Back to Basics: Mathematical Play

Lindsey Herlehy, NBCT
For the next 25-ish minutes, you are to interact with the materials of your choice. No rules.
What is PLAY?

Let’s hear your thoughts.
Mathematical play is...

- Pleasurable
- Intrinsically Motivated
- Freely Chosen
- Actively Engaged
- Process Oriented
- Non-literal

Resource: The Power of Play
Properties of Play

1.) Diminished consciousness of self
2.) Improvisational Potential
3.) Continuation desire
# Types of Play

<table>
<thead>
<tr>
<th>Exploratory Play</th>
<th>Playful Mathematics</th>
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<tbody>
<tr>
<td><img src="image1.png" alt="Turtles" /></td>
<td><img src="image2.png" alt="Dollar Sign" /></td>
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**What is the value of the dollar sign?**
Mathematical Play Content

- Classifying
- Exploring magnitude
- Enumerating
- Investigating dynamics
- Studying patterns and shape
- Exploring spatial relations
How Do You Play?

Play Debrief Replay
Conferring During Play

Mathematicians ask themselves questions when they work and play. It is important to understand how to talk to kids during play. You want to know about what they are thinking – not imposing your thoughts on their play.

Conferring During Play
The child’s interests and questions drive the exploratory play time. However, the teacher’s role as coach, thinking partner, and play partner is very important as well. Conferring during play is a balance of valuing the child’s ideas and choices while also nudging their thinking. This language should be supportive of that responsiveness, and not box you into one type of conversation or make your interactions with children formulaic.

Deep Listening is Ongoing Throughout the Conferring Process

<table>
<thead>
<tr>
<th>Researching Language</th>
<th>Noticing Language</th>
<th>Wondering, Connecting and Inviting Language</th>
<th>Summarizing and Paraphrasing Language</th>
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<tbody>
<tr>
<td>Confering begins with researching the child’s thinking and using noticing language in order to better understand what the child is doing and thinking.</td>
<td>•What are you thinking about right now?</td>
<td>•Wondering language builds upon the child’s current thinking and understanding to gently nudge the child towards a new/different/extended idea that she may choose to pursue.</td>
<td>•Summarizing or paraphrasing a child’s ideas may help clarify a question or idea a child wants to pursue.</td>
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<td>•These interactions should focus on the teacher’s genuine curiosity in the child’s thinking, rather than inserting her own ideas or expressing judgement with statements such as “I like how you…” or “Why don’t you try…”</td>
<td>•What are you wondering about?</td>
<td>•Connecting language serves as a bridge between the play of different children or the same child’s play over time.</td>
<td>•So one thing you’re really working on figuring out is…</td>
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<tr>
<td>•What are you making?</td>
<td>•That’s so interesting how you…</td>
<td>•Inviting language offers a specific idea or question for a child to take up if she chooses.</td>
<td>•So first you made…and but then you decided to…</td>
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<tr>
<td>•How did you make that?</td>
<td>•It looks like you’re trying to…is that right?</td>
<td>•I’m wondering what would happen if you…</td>
<td>•Remember yesterday when Alexis told us how she was trying to figure out how to…You might try…</td>
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<tr>
<td>•What are you working on figuring out?”</td>
<td>•I notice you decided to…</td>
<td>•I’m wondering how you might…</td>
<td>•This reminds me of when we learning about… I wonder if you might try…today?</td>
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<tr>
<td>•Will you tell me about this?</td>
<td>•Look how you…</td>
<td>•I’m wondering why/how you decided to…</td>
<td>•Remember last week when you thought about…while you were playing with the…You might go back to thinking about…today.</td>
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<tr>
<td>•Are you thinking that…?</td>
<td>•It’s so interesting how you…</td>
<td>•We wrote some questions about…on Monday. You might read them again and see if there’s one you want to work on today.</td>
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So, what does PLAY look like at your grade level?

Turn and Talk.
You Need A Play Table In Your Math Classroom!
The “butts”...

- Am I allowed to play?
- Do I have time to play?
- It is OK to have my struggling students play?
- Do I have to choose between intervention and play?
Resources

- **Playing with Mathematics: Play in Early Childhood as a Context for Mathematical Learning**

- **Purposeful Play: A Teacher's Guide to Igniting Deep and Joyful Learning Across the Day**
  https://www.heinemann.com/products/e07788.aspx

- **Math Play: How Young Children Approach Math**

- **You Need A Play Table In Your Math Classroom!**
  https://saravanderwerf.com/2017/05/29/you-need-a-play-table-in-your-math-classroom/

- **Making Space for Mathematical Play**

- **The Power of Play**
Thank you

Lindsey Herlehy
lherlehy@imsa.edu
Curriculum & Professional Development Specialist
Illinois Mathematics and Science Academy