The 15th Annual Early Childhood STEM Conference

Growing



February 21 & 22, 2025 Santa Monica, CA



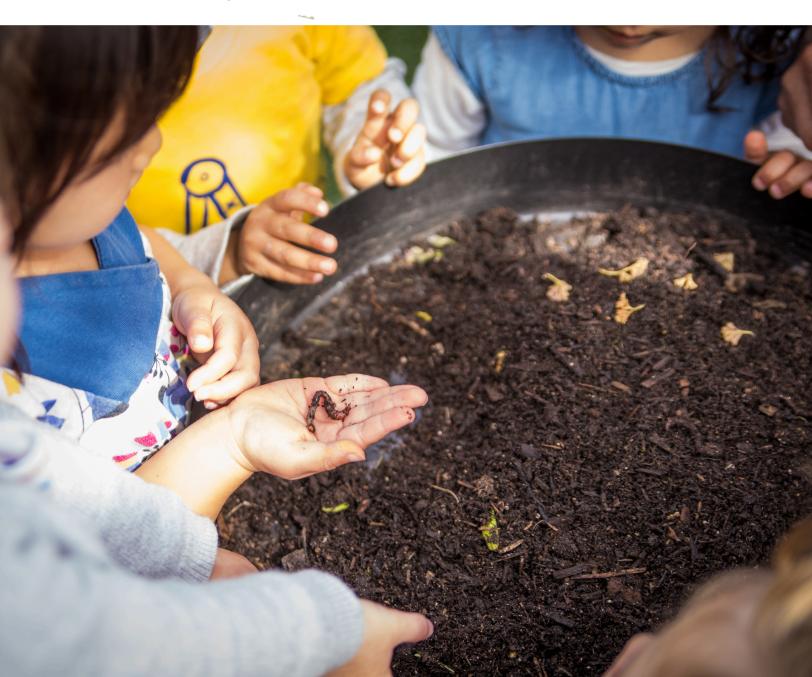






"Let children learn to love the earth before we ask them to save it."

-David Sobel





WELCOME TO THE 15TH ANNUAL EARLY CHILDHOOD SCIENCE, TECHNOLOGY, ENGINEERING & MATHEMATICS CONFERENCE

This year we celebrate 15 years of bringing Science, Technology, Engineering, and Mathematics to Early Childhood Educators from around the globe! In 2000, when the Children's Center at Caltech (CCC) first started exploring children's learning through the lens of STEM, there were few frameworks to draw from for information and inspiration. We discovered schools, educators, authors, and researchers who specialized in this unique perspective in curriculum development and recruited professional growth opportunities for our teachers. To share these resources, we began to invite neighboring schools. This led to the Early Childhood Teacher Collaboration in 2002, which consisted of monthly staff in-service training that was thoughtfully planned to enhance the professional growth of our team, neighbors, and partners in early childhood education.

In 2011, our mission to continue preparing today's children for the challenges of tomorrow heightened our awareness that it was increasingly important that they have developmentally appropriate, inclusive, and culturally sensitive approaches in science, technology, engineering, and mathematics (STEM). And so, the Early Childhood Science, Technology, Engineering, and Mathematics (ECSTEM) Conference was born.

Since then, the CCC has brought together distinguished researchers and educators from around the globe to promote and increase awareness about the importance of introducing STEM education to early childhood. The goal was to address early childhood educators' challenges regarding STEM curriculum and instruction, the implications for early childhood pedagogy and ultimately beginning a national movement focusing on STEM for children from birth to age eight.

The ECSTEM Conference celebrates its 15th year, Growing Up STEM. We are proud to partner with Growing Place; together, we highlight STEM experiences in children's everyday play! Thank you for being interested in joining us in this movement to strengthen our educational system for the future generations to come!

Sincerely,
The ECSTEM Committee

Susan Wood, M.A., Children's Center at Caltech - Executive Director
Olivia Garcia, B.A., Children's Center at Caltech - Associate Director
Melissa Samples, M.A., Children's Center at Caltech - STEM Curriculum Coordinator
Tiffany Chou, B.A., Children's Center at Caltech - Accounts Manager
Kristine Scott, B.A., Children's Center at Caltech - Office Manager
Pauline McPeake, M.A., Growing Place - ECSTEM Coordinator | Director, Canyon Crest Preschool
Chelsea McCants, B.A., Growing Place - ECSTEM Coordinator | Asst. Director, Canyon Crest Preschool
Sarah Ruben, M.S., Growing Place - Director of Pedagogy
Cecilia Carrillo, B.S., Growing Place - Campus Director



Since 1972, the Children's Center at Caltech (CCC) has become a national leader in STEM Early Education. The CCC uses a constructivist, play-based approach to plan, develop, and implement an inquiry-rich curriculum through the lens of STEM. As community outreach,

children's center catech

the CCC hosts professional development workshops and shares its STEM-based Early Childhood Education research.



Since 1985, Growing Place (GP) has been recognized as a leader in early childhood education for its pedagogical approach, teacher development, and work with children and families. GP curriculum is inspired by dialogue with Reggio Children® and social constructivist theory. From these pillars, Santa Monica College selected Growing

Place to operate the Santa Monica Early Childhood Lab School, expanding GP's reach to three campuses in Santa Monica and educators across the region.

2025 ECSTEM CONFERENCE PROGRAM

Schedule at a Glance

Friday, February 21st

8:30 a.m. – 10:00 a.m.	Keynote Speaker: David Sobel
10:30 a.m 12:00 p.m.	Session I Workshops
12:00 p.m 1:30 p.m.	Lunch & Growing Place, Lab School Tour
1:30 p.m 3:00 p.m.	Session II Workshops
1.50 p.m 5.00 p.m.	Session ii vvoiksnops
3:00 p.m 5:00 p.m.	Growing Place, Ocean Park & Palisades Preschool Tours

Saturday, February 22nd

8:30 a.m 10:00 a.m. 10:30 a.m 12:00 p.m. Session I Workshops 12:00 p.m 1:15 p.m. Lunch 1:15 p.m 2:00 p.m. Micro Session II Workshops 2:15 p.m 3:00 p.m. Micro Session III Workshops 3:00 p.m 5:00 p.m. Canyon Crest Preschool Tour			
12:00 p.m 1:15 p.m. Lunch 1:15 p.m 2:00 p.m. Micro Session II Workshops 2:15 p.m 3:00 p.m. Micro Session III Workshops	8:30 a.m. – 10:00 a.m.	Keynote Speaker: Aaron Ames	
12:00 p.m 1:15 p.m. Lunch 1:15 p.m 2:00 p.m. Micro Session II Workshops 2:15 p.m 3:00 p.m. Micro Session III Workshops			
1:15 p.m 2:00 p.m. Micro Session II Workshops 2:15 p.m 3:00 p.m. Micro Session III Workshops	10:30 a.m. – 12:00 p.m.	Session I Workshops	
1:15 p.m 2:00 p.m. Micro Session II Workshops 2:15 p.m 3:00 p.m. Micro Session III Workshops			
2:15 p.m. – 3:00 p.m. Micro Session III Workshops	12:00 p.m 1:15 p.m.	Lunch	
2:15 p.m. – 3:00 p.m. Micro Session III Workshops			
	1:15 p.m 2:00 p.m.	Micro Session II Workshops	
3:00 p.m. – 5:00 p.m. Canyon Crest Preschool Tour	2:15 p.m 3:00 p.m.	Micro Session III Workshops	
3:00 p.m. – 5:00 p.m. Canyon Crest Preschool Tour			
	3:00 p.m 5:00 p.m.	Canyon Crest Preschool Tour	

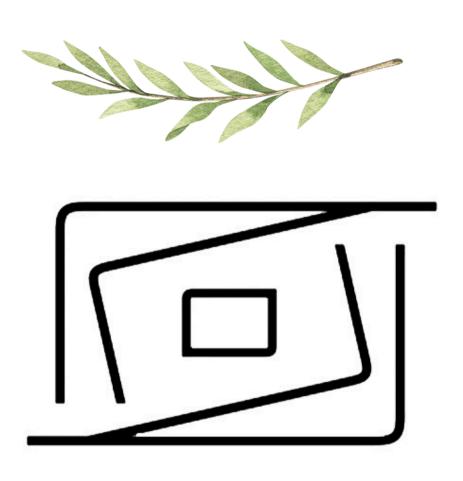
Table of Contents

INFORMATION

Hilton Santa Monica Map & Growing Place Map	10–11
General Information	14–15
Keynote Speakers	17
Plan Your Day & Food Concessions	
Friday Schedule of Events and Tour Sites	20-21
Saturday Schedule of Events and Tour Sites	30
Sponsors	40
Exhibitors	
<u>WORKSHOPS</u>	
Friday Sessions	21-27
Saturday Sessions	31–38
ADDITIONAL INFORMATION	
Fun Things in Santa Monica	42
Social Media	43



Certificates and a Conference Evaluation Survey will be available in your email at the conclusion of the conference. THE EARLY CHILDHOOD SCIENCE,
TECHNOLOGY, ENGINEERING, AND
MATHEMATICS CONFERENCE THANKS
OUR SPONSORS FOR THEIR
GENEROUS SUPPORT



AI + Gallery





Panda Restaurant Group, Inc. believes that good fortune is best shared.

We proudly support The Early Childhood STEM Conference. Thank you for your dedication to inspiring better lives.







Keynote presentation held at the Hilton Santa Monica, Pacific Ballroom.

Sessions held at Hilton Santa Monica and Growing Place, Lab School.

Complimentary Wi-Fi

Hilton Santa Monica

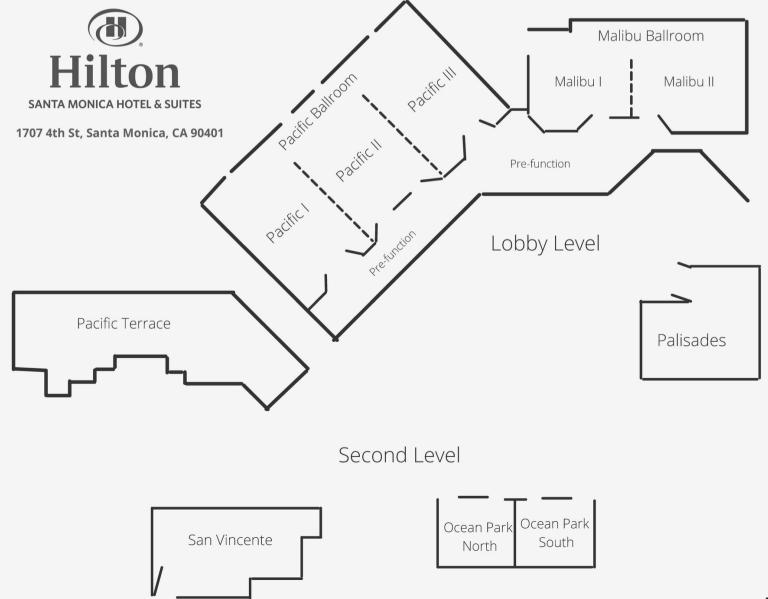
Network: ECSTEM

Password: ECSTEM2025

Growing Place, Lab School

Network: GP Guest Password: gpvisitor

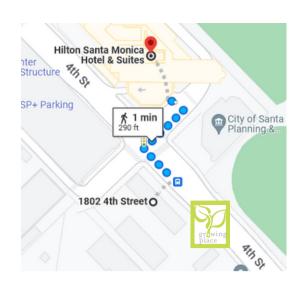
HILTON SANTA MONICA



Visit our Exhibitor Hall located at Growing Place, Lab School.

EXHIBITOR HALL HOURS

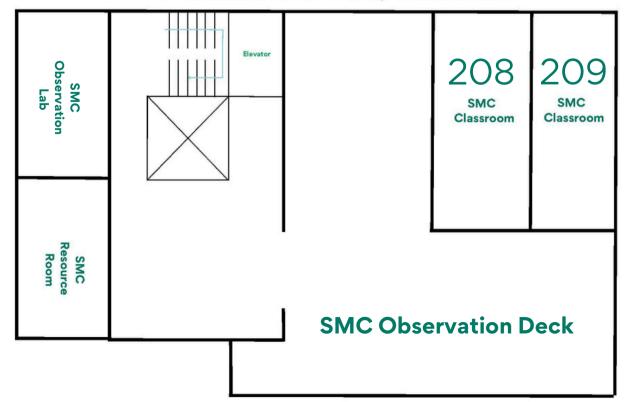
Friday | Open 8am - 5pm Saturday | Open 8am - 3pm



GROWING PLACE, LAB SCHOOL



Administration Building: Second Floor





"If you truly love nature, you will find beauty everywhere."

-Vincent Van Gogh





designing spaces that spark curiosity and creativity.







KAPLAN®

EARLY LEARNING COMPANY

General Information

REGISTRATION

Registration is required. An issued name badge will grant admission to all conference activities, including entrance at tour sites. Attendees, presenters, and exhibitors may pick up registration materials at the Hilton Santa Monica Check-In Table.

Registration Hours

Friday, Feb. 21 7:00am-2:00pm Saturday, Feb. 22 7:00am-11:00am

PAYMENT OPTIONS

Checks are payable to the Children's Center at Caltech.
Cash, VISA, MasterCard, American Express, and Discover also accepted.

REFUNDS

We do not offer refunds. Participants may send an alternate in place if they are unable to attend.

GENERAL CONSENT AND RELEASE FOR USE OF YOUR IMAGE

By attending this event, you agree to be photographed and/or filmed and give permission to use your likeness in promotional and/or marketing materials.

CONFERENCE ETIQUETTE

A successful conference requires that we extend professionalism and courtesy to one another. The following tips will ensure a pleasant experience for all participants:

- Silence cell phones.
- If it is necessary to leave a session early or arrive late, please make the interruption as nondisruptive as possible.
- Please respect capacity limits for rooms, if the session is full, please enjoy another one of our many conference offerings.

PARKING

The Hilton Santa Monica maintains a controlled parking lot. Parking rates are discounted for the ECSTEM Conference. Parking rates are as follows: Valet event parking is \$20. Valet overnight parking is \$30. Individuals must identify themselves as being with the group, EARLY CHILDHOOD STEM CONFERENCE, upon departure in order to receive the discounted rate.

Public Parking is available at the Civic Center Parking Structure, across the street from Hilton Santa Monica, and is subject to availability. Parking rates are as follows: Weekday All Day: \$14. Weekend All Day: \$5.

RECORDING AND PHOTOGRAPHY OF PRESENTATIONS AND TOUR SITES

There will not be professionally-made video or audio tapes of conference presentations. If you wish to tape or photograph a presentation, you must first obtain the speaker's permission. To respect the privacy of the children and families at the Tour Sites, photography and video recording are not permitted unless explicitly allowed by the site.

PROGRAM CHANGES

Unexpected, last-minute changes to our program are inevitable. Signage of changes will be posted by the door of appropriate rooms.

ENDORSEMENT DISCLAIMER

ECSTEM is pleased to present a wide variety of learning and informational opportunities available at this conference. ECSTEM does not, however, endorse products or services promoted in any of the sessions or exhibits. Opinions expressed are those of the presenters and do not necessarily reflect the position of ECSTEM.

ECSTEM shall not be responsible for loss or injury from the purchase or use of goods and services offered at the conference.

SALES

With the exception of onsite registration for the conference, no monetary exchange of any type may occur before, during, or after a presentation in any of the workshop rooms or anywhere in the hotel. Sales may take place only in booths located in the Exhibit Space.

CONFERENCE EVALUATION

We hope you will share with us your feedback about this year's conference. The workshop evaluation will be available via QR code and emailed at the conclusion of the conference.

CERTIFICATES

Certificates will be emailed to you at the conclusion of the conference.



Upcoming Educator Tours and Professional Development

LEARN WITH US

we learn together

EDUCATOR TOURS

All Educator Tours include a tour of the campus, insightful discussion, and a collaborative presentation session by school leadership and classroom educators.



Discovering the Possibilities of the Atelierista and Teacher Partnership

Investigate how the combined perspectives of the atelierista and the teacher develop collaborative small group work and how you can meaningfully work with materials in your setting. Gain inspiration for weaving diverse materials and rich viewpoints into your curriculum.

NEW DATE!

Friday, April 4, 2025 9:00 AM - 12:00 PM OCEAN PARK CAMPUS • 401 ASHLAND AVENUE



Encounters with Play and Belonging

Delve into highlights of two years of research with children, educators, and families on Play and Belonging. Examine moments from constructivist, Reggio-inspired curriculum with infant, toddler, and preschool classrooms for the understandings we reached about our overarching theme. Gain pedagogical insights on building community while deepening learning.

Friday, May 16, 2025 9:00 AM – 12:00 PM LAB SCHOOL CAMPUS • 1802 4TH STREET

TAILORED PROFESSIONAL DEVELOPMENT

By arrangement, Growing Place offers:

- Private Tours
- Materials Workshops
- Presentations
- Consultations and Site Visits



Scan the QR code to register for the April and May Educator Tours or to inquire for tailored PD!

Keynote Speakers





David SobelFriday Keynote

David Sobel is a Professor Emeritus in the Education Department at Antioch University New England in Keene, NH. He consults and speaks widely on child development and place-based education with schools, environmental organizations, and the National Park Service. In the last thirty years, he has authored ten books and more than 90 articles focused on children and nature for educators, parents, environmentalists, and school administrators.

Aaron Ames is the Bren Professor of Mechanical and Civil Engineering and Control and Dynamical Systems at the California Institute of Technology. His research interests span the areas of robotics, nonlinear control, and hybrid systems, with a special focus on applications to bipedal robotic walking—both formally and through experimental validation. His lab designs, builds and tests novel bipedal robots, humanoids and prostheses with the goal of achieving human-like bipedal robotic locomotion and translating these capabilities to robotic assistive devices.



Aaron Ames Saturday Keynote

PLAN YOUR DAY

NAVIGATING CONFERENCE SESSIONS

To support your conference experience, workshop sessions have been categorized by content area (Science, Technology, Engineering and Mathematics) and target audience. Conference attendees may follow one content area to focus on a particular subject matter or may pick and choose among topics to sample the full complement of conference offerings. The listing of content offerings and their abbreviations can be seen here.

CONTENT	TARGET AUDIENCE
S - Science	l – Infants
T – Technology	T - Toddlers
E - Engineering	P - Preschool
M - Math	TK - Transitional Kindergarten
	K - Kindergarten
	FG - First Grade
	SG - Second Grade
	A – Administration

EXHIBITOR HALL

Don't forget to visit the exhibitor hall located across the street from the Hilton Santa Monica at the Growing Place, Lab School. View page 41 for the list of exhibitors.

TOUR SITES

Tour sites have limited hours and specific days that they are being offered. Check the tour information for Friday on page 21 and for Saturday on page 30.



Food Concessions

Lunch is included with registration and available for pickup at the following locations:

Friday, February 21st

Growing Place, Lab School

12pm - 1:30pm



<u>Saturday, February 22nd</u>

Hilton Santa Monica

12pm - 1:15pm

COMMUNITY SUPPORT GATHERING

A space to heal, connect, and find strength together.

In the wake of the recent fires that have deeply affected our surrounding communities, we want to take a moment to acknowledge the challenges many are facing. During this difficult time, we hope this gathering will offer not just professional growth but also a sense of comfort and connection.

We've set aside a special space during lunch for those directly impacted by the fires—an opportunity to share, support one another, and build resilience together. You are not alone; we are here to stand with you.

FEATURED SESSION

"Supporting Young Children Through Crisis"

Saturday, Micro-Session 2
Growing Place, SMC Classroom 208

SMC Classroom 208

Growing Place, Lab School

Friday | 12pm - 1:30pm Saturday | 12pm - 1:15pm



Do Your Part: BRING YOUR OWN BOTTLE



We're working to make this event as low-waste and eco-friendly as possible. Please bring your own reusable water bottles — refill stations will be available. Together, we're modeling how small, mindful changes can protect the natural world children will grow to love and protect.

15TH ANNUAL ECSTEM CONFERENCE SCHEDULE OF EVENTS

FRIDAY SESSIONS AND TOURS

Friday, February 21st

-1.7			Λ٦	\square_{I}	ΝI
_ L'	\cup	C	A I	Ш	ΙN

7:00 a.m 2:00 p.m.	Registration & Check In	Hilton Santa Monica	
8:00 a.m. – 5:00 p.m.	Exhibit Space	Growing Place, Lab School	
8:30 a.m. – 10:00 a.m.	Opening Address and Keynote Speaker	Pacific Ballroom	
10:00 a.m. – 10:30 a.m.	Break		
10:30 a.m. – 12:00 p.m.	Session I Workshops	Breakout Rooms	
12:00 p.m 1:30 p.m.	Lunch and Tour - Growing Place, Lab School	Growing Place, Lab School	
1:30 p.m 3:00 p.m.	Session II Workshops	Breakout Rooms	
3:00 p.m 5:00 p.m.	Tours - Palisades Preschool and Growing Place, Ocean Park	Tours are self-guided. Transporation not included.	

FEATURED SESSIONS

We're cultivating connections with nature! Take a look at a few sessions to help you plant the seeds of environmental stewardship.

"Living Things: Variation"

Explore how to create a nature-based curriculum that is viewed through the lens of STEM and applies the Waldorf principles of focusing on rhythms and seasonal observations.

Presenter: Richard Ponce, BA The Children's Center at Caltech

Friday, Session 2

"Learning from Nature: Patterns and Biomimicry"

This workshop invites participants to learn about patterns in nature and biomimicry through presentation of work that took place with TK students in 2023/2024 and create their own biomimicry invention.

Presenter: Eriko Arakaki, MA &

Valeria Vacchi, BA Palisades Preschool

Saturday, Micro-Session 2



FRIDAY TOUR LOCATIONS

LUNCH TOUR | OPEN 12:00PM - 1:30PM

GROWING PLACE, LAB SCHOOL

growingplace.org/lab-school

1802 4th St. Santa Monica, CA 90401

The Santa Monica Early Childhood Lab School opened in September 2021 and is Growing Place's newest campus through collaboration with Santa Monica College and the City of Santa Monica. The Lab School is a demonstration site for Santa Monica College Early Childhood Education students to observe our established teaching and learning practices.

AFTERNOON TOURS | OPEN 3:00PM - 5:00PM

GROWING PLACE, OCEAN PARK CAMPUS

growingplace.org/ocean-park

1 mile from Hilton Santa Monica 401 Ashland Avenue, Santa Monica, CA 90405

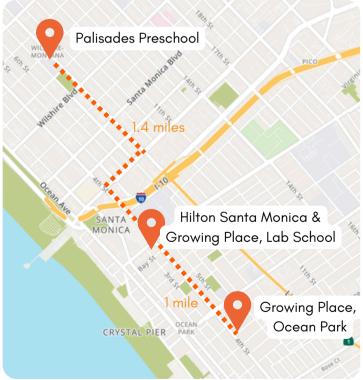
Growing Place was founded in 1985 with the Ocean Park Campus. Situated on an acre, Growing Place re-imagined and revived an old elementary campus to its full potential for our preschoolers. Five classrooms, an atelier, and a shared outdoor play space filled with nature contribute to our everyday experiences.

PALISADES PRESCHOOL

palisadespreschool.org

1.4 miles from Hilton Santa Monica958 Lincoln Blvd, Santa Monica, CA 90403

Palisades Preschool is a Reggio-inspired school community serving children, ages 24 months to 6 years of age, and their families. Their mission is to serve the community by offering a preschool experience for children and adults that celebrates diversity, creativity, kindness, and wonder. These values are embedded within a rich, child-centered curriculum that provides individuals and groups with opportunities to investigate and to express themselves.



ECSTEM 2025 Workshop Schedule

Friday, February 21st, 2025

KEYNOTE: 8:30AM - 10:00AM, PACIFIC BALLROOM

DAVID SOBEL

Will My Child Be Ready for Kindergarten or First Grade: A Review of Ten Years of Research on Nature-based Early Childhood Programs

In conjunction with researchers in Michigan and Minnesota, David has collaborated on research comparing the impacts on children in nature-based early childhood programs vs. children in traditional high quality early childhood programs. Research has focused on early literacy development, numeracy development, STEM learning, motivation, resilience, executive functioning and more. It has been conducted in private nature preschools, publicly funded HeadStart programs, university lab schools and public preschool programs. In the spirit of "slow and steady wins the race," an interesting story has emerged about the benefits of nature-based programs. Spoiler Alert: The answer to the question, "Will My Child Be Ready?" is: a definitive "Yes!"

SESSION I: 10:30AM - 12:00PM

"The Dynamics of Play: A Physics Perspective"

We will explore how children inherently engage with fundamental concepts of physics through their play and examine the critical role that educators play in nurturing and extending this natural curiosity. Through play, children instinctively encounter principles such as motion, force, balance, and energy. Educators, by recognizing these explorations, can provide intentional guidance and create learning environments that deepen children's understanding of these concepts.

Presenter: Sam Foreman, MA & Luis Salgado, MA

Growing Place
Target Audience: IT

Content: S E M

Location: Hilton Santa Monica, Malibu 1

"In Search of the Hidden Value: Playful Math Games"

Do you want to expand the variety of math games and experiences for small groups of children to meet the needs of larger groups? The presentation will feature a variety of creative and interactive games covering geometry, logic, measurement, grouping, order, series, seriation, classifying, number and operations. Hands-on and interactive experiences will be provided to tinker with some of these games and innovative ideas.

Presenter: Christine Richard, MA & David Moreno, MA

Growing Place

Target Audience: P TK K

Content: E M

Location: Hilton Santa Monica, Malibu 2

"G is for Garden"

Dig into the exciting world of plant structures. Use hand lenses to explore plant parts up close and get your hands dirty with fruit dissections to reveal hidden seeds and structures. Perfect for educators seeking fun, inquiry-based science activities.

Presenter: Kristin Brisbois, PhD & Sarah Thomas, MSW, MPA The Huntington Library, Art Museum, and Botanical Gardens

Target Audience: P TK K FG SG

Content: S

Location: Growing Place, SMC Classroom 208

"What good is a stick? How Natural Loose Parts Spark Creativity and Imagination in the Outdoor Classroom"

Natural loose parts are the bedrock of opportunities for creativity and imagination. What materials can educators add that will take children's imagination, creativity and problem-solving to the next level?

Presenter: Ellen Veselack, BA Child Educational Center Target Audience: ITPTK

Content: STEM

Location: Hilton Santa Monica, Pacific 1

"Partnering with Children to Co-Develop a Curriculum that Embraces STEM"

Young children offer us endless opportunities for enhancing our STEM curriculum, if we are willing to listen! Through a process of observation and documentation, educators can extend children's innate capabilities.

Presenter: Maureen Condon, MA & Alex Morgan, MA

Boulder Journey School
Target Audience: ITPTKKA

Content: STEM

Location: Hilton Santa Monica, Pacific 3

"Is 'Father Parenting' the Key to STEM Success?"

Dads parent differently. Research shows how they drive the SEL needed for success in STEM ... and everywhere! "Father Parenting" can be done by anyone – how do we support it?

Presenter: Ben Swett, MA

Early Engagement
Target Audience: ITP
Content: STEM

Location: Hilton Santa Monica, Ocean Park South

"Celebrating Interconnectivity Through the Eyes of Children"

A long-term investigation into how reciprocal relationships reflect the interdependence we share within the web of life.

Presenter: Cindy Nelson, AA & Octavia Leclerc-Jones

The New School West
Target Audience: T P TK K A

Content: STEM

Location: Growing Place, SMC Classroom 209

"Nature and Nurture"

This workshop will enable us to understand the different abilities of the child. We will do a thorough scientific analysis of the concept of Nature vs Nurture and will explore the nurture of nature.

Presenter: Raquel Felici, MSc Hebrew Academy Miami

Target Audience: P TK K FG

Content: STEM

Location: Hilton Santa Monica, Ocean Park North

"China ECSTEM Showcase Part I"

Building Learning Experiences for Young Children – STEM activities in different age groups at Soong Ching Ling Kindergarten. Soong Ching Ling Kindergarten is one of the top international kindergartens in China offers a blend of Eastern and Western teaching practice.

Exploration of Bee-Bot PBL Practice - by Hua Guo Tian Yu Education Technology

Presenter: Teachers of Soong Ching Ling Kindergarten, & Heidi Luo, MA

Hua Guo Tian Yu Education Technology & Soong Ching Ling Kindergarten

Target Audience: TPTKKFG

Content: STEM

Location: Hilton Santa Monica, Pacific 2

"There must be a provision for the child to have contact with nature; to understand and appreciate the order, the harmony and the beauty in nature."

FRIDAY LUNCH SITE TOUR: 12:00PM - 1:30PM

Grab your lunch at the Growing Place, Lab School parking lot and then head inside for a self-guided tour of the program.

Two-day and Friday registrants can tour Growing Place, Lab School at this time only.

GROWING PLACE, LAB SCHOOL

1802 4th St. Santa Monica, CA 90401



SESSION II: 1:30PM - 3:00PM

"Living Things: Variation"

Explore how to create a nature-based curriculum that is viewed through the lens of STEM and applies the Waldorf principles of focusing on rhythms and seasonal observations.

Presenter: Richard Ponce, BA
The Children's Center at Caltech

Target Audience: TPTKK

Content: STEM

Location: Hilton Santa Monica, Malibu 1

"What is the Importance of Object Play and Rough and Tumble Play in Early Development?"

As children, they are born into a three-dimensional world and spend their early years observing and moving in order to better understand themselves in relation to others and their environment. The purpose of this session is to review video together in order to see how children build relationships through movement and physical contact.

Presenter: Julia Vazquez, BA & Christine Richard, MA

Growing Place

Target Audience: ITP

Content: S M

Location: Hilton Santa Monica, Malibu 2

"Children's Books that Celebrate the Beauty and Power of Our Natural World"

Come and explore the beauty and power of nature presented through illustrations, and photography in children's books. Experience vivid illustrations, photography and digital media as a means to learn about and celebrate the natural world. As you flip the pages of the books we will discuss and contemplate how we can build on the concepts presented with follow-up activities and innovative materials. We will discover the use of specimens, and imagery to bring the real world into our classroom. Reflect on how you can use children's books to support the understanding of sustainability and stewardship.

Presenter: Jennifer Montgomery, EdD

College of Southern Nevada

Target Audience: P TK K

Content: S

Location: Hilton Santa Monica, Pacific 1

"Kindergarten Readiness Through the Arts"

STEM through the Arts? Atelieristas share methods and materials for classroom curriculum to support these foundational skills, nurturing creative ways of knowing while building fundamental tools for the future.

Presenter: Anna Forward, MA & Polly Hall, MA

Growing Place

Target Audience: ITPTKK

Content: STEM

Location: Hilton Santa Monica, Pacific 3

"Woodworking with Children: Engineering a Strong Image of the Child"

This workshop aims to support participants to explore the various ways in which Woodworking can be integrated into our daily curriculum. Wood is a gift from the Earth that encourages us to slow down and utilize different tools to engineer our thinking.

Presenter: Amy Bice, AA & Susan Kim, BA

The New School West

Target Audience: TPTKKFG

Content: STEM

Location: Growing Place, SMC Classroom 209

"Training Educators to Design STEM Environments"

Join this reflective journey of engaging with STEM provocations and discover a replicable framework that ignites curiosity, inspiration, and fortitude in both entry-level and senior educators to design STEM curriculum.

Presenter: Beth Nakatsui, MA Magnolia Community Preschool

Target Audience: PA

Content: STEM

Location: Growing Place, SMC Classroom 208

"Storytelling as an Interactive Teaching Modality: How to use Felts, Puppets and Props to Build STEM Vocabulary and Enhance Literacy Through Multiple Disciplines"

Fun, interactive and STEMtastic! Unlock dynamic storytelling skills with the practical use of felts, puppets and props! Help build language skills so learners can express their STEM ideas effectively.

Presenter: Sundrina Cottrell, AA
Artfelt Puppets, Pieces & Props
Target Audience: ITPTK KFG SG A

Content: STEM

Location: Hilton Santa Monica, Ocean Park North

"We do not inherit the earth from our ancestors, we borrow it from our children."

"The Art of Asking Open-Ended Questions"

Asking open-ended questions is one of the best ways to promote STEM learning without telling children what to do. Learn how to ask questions that promote development specifically in the areas of science and math, especially during observations for assessment.

Presenter: Angela Russ-Ayon, BS

Russ InVision

Target Audience: PTK K

Content: S M

Location: Hilton Santa Monica, Ocean Park South

"China ECSTEM Showcase Part II"

"Animal Homes" STEM Exploration Journey by Shanghai Institute of Early Childhood Education at Shanghai Normal University

"In the Chinese- English Bilingual Curriculum system how to combine STEM with IEYC and carry out teaching activities" by BeeMee Forest Academy

Examples: Roof Engineering Design; Simulated Rocket Launch and Pulsation.

Presenter: Heidi Luo, MA, Ms. Liu Ke, & Ms. Xiang Shanshan

Hua Guo Tian Yu Education Technology & BeeMee Forest Kindergarten

Target Audience: TPTKKFG

Content: STEM

Location: Hilton Santa Monica, Pacific 2

FRIDAY AFTERNOON TOURS: 3:00PM - 5:00PM

Two-day and Friday registrants can tour **Growing Place**, **Ocean Park** and **Palisades Preschool** at this time only. The tours will be self-guided, transportation is not provided, please utilize street parking.

GROWING PLACE, OCEAN PARK CAMPUS

401 Ashland Avenue, Santa Monica, CA 90405







PALISADES PRESCHOOL

958 Lincoln Blvd, Santa Monica, CA 90403







Submit a 2026 ECSTEM Conference Proposal!

Submit a proposal to share your knowledge and expertise with the early childhood education community at next year's ECSTEM Conference!

Visit ecstem.org this summer for deadlines and proposal information.

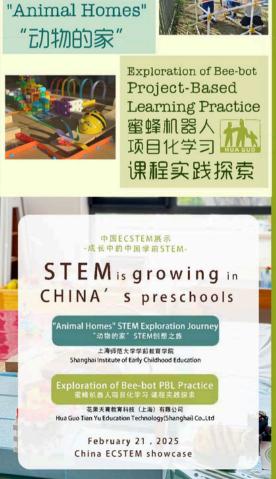
STEM

Journey

Exploration











Celebrating 80 Years of Excellence in Early Childhood Education

Join Pacific Oaks in shaping the future of education

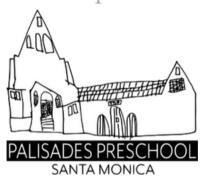
- B.A. in Early Childhood Education
- M.A. in Early Childhood Education
- Ed.D. in Early Childhood Education



Thank you to our supporters for generously providing the venues that made our sessions and site tours possible.







"We often forget that
we are nature. Nature
is not something
separate from us. So
when we say that we
have lost our
connection to nature,
we've lost our
connection to
ourselves."

-Andy Goldsworthy



15TH ANNUAL ECSTEM CONFERENCE SCHEDULE OF EVENTS

SATURDAY SESSIONS

Saturday, February 22nd

LOCATION

7:00 a.m. – 11:00 a.m.	Registration & Check In	Hilton Santa Monica	
8:00 a.m. – 3:00 p.m.	Exhibit Space	Growing Place, Lab School	
8:30 a.m. – 10:00 a.m.	Opening Address and Keynote Speaker	Pacific Ballroom	
10:00 a.m. – 10:30 a.m.	Break		
10:30 a.m. – 12:00 p.m.	Session I Workshops	Breakout Rooms	
12:00 p.m 1:15 p.m.	Lunch	Hilton Santa Monica	
1:15 p.m 2:00 p.m.	Micro Session II Workshops	Breakout Rooms	
2:15 p.m 3:00 p.m.	Micro Session III Workshops	Breakout Rooms	
3:00 p.m 5:00 p.m.	Tour – Canyon Crest Preschool	Tours are self-guided. Transporation not included.	

SATURDAY TOUR LOCATION

Afternoon Tour | Open 3:00PM - 5:00PM

Canyon Crest Preschool

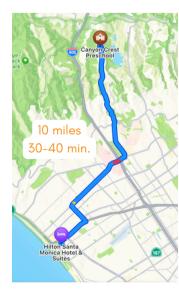
canyoncrestpreschool.com

10 miles from Hilton Santa Monica

2323 N Roscomare Rd. Los Angeles, CA 90077

Canyon Crest Preschool embraces play-based learning, encouraging children to explore nature, tinker, wonder, and learn about the real world through meaningful experiences and relationships. Children's early experiences are fundamental in the foundation and framework for kindergarten and beyond.

*Please allow yourself time for traffic, 4:30pm will be the last entry. Carpool is recommended as there is a small parking lot, plan to use street parking.



ECSTEM 2025 Workshop Schedule

Saturday, February 22nd, 2025

KEYNOTE: 8:30AM - 10:00AM, PACIFIC BALLROOM

AARON AMES

Lessons Learned from Teaching Robots to Walk

We are at a critical juncture in robot technology—children today have the possibility of growing up in a world where robots are part of their everyday lives. This presentation will explore the duality of this potential: how can we teach robots to do useful things, and how robots can be leveraged in positive ways. I will focus on robotic locomotion as a concrete instantiation of this duality. In particular, I will describe the process of making robots walk in human-like ways, and how we can take inspiration from children learning to walk. Conversely, I will demonstrate how the ability to make robots walk in natural and efficient ways leads to robotic assistive devices that can restore mobility. From this, we explore the broader question: how can robots be used beneficially? I will answer this question, in part, through examples of robot technology on the horizon, and what this might mean for education.



SESSION I: 10:30AM - 12:00PM

"Supporting the Development of Executive Function through Outdoor Games"

Research over the past decade suggests that it's more important to focus on the development of executive functions in preschool children than to focus on early literacy and math skills. But what is "executive function (EF)" anyway, how do you measure it, and what can you do to develop it? After a brief review of the research on EF in preschool children, we'll engage in an array of outdoor games (some traditional, some new), and we'll analyze how different components of the games develop different aspects of EF. Be ready to play Simon Says, Red Light/Green Light, a variation of Head & Shoulders, Knees & Toes and other games used successfully in programs around the country.

Presenter: David Sobel

Professor Emeritus and Author, Antioch University New England, Keene, NH

Target Audience: ITP TK K FG SG

Content: STEM

Location: Hilton Santa Monica, Pacific 3 (this is the meeting location, limited capacity)

*This workshop will take place outdoors and will require a short walk & playing!

"Molding Minds: The Intersection of STEM Education and Clay"

Natural clay is a versatile medium. Shaping and molding clay invites children to consider fundamental concepts in engineering and geometry such as scale, dimensions, and spatial organization. Tactile experience with clay is a tangible way to find the intersection between creativity and problem-solving. This session includes documentation regarding civil engineering processes for motor planning through the use of full-body clay, to the creation of cakes for a community party planned by children.

Presenter: Julie Martin, BS & Teri Rawson, AA

Growing Place

Target Audience: TP

Content: S E

Location: Hilton Santa Monica, Malibu 2

"Integrating Music as a Cross-Curricular Collaboration in the Classroom"

With pedagogical aspects of music educators as Carl Orff, Zoltán Kodály, Emile Jaques-Dalcroze and early childhood education advocate Friedrich Froebel, we will learn how music & movement curriculum can successfully collaborate with classroom curriculum, finding common threads such as cognitive, socialemotional, language acquisition, and spatial awareness to name a few.

Presenter: Dayita Datta, MA

The Children's Center at Caltech
Target Audience: ITPTKKFGSGA

Content: STEM

Location: Hilton Santa Monica, Malibu 1

"Reaching for the Sky: Taking Toddlers Outside"

Being outdoors is magic in expanding toddlers' play and calming everyone's nervous system, including adults. Learning outdoors binds children to their true nature. Come see how it works in RIE-inspired programs.

Presenter: Ruth Anne Hammond, MA Educaring® Consultant, RIE Mentor

Target Audience: IT

Content: SEM

Location: Hilton Santa Monica, Pacific 2

"Science After Preschool"

After students leave preschool, what happens in Science class? Well, as it turns out, many of the ideas and concepts that children learn at 5 years old carry with them through High School. That's right, HIGH SCHOOL! Let's take a peek at what Science class looks like for Kindergarten through 5th grade at an independent school in Pasadena CA. I will discuss topics, connections, materials, schedules, journaling, and hands-on experiences.

Presenter: Monica Dolan, MA

Polytechnic School

Target Audience: TK K FG SG

Content: STEM

Location: Hilton Santa Monica, Pacific 1

"Culinary Curiosities from Our Planet to Our Plate"

Through a culinary curriculum infused with connection, creation, and conservation, children engage with food to deepen their relationship with community and the natural world, expanding both palettes and perspectives.

Presenter: Madeline Friess, BA Evergreen Community School

Target Audience: P

Content: S

Location: Hilton Santa Monica, Ocean Park South

"Across the Pond Dipping! Nature Connection in a Modern World (A UK case study)"

This presentation will take you through a seasonal, project approach curriculum where children acquire knowledge and develop understanding of the natural world. Using wild spaces throughout the year, children interact with nature and learn its importance in our lives and for our future.

Presenter: Mandy Richardson, MA & Tom Richardson, BA PGDip

Naturally Learning Ltd
Target Audience: ITPTKK

Content: STEM

Location: Hilton Santa Monica, Ocean Park North

"Fostering Ecological Mindfulness & Sustainability in ECE"

This hands-on workshop highlights some foundational arts & nature-based learning concepts.

Participants will work with recycled and natural materials creating nature journals and discovering the connections to ESTEM.

Presenter: Sylvette Frazier, MA Ed. Connecting Children to Art in Nature

Target Audience: PTK K FG SG

Content: ST

Location: Growing Place, SMC Classroom 208

"Outside Your Door: Exploring the Arts in Nature"

Expand opportunities for STEM learning by using arts strategies to investigate the world around you.

Explore earth, life, and physical sciences through drama, music, and puppetry.

Presenter: Penny Russell, BA

Wolf Trap Institute for Early Learning Through the Arts

Target Audience: ITPTKK

Content: S

Location: Growing Place, SMC Classroom 209

"In every walk with nature, one receives far more than he seeks." John Muir

MICRO-SESSION II: 1:15PM - 2:00PM

"Supporting Young Children Through Crisis"

In the wake of the recent California fires, early childhood educators face the critical task of supporting children who may be experiencing stress, fear, or grief. This workshop equips educators with practical tools and compassionate strategies to engage in age-appropriate, meaningful conversations with children in crisis.

Presenter: TBD

Target Audience: ITPTKFGSGA

Location: Growing Place, SMC Classroom 208

"Ramps and Pathways"

Children's interests and desires to figure out how the physical world works makes ramps and pathways exploration ideal for early childhood settings. Through building systems to move objects, children engage in open-ended play experiences that encourage creativity, problem solving, and integrates science, technology, engineering, and math principles. Learn how versatile these materials can be and how you can create opportunities for experimentation and discovery while learning through physics.

Presenter: Susan Wood, MA & Melissa Samples, MA

The Children's Center at Caltech

Target Audience: ITPTK

Content: STEM

Location: Hilton Santa Monica, Malibu 1

"Exploring STEM in Children's Literature"

Participants will learn ways to look at children's books through the lens of STEM (Science, Technology, Engineering and Math). The audience will understand and appreciate the link between the use of props in literature and the reading ability of children; they will also understand the connection between receptive language and productive language and explore ways to link STEM topics with children's literature.

Presenter: Christina Cho, BA

De Anza College

Target Audience: TPTK

Content: STEM

Location: Hilton Santa Monica, Pacific 1

"Learning from Nature: Patterns and Biomimicry"

This workshop invites participants to learn about patterns in nature and biomimicry through presentation of work that took place with TK students in 2023/2024 and create their own biomimicry invention.

Presenter: Eriko Arakaki, MA & Valeria Vacchi, BA

Palisades Preschool

Target Audience: PTKKA

Content: S M

Location: Growing Place, SMC Classroom 209

"Creating a STEM-based Woodworking Program!"

Children love Woodworking! It's cross-curricular, involves all areas of learning, and makes links and connections between them. Curious about how Woodworking can be incorporated into a broader STEM program? Let's do this!

Presenter: Paul Ellis, MA

Brentwood Sunshine Preschool

Target Audience: PTK K

Content: TEM

Location: Hilton Santa Monica, Pacific 3

"Planting The Seed of Curiosity: Cultivating Wonder Through Life Sciences"

Explore how hands-on gardening experiences foster children's innate curiosity, observation skills, and STEM learning while connecting them to nature and environmental stewardship.

Presenter: Hope Petrozzi, MEd & Erika Garcia, MA

St. Margaret's Episcopal School

Target Audience: TPTKK

Content: STEM

Location: Hilton Santa Monica, Malibu 2

"Go-To Guide to a STEM Environment for All Ages"

Take a comprehensive guide with tips to set up an inviting STEM classroom. Take ideas to make it easier to choose the right resources for every age and development, while staying on budget.

Presenter: Lourdes Ochoa, BA & Mariana Contreras, BA

Harmon Oaks Nursery School Target Audience: T P TK K FG

Content: STEM

Location: Hilton Santa Monica, Ocean Park South

"Inquiry as a Pathway to Love - for children and adults!"

As humans, we are naturally curious and full of wonder. Through pedagogical documentation, we will examine strategies for engaging in inquiry as a means to falling in love with the world around us.

Presenter: Alex Morgan, MA & Anna Vertun, MA

Boulder Journey School Target Audience: TP

Content: S

Location: Hilton Santa Monica, Pacific 2

"Reconnection to the natural world is fundamental to human health, well-being, spirit, and survival."

MICRO-SESSION III: 2:15PM - 3:00PM

"Scale and Structure: Balance and Stability with Toddlers"

Take a look into how our toddlers balanced their way throughout the year, using their bodies and creating various structures.

Presenter: Marlene Garcia, BA & Linh Phu, BA

The Children's Center at Caltech

Target Audience: IT Content: S E M

Location: Hilton Santa Monica, Pacific 1

"Connecting with Nature"

This workshop presents a long-term exploration of leaves and trees in our two-and-three-year-old classroom that integrated hands-on experiences and diverse materials and will invite participants to explore these methods themselves.

Presenter: Lisa Wesley, BA & Valeria Vacchi, BA

Palisades Preschool Target Audience: P

Content: S M

Location: Growing Place, SMC Classroom 209

"Making Makerspaces Work: Designing Curriculum to Promote Spatial Literacy"

What is 'spatial literacy' and why does it matter in the 21st century teaching practice? What does a Design/Build curriculum look like and why is it beneficial? How does one begin to set up a basic makerspace in order to support these types of activities? From principles and materials to programming, this workshop covers the basics to promote spatial literacy and creative engagement in the classroom and beyond.

Presenter: Benjamin Gramann, B.Arch

Beta Design / Syracuse University

Target Audience: K FG SG

Content: STEM

Location: Growing Place, SMC Classroom 208

"The Value of Adult Learning: A Framework for Strengthening STEM Education"

The value & impact of building out organizational structures and program frameworks to foster adult learning and internal professional development opportunities with a STEM focus for faculty development.

Presenter: Alysia Gonzales, MA & Lily Schwartzman, BA

Former Leads from Google Children's Schools

Target Audience: A
Content: STEM

Location: Hilton Santa Monica, Pacific 2

"Growing With Our Garden"

The opportunities for meaningful growth across multiple domains are ever present as early learners care for their class gardens in joyful collaboration with families and community friends!

Presenter: Raissa Lee, MS Ed

Irvine Valley College

Target Audience: ITPTKKFGSGA

Content: STEM

Location: Hilton Santa Monica, Malibu 2

"Bridging Classroom and Community: Our School's Journey to Nature-Based Learning"

Learn ways to foster a deeper connection to nature by embracing our local ecology. Attendees will gain insight and strategies into how to become a passionate and thriving nature-based program.

Presenter: Amy Chiu, MSEd & Alec Harrison, BA

Methodist Preschool of Pacific Palisades

Target Audience: TPTKK

Content: S

Location: Hilton Santa Monica, Pacific 3

"Caring for Creatures"

Do you have a love of animals and want to share that with your students? Learn how to foster environmental stewardship through the care of classroom pets. See examples of pet care and set up in the early childhood education setting at Pacific Oak's Children's School.

Presenter: Bryana Casas, MA
Pacific Oaks Children's School

Target Audience: P

Content: S

Location: Hilton Santa Monica, Ocean Park South

"Nature Connection"

Discover the transformative power of nature in early childhood education. This workshop explores strategies to foster nature connection, enhancing children's development, curiosity, and environmental stewardship through immersive, hands-on activities.

Presenter: Cristina Taratchila, MA

Little Finch Forest School Target Audience: T P TK

Content: S

Location: Hilton Santa Monica, Ocean Park North

"It is a good idea to make going on a walk part of the routine of children's daily life...To walk is a rhythmical movement that gives you strength, perseverance, and peace. And when we go for a walk together, while holding hands, it contributes to feelings of comfort and community."

-Rikke Rosengren

"Backyard Life Science Experiences for Future Scientists"

This presentation will give you an insight of STEAM exploration for young children emphasizing on the life science, arts, and math. We will be sharing some exciting strategies to bringing STEAM excitement from outdoor into your classroom through our project-based approach and Reggio Emilia inspired program experiences. Learn and see how you can bring life science, arts, and math exploration for your young learners in your program.

Presenter: Nancy Duran, MA
East Los Angeles College
Target Audience: ITPTK K

Content: STEM

Location: Hilton Santa Monica, Malibu 1

SATURDAY AFTERNOON TOUR: 3:00PM - 5:00PM

Two-day and Saturday registrants can tour Canyon Crest Preschool at this time only. The tour will be self-guided, transportation is not provided. *Please allow yourself time for traffic, 4:30pm will be the last entry. Carpool is recommended as there is a small parking lot, plan to use street parking.

CANYON CREST PRESCHOOL

2323 N Roscomare Rd. Los Angeles, CA 90077









Conference Evaluation Survey

Complete and submit the evaluation to be entered to win a 2026 ECSTEM Conference Registration.



We want to hear from you!



We offer professional development designed to immerse you in the culture and environments of our school while celebrating the beauty and strengths of your own context.

Join us online or in person for an hour, a day or a year...

or we can come to you.









PERSONALIZED LEARNING

Engage in personalized experiences of learning that includes dialogue with Boulder Journey School faculty, guided workshops, and/or presentations through our study tour and consulting programs.

CONFERENCES

We hold an annual conference as well as semi-regular Fall or Spring initiatives.

We will host the 2025 North American Reggio Emilia Alliance (NAREA) summer conference June 25 - 27, 2025

PARTNERSHIP WITH UNIVERSITY OF COLORADO DENVER

We partner with University of Colorado Denver to offer an online MA in Innovative Early Childhood Education, a Graduate Certificate and stand alone courses that can be taken for credit or PD hours. We now offer 'Messing About with STEM' at the undergraduate level!

MA PLUS LICENSURE PROGRAM

Immerse yourself in a paid practicum in beautiful Colorado alongside a skilled Mentor Teacher while earning an MA in Early Childhood Education from the University of Colorado Denver, a Teaching License (Birth - Third Grade) from the Colorado Department of Education, and a Large Center Director Qualification from the Colorado Office of Early Childhood. Find the intersections between practice and theory in close collaborations teaching alongside Boulder Journey School educators and studying alongside educators from worldwide contexts. Resident Teachers in this program travel to Reggio Emilia to participate in a Study Group with Reggio Children.

FIND ALL OUR LATEST PD OFFERINGS





🕵 @boulderjourney 🏻 🖨 boulderjourneyschool.com



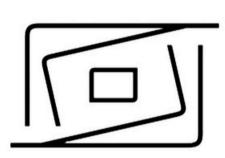


Sponsors









AI+Gallery





Exhibitors



















Fun Things to do in Santa Monica, California

Santa Monica Pier

Santa Monica Pier is one of the most iconic locations in California, with multiple sights to see. The pier is located along the seaside stop of Route 66, one of the original highways in the U.S.! Look out for the end of the Trail Sign, the Looff Hippodrome, the Santa Monica Muscle Beach, and the infamous Pacific Park.

Recommended: Seaside on the Pier for lunch, and Japadog for snack.



The Acorn Store

The Acorn Store is a magical place both for children and adults. They offer a large selection of wooden, natural toys and treasures that help develop everyone's imagination and support creative play. From books, wooden figures, and dress up materials, the Acorn store is any educator's dream!



3rd Street Promenade & Santa Monica Place

3rd Street Promenade is located in the center of downtown Santa Monica. The three blocks of traffic-free area is packed with shops, stores, and eateries. There are also various live street performers providing entertainment and live music. If you really enjoy shopping, head south of the promenade to the Santa Monica Place. The three-story outdoor mall has a mix of known and lesser known brands and restaurants with a local twist. Stock accessories and fashion trends are made by local designers!

Recommended: The Curious Palate for lunch



Tongva Park

This old parking lot turned ocean-side oasis spans 6 acres filled with sculptures, gardens, and picnic locations. This tranquil and beautifully designed spot is best for resting both your feet and mind, or for walks along the California coastline with the ocean breeze.



FIND US ON SOCIAL MEDIA!

On Instagram (©)





On Facebook (Caree Conference Co

#ECSTEM2025



For Further Information **Telephone** 626,395,6860 Website ccc.caltech.edu

Send your resume to: Olivia Garcia, Associate Director olivia.garcia@caltech.edu



ECSTEM Professional Development Division

Thank you for your interest in ECSTEM. In 2000, our research led us to adopt STEM (Science, Technology, Engineering and Mathematics) curricula as a focus of our early childhood program. As leaders in STEM Early Childhood education, we launched ECSTEM (www.ecstem.org) in 2011, and began hosting an annual conference bringing together educators, policy makers, researchers and other vested community stakeholders to address the needs of our youngest citizens.

The Professional Development Division (PDD) arranges tours, on-site visits and workshops. Email us at ecstem@caltech.edu

- Workshops are held on Saturdays once a month from 9am to 12pm and are \$75 per person. These are pre-scheduled dates; please see the next page for information regarding upcoming dates.
- One-hour tours are scheduled during the week; they are \$125 per group (limited to 2). Please contact our office for more details and scheduling.
- 2.5 hour educator tours available, which includes a description of STEM curriculum and Q&A with the director (limited to 4). Please contact our office for more details and scheduling.
- Half day and full day presentations at your program are available upon request and dependent upon availability. Please contact our office for scheduling and pricing.

Spring Workshops

Workshops are held on Saturdays once a month from 9am to 12pm and are \$75 per person. Includes a tour of the center.

Register using the QR code or visit ccc.caltech.edu

Saturday, March 15th, 2025

Making Math Meaningful

In this workshop, you'll discover how early math skills lay the foundation for future academic success, enhance critical thinking, and promote problem solving. Come away feeling more confident in your own math abilities and with practical strategies to integrate math into your classroom seamlessly, making math fun and meaningful for young children.

Presenter: Melissa Samples, STEM Curriculum Coordinator

Saturday, April 26th, 2025

Musical Pathways to STEM

This workshop will awaken, develop, and refine innate musicality through STEM based music and movement activities for early childhood years. The session will encourage to build a strong foundation for future development of language, social-emotional, and motor skills for young children by introducing ear-training, singing games, solfege, finger plays, song-tales, echo songs, folk dance, playing patterns on non-pitched percussion instruments and pitched barred instruments.

Presenter: Dayita Datta, Music Specialist

Saturday, May 17th, 2025

Engineering Design Process

The Engineering Design Process is a tool children use in their daily lives. In this workshop, you will follow us through a diverse curriculum tied together by scientific inquiry and art while providing young children opportunities to exercise their problem solving skills.

Presenter: Jose Osorio, Lead Teacher

SAVE THE DATE 16 TH ANNUAL ECSTEM CONFERENCE

FEBRUARY 2026
PASADENA, CA

