



**BERNARD ZELL**

**ANSHE EMET DAY SCHOOL**

בית ספר אנשי אמת ע"ש ברנרד זל

Dear Bernard Zell Families,

Over our mid-winter break, I had the opportunity to attend this year's Early Childhood STEM Conference hosted by the Children's Center at the California Institute of Technology. It was an amazing learning experience for me and magnified the importance of our Bernard Zell Early Childhood



team's work to inspire curiosity, grow problem solving skills, and co-construct knowledge as we engage in learning with our youngest students.

The keynote address, by Dr. Lisa Regalla from the Center for Childhood Creativity, focused on her research around the underlying dispositions and knowledge

necessary for children to succeed in a STEM driven economy and world.

She shared six findings that develop the roots of STEM success and we see examples of this throughout our Early Childhood classrooms at Bernard Zell.

1. **Young children are wired for causal learning and the ability to make statistical inferences.** This is why we see our students testing

things out during play and making adjustments to their explorations as they weigh expected vs. unexpected results.

2. **More play leads to better STEM thinking.** Research shows that if something doesn't work the way you thought, you tend to play with it longer. As our students explore open ended play and the intentional invitations we provide, we have the opportunity to ask "what would happen if you had done \_\_\_\_\_?" or "Why do you think that happens?" As they work through these questions, their analytical skills and critical thinking grow.

3. **STEM and language learning develop in tandem.** When children have the opportunity to play both independently and through guided play with teachers or parents, they develop spatial reasoning skills - the ability to mentally manipulate objects and shapes within their environment. This skill is foundational to STEM achievement. Elaborative talk (asking "wh" questions - who, what, when, where and why) and spatial vocabulary development are strategies adults can use to help scaffold children's learning.



4. **Active, self-directed learning builds STEM skills.** Active learning (also known as play!) helps children to grapple with abstract ideas and self directed inquiry builds lifelong interest.
5. **Mindset matters to STEM success.** A growth mindset leads to confidence! We teach our students that not everything comes easy and perseverance is important. When a child says they can't do something, we remind them to add "yet!" It's a powerful word!

6. **Adult support and executive functioning skills promote abstract thinking.** Supporting our student's development of self control, cognitive flexibility, and working memory are all necessary for them to successfully engage in abstract thinking, an important skill when engaging in STEM related learning.

Our job as Early Childhood educators and parents is to continue to fertilize the soil so our children can grow! By allowing time, asking questions, praising process, and embracing the mess, we are setting our students up for success!

Wishing you Shabbat shalom!

Warmly,

Abby Aloni  
Head of Early Childhood