

WonderTrek Children's Museum

Studio Explorations Framework

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Studio Explorations Framework

Table of Contents

Framework Overview	3
Studio Explorations	4
Play Conditions	4
WonderTrek Inquiry (WTI)	5
WTI Full Model	6
WTI-LITE Model	7
Process Documents	8
WTI Inquiry	8
WTI Question Worksheet	10
Completed sample	11
Play Conditions	12
Invitation to Explore	13
Invitation to Explore Worksheet	14
Completed sample	15
Wrap-up	16
Summary Worksheet	16
Completed sample	17
Glossary	18
Appendices	19
Appendix A: Center for Play and Interactive Learning (CPIL)	20
Appendix B: Studio Learning	21
Appendix C: Documentation Methods-Observation Sheet	22
Appendix D: Developing Questions for Engaging Children	23
Appendix E: Group Reflection Tool	24
Appendix F: Play Conditions Table	25
Reference Documents	29
Reference Document 1: Documentation Protocol Example	30
Reference Document 2: Debrief Survey Example	32
Reference Document 3: Inquiry Synthesis Example	34

FRAMEWORK OVERVIEW

WonderTrek's approach to exploring its questions about children's investigations engages children (and adults) in an on-going inquiry process. The approach is a mix of multiple museum practices including prototyping, studio learning, Reggio, Team-Based Inquiry, observation, reflection, etc. Based in the Museum's Strategic Master Plan (2018), WonderTrek's **Studio Explorations Framework** integrates three resources critical to the Museum's play and learning value.

- **Studio Explorations** is a flexible, loose parts-rich experience format for children and families at the Museum and in community and school settings.
- A set of **Play Conditions** highlights the features and attributes of play settings that encourage and support children engaging with other children, exploring materials, taking risks, following their imaginations.
- **WonderTrek Inquiry** (WTI) is a collaborative question-driven, iterative process for the Museum and its partners to explore, document, and share insights from children in play-based settings.

In **Studio Explorations** children engage with materials, spaces, phenomena, or relationships to discover possibilities and take tools, objects, materials or ideas where their thoughts and imaginations need to go. These investigations are directed by the child with the adult as resource and co-researcher, rather than as instructor. The Studio, or other programmatic space, contains the **Play Conditions** to support and encourage children's explorations. Children encounter invitations to explore intriguing activities that may involve building, drawing, arranging objects, taking photos, or movement, guided by a question and the **WonderTrek Inquiry** process. Traces of children's thinking and work invite reflection and discussion among the WTI team and, when possible, with children, parents, teachers, and partners.

These three resources, **Studio Explorations**, **Play Conditions**, and **WonderTrek Inquiry** work together and represent a major step in launching WonderTrek's Center for Play and Interactive Learning (CPIL) (Appendix A). Conducted with others WonderTrek's research can be fielded by a project team, museum colleagues, teaching pairs, Museum partners, a self-forming group in and/or outside of the Museum.

Studio Explorations

Grounded in the Master Plan’s Learning Experience Framework, *Studio Explorations are engaging experiences for children that are developed to tell us something about how children engage with materials and with other children; and how they explore, imagine, think, and have ideas.* Emerging from children’s interests, everyday moments, and WonderTrek’s foundational ideas, Studio Explorations are framed by a question or set of questions that guide planning, presentation, and reflection.

As both physical space and an experiential approach, Studio Explorations provide a flexible format that supports varied audiences, settings, and goals. Locations may be at the Museum’s Franklin Arts Center PlayLab, a temporary community site, a classroom, or part of CPIL in the new Museum. Varied as these settings are, each creates the conditions that support and encourage children’s play, explorations, and making connections. WonderTrek’s Studio Explorations are inspired by Studio Learning (Appendix B) drawing on a set of key elements of Studio Learning to engage children as co-developers of play and learning experiences for the new Museum. Each of these elements—Studio Environment, Project Focused, Individual and Group Abilities, Presentation, and Documentation—has been adapted to an audience of young children participating in self-directed play.

Studio Explorations create opportunities for children to discover their interests and preferences; make choices; connect with other children; collaborate and problem solve together; discover connections to the region and to WonderTrek; and enjoy themselves. At the same time, Studio Explorations are a platform for WonderTrek to follow the child, look at what they do, and glimpse how they play, think and learn; and to share new insights based in children’s play.

Play Conditions

WonderTrek’s Play Conditions connect its Studio Explorations spaces and activities across varied settings as well as distinguishing Studio Explorations from the offerings of other groups that also serve children in Region 5.

Play Conditions are features of the physical and social environment that support and encourage children’s exploration, play, and learning. Working at all scales and across various dimensions, these conditions emerge from what research, child development, play theory and museum best practices indicate will encourage and support children’s exploration, play, and learning in informal learning settings. Seven Play Conditions work together to contribute to an inviting set-up for an exhibit, program, or Studio Explorations, indoors or out.

- Image of the Child
- Context or Setting
- Invitation to Explore
- Materials
- Relationships
- Content
- Time

The presence of particular play conditions varies across settings and in different combinations depending on the nature of the experience that WonderTrek hopes to create. Play conditions are selected in response to a question such as, “What do we think will increase the chances that children will work together?” Or “What might encourage children to investigate light?”

Play conditions also take into account the ages of the children, the size of the group, the presence and role of adults, and location. In every case, selected play conditions brought together build on children’s confidence and capabilities in order to enrich and add complexity to their play with found, familiar, and fantastic materials; and to give children agency.

WonderTrek Inquiry

WonderTrek Inquiry¹ (WTI) *is a collaborative question-driven, iterative process for the Museum and its partners to explore, document, and share insights from children in play-based settings.* It guides the Museum’s on-going inquiry into children’s play and exploration through a documentation process that allows the Museum to learn, from, about, and with children.

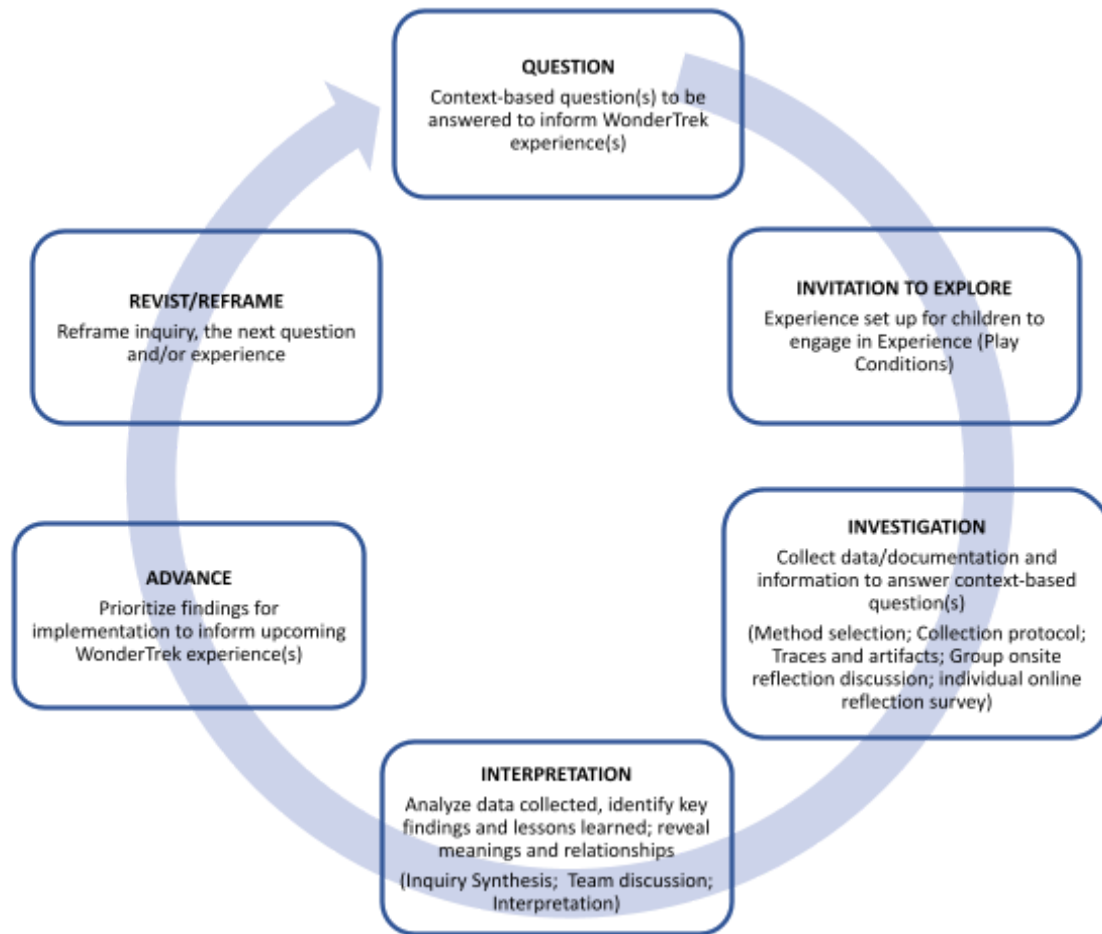
WTI moves from Museum questions to children’s investigations, to reflections and insights, and giving visibility to insights through documentation. Documentation of Studio Explorations may lead to new understandings of children’s thinking and ideas; new questions to explore; possible leads for experience development; or a set of posters or panels to make children’s thinking and ideas visible and available to them, their parents and caregivers, educators, and the public.

Three main uses of WTI are:

- 1) An approach to learn with and about children, recognize their capabilities, and “help children find the meaning of what they do, what they encounter, what they experience.” (Rinaldi, Carlina. 2001. Innovations. Fall Vol.8 No. 4)
- 2) A process that informs development of WonderTrek Museum experiences: environments, exhibits, programs.
- 3) A process, or approach, for others who work with children to use for engagement through WonderTrek’s Center for Play and Interactive Learning (CPIL).

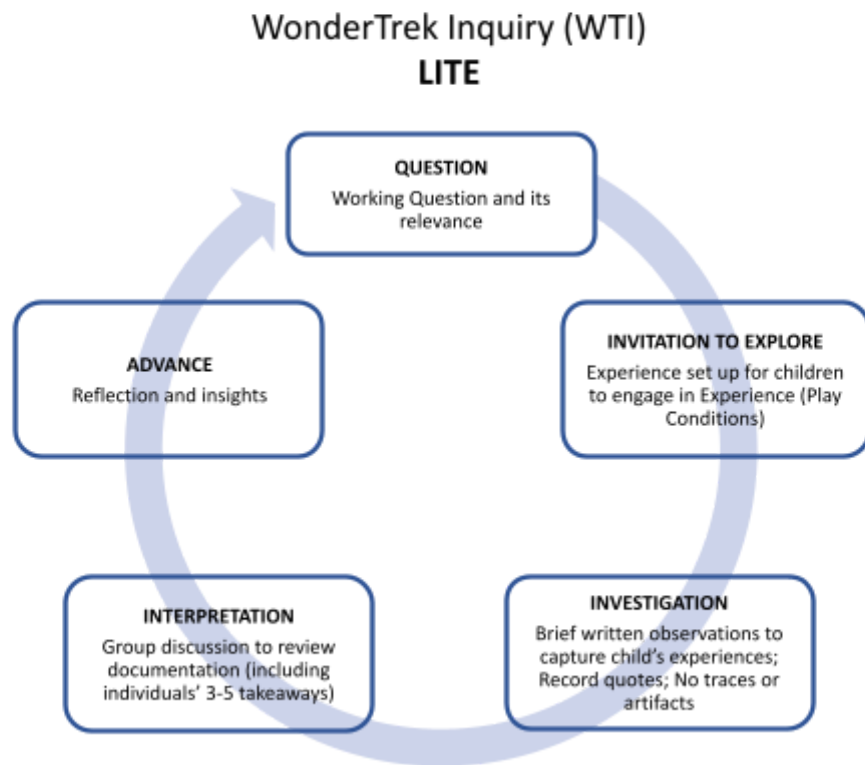
¹ Adapted from the NISE Networks’ Team-Based Inquiry.

WonderTrek Inquiry (WTI)



WonderTrek has developed, tested and adapted a set of tools for teams to use in Studio Explorations throughout the inquiry cycle. These tools guide teams through the six steps of the process: Question, Invitation to Explore, Investigation, Interpretation, Advance, and Revisit/Reframe. As a result of testing, WTI has been streamlined to guide long and short-term research: **WTI- Full** is generally used for an extended line of inquiry and **WTI-Lite** is used both as an exploratory tool and to document Studio Explorations at one-time community events or repeated programs. The full and the lite versions are shown below.

WTI Steps	WTI - Full	WTI - LITE
Question	<ul style="list-style-type: none"> • Working Question • Its relevance 	<ul style="list-style-type: none"> • Working Question • Its relevance
Invitation to Explore	<ul style="list-style-type: none"> • Experience set-up related to question 	<ul style="list-style-type: none"> • Experience set-up related to question
Investigation	<ul style="list-style-type: none"> • As determined by the Question and Invitation to Explore • Written observations; photos; • Other data: Traces/artifacts 	<ul style="list-style-type: none"> • Brief written observations to capture child's experiences observations. • Record quotes • Each observer comes up with 3-5 takeaways from their individual observations • No traces or artifacts
Interpretation	<ul style="list-style-type: none"> • Debrief Survey • Inquiry Synthesis 	<ul style="list-style-type: none"> • Group discussion to review documentation (including individuals' 3-5 takeaways)
Advance	<ul style="list-style-type: none"> • Group Reflection: If possible 	<ul style="list-style-type: none"> • Group Reflection, next steps, promising threads, recorded
Revisit/Reframe	<ul style="list-style-type: none"> • Reframe inquiry 	<ul style="list-style-type: none"> • N/A



PROCESS DOCUMENTS

WonderTrek Inquiry (WTI)

Overview

WonderTrek Inquiry (WTI), a collaborative question-driven, iterative process is adapted from *Team-based Inquiry*² to explore, document, and share insights from children. WTI is a cycle that follows six steps:

1. **QUESTIONS:** *Context-based question(s) to be answered to inform WonderTrek experience(s).*

The WTI cycle begins with the development of a question or questions. The WTI Question Worksheet is a planning tool to clarify and frame the inquiry, pros and cons of different methods for exploring them, and prioritizing questions. It is useful for exploring enduring questions, *questions of long-term interest to WonderTrek* (WTI Full) or one-off and repeat explorations (WTI Lite)

2. **INVITATION TO EXPLORE:** *Studio Explorations space set up for the particular play conditions for this inquiry.*

3. **INVESTIGATION:** *Instructions and methods for documenting and collecting information to answer context-based question(s).*

This step of WTI includes three tools:

- **Documentation protocol** that provides specific instructions for documentation (Reference Document 1). A protocol should include:
 - Target visitors, the purpose/WTI question, and an overview of the documentation process.
 - Materials for documentation; specific step-by-step instructions including how to prepare, where to stand/observe or approach visitors and example language to use; and “what if” scenarios.
 - How to complete observation sheets or other forms and what to do with documentation.
- **Documentation methods** to date have focused on observations, photos and video. Observation sheets include modified behavior categories based on the Adult Child Interaction Inventory (ACII)³ as well as Visitor Interaction codes and a four-point Engagement Scale (Appendix C). Talking with children is another method for documentation (Appendix D).
- **Traces** of what children did and said: photos, drawings, video, etc. as indicated by documentation methods.

² <http://nisenet.org>

³ Developed by Lorrie Beaumont, EdD, for the Boston Children’s Museum.

4. **INTERPRETATION:** *Review documentation, identify key findings and lessons learned; reveal meanings and relationships.*

Three tools that have been used in the WTI process are:

- **Debrief Survey** that is completed by WonderTrek staff who were present at an event. This online survey gathers thoughts and ideas related to the guiding question(s), what worked or didn't, changes to consider for future events and things to follow-up on (Reference Document 2).
- **Debrief Questions:** three-five takeaways from the event (used for WTI Lite)
- **Inquiry Synthesis:** a written summary of Debrief Surveys (or Debrief Questions), traces, observations; optional (Reference Document 3).
- **Group Reflection:** further distillation of the findings and suggestions on how data and insights can be used going forward. (Appendix E).

5. **ADVANCE:** *Prioritize findings for implementation to inform upcoming WonderTrek experience(s)*

Tools for prioritizing findings include:

- **Documentation/Presentation:** a selection of written and visuals to make the process and its insights visible and shareable; optional.

6. **REVISIT/REFRAME:** *Reframe inquiry, the next question and/or experience.*

This step in the WTI process sets the stage for expanding the current inquiry or creating a new one beginning again with the WTI Worksheet.

WTI Question Worksheet

<p><u>Working Question:</u> <i>What questions do we want to investigate?</i></p>
<p><u>This is important because...</u> <i>What persistent questions or projects does the Museum have this will address?</i></p>
<p><u>Invitation to Explore:</u> <i>Where and when will this take place? What are relevant Play Conditions? How will it be set up? How is the set-up responsive to the Question?</i></p>
<p><u>Documentation Methods:</u> <i>What are the ways in which children's activities and experiences will be documented: collect quotes? data will be collected.</i></p>
<p><u>Data Gatherers/Researchers/Documenters:</u> <i>Who will gather what information?</i></p>
<p><u>Timeline:</u> <i>What tasks and arrangements must be made for this Studio Exploration to be ready?</i></p>
<p><u>Completed by:</u> <i>All individuals who contributed to the worksheet.</i> <u>Date:</u> <i>Date worksheet completed</i></p>

WTI Question Worksheet

Completed Sample

<p><u>Working Question:</u></p> <p>What are we seeing when children experiment with balance, stability, and motion using both small motor and large motor objects and materials?</p>
<p><u>This is important because...</u></p> <p>It focuses attention on how children explore and navigate with their bodies, that can inform development and design a climbing structure</p>
<p><u>Invitation to Explore:</u></p> <ul style="list-style-type: none">• Play Lab; September 10, 2022 Studio Explorations• The Child: Who is likely to be exploring?• Provocation• Materials: Wobbly Wonders table-top wooden platforms and pieces; Purple Peanuts; selected BBB that invite children's large motor experimentation such as tipping, rocking; floor mats• Facilitation: Staff presence and role
<p><u>Documentation Methods:</u></p> <p>Observation, written notes, photos, videos</p>
<p><u>Data Gatherers/Researchers/Documenters:</u></p> <p>Emilee and Shannon</p>
<p><u>Timeline:</u></p> <p>Studio Exploration date, lead time for planning, ordering materials, publicity.</p>
<p><u>Take-aways:</u></p> <p>Scarves can be anything and everything and work cross all ages.</p>
<p><u>Possible Idea to Return to:</u></p> <p>Revisit Big Blue Blocks and balls with climbing inclines.</p>
<p><u>Completed by:</u> Emilee, Jeanne, Shannon, Mary, Jim, Peter, Cheryl <u>Date:</u> September 15, 2022</p>

PLAY CONDITIONS

Overview

Play Conditions are factors in the physical and social environment that encourage, support, and extend children’s exploration and play. WonderTrek’s Play Conditions both create a consistency across but also distinguish its experiences in the Play Lab, community events, and eventually the Museum itself from other groups that also serve children and families.

More than design, Play Conditions build on the child’s competence as a learner (regardless of age), their capabilities, and interests. Working at all scales and across various dimensions, Play Conditions invite children to move, make choices, engage with other children, explore materials, take risks, and follow their imaginations. The eight Play Conditions mentioned previously and detailed in the following table contribute to creating experiences that *children want to jump into, stay with, and carry forward* in Studio Explorations, exhibits, programs, or at a gathering place. The seven aspects of Play Conditions and their function follow.

Image of the Child: Inform all of WonderTrek’s experiences by focusing on children’s strengths and capabilities; setting up experiences that engage children at their highest level of ability; and make children’s strengths and capabilities visible.

Context or Setting: Create a physical and social space, from macro to micro, for all children in which they can explore, play, and learn.

Invitation to Explore: Select and arrange elements to encourage children (and adults) to engage and explore an idea without giving them too much direction but inviting noticing and wondering.

Materials: Seed the set-up with natural objects, loose parts, phenomena, art materials, digital media, tools, etc. that: 1) Give children agency and choice; 2) Encourage exploration and experimentation that is physical, social, emotional, cognitive, and linguistic; 3) Generate new possibilities; and 4) Reveal new perspectives and insights about the world.

Interactions and Relationships: Bring children and adults together to engage with others; feel a sense of welcome, respect, and connection.

Content: Engage, encourage, and expand children’s interests with the world about what is fascinating to them and meaningful.

Time: Open up time for play; extend time playing and directing play to bring enjoyment.

Appendix F further defines each aspect with valued qualities and possibilities to support play conditions.

Invitation to Explore

Overview

An **Invitation to Explore** encourages children to investigate, think, and take action, individually or as a group. Part of creating Studio Explorations, an Invitation is sometimes thought of as a *provocation*. Both an Invitation and a provocation may respond to or spark children’s interests. Both are intended to actively engage children in unscripted activities that offer multiple paths for exploration—but without specific learning goals and with no wrong outcome.

Emerging from the Museum’s on-going inquiry into children’s play and exploration, an Invitation to Explore is a strategy that allows the Museum to learn, from, about, and with children. Guided by an exploratory question, the Invitation draws from the Museum’s Play Conditions to engage and encourage children.

Every Invitation to Explore is different, but developing one is always an opportunity for a team to think together about creating an invitation that is welcoming, noticeable, and expressed in multiple ways. An Invitation is intended to encourage children to engage and explore possibilities without giving too much direction by:

- Sparking curiosity
- Presenting something worth noticing and discovering
- Encouraging investigation
- Offering a reason to continue exploring
- Enabling children to take the experience where they need it to go

An Invitation to Explore begins with settling on the exploratory question and revisiting the Invitation after the Studio Explorations.

Invitation to Explore Worksheet

<u>Working Question:</u> <i>What question from the Question Worksheet is to be explored?</i>	
<u>Setting:</u> <i>Where and when will this Studio Explorations take place? What is the general set-up?</i>	
<u>Materials:</u> <i>What materials, loose parts, equipment, or supplies are needed? List types, quantities, and sources. How can materials be arranged and presented to suggest possibilities rather than direct exploration?</i>	
<u>Set-up:</u> <i>How can the space, materials, surfaces, lighting, height, and circulation create an intriguing or unusual approach?</i>	
<u>Invitation:</u> <i>How does this Invitation to Explore related to and support the question being explored? What is unusual or enticing about this Invitation? How is it reinforced?</i>	
<u>Revisiting the Invitation:</u> <i>What worked and didn't work with the Invitation?</i>	
<u>Completed by:</u> <i>All individuals who contributed to the worksheet.</i>	<u>Date:</u> <i>Date worksheet completed</i>

Invitation to Explore

Worksheet

Completed Sample

Working Question:

What are we seeing when children experiment with balance, stability, and motion using both small motor and large motor objects and materials?

This is important because: It focuses attention on how children explore and navigate with their bodies; it can inform development and design for the Landscape Structure

Setting:

- September 10, 2022 Studio Explorations
- Indoors in the Play Lab,
- In the open space outside of the office dividers
- Wobbly Wonders along the wall with less traffic and activity

Materials:

- Objects that encourage movement and challenge stability and balance: 5 Purple Peanuts that move in unpredictable ways; selected BBB's that invite children's large motor experimentation such as tipping, rocking, rolling, bouncing; cushy stepping stones; foldable, soft balance beam
- Choice of loose parts: Wobbly Wonders, table-top wooden platforms and pieces; balls of different sizes
- Invite curiosity and exploration: Novel, irregular shapes;
- Floor mats: fall zone

Set-up:

- Tables, placed end-to-end along the wall for Wobbly Wonders- out of the way of the large motor equipment
- Peanuts, blocks, balls, stepping stones on the mats
- Adult chairs located at the edge with easy view of the space and materials

Invitation:

Varied, irregular shapes that move in unusual ways; at different scales (small- Wobbly Wonders and larger -BBB); that are novel (Peanuts, Wobbly Wonders); in multiples; and re-combinable

Revisiting the Invitation:

- Were there too many different kinds of loose parts?
- In what ways might the arrangement of the materials and equipment invite different entry points and approaches?
- Would graphic images of balance and movement invite experimenting?

Completed by: Jeanne, Emilee

Date: September 15, 2022

WTI Wrap-up

To complete the WTI cycle and ensure its usefulness, it is important to reflect and summarize the inquiry. Debrief Reflections (Reference Document 2) and/or Group Reflections (Appendix E) both provide good questions for facilitating and documenting the reflection process. The following format, which draws on previous completed worksheets, should be used for summarizing an entire WTI cycle.

WTI Summary Worksheet

<u>Working Question:</u> <i>What question(s) were we investigating?</i>
<u>This is important because...</u>
<u>Invitation to Explore:</u> <i>Where and when did the investigation take place? What are relevant Play Conditions? How was it set up to be responsive to the working question?</i>
<u>Documentation Methods:</u> <i>How were children's activities and experiences documented.</i>
<u>Data Gatherers/Researchers/Documenters:</u> <i>Who gathered the data?</i>
<u>Timeline:</u> <i>Date/time of exploration.</i>
<u>Takeaways:</u> <i>What are 2-3 takeaways from the Group Reflection and/or Debrief Survey</i>
<u>Change or Advance:</u> <i>How might these takeaways be useful for changing or advancing our practice?</i>
<u>Completed by:</u> <i>All individuals who contributed to the worksheet.</i> <u>Date:</u> <i>Date worksheet completed</i>

WTI Summary Worksheet

Completed Sample

<p><u>Working Question:</u></p> <p>What do we notice about children's play and exploration with a new landscape feature?</p>	
<p><u>This is important because...</u></p> <p>It focuses on how children get to know and navigate various physical features using their bodies, interacting with peers.</p>	
<p><u>Invitation to Explore:</u></p> <p>In PlayLab: The landscape structure; floor mats, swoop soft sculpture for toddlers</p>	
<p><u>Documentation Methods:</u> Observation and notes; Photos and videos; Parent comments</p>	
<p><u>Data Gatherers/Researchers/Documenters:</u> Jim, Mary, Jeanne</p>	
<p><u>Timeline:</u> Saturday, November 12, 2022</p>	
<p><u>Takeaways:</u></p> <p><u>Play, Take-aways</u></p> <ul style="list-style-type: none"> ▪ Play Patterns: there seem to be patterns within children’s play, with much variation but some common features ▪ The power of loose parts: Foam blocks from the toddler area to step up on, line up and sleep on; adapt (hatch) <p><u>Landscape Structure Take-aways</u></p> <ul style="list-style-type: none"> ▪ More complex features (the hatch, skinny ramp) support more complex interactions. ▪ More social interaction around the hatch than other features ▪ Sliding is facilitated by a straight uninterrupted incline. ▪ From arrival on, children built up confidence in negotiating the LS, even the youngest: observing; making small increments up the ramp; repetition. ▪ Heard many times, “Mommy, Mommy, look at me!” ▪ The Landscape Structure seems to support: <ul style="list-style-type: none"> o Movement: Climbing, sliding, rolling, jumping; experimenting and practicing o Performance: A gymnastics form, perfecting a challenge, “Mommy, look at me.” o Adapting the structure with other materials—with loose parts 	
<p><u>Change or Advance:</u></p> <ul style="list-style-type: none"> ▪ What play patterns can this structure support? ▪ What play conditions might increase children’s time working on, adapting, and modifying the structure? (More blocks, etc.) 	
<p><u>Completed by:</u> Jeanne</p>	<p><u>Date:</u> November 13, 2020</p>

Studio Explorations Framework

GLOSSARY

Studio Explorations (SE): *engaging experiences for children that are developed to tell us something about how children engage with materials and with other children; and how they explore, imagine, think, and have ideas.*

Play Conditions: *features of the physical and social environment that support and encourage children’s exploration, play, and learning.*

WonderTrek Inquiry (WTI): *a collaborative question-driven, iterative process for the Museum and its partners to explore, document, and share insights from children in play-based settings.*

Invitation to Explore: *room set up, activities, materials for particular play conditions.*

Documentation: *the gathering of information to both show what children’s play looks like and inform future Studio Explorations.*

Traces: *photos, drawings, video and other recording of what children did and said.*

Debrief survey⁴: *an online survey sent to SE staff after an event to gather specific information, i.e., what worked or didn’t, important takeaways, ideas and thoughts to follow-up on, etc.*

Debrief questions: *three to five takeaways from an SE (used for WTI Lite).*

WTI Summary Sheet: *a brief one-two page summary to wrap-up a WTI.*

Inquiry Synthesis⁵ (optional): *a written summary of responses to the Debrief survey/questions, traces, and observations used to explore what was seen, how it is meaningful to children, and how it can advance future offerings.*

⁴ Formerly Reflection Survey.

⁵ Formerly Quick Response Memo.

APPENDICES

Appendix A: Center for Play and Interactive Learning (CPIL)

Appendix B: Adapted Studio Learning

Appendix C: Documentation Methods-Observation Sheet

Appendix D: Developing Questions for Engaging Children

Appendix E: Group Reflection Tool

Appendix F: Play Conditions Components Table

Center for Play and Interactive Learning

Purpose: The Center for Play and Interactive Learning values play as a powerful strategy for learning and wellbeing. Play is a way for children—and adults—to explore, engage with, and understand their world. Interactive learning is a related process for exploration and learning. The Center highlights the role of interaction with objects and materials, with people, ideas, and the physical environment in both play and interactive learning in informal and formal learning settings.

CPIL supports two complementary interests. First, it is intent on deepening its understanding of play through on-going inquiry, small experiments, and projects that explore the conditions that engage children and boost play value. At the same time, it is committed to supporting and building capacity in adults who work directly and indirectly with children birth – 8 years of all abilities and backgrounds in formal and informal learning settings around play and interactive learning.

The Center for Play and Interactive Learning is committed to changing the way the region sees and values play in the lives of its children.

Adapted Studio Learning

Studio learning has been practiced for many decades and is most common in secondary and post-secondary programs focusing on art, architecture, and engineering. True studio learning programs are rare in museums and other informal learning environments. Elements of the practice, however, are often seen in summer camps (weeklong programs for elementary-age children) and in after-school programs for youth, typically in their middle teens. In these programs, participants work on projects that culminate in specific outputs, such as simple robots, media productions, or even a garden.

WonderTrek has drawn on a few key elements of studio learning to engage children as co-developers of play and learning experiences for the new museum. Each of these elements has been adapted to an audience of young children participating in self-directed play.

Studio Environment. In teaching situations, studios are dedicated spaces well outfitted with tools, equipment, and supplies. For WonderTrek audiences, the studio is a dedicated place and a variable assemblage of loose parts and structures that can be reconfigured at different locations. In this way, the studio is a destination and a concept around which ideas emerge and are played around with.

Project Focused. In typical studio learning programs, small groups of students are assigned projects to complete together and individually over a set period of time. During this time they conduct experiments, make revisions, and test variables—all towards building, growing, or producing their final outputs. In WonderTrek’s studio experiences, children establish their own projects, of differing scales and levels of involvement, and determine how they go about getting them done. A ball run constructed in minutes is a project, as is an impromptu stage performance.

Individual and Group Abilities. Participants use their developing skills and talents to express their ideas and give shape to imagined experiences. In groups, they explore ideas collaboratively, working toward shared goals—immediate and longer-term. In formal teaching situations, groups of students work together sometimes for many weeks, getting to know one another through the shared experiences of their studio. At WonderTrek, children arrive for events often not knowing other children, yet get involved in playful interactions that parallel the kind of engagement seen in more formal studio environments.

Presentation. At various points during a formal studio project, participants have opportunities to present their work. In Studio Explorations, children present their accomplishments to others in many ways. Attracting the attention of an adult caregiver, a child can say “look at this” while demonstrating a complex configuration of balancing parts. Children can also be asked to talk about their project, connecting it with imaginative narratives that reveal specific purpose and function—a fence that horses can jump but dogs can’t.

Documentation. In formal teaching situations, studio participants learn and practice a wide range of documentation techniques, including video, photography, drawing, writing, and performance. Documentation plays an essential role in Studio Explorations—sometimes done by adult observers, other times done by children. Recording children’s projects and interactions by listening and taking photos informs ongoing program development. It’s also a way of gathering creative input for the longer-term co-development of experiences for the new museum. Children also have opportunities to document their own projects by drawing related images or giving walk-through descriptions to other children or to interested adults.

Engagement Scale:

- 1 = Minimal/Glance: visitor stops, pauses and/or glances briefly at the area, play or materials, but displays no apparent interest in any particular element or information.
 2 = Brief/cursory: visitor stops, watches or views area or materials with slight interest; looks briefly, may offer comment or idea, but does not play or further explore.
 3 = Moderate: visitor explores the area and materials fairly thoroughly. Shows interest; appears engaged and focused; seems to listen fairly closely; picks up materials, begins to play or engage in some conversation related to the materials, or may point out elements.
 4 = Extensive: visitor explores in depth focus and concentration. Views materials and action very intently; plays intently; engages in a fairly extended conversation with others about play, materials, and ideas.

Roles Check only once even if seen multiple times	GUIDING QUESTION: Observations (include approx. time of engagement for each activity)
Adult	
<input type="checkbox"/> <i>Observer</i> (watches child play but does not enter play).	
<input type="checkbox"/> <i>Stage Manager</i> (sets stage/preps environment).	
<input type="checkbox"/> <i>Mediator</i> (intervenes to resolve conflicts; helps child understand another's point of view) .	
<input type="checkbox"/> <i>Player</i> (plays next to child; joins in play already started; lets child lead play).	
<input type="checkbox"/> <i>Social Director</i> (helps child enter play, assists in finding role, draws other children into play).	
<input type="checkbox"/> <i>Scribe</i> (documents play through photos, video, etc. to create play memories).	
Child	
<input type="checkbox"/> <i>Observer</i> (watches play but does not enter play).	
<input type="checkbox"/> <i>Stage Manager</i> (sets stage/preps environment).	
<input type="checkbox"/> <i>Mediator</i> (intervenes to resolve conflicts; helps others understand another's point of view) .	
<input type="checkbox"/> <i>Player</i> (joins in play already started; lets others lead play).	
<input type="checkbox"/> <i>Social Director</i> (helps others enter other children into play).	
<input type="checkbox"/> <i>Scribe</i> (documents play through photos, video, etc. to create play memories).	

Observation Sheet Fall 2022 **EXAMPLE**

Developing Questions for Engaging Children⁶

- **Develop questions as a group.** Varied perspectives are valuable.
- **Clarify what you are curious about** and how this will be helpful in, for instance, planning exhibits and experiences. Just clarifying what you want to learn about takes a few tries.
- **Frame a hierarchy of questions**, from broad learning interests to questions for children.
 - An overarching research question gets at what you want to know about: How do children develop a sense of belonging?
 - A focus question narrows the research question in a way that is relevant to the setting and group of children or adults: What do children experience belonging in different spaces?
 - Facilitation questions engage children’s thinking, memories, and ideas: What does ‘belonging’ mean to you? How do you feel when you belong? What is a special place where you feel you belong? What is that place like?
- **The child should be the subject of questions** asked of them. “How does the child...” vs. “How can we get children to...”
- **Distinguish between what and how questions.** “What” questions ask about the character of something, breaking out relevant dimensions. “How” questions get at *in what way*, give clues to the conditions that might encourage an interest, opportunity, environment, behavior, skill.
- **Work through multiple iterations of the question**, discussing, noticing hidden assumptions, reflecting on each version, and recasting the question.
- **Ask children juicy questions**, questions that: get at what is fascinating to them, important to them, relates to something they experienced.
- **Avoid questions that:** you already know the answer to; are intended to confirm your ideas and plans; can be answered yes-or-no.
- **Consider both the content and language** of the question: clear, simple, child friendly.
- **Provide context for the experience** in inviting children to explore questions, individually or in groups, i.e. *we’re planning a new museum; we know you know something about play/our museum/being a child; we’d like to hear your ideas and thoughts today; you can help us.*

⁶ Originally entitled “Asking Children Questions,” Gyroscope, Inc. and Vergeront Museum Planning (November 10, 2021)

- **Provide meaningful opportunities for children to express** their thinking and ideas by: drawing, writing, discussion, constructions

Group Reflection Tool

The Group Reflection comes at the end of the inquiry process and uses the Inquiry Synthesis to explore: *What are we seeing? How might this be meaningful to children, and What do we do with this?*

1. The team asks for clarifications about the Question and the Quick Response Memo.
2. The group is asked to describe noteworthy aspects of the children's explorations captured in the Memo using descriptive language and withholding judgements and assumptions (Not "I like.../I don't like.")
3. Each member of the group suggests a thread they see running through the observations, photos, and any other collected traces of children's explorations.
4. The group considers all the threads together, clustering ones that seem related.
 - a. Selecting a few of the most intriguing clusters, the group speculates on what they might be telling them about these children's interests, what is meaningful to them, and their capabilities.
 - b. The group names these threads or clusters.
5. The group discusses how these insights can be used going forward to revise the invitation to explore; reframe the question for a future inquiry; or bring together with other questions.

Elements	Role, or Function	Valued Qualities	Possibilities to Support Play Conditions
Image of the Child	Inform all of WT's experiences by focusing on children's strengths and capabilities; setting up experiences that engage children at their highest level of ability; and make children's strengths and capabilities visible	Viewing children as: <ul style="list-style-type: none"> • Curious and inquisitive • Capable • Creative and imaginative • Expressive and receptive^{7*} • Social • Caring and empathetic 	Reflecting and supporting children's capabilities with: <ul style="list-style-type: none"> • Traces of children's thinking, doing, and making. • Fragments of activities that are by-products; making evidence of the activity and the child's creativity and thinking tangible and visible • The child's involvement to be re-visited, re-recognized, and describe • Opportunities for meaning making • Choices for one child and different choices for different children
Context or Setting	Create a physical and social space, from macro to micro, for all children in which they can explore, play, and learn	Settings that: <ul style="list-style-type: none"> • Are safe, welcoming, accessible, engaging, comfortable and accepting • Integrate the built and natural environment • Support the child's growing sense of agency • Children can make come alive 	Shape settings with: <ul style="list-style-type: none"> • Different scales; large and small spaces and versions of objects for comparisons • Light, sound, surfaces used purposely • Multiple levels including changes in heights to reach, climb; changeable levels and inclines to vary movement and speed; places for children to watch from • Edges that define, contain, or differentiate areas • Areas with distinct feelings, qualities, or ambience • Open sight lines • Seating that is abundant and incorporated into areas for adult comfort and participation • Place-based; created by place-based, sensory clues, landmarks, and features; signs, sights, sounds, views, and images with personal and local relevance; reference the history of the space • Recognizable features, landmarks, way-finding clues • Change throughout the day and season

^{7*} Items correspond to Experiential Approach and Engagement Strategies in WonderTrek Learning Framework

Play Conditions

Elements	Role, or Function	Valued Qualities	Possibilities to Support Play Conditions
Invitation to Explore	<p>Select and arrange elements to encourage children (and adults) to engage and explore an idea without giving them too much direction but inviting noticing and wondering</p>	<p>An Invitation to Explore:</p> <ul style="list-style-type: none"> • Sparks curiosity • Presents something worth noticing and discovering • Encourages investigation • Offers a reason to continue exploring • Enables children to take the experience where they need it to go • Encourages moving: being active, climbing, dancing 	<p>Encourage exploration with:</p> <ul style="list-style-type: none"> • Something fascinating, enticing, sparks children’s wonder, questions, interest, sensory-on and bodies-on engagement • An intriguing approach or point of view; an unusual presentation of materials or objects • Qualities such as novelty, surprise, complexity, ambiguity, or juxtaposition • ALL kinds of play
Materials	<p>Seed the set-up with natural objects, loose parts, phenomena, art materials, digital media, tools, etc. that:</p> <ul style="list-style-type: none"> • Give children agency and choice • Encourage exploration and experimentation that is physical, social, emotional, cognitive, and linguistic • Generate new possibilities • Reveal new perspectives and insights about the world 	<p>Materials that:</p> <ul style="list-style-type: none"> • Accommodate children’s agency • Promote noticing, wondering, and exploring the world • Change with use and new insights • Promote understanding feelings, ideas, and perspectives • Support a growing sense of competence • Work at multiple levels and ages • Are portable, combinable, modifiable • Imagine something different 	<p>Select and use materials, objects, and tools in ways that:</p> <ul style="list-style-type: none"> • Engage some, and sometimes, all of the senses; that tell children something about the world; that are open-ended, unscripted, offer multiple possibilities, and have holding power • Are familiar, functional, or fantastic; found in nature, about the house, in various settings; something familiar used or constructed in different ways: mirrors hanging overhead to give a new perspective • Invite explorations, questions and a closer look; encourage back-and-forth interactions • Incorporate varied, abundant and accessible objects into every area to inspire imagination and spark possibilities: pillows, containers, paper, boxes, clothing, fabric, purses, bags, and costumes • Are real stuff, genuine materials, and accurate relationships that provide a high correspondence with real world information; materials, machines, tools and processes • Can be moved, carried, lined up, combined and re-combined, taken apart and put back together in various ways • Can be explored digitally • Are repeatedly modifiable; invite repetition, transformation, or multiple changes; and encourage “what else can happen if...?”

Elements	Role, or Function	Valued Qualities	Possibilities to Support Play Conditions
Materials continued	Seed the set-up with natural objects, loose parts, phenomena, art materials, digital media, tools, etc. that: <ul style="list-style-type: none"> • Give children agency and choice • Encourage exploration and experimentation that is physical, social, emotional, cognitive, and linguistic • Generate new possibilities • Reveal new perspectives and insights about the world 	Materials that: <ul style="list-style-type: none"> • Accommodate children’s agency • Promote noticing, wondering, and exploring the world • Change with use and new insights • Promote understanding feelings, ideas, and perspectives • Support a growing sense of competence • Work at multiple levels and ages • Are portable, combinable, modifiable • Imagine something different 	<ul style="list-style-type: none"> • Change through use; change form or condition through pressure, interaction, portability, heat; that harden, soften, loosen, stick, fall apart, etc., and offer new possibilities in their changed form • Are presented in unusual and unexpected ways. Familiar materials used in unusual combinations; deconstructed; transformed with “modifiers” such as color, size, scale, quantity, reflection; are set in unusual contexts, juxtaposed, off-kilter • Objects and materials distinguish this setting from others
Interactions and Relationships	Bring children and adults together to engage with others; feel a sense of welcome, respect, and connection	Interactions that: <ul style="list-style-type: none"> • Foster social connections • Value the individual and the group • Nurture supportive relationships • Are collaborative • Involve exploring together • Invite conversation • Allow children to contribute in their own, individual ways • Make something new together • Reflect the knowledge of the child or the group 	Create opportunities to connect through: <ul style="list-style-type: none"> • Shared stories to make-up, tell, and retell • Exchanging ideas among children • Multiple positions, places, roles, or seating, for two or more players or partners—stools, places at the table, multiple controls, multiple sets of materials or props. • Conversation • Facilitation by prepared staff • Scaffolding by more experienced peers or adults • Incidental or planned demonstrations • Playworkers, peers or adults modeling behaviors, responding to children’s interests and questions • Asking and answering questions • Varied graphic images: text, maps, and other visuals

			• Multiple expressive languages: words, bodies, clay, paper
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Elements	Role, or Function	Valued Qualities	Possibilities to Support Play Conditions
Content	Engage, encourage, and expand children’s interests with the world about what is fascinating to them and meaningful	Interdisciplinary content that is: <ul style="list-style-type: none"> • Drawn from implicit, child development, content • Explicit (i.e. phenomena, nature) and relevant • Prompts meaningful connections • Connects experience, knowledge, and ideas • Meaningful themes 	Present content that is: <ul style="list-style-type: none"> • Available through all the senses • Embedded in all Play Conditions • Layered into experiences • Engaged with directly and released through interaction • Relevant • Explore from different points of view
Time	Open up time for play; extend time playing and directing play to bring enjoyment	Play that: <ul style="list-style-type: none"> • Children decides when it starts and ends • Stretches out over time 	Protect time for play by: <ul style="list-style-type: none"> • Discouraging interruptions from others and unrelated decorations • Allowing experiences to come to a natural end—flow

REFERENCE DOCUMENTS

Reference Document 1: Documentation Protocol Sample

Reference Document 2: Debrief Survey Sample

Reference Document 3: Inquiry Synthesis Sample

Documentation Protocol

EXAMPLE

A protocol should contain explicit instructions for documenting an event and include: the name and date of the event, documentation methods, guiding question(s), materials needed, specific, step-by-step procedures, "what ifs," how to wrap-up and where to leave documentation.

WonderTrek Studio Explorations

(Date & Name of Event) Documentation Protocol

Documentation methods:

1. Observations - onsite, instructions below.
2. Audio and Photo Recording
3. Reflection survey - online, following the event

Guiding question: How does adding different materials (list materials) throughout a Studio Exploration invite and encourage children's narration of their play?

Materials: 4"x6" Post-It Notes, pens, digital camera, audio recorder

Observations

- With Post-It Notes, pen, and digital camera in hand, find an unobtrusive place to observe children playing with the Big Blue Blocks. Don't try to be invisible, just quietly present and not engaged with the children you are observing.
 - If the children you are observing engage with you, be friendly and redirect them to another adult.
 - If they ask what you are doing, say "I'm taking some notes for the museum (or studio).
- Note the number of children in the group you observe and estimated ages.
- Record what children say.
 - Summarize:
 - *Three children work together to build a ramp-like structure. They discuss different strategies as they move the blocks into different positions.* ○
 - Direct quotes:
 - Boy says, "Let's move this one on top." ○ Summarize and direct quotes:
 - *Three children work together to build a ramp-like structure. They discuss different strategies as they move the blocks into different positions. Boy says, "Let's move this one on top." Smaller boy pushes the blocks around then says, "Okay, now let's add some pillows."*
 - Always put quotation marks around direct quotes.
 - Write as clearly and legibly as possible.
 - Put your name or initials on each Post-It note that you write on and number each page so that individual observations can be easily tracked back to their authors and sequenced.
- Observe an individual child or group of children for at least 10 minutes.
 - If children abandon play before 10 minutes is up, make a note of how the engagement ended and move on to the next observation.
 - If there are a lot of children present, try to observe as many individuals or groups as possible for at least 10 minutes.

- o If there are only a few individuals or groups of children, observe and record their interactions with the materials on hand for as long as it makes sense.

Audio recording

- Similar to doing observations, don't try to be invisible, just quietly present and not engaged with the children you are trying to record. Do not ask children direct questions about what they are doing.
 - o If a child or adult asks about being recorded, share that WonderTrek is curious about the conversations children have when they are playing with the materials available as we make plans for new WonderTrek exhibits and activities.
 - o Make general notes and/or take a photo of what children were doing as they were being recorded, i.e., three children moving around blocks in a circle, draping fabric over the circle and tossing balls onto the fabric.

Photography/Video

- Take photos with permission.
- It's okay to interrupt children to ask if you can take a photo. For example, "I'd like to take a photo for the museum/studio. Is that okay?"
- Short, 2-3 minute videos are okay, too.
- Do your best to photograph children from the back, side, or above *if you don't have explicit permission from their adult*.
 - o If a child or adult asks how the photos will be used, let them know that all photos taken during Studio observations are meant to help to create new WonderTrek exhibits and activities.
- Note in your documentation when a photo was taken:
 - o *Three children work together to build a ramp (photo). They discuss different strategies as they move the blocks into different positions*

Wrap-up

- Observations:
 - o After each observation, quickly review what you've documented to make sure everything is legible (rewrite for clarity if necessary), direct quotes have quotation marks, photo notations have been made, and your name or initials appear on each Post-It Note.
- At the end of the program, give all observation to (specific person) for entry and organization.
 - o Upload photos to the (specific Google folder).
 - o Upload audio files to (specific Google folder).
- Complete reflection survey within 24 hours, if possible.

Debrief Survey

EXAMPLE

Report for WonderTrek 8-20-22 Studio Exploration Debrief Survey

1. In your opinion, what was the most important thing you took away from today's Studio Explorations?

Response *Both parents and kids feel more comfortable exploring movements with a padded floor. Parents were less likely to step in and stop a behavior that would be dangerous on carpet*

2. What words did you hear children using to describe or talk about the mats, peanuts, Big Blue Blocks and any other materials that were available?

Response *Boing, bounce, roll, squishy, safe, whoa, pretty, purple, blue,*

3. What did you hear children say to express their feelings – enthusiasm, delight, excitement, frustration, disappointment?

Response *Woo! Woohoo! Whoa! Wow! Watch! No!*

4. In your opinion, which materials or objects extended children's exploration and in what way?

Response *The floor mats allowed much more risk taking than previous events. Parents were more hesitant to step in and help their child do the child had more time to explore their own movements over, under, and around the bbb and peanuts. The peanuts were lots of fun, they seemed to extend play as well but more so as an additional or novel material option.*

5. Thinking about future Studio Explorations featuring the peanuts, mats, Big Blue Blocks, and any other materials that were available, what kind of artifacts or traces of children's ideas and thinking might we gather?

Response *What makes some activities more fun to do alone and some more fun to do in a group? The kids today seemed to spend more time engaged with the BBB cooperatively, but they played with the peanuts either in parallel play or completely independently. There was only 2 instances (that I observed) where kids played with the peanuts together.*

6. What about today's Studio Explorations worked really well and why?

Response *The kids absolutely loved the peanuts and mats! They seemed much more brave and confident when playing on the mats, with both the BBB and peanuts. The peanuts were very engaging and a helpful option for kids needing to burn off energy.*

7. What do you think needs to change for the next Studio Explorations and why?

Response *More mats! Not sure if it's possible to have the whole floor mats in the new studio. Maybe different sized peanuts for younger kids (these were the largest from this brand).*

8. What needs to be followed-up on either by you or by the team?

Response *Survey emails, check peanut sizes*

9. Share any other thoughts or notes that you may have about the event here.

Response *Today was a lot of fun with a pretty good turnout! 7 families, 14 kids total, ages 2-12 The older kids (11,12) didn't interact with the items very much, unless to help their younger family members or just sit on the peanuts.*

Inquiry Synthesis

EXAMPLE



8850 Peep O Day Trail, Eden Prairie, MN 55347-2176
(952) 938-5493 Cheryl@BlueScarfConsulting.com

To: Peter Olson, Jeanne Vergeront, Mary Weiland, Ashley Wereley, Maria Prozinski, Emilee Mailhot, Shannon Wheeler, Jim Roe

From: Cheryl Kessler

Date: July 5, 2022

Re: Playful Connections Studio Explorations #11, June 25, 2022

On Saturday, June 25, 2022, WonderTrek invited the public to attend a Studio Explorations (SE#11) event at the Franklin Art Center. From 10am to 2pm, 40 children (newborn to age seven) and 30 adults engaged with Big Blue Blocks, fabrics of various sizes, colors and textures, soft plastic balls, string and rope, binder clips and clothes pins. WonderTrek team members Peter Olson, Emilee Malihot, Maria Prozinski and Cheryl Kessler were in attendance. Two methods to document the event:

- Conducted visual observations, which were recorded in writing, photos, and video.¹
- Responded to a nine-question online reflection survey with questions related to what might extend children's exploration and what type of activity could children do to create artifacts for documentation?

Documentation of SE#11 continued to focus overall on 1) Children's physical interactions such as handling, carrying/dropping, manipulating, conforming bodies, kicking, observing, etc., and 2) Children's engagement with novel, open-ended objects and materials, abundance, i.e., what are children's response to different materials? In particular, the team used the WonderTrek Inquiry (WTI) process,² to focus SE#11 documentation efforts on this question: *How does adding different materials – Big Blue Blocks, fabrics, balls, colored cards – throughout a Studio Exploration invite and encourage children's narration of their play?*

This quick response memo includes the written observations, photo and video documentation, and responses to a post-event online reflection survey. This document is meant to provide the team with timely insights for general discussion and future event planning.

Observations

Whether the variety of materials on hand invited or encouraged children's narration of their play is hard to say with any certainty through observations alone.³ That said, recorded

¹ Unobtrusive audio recording was attempted but proved unsuccessful after several attempts; children seemed to stop talking once the recorder was discovered.

² [WTI Question Sheet Revised 6/15/22](#)

³ A discussion during a team call on 06/29/22, before the completion of this memo, addressed this issue and resulted in exploring the idea of talking with children about their SE experiences in the near future.

observations document specific instances where the various materials on hand seemed to enhance children's play.

Plastic Colored Balls



2 y/o. Putting balls in hole together. "Oooo-eeee" (EM)
[https://drive.google.com/file/d/1fZG7V2X0wtvqFvGNUwSQXhEg4KGV1Mwx/vi
ew?usp=sharing](https://drive.google.com/file/d/1fZG7V2X0wtvqFvGNUwSQXhEg4KGV1Mwx/view?usp=sharing)



4-5 y/o. Taking balls out of bag, placing through side hole in bbb stack, also throwing balls into holes. Mom observing, then child laid on pack on long block. Mom placed another block enclosing child. (PO)



5 y/o "I'll hold it for her." "Ray, put it here." Pink stripes puts block on top. 5 y/o puts noodle in circle. 2 y/o grabs noodle, too. Starts poking each other; hits ball w/noodle. 2 y/o tries. Puts circle on top of noodle, 2 y/o helps. (EM)

"You put the balls here," helps pink dress. "She can use this one," passes block to dad. (EM)

2 y/o. Tapping balls together, "Boom, boom, boom." Sets balls on log, lets them fall off, "Boom." Grabs another ball, "red," sets ball on log to roll off. "Blue," same with blue ball. (EM)

2 y/o. Rolls ball down track, "Wooo!" Mom, "Is that fun?" 2 y/o "Yessss." Picking up small circle. "Unnnn" (heavy lifting sound). Climbs on block, rides like a horse. (EM)

"2 y/o. Boom" knocks block off another [block]. Sits ball in hole, "yay" (EM)

Fabrics



4 y/o. Child came into the office area and asked Tony if she could use the rack. I helped her move it back to where she was playing. She added blocks to the rack and draped fabric. She told her mother it was a puppet theater. Mother told her how to use it for a puppet show. They began exchanging balls back and forth. Mom, "what's your name puppet?" Child, "I'm Cassidy." The dialogue continued as they exchanged balls. Started using the play to practice color names and spelling (photos), using playful sounds and voices. (PO)

3 y/o Picks up red mesh - "I'm having a picnic." Grabs log shape, stands it up, drapes mesh over. "Now this is where the pizza goes." Grabs sting, "What's this?" "I know it can be a cowboy think." Spins string like a lasso. Ties 2 blocks together. "Look what I made." (EM)

5 y/o. Grabs another fabric, brings it to Mom. "Will you tie another?" (EM)

3 y/o. Fabric tied over shoulders like cape, jumps off block, "Mmmpf." "He's got a banana like me" referencing to baby in seat. "Mom, can you spread this out?" (EM)

Color Cards



3 y/o Grabs red card, clothes pins. "I didn't know you had these!" "I'm going to make a puppy (inaudible). "It's almost done, see!! (EM)
https://drive.google.com/file/d/1td5fyCq07lcY YcuM_Cd8-DJqHCoF3qLb/view?usp=sharing

INCLUDEPICTURE

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iveCopyPasteTempFiles/page3image60646  
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Big Blue Blocks

I asked, "what are you making?" 4 yr olds "stairs for our house." [I asked] "Do you live in the house?" "I live in the house with her. Her is my friend. We live in the house. Her is my friend." 4 yr old fell and hurt her knee, grabs her knee and flexes out her leg, but doesn't cry. Older child sits close by and asks if they are okay. Non-verbal response. Play resumed. (PO)



Makes horse sounds. "get on the back of my horse." 5 y/o and 4 y/o sitting on long blocks (photo). Lots of laughter - "wanna to com to my pappas studio?" Left the Play Lab. (PO)

4 y/o, "What are you doing?" 5 y/o "I'm making ..." 4 y/o, "I need help with this." Stacking vertically and knocking over. 4 y/o, "That was fun. Now come and look." 4 y/o was much more vocally [descriptive] while 5 y/o was more focused stacking and knocking over. 4 y/o. "What are we making?" We can use this. We can tie it."

5 y/o and 2 y/o. Lifting blocks into tower. "Ugh." "Here you go," 2 y/o offers block, 5 y/o, "Thank you." Happens again, 5 y/o, "Ugh, Eloise!" "I'll bring it over there," picks up block and adds to tower. Grabs blue mesh, ties cape. (EM)

6 y/o. "I know what we can make!" Grabs block, adds noodle. Rainbow shorts, "remember we have to share." (EM)

3 y/o. Bouncing on semi-circle, "Whoooa!" "Look at me." Grabs noodle, "Hiyah!" "Where did you go?" finds friend in pink star shirt. (EM)

There were a few other observations that didn't quite fit into the three categories above. For example:

6 or 7 y/o. "I'm going to hide it." Playing solo., caregiver observing, put rope through bbb, made a knot, pulled it by the rope. (PO)

5 y/o. "Goodbye, I'm going on a road trip." (PO)

5 y/o, black shirt. "Mem waten," grabs ball, rolls on blocks. "I'll make a backpack." "Look, I made a fan." "I'll make you a chair, Mom." (EM)

3 y/o with friend. Brought stuffies [toys]. "Let's go dance in the dance studio." "da da da dee dee" sound effects as Stuffie jumps. "They never have to go to school." Runs out the door. (EM) **Reflection**

Survey

The **most important takeaways** from SE#11 was how having fabrics, balls, color cards and other materials noted previously impacted the amount and type of play participants engaged in as well as the high attendance for the event.

Adding materials to the BBB makes a world of a difference! Not necessarily in engagement or duration of play, it seemed to foster more creative and imaginative play and less tower building and weapon fights.

(EM)

Adding novel materials, fabrics, balls, color cards, clothes pins, small ropes, and large office clips increased play opportunities both in longevity and depth. I can't quantify it, but it seemed players played longer in more varied ways with more rigor and cooperation. Overall, it seemed a more enthusiastic play experience for all children in attendance because of the addition of more materials. (PO)

I was amazed at the number of families who were here on Saturday. Our space is small so it was rather full! (MP)

The things that **worked well** included offering a \$10 DQ gift card for the first six families to arrive at the event, adding different materials and having them available in the center of the play area, having less observers, and how children utilized the space available.

Offering DQ cards seemed to make a huge difference! (EM)

Adding something new. Moving the materials from the wall to the center of the Lab. The number of us present, was easier to have a place for observation and conversations with children and caregivers. The amount of children and caregivers (DQ and rain day!) (PO)

The children did really well within the small space. As the time moved forward, it became humid and hot in the room. (MP)

The ways in which the addition of new materials – balls, fabric, and color cards – **invited and encouraged** children's play were described as more creative interactions with markedly deeper and broader engagement than has been seen at previous SE events.

It seemed to encourage more imaginative play, as kids used to the fabric as costumes or included the fabric with their builds. The cards were used as menus, cards, maps, a "puppy something", etc. Without the additional materials, a lot of the interaction with the bbb is building towers, castles, houses, sword fights with noodles, and "slides" with the ball run pieces. There was still some building structures made, but the kids really enjoyed the additional materials and seemed to pick projects that would include these new materials. (EM)

Seems so. I could see more specific types of play happening than the first SE. Often balls were thrown in holes or back forth between players. Blocks were used physically, they were stacked and pushed over, children would submerge themselves in blocks, tubes used for jousting. Clips were put on the edges of color cards and then handed then transported across the Lab and handed to a caregiver. Fabrics were used for dress-up, prop pieces (horses saddle), ropes through holes in a block to drag it, all were part of some imaginative fantasy play (riding a horse on a road trip). (PO)

The balls extend the play, the children build ramps. The fabric was used for forts and capes. (MP)

The **language children used** to describe or talk about the Big Blue Blocks, balls, fabric and/or color cards tended to be about what they created, e.g., height, stability, or purpose. One parent used play with their child to practice color names.

"boom" "blue" "big" "colorful" "dress" "cape" "pirate sail" "tall" "heavy" "wiggly" (EM)

"This is our horse" referring to a long blue block "We're building stairs in our house" referring to a few rectangular blue blocks. Parent was prompting a child to say the color of each ball before they threw it back and forth and what the first letter of the color is. (PO)

This is my motorcycle, squeals of excitement from toddlers. (MP)

Expressions of enthusiasm, delight, excitement, frustration and disappointment depended, in part, on a child's age. Toddlers vocalized the majority of expressions, while others were observed responding non-verbally. One team reflected that because the space was crowded with children, some children seemed shy.

"woohoo!" "hmmpf" "deedeedeede" "whoa!" "this is so much fun!" "woo!" squeals and squeaks from kids under 2 crying when creation is knocked over. (EM)

I observed two children playing together, probably 4 years and 5 years old, going in and out of fantasy play, lots of laughter, yelps of delight, prompting each other. One child fell on her knee causing temporary pain. While the child in pain didn't verbalize, her actions and demeanor expressed pain. The other child moved in and sat close by, with posture expressing concern and quietly asked once "are you okay". The other child didn't respond verbally but they sat quietly for a moment. After several beats, they went back into their play scenario. (PO)

Some children were shy because there were so many children. (MP)

Team members shared their ideas about what **materials and could extend children's explorations** with the Big Blue Blocks. While the question was meant to be about extending explorations in the future, it was interpreted as how the new materials extended children's explorations on June 25.⁴ The reflections are useful as they provide deeper descriptions of how the materials presented enhanced children's play.

Fabric- made fort building much easier, didn't need as many blocks to complete so there was more for other friends to use; as costumes- kids played in the forts they built as characters, weren't so quick to tear down fort and start a new project. Balls- kids can test out the "slides" they made, modify path, test again. Cards- seemed to prolong play with finished project as the cards became props for the story they were telling, similar to fabric as costumes. (EM)

I saw all the materials used, all in different ways supporting different types of play (see question 4). From what I observed, dramatic/fantasy play with narration was supported most by fabrics. Clips and clothes pins supported younger visitors, I observed them transporting and sharing with caregivers and adorning color cards. (PO)

Material - Children utilized it as tablecloth, a door for a fort and capes. (MP)

The type of **artifacts or traces** that we might collect from children in the future included gathering firsthand accounts from children and caregivers about their explorations and children's perceptions of constraints during SE, adding different conditions and light as options for play, and water.

limitations they perceive- what am i allowed to do with the bbb? what can i do (physically)? what can the bbb do? what can't they do? (EM)

⁴This reflection question will be revised to focus on future SE events.

Is there some [way] to explicitly ask children and caregivers to share and describe what they were playing before they leave the exploration? Definitely curious about adding light to the play conditions, but before

that, now that we've added novel materials, wondering about adding elevation or structure to the conditions, i.e., ramps, short platform, small boards. (PO)
different size balls; water. (MP)

Suggested **changes** for the next SE on July 9 included trying specific materials on their own, new conditions, a larger, cooler space, and ways to share the WTI process with visitors.

Fabric alone, balls alone, cards alone- does one material facilitate play more than the others? Reflection survey for the kids- what do you think would be fun to have with the BBB? (EM)

Again, adding something new to the conditions for children to respond to that advances our inquiry.

More explanation of our WonderTrek's Inquiry process, our role and players role. How this process is part of making WonderTrek. More of what we're doing. (PO)

Consider a larger space Air conditioner or fan. (MP)

Specific items to follow-up on from the June 25 SE included standard items such as sending thank you notes and participant surveys as well as how to share the WTI process, team members' roles in WonderTrek, and a way to keep the space cool during warm weather.

Thank you emails to families that came, surveys to participants. (EM)

Advancing our audience communications about the WonderTrek Inquiry process and players role in making WonderTrek. (PO)

We need to have the window air conditioner inserted into window or purchase a fan to circulate air in space. (MP)

Team members' final thoughts ranged from gratitude for each other's presence, a sense of achievement in our goals and process and a suggestion for creating a bit more space in the studio for play.

Today went great!! Thanks, Peter, Cheryl, and Maria, for all your help! (EM)

I feel like our invitation to play, the conditions and question, our preparation, led to rich observation.

WonderTrek's Inquiry process took a good step forward. (PO)

We may need to have the greeting table outside the room if we plan to use this space next time. (MP)