The Science of Learning

Advances in our understanding of children’s learning and development can inform how we promote children’s well-being, healthy development, and transferable learning. Development and learning are dependent on the quality of the experiences we provide, and science can inform how to provide quality experiences.

How children learn and grow.

• Development is dependent on experience and the quality of those experiences.

• Development is dynamic and how growth in one area impacts others as such experiences need to support children’s holistic development, including social-emotional, cognitive, and physical development.

How to help children learn and grow.

• Supportive environments and strong relationships that nurture a sense of belonging and community.

• Joyful experiences that help children get into a mindset to learn free from stress and distraction.

• Developmentally appropriate instruction that supports learning and motivation.

• Child-directed experiences that foster skills and habits that enable continuous learning, including self-regulation and a sense of agency.

• Individualized resources and support to respond to children’s needs and address barriers.

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Instructional Strategies

Children learn best when they can be active and engaged in experiences that are meaningful, socially interactive, iterative, and joyful. Strategies to help children include:

- **Meaningful learning** that builds on prior knowledge and experiences to develop deep understanding and transferable knowledge and skills.
- **Inquiry and investigations** that foster higher-order thinking including the ability to find, analyze, synthesize, and apply knowledge to new situations.
- **Well-scaffold instruction** with the right amount of challenge to support engaging learning experiences.
- **Active child-directed opportunities** that allow children to practice and apply learning through hands-on experiences.
- **Collaborative learning experiences** that encourage children to question, explain, and elaborate on their thoughts and co-construct solutions.
- **Joyful and engaging** learning that supports deep understanding and helps learning stick.
- **Multifaceted and complex tasks** that require planning, monitoring, and reflection to support the ability to understand and self-manage one’s learning.
- **Formative assessment** that provides ongoing feedback provided to children and helps refine teaching practices.

Playful Learning

Based on the science of how children learn, care and education must harness the intrinsic motivation and autonomy common to play with adult guidance and facilitation to help children reach developmental and learning goals. In other words, to make learning playful.

**Principles of Playful Learning**

<table>
<thead>
<tr>
<th>Active</th>
<th>Children are actively involved and have agency in the learning process.</th>
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<tbody>
<tr>
<td>Engaged</td>
<td>Children are engaged and focused on learning goals.</td>
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<tr>
<td>Meaningful</td>
<td>Children connect their own experiences and interests to learning goals.</td>
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<tr>
<td>Socially Interactive</td>
<td>Children collaborate and work together involved to meet learning goals.</td>
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<tr>
<td>Iterative</td>
<td>Children’s’ learning evolves to grow and extend understanding.</td>
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<tr>
<td>Joyful</td>
<td>Children are happy and having fun.</td>
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Recommended Readings

https://www.amazon.com/Making-Schools-Work-Bringing-Classroom/dp/0807767387

https://www.naeyc.org/resources/pubs yc/summer2022/power-playful-learning