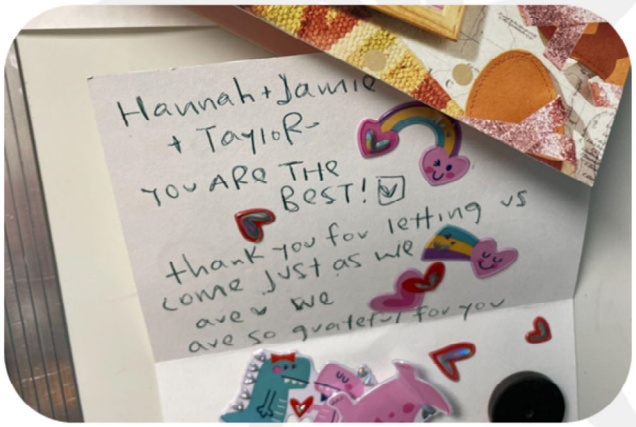
Jamie -
Intellectual and developmental disabilities is the term we use when there are limits to a person's ability to learn at an expected level and function in daily life. This may include diagnosis like autism, sensory processing disorder, downs syndrome, or any other form of neurodivergency. Families with children with IDD's often find themselves unsure or unsupported accessing community places like childrens museums.

The current barriers for children with IDDs are -
- Physical barriers
- Information barriers
- Communication barriers
- Technological barriers
- Policies or practices
- Community and social barriers

How do we tackle this? Well… each type of program has opportunities to make these families feel welcomed

General Inclusion Practises

What does inclusion look like in your space?



The goal for best supporting our IDD families is making them feel welcome and represented in our space while offering of multiple sensory experience. Informal learning spaces, like childrens museums are Guided by the child's interests, they are Voluntary, Personal, Ongoing, Collaborative, Nonlinear, Open-ended.

This is Sparrow- she came in originally with a support worker in a harness, which then evolved to visits with mom, and eventually no harnessing as she built confidence in our space. She was welcomed to participate in programming at her interest level. She grew to understand the expectation of arriving and checking in at the front desk, receiving her warm welcome and hand stamp, and then heading into the museum to explore. Sparrow is specifically drawn to the dinosaur gallery. It is the first stop when she arrives at the museum, and in the early days of her visits the only gallery she would attend. Now she knows she is able to pick up a physical object like the dinosaur and take it with her along the way through the rest of the museum. She has come to learn and know that it does not matter if the dinosaur from the start of her visit travels with her to explore space, and the street where you live exhibits. The connection to her favourite exhibit and her comfort place at the front desk is tied to her dinosaur and allowing her to take that with her is one very simple way we can make her feel comfortable throughout the entire museum.

In general, regular programming with STEAM/Early Years programs are presented in a way that leaves the intended outcome open ended. How does this work with objects based learning? What we know with children who have Intellectual and developmental disabilities is that hands on experiences can be critical to the understanding of basic and complex concepts. Demonstrate, wait and listen. Reflect on your processes because it is the process and not the outcome that really matters. And like Sparrow's dinosaur at the start of the visit, I challenge you to let go of the rigidity of where the result is meant to end.

Day Camp

Where does the problem exist? Fix the environment not the child.

We see so many children coming into our day camp programming with challenges - sometimes diagnosed, but more than often not there are no official medical reasons as to why they struggle to . When we notice a change in behaviour that is undesired or takes away from the group experience, in the daycamp and sometimes education world we see it looked at from a clinical perspective. Remove the child, find out what is wrong with the child, “fix the problem” and then when the child is ready - they can return to the program. Where as with our daycamp we train our team to look at the challenge from a social perspective. Look at the behviour in it’s place, and change the environment to meet the needs of the child. This often happens when a concept or activity is either too easy, or too difficult for the child acting out. We are able to utilize objects in the exploration of these activities to both deepen the understanding when concepts are too tough, or encourage more authentic and deeper exploration when there is more interest led from the child

My example would be Miles. He was a camper with us everyday. He had not been to school yet, and therefore had no official diagnosis but a typical day at camp for Miles was challenging for him. He often looked at running from the group, and did not enjoy engaging in activities or socializing with his peers. Until we introduced objects. Miles is incredibly smart and would use one to one interactions with a cousellor when programming was not sitting well with him. We understood that the environment was a challenge to keep him engaged, so we would take him to other galleries to explore (we would often use the train table) or bring trains and dinosaurs into the camp space so that he could interact with his peers by sharing his expertise in these objects.

Similarly with my friend Idris here and this tube. Idris has autism and visits the museum regularly with his family. One day while they were participating in a STEAM program, his mom was engaged with his younger brothers on exploring how things rolled. She wanted to have him join in on making a ramp but Idris was more interested in playing off on his own with a tube that we were using to create ramps. Mom tried to get him to leave the tube to join his brothers and that's when I asked if I could play. Yes. The desired "outcome" was to test the force of gravity of a car rolling down a ramp. But moms desired outcome was for Idris to join in on play with his brothers. I suggested that we bring the tube over to where they were playing, and then simply demonstrated putting a car into the tube and watching it roll out of the other side. HE squealed with excitement. We might not have built a ramp, or played with the objects in their intended way - but does this look like success to you?

This brings us back to the importance of inclusion and providing the community with options and opportunities to feel comfortable in our space. We partner with Autism Ontario for "Low Sensory Nights" and with Westerns Faculty of Education to provide STEAM programs for children with IDDS. There was a ton of research conducted across canada with Western around informal learning spaces for IDD kids and STEAM. What we discovered was that during exclusive evenings (similar to what we provide monthly at the childrens museum) familes feel welcome and it removed the social barriers to participating. The comfort that is built during that exclusive visit builds on the affirmation that "I have a place here" and then

leads to families like Sparrows, and Idris that can feel safe coming to the museum anytime. Which is true inclusion.

One-to-one interactions/ or what we like to call wows, are a demonstration of a collection item, or interesting object between an Animator and a child. These are always so accessible and inclusive because the information is catered directly to the child so that barriers such as age, development and interest or previous knowledge are naturally overcome.

So that brings us to another passion of mine - which is staff engagement and training. We can’t provide these unique opportunities without a team ready to facilitate them.

Staff Engagement and Training

- Training - show, demonstrate and share.
- Provide the story behind the item
- Encourage manipulation of objects and PLAY
- Make connections
- Invite staff to ask questions and share what they might know

Sound familiar?

The key to this work, is really in the staff team training and we do this by showing, demonstrating and sharing.

-staff training sessions done quarterly and are made up of program updates, and collections training
-We are constantly moving - If you are introducing new party themes, than host a birthday party with your staff
-Set up different session talking points in different exhibits
-one component that is essential to promoting object based learning is taking the time to explore the collection
-we pull items ahead of time, provide information, and we invite staff to make connections
-let them share their experiences
“Oh my grandmother used to have a cherry pitter like that, or I learned all about whale baleen in my science program”
-invite them to share information or memories about an object to the rest of the team
-this should sound familiar. We interact with our grown ups with the same confidence in their capabilities as we do children.

Making Time and Providing Choice

- Ensure to provide time in daily scheduling for collection interactions
- Allow staff to choose
- Celebrate their successes
- Clearly address the limitations of an object

When you put in the work to prioritze objects - make time for it!

-scheduling these interactions in the day to day is just as important as scheduling a staff to do a birthday party.
Staff will sometimes wander through the museum with an object, or can be set up in a station for items that might need a flat surface or may be more fragile
-we provide opportunities for the staff to choose collection items that they want to show to children and families
-This doesnt mean that we allow all pieces to be demonstrated, but we do pull pieces directly from the collection and provide the information that staff would need to share the artifact with families
This is a photo of our collections cart. We have prepulled items that can go onto this cart, and can be shared with families. We typically switch out these items on a monthly basis.
-Tie collection demonstrations with other topical things taking place at the museum
-there are some objects of course that need to be handled differently or with more care - we are clear about these limitations when we provide training and before the item is place on the collection cart.
-white gloves. When these items require more care, we ask visitors to use the white gloves which often spark further conversation around care and preservation
-in addition to the carts, we have leather aprons that staff can use while gallery tidying for things like energy sticks. These are easily accessible to staff to bring out to help explore the understanding of a circuit

What if You Don't Have a Collection?

What if you don't have a collection?

Authentic objects are resources like any others!

- Even if you don't have objects, you can talk about them
  - Print out a painting or sculpture to talk about
  - Use the DAR method (describe, analyze, relate)
- Investigate your neighbourhood
  - What's cool about where you live?
  - Is there a fossil history?
  - Interesting landmarks?
- Go thrifting!
  - Authentic items don't have to be expensive.
  - Old items don't have to be in a museum collection
- Preventive Conservation can be simple
  - If you have a room and a rubbermaid bin, you're all set!


Children's MUSEUM
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THANK YOU!