CURIOSITY 2017

WHO WHAT WHEN WHERE WHY?

EARLY CHILDHOOD STEM CONFERENCE

SCIENCE TECHNOLOGY
ENGINEERING MATH

FEBRUARY 3-4

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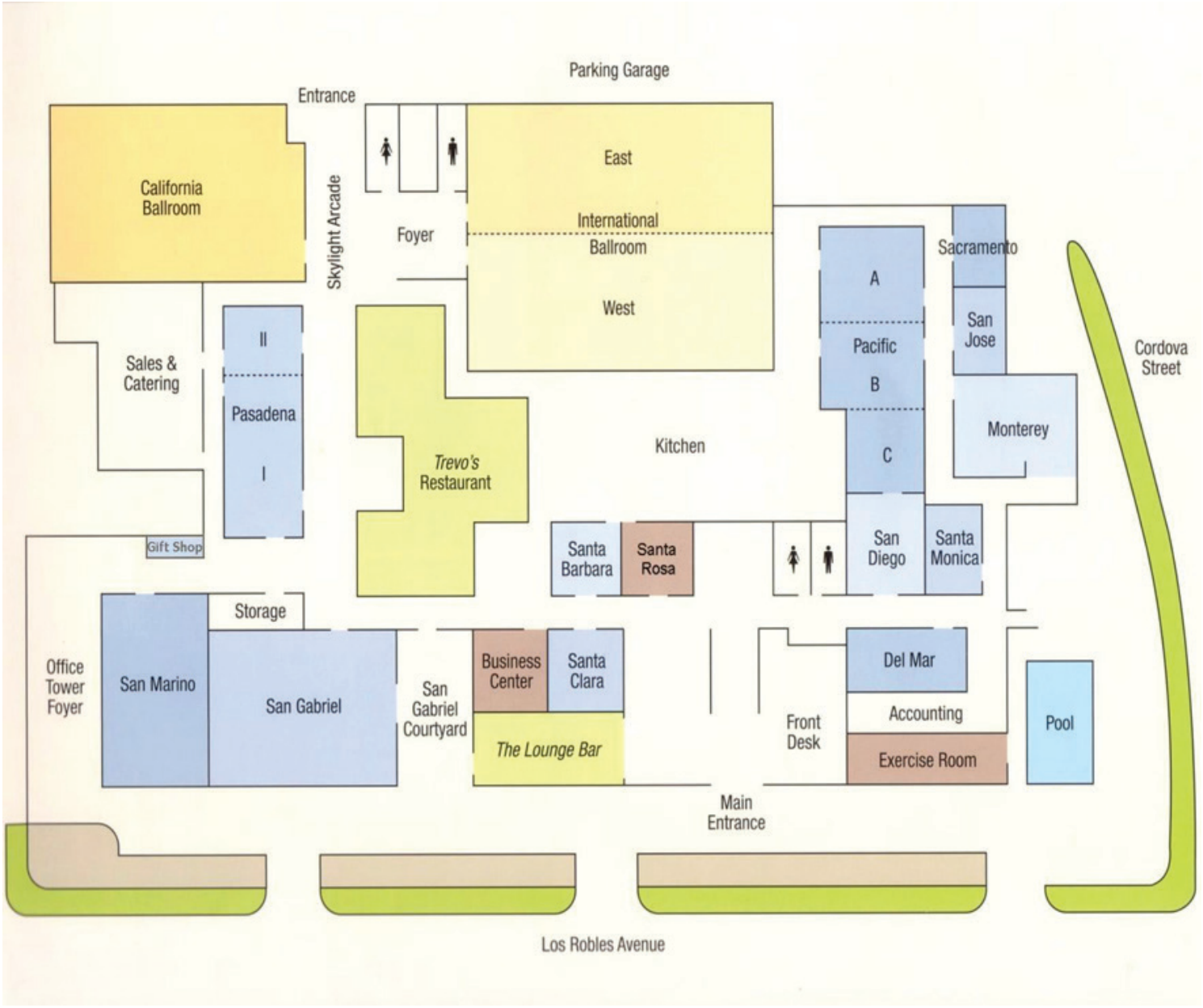

EARLY CHILDHOOD STEM CONFERENCE

CURIOSITY

FEBRUARY 3 - 4, 2017

WELCOME TO OUR 6TH ANNUAL EARLY CHILDHOOD SCIENCE, TECHNOLOGY, ENGINEERING, AND MATHEMATICS CONFERENCE (ECSTEM).

This year we focus on Curiosity....the who, what, when, where, and why. We look not only to what's beyond our galaxy, but the curiosity and wonder amongst ourselves as educators; carrying this forward to our youngest learners.

We have brought together a dynamic list of panelists, a distinguished keynote speaker, an active "Hall of Inquiry" which includes an Outdoor Model Teaching Lab, and an exhibit of Frances and David Hawkins titled "Cultivate the Scientist in Every Child." Our presenters are a range of distinguished researchers, expert educators, and community leaders to inform and inspire early childhood education professionals, practitioners, designers, businesses, researchers and community leaders to come together to network.

We hope you enjoy your experience and cultivate new ideas from your involvement in the ECSTEM conference. We look forward to uniting together to promote and increase awareness of the importance of STEM education in early childhood.

Sincerely,

Early Childhood STEM Committee

2017 CONFERENCE STEERING COMMITTEE

Susan Wood
Children's Center at Caltech
ECSTEM Executive Chair & Executive Director

Tiffany Alva
THINK Together
ECSTEM Associate Chair & Senior Director of Early Learning

Veronica Dayag
Children's Center at Caltech
ECSTEM Conference Coordinator & Associate Director

Marcela Suarez
THINK Together
ECSTEM Operations Coordinator & Director of Early Learning Programs

2017 CONFERENCE SUB COMMITTEE

Joksan Rabadan
THINK Together
Community Childhood Educator

Seadra Chagolla
Children's Center at Caltech
Early Childhood Educator

Carrie Lynne Draper
Readiness Learning Associates
Executive Director

THE EARLY CHILDHOOD STEM CONFERENCE IS BROUGHT TO YOU BY:

THE CHILDREN'S CENTER AT CALTECH

Since 1972, The Children's Center at Caltech (CCC) has grown to become a national leader in STEM Early Education. CCC serves children ages six months through five years using a STEM based curriculum that utilizes a constructivist approach to plan, develop, and implement inquiry rich learning opportunities for our youngest learners. In addition, CCC conducts professional development workshops and shares research in STEM-based Early Childhood education.

THINK Together

THINK Together is a non-profit organization that supports the academic achievement of underserved students through after-school and summertime academic enrichment, and early learning programs in school districts throughout California.

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kidspace children's museum

“The important thing is not to stop questioning. Curiosity has its own reason for existence.”

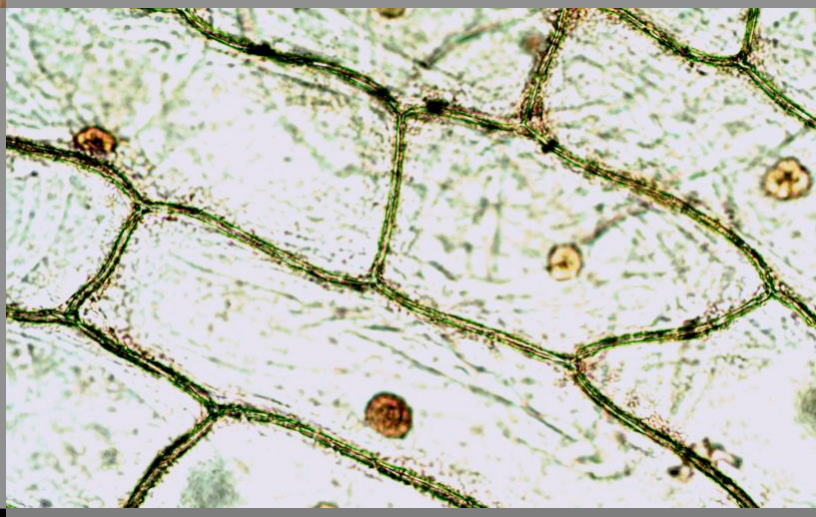
-Albert Einstein

“It may be that our cosmic curiosity... is a genetically-encoded force that we illuminate when we look up and wonder.”

-Neil deGrasse Tyson

“The future belongs to the curious. The ones who are not afraid to try it, explore it, poke at it, question it, and turn it inside out.”

–Unknown



“Look up at the stars and not down at your feet. Try to make sense of what you see, and wonder about what makes the universe exist. Be curious.”

-Stephen Hawking

Picking up STEAM

The world needs teachers who can inspire students by introducing them to the exciting areas of science, technology, engineering, the arts, and math.

Pacific Oaks' B.A. Early Childhood Education, STEAM Specialization trains future educators to implement STEAM in their classrooms.

Pacific Oaks is a proud sponsor of the Early Childhood STEM Conference Friday Evening Reception.

PACIFIC OAKS COLLEGE

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EARLY CHILDHOOD STEM CONFERENCE

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NAME BADGES (OBTAINED AT REGISTRATION BOOTHS) ARE REQUIRED FOR ENTRANCE TO ALL KEYNOTES, SESSIONS, MEALS, AND EVENTS.

GENERAL INFORMATION

REGISTRATION

Registration is required for all attendees. The name badge issued with the paid registration is required for admission to all conference activities. Registration does not include the Friday Evening Special Evening Event or tours. All attendees, presenters, and exhibitors may pick up their registration materials at the Registration & Check In booths.

ADDITIONAL OPPORTUNITIES:

You may purchase tickets or sign up for any of the following events at registration, if available (space is limited):

ONSITE REGISTRATION FEES ARE AS FOLLOWS:

1-day (Friday or Saturday)	$350.00
Student	$100.00
2-days (Friday & Saturday)	$425.00
Student	$160.00
Group of 10+ (same registration only)	20% off
TOUR: The Children's Center at Caltech (Friday)	$20.00
TOUR: Kidspace Children's Museum (Saturday)	$20.00

PAYMENT OPTIONS:

Please make checks payable to The Children's Center at Caltech. We also accept cash, VISA, MasterCard, American Express, and Discover.

*All full day registrations allow admission to the Hall of Inquiry (exhibit hall), workshops, opening/keynote addresses, and includes both continental breakfast and lunch.

REFUNDS

No refunds will be made for cancellations. Refunds will NOT be processed at the conference and there are NO refunds for no-shows.

PARKING

Self-parking for the conference is at a contracted, discounted rate of $8.00 per vehicle for the day and $16 for overnight. Valet parking is $10 per day and $18 for overnight.

If you are staying at the Hilton, the front desk will ask at registration if you are parking a vehicle on the property, and determine if it is valet or self-parking. The charge will be automatically added to your room folios, and charges may be paid upon checkout.

If you are arriving for the day only, and parking your vehicle in the self-parking garage, you will receive a ticket when entering the garage, and upon departing for the day, you will be charged the discounted contracted rate of $8.00. Please be sure to get your ticket validated prior to departure.

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 Hall of Inquiry. No sales of any kind may take place in the non-profit section of the exhibit hall.

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.

PROGRAM CHANGES

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

RECORDING OF PRESENTATIONS

There will not be professionally-made video or audio tapes of conference presentations. If you wish to tape a presentation, you must first obtain the speaker's permission.

CONFERNCE EVALUATION

We hope you will share with us your feedback and comments about this year's conference. The workshop evaluation sheet will be handed out at the beginning of every workshop and collected as attendees leave.

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SCHEDULE OF EVENTS

FRIDAY, FEBRUARY 3

		LOCATION
7:30 a.m. – 9:00 a.m.	Continental Breakfast	Skylight Arcade
7:30 a.m. – 10:00 a.m.	Registration & Check In	Hilton Foyer & Skylight Arcade
8:30 a.m. – 10:00 a.m.	Opening Address Introduction to the Exhibit "Cultivate the Scientist in Every Child: The Philosophy of Frances and David Hawkins" by Dr. Ellen Hall and Alex Cruickshank, MA Keynote Speaker: Dr. Konstantin Batygin, Ph.D	International Ballroom
8:30 a.m. - 4:30 p.m.	Exhibitor Hall Open	California 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. – 1:00 p.m.	Lunch Break	Skylight Arcade
1:00 p.m. – 2:30 p.m.	Session II Workshops	Breakout Rooms
1:30 p.m. – 3:30 p.m.	Tour of The Children's Center at Caltech	Hilton Main Entrance at 1:00 PM
2:30 p.m. – 3:00 p.m.	Break	
3:00 p.m. – 4:30 p.m.	Session III Workshops	Breakout Rooms
4:30 p.m.	Friday Workshops Conclude	International Ballroom
4:30 p.m. - 6:30 p.m.	Friday Evening Book Signing Event (Hall Inquiry will be open during this time)	

SATURDAY, FEBRUARY 4

7:30 a.m. – 9:00 a.m.	Continental Breakfast	Skylight Arcade
7:30 a.m. – 10:00 a.m.	Registration & Check In	Hilton Foyer & Skylight Arcade
8:30 a.m. – 10:00 a.m.	Opening Address Introduction to the Exhibit "Cultivate the Scientist in Every Child: The Philosophy of Frances and David Hawkins" by Dr. Ellen Hall and Alex Cruickshank, MA Panel of Experts • Dr. Chip Donohue, Ph.D • Susan Nall Bales, MA • Dr. Elisabeth McClure, Ph.D • Peggy Ashbrook	International Ballroom
8:30 a.m. - 4:30 p.m.	Exhibitor Hall Open	California 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. – 1:00 p.m.	Lunch Break	Skylight Arcade
1:00 p.m. – 2:30 p.m.	Session II Workshops	Breakout Rooms
1:30 p.m. – 3:30 p.m.	Tour of Kidspace Children's Museum	Hilton Main Entrance at 1:00 PM
2:30 p.m. – 3:00 p.m.	Break	
3:00 p.m. – 4:30 p.m.	Session III Workshops	Breakout Rooms
4:30 p.m.	Conference Concludes	

KEYNOTE SPEAKER AND PANEL OF EXPERTS

KONSTANTIN BATYGIN, Ph.D.

Assistant Professor of Planetary Science
The California Institute of Technology
Pasadena, CA

Dr. Batygin's research interests lie in the field of planetary astrophysics. He is fascinated by a wide variety of problems related to the formation and evolution of the Solar System, dynamical evolution of exoplanets, as well as physical processes inherent to planetary interiors and atmospheres. In January 2016, Dr. Konstantin Batygin and Dr. Michael E. Brown proposed the existence of a ninth planet in the Solar System. Graduating from the University of California, Santa Cruz with a Bachelor's degree in Astrophysics, Dr. Batygin went on to pursue graduate studies at The California Institute of Technology, obtaining a Ph.D. in Planetary Science. Currently, he is an Assistant Professor of Planetary Science at The California Institute of Technology in Pasadena, California.

"THE SCIENTIST IS MOTIVATED PRIMARILY BY CURIOSITY AND A DESIRE FOR TRUTH."
-IRVING LANGMUIR

SUSAN NALL BALES, MA

Founder and Senior Advisor
FrameWorks Institute
Washington, DC

For more than 15 years, Bales led a multi-disciplinary team of now 20 social scientists and communications practitioners in the development and application of Strategic Frame Analysis® --an innovative method of conducting and applying framing research, both descriptively and prescriptively. In addition to dozens of reports and commentaries that inform the FrameWorks' work on a wide range of social issues, Bales has published widely on framing, science translation and communications for social good, in both peer-reviewed and popular journals.

At the White House Early Learning and STEM Symposium (2016), Bales shared findings from a new FrameWorks research effort on how Americans think about STEM, funded by the Noyce Foundation, and drew from new communications toolkits developed jointly with the Afterschool Alliance. She is a senior fellow at the Center on the Developing Child at Harvard University, where she has worked collaboratively for several decades with many of the nation's leading neuroscientists and child development experts, resulting in a "Core Story of Early Child Development" that has been widely credited with changing the public discourse on the early years in the US, Canada, Australia and the UK.

DR. ELISABETH MCCLURE

Research Fellow, Joan Ganz Cooney Center at Sesame Workshop
New York, NY

Elisabeth McClure, PhD, is a research fellow at the Joan Ganz Cooney Center at Sesame Workshop, where she is the Co-PI on a National Science Foundation project called Fostering STEM Trajectories: Bridging Research, Practice, and Policy, which aims to identify and help eliminate the most pressing challenges in promoting more effective early childhood learning and teaching across the STEM field. She is also conducting research on how families find and choose educational apps for their children, ages 2-8. Dr. McClure received her PhD from Georgetown University, where she was trained in developmental psychology with a focus on public policy and conducted research examining how babies and toddlers use video chat. Her work has been featured in The Atlantic, Science News, and on NPR, and has been used to inform policies for the American Academy of Pediatrics and the U.S. Department of Education.

CHIP DONOHUE, Ph.D.

Dean of Distance Learning and Continuing Education, Director, TEC Center, Member, Fred Roger Center Advisory Council Erikson Institute, Graduate School of Child Development, Chicago, IL

Chip Donohue, Ph.D., is Dean of Distance Learning and Continuing Education and Director of the TEC Center at Erikson Institute in Chicago. He is a Senior Fellow and Member of the Advisory Board of the Fred Rogers Center for Early Learning and Children's Media at Saint Vincent College, where he co-chaired the working group that revised the 2012 NAEYC & Fred Rogers Center Joint Position Statement on Technology and Interactive Media as Tools in Early Childhood Programs serving children from Birth through Age 8. Chip is the editor of Technology and Digital Media in the Early Years: Tools for Teaching and Learning, co-published by Routledge/NAEYC in 2014, and is editing a new book, Family Engagement in the Digital Age: Early Childhood Educators as Media Mentors to be published in 2016. In 2012, he received the Bammy Award and Educators Voice Award as Innovator of the Year from the Academy of Education Arts & Sciences. In 2015, he was honored as a children's media Emerging Pioneer at the Kids at Play International Awards. Donohue is finalizing a proposal for a chapter in a book on Digital Childhoods on the intersection of STEM and social/emotional development with a colleague in Australia, and spoke about STEM and technology at a number of conferences last year including the Region 9 Head Start Conference on Putting the "T" in STEM: What Educators Need to Know about Intentional and Appropriate Teaching with Technology.

PEGGY ASHBROOK

Early Childhood Science Teacher, The Early Years Columnist: Science and Children, Author: Science is Simple; Science Learning in the Early Years: Activities for PreK-2
Alexandria, Virginia

Peggy Ashbrook is an early childhood science teacher and writer - the National Science Teachers Association's Early Years column in Science & Children and companion blog (www.nsta.org/earlyyears), and author of Science is Simple (2003, Gryphon House). She began teaching science to young children in her home as a day care provider in 1988. Peggy is active in professional associations - National Science Teachers Association (NSTA), National Association for the Education of Young Children (NAEYC), and NoVA Outside Early Childhood Committee, presenting at local, area, and national conferences. She is a co-facilitator for the NAEYC Early Childhood Science Interest Forum (ECSIF).

Currently, Peggy teaches children and mentors teachers in schools, and provides professional development on early childhood science inquiry. Her favorite place is where the worlds of early childhood and science learning overlap.

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TOUT ABOUT TOYS
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WYLAND FOUNDATION
Booth 20
wylandfoundation.org

TEACHING LAB

THE MODEL OUTDOOR TEACHING LAB

(Located Inside the Hall of Inquiry)

Are you curious to know how to set up your outdoor classroom environment to maximize STEM instruction? Check out our model outdoor teaching lab to implement new ways and tips that include hands-on activities of sensory, solids and liquids, rocks, block play, living organisms, microscopes, and more on science, technology, engineering, and mathematics. Come discover the Model Outdoor Teaching Lab with us!

The Outdoor Model Teaching Lab is set up like a "typical outdoor environment" with areas that look familiar to teachers and students alike. Visitors of the Outdoor Model Teaching Lab will be able to:

- Be inspired by the latest activities from several early childhood STEM companies
- Relate to the outdoor classroom as your own
- Expand your STEM-related experience with children using every day materials with minimal amount of additional items but with the emphasis of intentionality

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- AHMED ZEWAIL

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Conference Workshops

FRIDAY, FEBRUARY 3
10:30 a.m. – Noon
Art, snack, nap, and then coding!
Presenters: Allison Wilson, Vidya Janardhanan, Stratford School

SATURDAY, FEBRUARY 4
10:30 a.m. – Noon
Coding Made Simple
Presenter: Candi Schreuders, Stratford School

10:30 a.m. – Noon
Nature Nurtures Outdoor STEM Learning: Botany & Life Science Lessons for the Early Childhood Education Classroom
Presenter: Carrie Lynne Draper, Readiness Learning Associates

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FRIDAY, FEBRUARY 3

ROOM

SESSION 1

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SESSION 2

First Choice

Second Choice

SESSION 3

First Choice

Second Choice

SATURDAY, FEBRUARY 4

SESSION 1

First Choice

Second Choice

SESSION 2

First Choice

Second Choice

SESSION 3

First Choice

Second Choice

WORKSHOPS

FRIDAY, FEBRUARY 3

WORKSHOP INFORMATION

To support your conference experience, workshop sessions have been categorized by topic area (Science, Technology, Engineering and Mathematics). Additionally, the target audience has also been specified for each workshop. Conference attendees may follow one topic area for an in-depth, content-rich focus on a particular subject matter, or may pick and choose among topics to sample the full complement of conference offerings. The following are the listing of session tracks and their abbreviations.

CONTENT	TARGET AUDIENCE	
S – Science	I – Infants	K – Kindergarten
T – Technology	T – Toddlers	F – First Grade
E – Engineering	P – Preschool	S – Second Grade
M – Mathematics	TK – Transitional Kindergarten	

KEYNOTE SPEAKER 8:30-10:00 AM

KONSTANTIN BATYGIN, PhD

Assistant Professor of Planetary Science, Division of Geological & Planetary Science
California Institute of Technology, Pasadena, CA

SESSION I: 10:30-12:00 PM

"ENCHANTED ENGINEERING"

Presenters:
Jennifer Montgomery, MA, and Valerie Marquez MA
El Camino College

Room: Pacific A
Content: E
Target Audience: P, TK, K

Engineering is the focus of this workshop based on fairy tales and children's books. We will explore unconditional building materials and expansion of the block area. Can you build a bridge for the Billy Goats Gruff? A pulley for Rapunzel?

"'T' IS FOR TODDLERS"

Presenter:
L. Chérie Hogan, BA, MA
CSUN Children's Center
Room: Pacific B
Content: T
Target Audience: T

Let's take a trip to Toddler Town!

Using the "T" in STEM for Technology and Tools with the Teachings of cooking with Toddlers as young as 18 months old! Plus Tried & True recipe handouts given to all attendants.

"INCORPORATING CULTURE AND CAREGIVERS INTO STEM"

Presenters:
June "Pua" Aquino, BA, and Dayna Begonia, CDA
Partners in Development Foundation
Ka Pa'alanaRemo Inc.
Room: Pacific C
Content: S T E M
Target Audience: I T P TK

See how a NAEYC accredited preschool that serves an at-risk population incorporates culture and family engagement into their STEM curriculum. Leave with a take home activity and a free book!

"DO YOU KNOW IT WHEN YOU SEE IT? CAN YOU COPY, EXTEND AND CREATE A NEW ONE? THE DEVELOPMENTAL CONTINUUM OF PATTERNING!"

Presenter:
Susan Walsh, EdD
University of Laverne
Room: Monterey
Content: M
Target Audience: P TK

Participants will learn the progression of preschoolers' and TK children's understanding of pattern concepts. This workshop is interactive and designed for participants to be aware of developmentally appropriate strategies to support patterning at each developmental level, based on California Preschool Learning Foundations and NCTM Standards.

"CURIOUS ABOUT MARS"

Presenter:
Carrie Lynne Draper, MEd
Readiness Learning Associates
Room: Pasadena I
Content: S T E M
Target Audience: P TK K F S

This inquiry based planetary science workshop begins your mission to train your students to become our next generation of explorers! How do we explore space? You will engineer, use models, learn about orbiters and make a lander. Compare Mars and a mystery planet, study lava layers & so much more! Be ready to launch space learning in your EC classroom using NGSS-based lessons.

"STEM ENVIRONMENTS"

Presenter:
Monica Dolan, MA and Vien-Vi Le
The Children's Center at Caltech
Room: Pasadena II
Content: S T E M
Target Audience: I T P TK

What does a STEM based environment look like? Join us as we look at what an intentional environment of science, technology, engineering, and math embraces. This will help educators understand the "why" behind materials and spaces and how to select the appropriate materials based on the child's interests and needs.

"STEM AND STORYTELLING: PARALLEL PLOTLINES"

Presenter:
Ruth Spiro, MBA
Independent Author
Room: San Marino
Content: S
Target Audience: T P TK K F S

Both provide opportunities for practicing skills such as sequencing and prediction. We'll explore the elements of "story" and their parallels to STEM in the classroom, and then discuss the publication process for aspiring authors.

"SUPPORTING SCIENCE IN HEAD START – HOW TO CREATE A PROFESSIONAL DEVELOPMENT PLAN THAT ENGAGES TEACHERS, CHILDREN AND FAMILIES"

Presenters:
Lauren Van Derzee, MA and Zoe Peters, BA
Sciencenter/Bay Area Discovery Museum
Room: San Diego
Content: S T E M
Target Audience: PK-K

Learn how building and sustaining partnerships between science museums and Head Start provides teachers with professional development that empowers them to integrate science into their classroom.

"BLENDED LEARNING TO PROMOTE MATHEMATICAL PROBLEM-SOLVING FOR EARLY LEARNERS"

Presenters:
Manjari Patel, MA, and Meredith Simon, MA
Mind Research Institute
Room: Santa Barbara
Content: T M
Target Audience: P TK

It's important to find a balance between technology and manipulatives for early learners. Learn how neuroscience can determine the elements of effective blended learning for mathematics for ages 3-5.

"ART, SNACK, NAP, THEN CODING"

Presenters:
Allison Wilson, AA, Vidya Janardhanan, BA,
Candice Schreuders, BS
Stratford School
Room: Santa Clara
Content: T
Target Audience: P K

There is a new form of literacy that is taking place for our early learners and it's coding. Learn how to integrate the "T" in STEM through plugged and unplugged activities.

"CREATIVE CURIOSITY: MODES OF TRANSPORTATION"

Presenters: Laura Schmidl, MA, and Maria Elena Serratos, BA
Discovery Cube
Room: Santa Rosa
Content: S E M
Target Audience: T P TK K

Discovery Cube presents an NGSS and Preschool Learning Foundations aligned interactive workshop focusing on creativity and encouraging curiosity while learning about scientific principles involved with various modes of transportation.

"GROWING WITH STEM"

Presenters: Sandra Sewell, and Raema Avalos, BA
Centro De Ninos, Inc.
Room: Del Mar
Content: S T E M
Target Audience: T P TK Bilingual

We have produced videos for parents and preschool caregivers on STEM activities featuring some of our children in each video. The videos are in English and Spanish. They were made to introduce the concepts of STEM to the Latino Spanish Speaking Community to demystify STEM in a preschool or at home setting. Workshop will include viewing a selection of videos with discussion and handouts of lesson plans. Tips for approaching and engaging Spanish speaking parents in STEM.

"ENGINEERING: WORKING ARTFULLY"

Presenters:
Pauline McPeake, MA and Ellen Khokha, MA
The Growing Place | Santa Monica College
Room: Sacramento
Content: E
Target Audience: I T P

The presenters will share the experience of a program wide intention to collaborate on the meaning and possibilities of "working artfully" with eager learners, infants thru Pre K to use investigation, competency, and skills to bring about results, a classic definition of engineering.

"EARLY STEM SKILLS, BEGINNING AT BIRTH"

Presenter:
Christina Nigrelli, MA, EdS
Zero to Three
Room: San Gabriel
Content: S T E M
Target Audience: I T P

The seeds of early STEM skills such as numeracy are planted early on through everyday activities that naturally introduce mathematical concepts and encourage the curiosity that makes young children ready-made scientists. Come learn how daily routines support problem solving, decision making, and creativity!

SESSION II: 1:00-2:30 PM

"STOPPING AND STARTING: FROM REPETITIVE MOTION TO INTENTIONAL DESIGN"

Presenters:
Christine Richard, MA, and Ally Voye, BA
The Growing Place | Santa Monica College
Room: Pacific A
Content: S E M
Target Audience: P

Identifying the stopping and starting mechanisms that exist within a particular material can lead to new discoveries about the material's potential and provide an intentional platform for research.

"FRAMING EARLY STEM LEARNING"

Presenter:
Susan Nall Bales, MA
FrameWorks Institute
Room: Pacific B
Content: S T E M
Target Audience: P TK K F S

This workshop will cover the FrameWorks Institute's extensive research into effective ways to frame early STEM learning to deepen public understanding of and build support for the issue.

"INVERTEBRATES AS THE 'BACKBONE' OF AN ELEMENTARY SCIENCE CURRICULUM"

Presenters:
Ilana April, MA, and Jean Rosenfield, MEd
American Museum of Natural History
Room: Pacific C
Content: S
Target Audience: T P TK K F S

Learn why invertebrates can serve as the "backbone" of any elementary-aged classroom and teach young students about diversity, respect, and inquiry-based skills of scientific thinking, observation and record making.

"GARDENING"

Presenters:
Olga Serrato, MA, Cathy Gish-Persi, Teresa Hovansyan, and Deborah Lutz
Los Angeles Valley College Child Development Center
Room: Monterey
Content: S M
Target Audience: P Bilingual

This workshop will emphasize the importance of giving children the opportunity to explore the outdoor environment and show how vegetables and fruits grow. Fruits and vegetables don't come from the super market.

"FUN MATH FOR DUAL LANGUAGE LEARNERS"

Presenter:
Stephanie Suastegui
English and Spanish Felt Stories and Songs
Room: Pasadena I
Content: M
Target Audience: T P TK Bilingual

Games, traditional stories, and songs are a great way to teach math! Participants will use hands on materials to explore games, traditional stories, and songs that teach classification, number and quantity, number sense of math operations, and measurement.

"THE ART OF MATH AND SCIENCE"

Presenter:
Jayanti Tambe, MA
UCLA Early Care and Learning
Room: San Marino
Content: S M
Target Audience: P TK

Participants will look at art in the preschool classroom through the lens of scientific and mathematical experiences on a journey of exploring 19 artists from around the world.

"TEACHER CURIOSITY: MESSING ABOUT WITH STEAM EDUCATION"

Presenters:
Lauren Weatherly, MA, and Alison Maher, MA
Boulder Journey School Teacher Education Program
Room: San Diego
Content: S T E M
Target Audience: I T P TK K F S
This presentation and workshop will share how teacher curiosity, inspired by the schools in Reggio Emilia, Italy, and American educators David and Frances Hawkins, provides powerful connections with children's thinking, learning, and inquiry.

"ENGAGING PRESCHOOLERS IN STEM THROUGH PUBLIC MEDIA: RESOURCES, SUPPORTS, AND IMPACTS"

Presenters:
Naomi Hupert, MA, and Ximena Dominguez, PhD
Education Development Center
Room: Santa Barbara
Content: S T M
Target Audience: P
This workshop presents public media resources we have designed, used, and studied in our research work with preschoolers at school and at home to support math and science learning.

"BOOKS, BLOCKS, AND BUILDING"

Presenters:
Diana Zaragoza, MS
Sacramento City College
Room: Santa Clara
Content: S E M
Target Audience: P TK K F S
This workshop will introduce participants to children's literature that engages and inspires students to use their own imagination and creativity to follow floor plans and design their own creations.

"DEVELOPING AND SUSTAINING TEACHERS AND STUDENTS CURIOSITY: A KEY CONTRIBUTOR TO SUCCESS IN STEM DISCIPLINES"

Presenters:
Laura Grandau, PhD and Rebecca Itzkowich, MA
Erikson Institute
Room: Santa Rosa
Content: S M
Target Audience: P TK K F S
Participants will explore the nature and importance of curiosity and engage in activities that encourage pre- and in-service teachers and their students to develop and sustain an inquiry mindset.

"THE ART OF ASKING QUESTIONS TO PROMOTE CURIOSITY AND SCIENTIFIC INQUIRY"

Presenter:
Dave Scahill and Jean Barbre, Ed.D
The Discovery Source | Orange County Department of Education
Room: Del Mar
Content: S T E M
Target Audience: P TK K
Join us as we examine a variety of questions and prompts that help promote children's natural curiosity in STEM. Learn the Art of Asking Questions to promote children exploration and higher level thinking skills.

"DESIGNING FOR CHILDREN TO DESIGN- CREATIVITY IN STE(A)M LEARNING"

Presenter:
Cas Holman
Rhode Island School of Design (RISD)
Room: Pasadena II
Content: T E
Target Audience: P TK K
What better way for a child to master a tool than by inventing and building it first? How does innovation differ from invention in the experience of a child? Cas will discuss her approach to designing learning materials that allow children to experiment, try, fail, and create their own visions through open-ended collaborative play. She'll draw from her experience working with Anji Play schools in China, Rigamajig, and her Industrial Design students at Rhode Island School of Design (RISD).

"SING, SONG, BOUNCE, AND JUMP"

Presenter:
Dayita Datta
The Children's Center at Caltech
Room: San Gabriel
Content: M
Target Audience: P TK K F
Tonal, rhythmic, and expressive experiences for young children using musical pattern recognition, which is an integral part of math skills. Pattern recognition through song-tales, echo songs, dance, bounces, tap, clap, and playing percussion instruments.

"INCLINED TO LEND A HAND: EXPLAINING AND VISUALIZING STEM CONCEPTS FROM THE LITTLE ENGINE THAT COULD WITH AMERICAN SIGN LANGUAGE (ASL)"

Presenters:
James Maloney, MS, and Julius Su, PhD
Pasadena City College/ Su-Kam-Intelligent-Education-Systems (SKIES)/Community Science Academy
Room: San Diego
Content: S T E M
Target Audience: T P TK K

Communicating simple machines with hands-on activities and hands-on language. Practice ASL STEM strategies that also promote pro-social classroom management. Walk away with your experiences through the collaborative learning app, SKIES.

SESSION III: 3:00-4:30 PM

"WHAT HAPPENS WHEN AIR, PAPER, AND PEOPLE PLAY TOGETHER? MAKING STEM AN INTEGRATED PART OF CLASSROOM CULTURE"

Presenters:
Peggy Hafenberg, BA, and Ally Voye, BA
The Growing Place
Room: Pacific A
Content: S M
Target Audience: P TK

Embracing paper airplanes: A transitional kindergarten's yearlong investigation into flight via air and paper.

"USING IMPROVEMENT SCIENCE AND HUMAN CENTERED DESIGN TO INNOVATE IN EARLY CHILDHOOD STEM"

Presenters:
David Kanter, PhD and Elizabeth Rood, EdD
100Kin10
Room: Pacific B
Content: S T E M
Target Audience: P TK K F S

100Kin10 will lead participants through a rapid-cycle prototyping process to identify solutions to some of the challenges faced by educators and schools in the early childhood STEM space.

"STEAM-ING UP YOUR KINDERGARTEN CURRICULUM"

Presenters:
Heather Jolly, BA, and Hallie Rosenblum, BA
Polytechnic School
Room: Pacific C
Content: S T E M
Target Audience: TK K F

Feeling overwhelmed with incorporating STEAM into your already existing curriculum?! We were! This workshop will show how we have studied our curriculum over the past years and found meaningful and functional ways to weave STEAM into our already existing curriculum. Be inspired with curriculum, photos of classrooms and playgrounds with STEAM in action, lesson plans and hands-on activities you can take back to your classroom to enhance your own program with STEAM elements.

"BIG SCIENCE FOR SMALL SPACES"

Presenter:
Vivian Belmont, BA
Dream Big Science and Art
Room: Monterey
Content: S T E M
Target Audience: TK K F S

BIG science in small places is possible! The how, what and why of open - ended STEM exploration in the classroom with materials that won't break the bank!

"EXPLORING CURIOSITY: A HANDS-ON SCIENCE AND MATH APPROACH"

Presenters:
Maria Elena Serratos, BA, and Laura Schmidl, MA
Discovery Cube
Room: Pasadena I
Content: S M
Target Audience: T P TK K Bilingual

This hands-on Spanish workshop will integrate a storybook with science and math lessons while offering ideas on how to encourage curiosity as early learners explore recycled and reusable materials.

Este taller práctico integrará un cuento con lecciones de ciencias y matemáticas y se ofrecerán ideas para promover la curiosidad en los niños mientras exploran con materiales reciclados y reusables.

"DELIVERING ON THE PROMISE OF CONNECTED PLAY: EARLY LEARNING STEM AND DIGITAL STORYTELLING"

Presenter:
Azadeh Jamalian, PhD
Tiggly, Teachers College, Columbia University
Room: Pasadena II
Content: M
Target Audience: T P K

Connected technologies bring fundamental tactile play with manipulatives into students' digital learning. Together, the combination of physical and digital, brings endless opportunities for early learning STEM which will be discussed in this workshop.

"SUPPORTING PARENTS, PARTICULARLY SPANISH-DOMINANT PARENTS, IN PROMOTING PRESCHOOL READINESS – THROUGH STEM EXPLORATIONS"

Presenters: Maryann Marrapodi, EdM, and Sylvia Toledo, BA
Hispanic Information & Telecommunications Network (HITN)
Room: San Marino
Content: STEM
Target Audience: P

Explore strategies to engage families in promoting school readiness through activities that develop STEM language, content and skills. Hands-on materials will scaffold rich discussions for engaging families with STEM.

"SUPPORTING MATH AND SCIENCE IN THE EARLY YEARS: USING NATURE CONNECTIONS TO STRENGTHEN FOUNDATIONAL LEARNING FOR ALL AGES"

Presenter:
Heather Fox, MA
Dimensions Educational Research Foundation
Room: San Diego
Content: S T E M
Target Audience: I T P TK

Nature-based outdoor spaces foster children's inborn desire to learn. Examine the STEM concepts that children demonstrate in nature. Strategize how to transform outdoor spaces to support this authentic, inquiry-based learning.

"HELLO ROBO! DEVELOPING A CONCEPTUAL FRAMEWORK FOR STUDENT UNDERSTANDING OF ROBOTS"

Presenter:
Wendy Brenneman, BA
Carnegie Science Center
Room: Santa Barbara
Content: T E
Target Audience: P TK K

Ready to implement robotics activities, but don't have a robot yet? Explore three developmentally-appropriate concepts to prepare early learners for an understanding of robotics, and design relevant hands- on investigations you can do right away.

"BEYOND THE BLOCK CENTER: INQUIRY-BASED ENGINEERING IN EARLY CHILDHOOD"

Presenter:
Brittany Oliver, MA
Fight for Children
Room: Santa Clara
Content: T E M
Target Audience: P TK K

This workshop will provide an overview of the STEM inquiry cycle and offer practical advice for planning and implementing inquiry-based engineering investigations in the early childhood classroom.

"USING STEM AS A CONTEXT FOR UNDERSTANDING ADDITION & SUBTRACTION "

Presenters:
Sara Delano Moore, PhD and William Bintz, PhD
SDM Learning | Kent State University
Room: Santa Rosa
Content: M
Target Audience: TK K F S

To make operations meaningful, students must understand the situations where we use them. Learn about high-quality picture books and STEM engagements which support primary students' understanding of addition and subtraction.

"STEM SKILLS IN AN OUTDOOR CLASSROOM WITH INFANTS AND TODDLERS"

Presenter:
Cathy Bell, BS
Child Educational Center
Room: Del Mar
Content: S T E M
Target Audience: I T

Children are born scientists! Discover the ways that STEM learning is supported in an Outdoor Classroom with infants and toddlers and how teachers can facilitate and articulate foundational skill development

"STEM ... MM!"

Presenters:
Patty Clarkson, Ed.D, and Kari Applegate, MA
Cal Poly Preschool Learning Lab
Room: San Gabriel
Content: S T E M
Target Audience: P TK

Come discover how music and movement can be easily incorporated into the STEM learning process! Hear about the STEM learning process at Cal Poly Preschool Learning Lab and how we use music and movement to reinforce children's understanding of any concepts we are exploring. During this session, you will gain the knowledge and experience to create your own original STEM...MM songs to strengthen learning at your center.


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WORKSHOPS

SATURDAY, FEBRUARY 4

PANEL OF EXPERTS
8:30 AM - 10:00 AM

DR. CHIP DONOHUE, PhD
Dean of Distance Learning and Continuing Education
Director, TEC Center
Member, Fred Rogers Center Advisory Council

SUSAN NALL BALES, MA
Founder and Senior Advisor Frameworks Institute

PEGGY ASHBROOK, BA
Early Childhood Science Teacher
The Early Years Columnist: Science and Children Author: Science is Simple

DR. ELISABETH MCCLURE, PhD
Research Fellow

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

"CODING MADE SIMPLE"
Presenter:
Candice Schreuders, BS
Stratford School
Room: Pacific A
Content: T
Target Audience: P TK K
How do I teach pre-coding skills to young children? Connecting the standards, the NAEYC, and the Fred Rodgers technology statement to your classroom. Collaborate and take away coding lessons to implement tomorrow!

"NATURE NURTURES OUTDOOR STEM LEARNING: BOTANY AND LIFE SCIENCE LESSONS FOR THE EARLY CHILDHOOD EDUCATION CLASSROOM"
Presenter:
Carrie Lynne Draper, MEd
Readiness Learning Associates
Room: Pacific B
Content: S T E M
Target Audience: P TK K F S
Gardening is just another form of play for young children. What happens below the surface fosters opportunities to grow children's botany & life science interest. Centers focusing on the Inquiry Process (Observe, Question, Collect Evidence, Analyze, and Communicate) will be used in this interactive workshop. Participants will take away lessons and strategies ready to use with young learners.

"WOODWORKING WITH CHILDREN: ENGINEERING A STRONG IMAGE OF CHILDREN"
Presenter:
Amy Bice, AA, and Cindy Nelsen
The New School West
Room: Pacific C
Content: E M
Target Audience: P TK
Throughout the years of woodworking with preschool children many projects have emerged that have required the children's engineering and mathematical skills. The long term projects revealed a need for a richness of material experiences and environment that created a foundation of resources including wood. We look at wood as one of the resources for creating educational moments that extend children's curiosity through a scientific and collaborative approach to learning.

"HOW MANY? COUNTING IS MORE COMPLEX THAN MEETS THE EYE. ¿CUANTOS HAY?- CONTAR ES MÁS COMPLEJO DE LO QUE PARECE."
Presenter:
Rebecca Itzkowich, MA
Erikson Institute
Room: Monterey
Content: M
Target Audience: P Bilingual
Learning to count is complex. In this interactive session we will explore the Big Ideas behind what young children need to understand to be able to respond to the question: How many?

"WHAT'S UP WITH THE SUPERHEROES? "
Presenter: Shalek Chappil-Nichols, MS
Truth Consulting
Room: Pasadena I
Content: S T E M
Target Audience: P TK K
In this workshop teachers will learn how to use the superhero movement to engage in STEM ideas and positive social emotional thinking.

"FAMILY ENGAGEMENT: CREATING A CULTURE OF CURIOSITY"

Presenter:
Alesha Henderson and Marianne Kelly
Lakeshore Learning Materials
Room: San Marino
Content: S E M
Target Audience: P TK K F S
Families love to do projects, as long as they have some guidance and some creative options. In this workshop, we offer strategies to get and keep families involved.

"HELP: WE SPEAK DIFFERENT LANGUAGES"

Presenter: Jenne Ring, MA
Pasadena City College
Room: Pasadena II
Content: S T E M
Target Audience: P TK
Handouts and discussion for teachers to help parents understand the common language/vocabulary /terms associated with STEM.

"CONSTRUCTIVISM, CRITICAL THINKING, AND CREATIVITY: EXPLORING A CIVIL ENGINEERING PROJECT WITH YOUNG CHILDREN"

Presenters:
Tom Chiaromonte, PhD and Jenn Kinkel, MA
Fullerton College
Room: San Diego
Content: E
Target Audience: P
When preschool children are provided with ample materials, competent teachers, and time, they are capable of constructing elaborate, creative, engineering designs. A year-long project will be explored in this workshop.

"TOUCHING ROCK MUSEUM: CURATING ENGAGEMENT"

Presenter:
Alex Cruickshank, MA, and Lauren Weatherly, MA
Boulder Journey School Hawkins Centers of Learning
Room: Santa Barbara
Content: S M
Target Audience: P TK
This presentation follows a group of children as they design, build, and utilize a museum of rocks. We pay close attention to the children's natural inclination to include mathematics, using inspirations from the schools in Reggio Emilia, Italy and Frances and David Hawkins.

Participants will engage with hands-on materials.

"TINKERING IN THE CLASSROOM STEAM LAB"

Presenter:
Sara Cooper, BA and Brenda Ramos, BA
Fullerton Elementary School District
Room: Santa Clara
Content: S T E M
Target Audience: P TK K F S
Hands on approach on methods to integrate a Reggio inspired constructivist classroom STEAM Lab. Hands on investigation of materials in multiple contexts that provokes a child's natural curiosity and learning multiple approaches to problem solving.

"FINDING, FUELING, AND FLEXING CURIOSITY: USING THE SCIENTIFIC METHOD TO EXPLORE CHILDREN'S WORLDS"

Presenter:
Carrie Rothstein-Fisch, PhD and Katie Leon, MA
California State University, Northridge
Room: Santa Rosa
Content: S T M
Target Audience: P TK K F S
Explore how to use children's natural curiosities to engage them in the scientific processes of observation, hypothesis development, testing, documentation, and reporting.

"UNDERSTANDING CHANGE AND GROWTH OVER TIME"

Presenter:
Olivia Garcia, BA, and Gretchen Kammerer
The Children's Center at Caltech
Room: Del Mar
Content: S T E M
Target Audience: P TK
How do children process change and growth? Join us as we explore living organisms such as humans, insects, plants and their life cycle. See how we couple math with the seasons, weather, and properties involving long term documentation. This workshop will give an insight of how to implement curriculum into your three year old classroom.

"SETTING UP YOUR ENVIRONMENT FOR SUCCESS (A STEM ENVIRONMENT)"

Presenter: Joshua Alvarez, BA
Kaplan Early Learning Company
Room: Sacramento
Content: S T E M
Target Audience: T P K
Attendees will explore innovative ways of setting up the environment as a learning tool for intentional teaching and implementation. We will focus on proper analysis, reasoning, and exploration.

"EARLY EXPLORATION INTO STEM"

Presenter:
Jean Barbre, EdD
Orange County Department of Education
Room: San Gabriel
Content: S T E M
Target Audience: I T

Beginning at birth children are naturally curious about the world and they are busy learning the principles of STEM. Explore with us activities and materials to help promote curiosity and exploration in STEM for infants, toddlers, and twos.

SESSION II: 1:00-2:30 PM

"STEM FOR DUAL LANGUAGE FAMILY CHILDCARE PROVIDERS FROM A TO Z"

Presenter:
Raissa Lee, BA, and Savannah Smith
ABC Mom Learning Center & Childcare
Room: Pacific A
Content: S T E M
Target Audience: T P

ABC Mom Learning Center & Childcare is excited to share how they have implemented a successful and engaging dual language STEM early education program for students and their families.

"ENGINEERING IN ACTION: THE TEACHER'S ROLE IN FOSTERING TINKER THINKING"

Presenter:
Constant Hine, MA
Kodo Kids
Room: Pacific B
Content: E
Target Audience: P TK K

Identify ways engineering is happening every day in the classroom and how to facilitate those experiences through play and investigation to intentionally foster engineering play behaviors. Come learn with hands-on materials!

"CODING IS THE NEW LITERACY: GET CURIOUS WITH PBS KIDS SCRATCH JR."

Presenter:
Alison Dorff, BS, and Susie Grimm, MPA
PBS SoCal
Room: Pacific C
Content: S T E M
Target Audience: K F S

Coding is a new type of literacy important to help develop math and problem solving skills. This workshop will provide attendees with fun and engaging tips and resources to implement PBS KIDS Scratch Jr. as a way to introduce kids to computational thinking needed for the 21st century. Bring Your Own Mobile Device (BYOMD).

"COOKING FOR ALL AGES"

Presenter:
Emily Kraemer, BA, and Peggy Liu, BA
Orange Coast College, Harry & Grace Steele Children's Center
Room: Pasadena I
Content: S T M
Target Audience: I T P TK

Think cooking is just for school-agers and adults? Think again! Come and learn about food science for young children. Get ready to be hands-on and receive recipe handouts!

"PRESCHOOLERS JOURNEY IN CREATING A RECIPE: ARRIVING AT A RECIPE FOR ALL LEARNING"

Presenter:
Iwona Dziag, MA
Branches Atelier Preschool
Room: Pasadena II
Content: S M
Target Audience: P TK K

How is meaningful scientific inquiry defined and enacted in a preschool classroom? How do children make meaning about scientific and mathematical concepts? Learn about resource-based classroom inquiry by watching children design and revise their recipe.

"VARIATION: CONSTRUCTING KNOWLEDGE ABOUT THE WORLD AROUND US"

Presenter:
Amanda Lawson, BA, and Angeline Picasso
The Children's Center at Caltech
Room: Monterey
Content: S T E M
Target Audience: T I

Since infants learn best by exploring their bodies and their environment, a curriculum was created to support their learning. Join us as we take a year long journey into variation. Our youngest learners discovered, investigated, and experienced shape, color, texture, size and weight, and learned about who they are and the world around them.

"BUILDING STEAM THROUGHOUT THE DAY: MAKING THE MOST OF THEIR CURIOSITY"

Presenter:
Alesha Henderson and Marianne Kelley
Lakeshore Learning Materials
Room: San Marino
Content: S T M
Target Audience: P TK K F S

STEAM is more than just a center or a time, it's an approach. We will explore how to implement STEAM in your literacy time, your block center, dramatic play and even in music. Seamless integration equals success, all day!

"A LOOK AT THE WORK OF FRANCES AND DAVID HAWKINS"

Presenter:
Karen Worth, MA
Wheelock College
Room: San Diego
Content: S T E M
Target Audience: I T P K

Learn some history behind the philosophy of Frances and David Hawkins from a personal perspective. During this session there will also be an opportunity to explore materials.

"FAIRY TALE ENGINEERING: AN INTRODUCTION TO DESIGN THINKING IN THE EARLY CHILDHOOD CLASSROOM"

Presenter:
Cami Gordon, EdM
Bay Area Discovery Museum
Room: Santa Barbara
Content: E
Target Audience: TK K F S

Think it, Make it, Try it! Engage in creative problem solving through engineering design. Gain tools to help students: identify characters' needs, design solutions, and bring prototype ideas to life

"25 STEAM ACTIVITIES"

Presenter:
Yolanda Carlos, MEd and Robert Boyman, MA
Pacific Oaks College
Room: Santa Clara
Content: S T E M
Target Audience: P TK K

This workshop will provide attendees with hands-on activities they can integrate into their programs. Attendees will be able to take home 25 activity ideas in an information packet.

"ECHOES OF REALITY; EXPLORING DIGITAL LANDSCAPES, IMMERSIVE PROJECTION, AND VIRTUAL REALITY"

Presenter:
Jennifer Kesserling, BS, and Jennifer Norviel, BA
Riverfield Country Day School
Room: Santa Rosa
Content: T E
Target Audience: I T P TK K

Technology offers possibilities for children to seamlessly interweave both the physical and virtual worlds. This presentation explores the limitless potential of digital environments through the lens of our youngest digital citizens.

"SEWING, WEAVING, AND VISUAL PATTERNING"

Presenter:
Olivia Garcia, BA and Daniela Perez
The Children's Center at Caltech
Room: Del Mar
Content: S T E M
Target Audience: PK-K

Sewing, stitching, and weaving can be done with toddlers and preschoolers! Participants will understand the process of introducing basic concepts of sewing to young children and how it relates to literacy and math. With activities from looms, hand stitching, quilts, pillows and more, teachers will be inspired with ways to bring it back to their classrooms.

"STEM, STEAM AND 21ST CENTURY BLOCK PLAY"

Presenter:
Linda Kahrs
Tout about Toys
Room: Sacramento
Content: S T E M
Target Audience: P TK K

A properly designed block center provides key skill development opportunities such as; creativity, communication, critical thinking and collaboration. It also provides a platform for social development, physical development, STEM, STEAM, and creative expression. Learn how magnetic building systems are playing a key role in changing the way we think about block play in the 21st century preschool classroom.

"SING, PLAY AND DANCE CREATIVE AND IMPROVISED PATTERNS BY EXPLORING MATH IN MUSIC"

Presenter:
Dayita Datta
The Children's Center at Caltech
Room: San Gabriel
Content: M
Target Audience: P TK K F

This music and movement workshop will focus on the use of mathematical intelligence and awareness by pattern recognition through singing games, song-tales, echo songs, pitch exploration, listening, using props, folk dance, tap, clap, and playing patterns on non-pitched percussion instruments, Soprano Recorder and pitched barred instruments. This workshop encourages and nurtures teachers to carry out age appropriate STEM based music sessions which are fun, creative and appropriate for building strong foundation of language and social- emotional development for preschool and elementary children.

SESSION III: 3:00-4:30 PM

"UTILIZING FREE RESOURCES"

Presenter:
Peggy Ashbrook, BA and Evelyn Sussman, BA,
National Science Teachers Association and The Children's Center at Caltech
Room: Pacific A
Content: S T E M
Target Audience: PK-K

"Free Resources" means everything from the empty egg carton to the public library to the teacher next to you. Learn how to find free resources online from the National Science Teachers Association (NSTA) and the National Association for the Education of Young Children (NAEYC), connect with your local children's librarian, forage for materials from nature and use the many re-usable packing products that are usually thrown away or recycled. Using photographic examples and a resource list, teachers will go home with a new appreciation for how easily free resources are available. We will handle examples from a preschool classroom. If materials are provided by the conference organization, this session can include a make-and-take section.

"TINKERING WITH TOPS: EXPLORING PHYSICS OF ROTATIONAL MOTION"

Presenter:
Beth Dykstra Van Meeteren, EdD
University of Northern Iowa
Room: Pacific B
Content: S T E M
Target Audience: P TK K

Children explore lines of symmetry along an axis and other variables that affect rotational motion such as the size, shape, and weight of the top body and its placement on the spindle.

"SORT IT ALL OUT"

Presenter:
Sandra Silverman, MS
Consultant
Room: Pacific C
Content: S T M
Target Audience: P TK K

Through fun hands-on experiences you will learn the developmental sequence for sorting and classifying, techniques to support children's learning, and the language-math-science connection that are the basis for STEAM.

"MUSIC IN EARLY CHILDHOOD STEM SERIES"

Presenters:
Dete Meserve and Craig Bartlett
Ready, Jet, Go
Room: Monterey
Content: S T E M
Target Audience: T P TK K F S

Ready, Jet, Go creator Craig Bartlett, composer Jim Lang, and producer Dete Meserve will demonstrate how to use music to help teach STEM ideas.

"USING THE 5E'S TO TEACH TOWARD THE NEXT GENERATION SCIENCE STANDARDS: SCIENCE INQUIRY IN THE EARLY YEARS"

Presenter:
Linda Froschaeur, MA
National Science Teachers Association
Room: Pasadena I
Content: S T
Target Audience: P K F S

Experience the 5E strategy for developing STEM conceptual understanding and ways of thinking. This hands-on workshop will highlight each phase of the 5E and connect learning to the NGSS.

"LIGHT AND SOUND WITH TODDLERS"

Presenter:
Retha Jones, BA and Vanessa Guerra
The Children's Center at Caltech
Room: Pasadena II
Content: S T E M
Target Audience: T

Join us as we look into the properties, color, mediums, and sources of light, shadow, and, sound. We will explore illumination, reflection, the environment, and more with light sources and the relationships that occur.

"RECOGNIZING AND SUPPORTING YOUNG CHILDREN'S SCIENTIFIC CURIOSITY"

Presenter:
Emily Slusser, PhD, and Mario Fusaro, EdD
San Jose State University
Room: Santa Barbara
Content: S
Target Audience: I T P

This research-based session will use video vignettes to explore how children learn about science and engage in scientific inquiry. Activities will focus on supporting children's conceptual development and natural curiosity.

"ORDINARY TO EXTRAORDINARY: PROGRAM-WIDE TRANSFORMATION THROUGH STEAM ACTIVITIES"

Presenter:
Stephanie Lester, MA, and Linda Brown, MA
Antelope Valley College| Lancaster School District
Room: Santa Clara
Content: S T E M
Target Audience: P TK K

This hands-on workshop will provide step by step guidelines demonstrating how to set up, manage and sustain a program-wide implementation of project-based learning utilizing STEAM activities.

"DANCING ROBOTS"

Presenter: Amanda Sullivan, PhD
DevTech Research Group at Tufts University
Room: Santa Rosa
Content: T E
Target Audience: P TK K F S

Gain a hands-on introduction to the KIBO robot, designed for children ages 4-7. Participants will explore building and programming in order to create dancing robots with sensors, motors, and wheels.

"SYSTEMS AND INTERACTIONS IN OUR COMMUNITY"

Presenter: Janet Nunez, BA, and Ingrid Ellegaard-Hansen, BA
The Children's Center at Caltech
Room: Del Mar
Content: S T E M
Target Audience: T P

This workshop will show how children gained experience, discovered, and investigated different aspects of the world around them. Journey through a curriculum based on systems and interactions in our very own "backyard."

"THE HUMAN BRAIN HAD A VAST MEMORY STORAGE. IT MADE US CURIOUS AND VERY CREATIVE. THOSE WERE THE CHARACTERISTICS THAT GAVE US AN ADVANTAGE - CURIOSITY, CREATIVITY AND MEMORY. AND THAT BRAIN DID SOMETHING VERY SPECIAL. IT INVENTED AN IDEA CALLED 'THE FUTURE.'"

- DAVID SUZUKI

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20 FUN THINGS TO DO IN PASADENA, CALIFORNIA

THE GAMBLE HOUSE

A California and National Historic Landmark can be found mixed in with other well to do suburban homes on Westmoreland Place in Pasadena. Build in 1908, the Gamble House belonged to the on screen Dr. Emmett Brown in the Back to the Future trilogy. Off screen this three-story architect's dream was included in the top 10 houses list of all time by the Los Angeles Times in 2008 and has a yearly rotating occupancy of architecture students from USC. Drop in on a Tuesday when the rear lawn and terrace are open for Brown Bag lunch carriers or for daily architect based tours.

PASADENA PLAYHOUSE

The 686-seat historic performing arts venue is an influential medium for the American Theatre. The Pasadena Playhouse was the first American theatre to produce all of Shakespeare's plays and they showcase at least 300 performances annually. Their College of Theatre Arts cranked out legendary actors including Gene Hackman, Dustin Hoffman and box office heartthrob William Holden. Today, The Whipping Man by Matthew Lopez is onstage until March 1st and Pygmalion and Waterfall debut later this spring and summer.

JET PROPULSION LAB

The city of Pasadena can proudly boast that they host the leading robotic exploration of the solar system in the country. NASA's Jet Propulsion Lab offers numerous public educational events throughout the year including a March event that will share stories of field campaigns and research efforts and an April event that will showcase two new sibling robots. General purpose tours are offered year-round for visitors who would like to learn about the laboratory as a whole. Visit the website for more information about the tours.

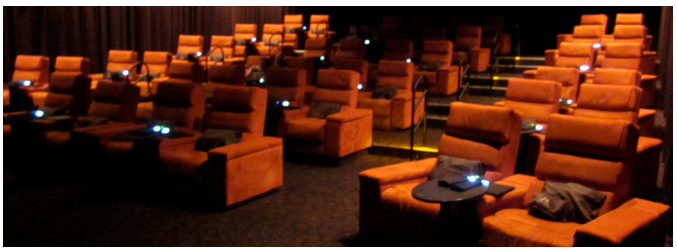
ARLINGTON GARDEN

The city's only dedicated public garden features plants that fair extremely well in the Southern California climate. The Garden facilitates inspiration and guidance for anyone looking to start or improve an existing garden with drought tolerant plants. Even if you're not visiting for personal gardening purposes, the three acre lot offers tranquility for any and all visitors.

Admission is free and the Garden is open year- round, rain or shine.

HUNTINGTON LIBRARY

The Huntington Library serves as a dual purpose establishment by showcasing educational and research based collections and 120 acres of landscaped gardens. There is an admission fee to visit, but they do offer "Free Days" for non- member visitors the first Thursday of each month. You'll have to request your ticket in advance online or by phone to avoid a sellout. There are four dining options here for when your feet need a rest including the Rose Garden Tea Room where you'll delicately eat finger sandwiches and chilled salads of The Cafe for a family friendly option with simple, yet satisfying options such as sandwiches, tacos, quesadillas, and a kid approved children's menu.



IPIC THEATER

This theater creates such a fun, unique movie viewing experience with their recliner sofas, provided blankets & pillows and free popcorn. That's not all though, guests can order a full meal up to 30 minutes prior to the movie showing and have it delivered to their reserved seat. With you meal you'll have the option to accompany it with a glass of wine or cocktail from Salt Lounge. This sounds like a movie night at home, but even better because other people are doing the work for you.

ICE HOUSE COMEDY CLUB

Open since 1960, this vintage-esque comedy club has been Pasadena's go to for music and comedy. Renowned comedians have graced this club including Jay Leno, Jerry Seinfeld and the late Robin Williams. Today, there are two showrooms, a courtyard and approximately 7,000 guests each month. Upcoming performers include Harry Basil and Kevin Smith with Jason Mewes. I would try looking at Groupon for the latest and greatest deals for entry into this comedy club.

EATON CANYON

There's many things to do at Eaton Canyon that at least one aspect is bound to appeal to whomever you might be traveling with. Whether you like to hike, go horseback riding or like watching running water, you can find it here. The trail to Eaton Canyon Falls is a popular and often crowded hike that starts off as a fairly easy walking experience, but progresses in difficulty as you approach the falls. If you're not as into physical activity there's still much opportunity to view wildflowers in the spring and an abundance of birds during the crowning of migration (April-May.)

LE PETIT VENDOME WINE TASTING

This wine and spirits shop recently moved to a new location between Smitty's Restaurant and Wells Fargo Mortgage. Always go online to confirm the wine tasting schedule, but wine tasting at the Pasadena location usually occurs every Friday and Saturday between 6:30 and 8p.m. Each weekly wine tasting will focus on either a particular region or category of wine. What's really neat are all sampled wines are offered to samplers at or below retail prices.

OLD TOWN PASADENA

The real downtown of Pasadena hosts many activities and establishments for those looking for fun in the City of Roses. Take a walk along Colorado Blvd. in old town to enjoy a myriad of shopping and dining options, plus there's the Farmer's Market every Sunday with free kids' activities. And, of course, every year folks camp out along Colorado the day before the turn of the new year so they can stake out their real estate to watch the annual Rose Parade.

ROSE BOWL

Speaking of roses... The Rose Bowl might be most famously known for the annual college football game of the same name, but regular flea markets, concerts and special events draw in the crowds year-round. Also of note, stadium tours are made available for those who are really just interested where visitors can see the original 1922 locker room, the Loge Lounge and all the famous history that has occurred here.

KIDSPACE CHILDREN'S MUSEUM

This is the place to visit if your family has little ones in it because really, sometimes kids need an outing that is all about them. There are a ton of hands-on exhibits for our little ones who are used to hearing, "don't touch!" and plenty of outdoor activities and programs. The outdoor Robert & Mary Galvin Physics Forest looks like a fantastic place to let kids use their wholes bodies and mind to see just how things work. Check out their website for current programs geared for all age ranges.

626 NIGHT MARKET

Ok, so Arcadia isn't technically in Pasadena but since it's literally just a stone's throw away we have to mention the 626 Night Market, the original, and largest, Asian themed night market in the United States. With food options ranging from ramen burgers to lobster rolls, Sriracha inspired creations to more traditional fare such as stinky tofu or dragon candy, it's no wonder that 626 is one of the signature food events of the San Gabriel Valley (and all of Los Angeles, really).

SANTA ANITA PARK

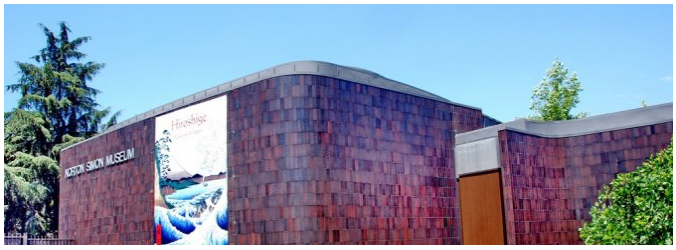
I remember a time when all I used to hear about on the radio and television was the Santa Anita Park. The park which is best known for its thoroughbred racing is in season right now until June. You can catch a race and a free tour of the stables weekends during the season at 8:45 and 9:45 a.m. They've got more than just horses though, if you like beer they've got a beer festival coming up early March and the Winner's Circle BBQ Championship at the end of March. You're bound to have a busy spring and summer if you stay current with the events this venue hosts.

FREE CONCERTS AT LEVITT PAVILION

The Levitt Pavilion Pasadena is a non-profit arts organization which hosts a Music Festival of some 50 free concerts over the course of each and every summer. Performances include past Grammy winners, and a variety of genres, from Latin to Jazz to contemporary alternative and indie acts. There are even food vendors and children's activities set up to entertain the little ones. Just be sure to get there early to stake out a good spot to enjoy the show.

SAN GABRIEL MISSION DISTRICT

If you went to elementary school in California there's a good chance you toured one of the 21 missions that line the state. Although not directly inside Pasadena city limits, this mission is too close not to visit if you'll be in the area. Take a walk through the "city with a mission" and explore what was first rooted over 200 years ago. You'll get a small taste of early California life, eat some good food and most importantly, learn about the Franciscan's fourth established mission.



NORTON SIMON MUSEUM

One of the most impressive private collections in the world resides at the Norton Simon Museum, just a few blocks west of the heart of Old Town Pasadena, with works ranging from a 2,000 year period that include paintings from the European Renaissance, 20th century European masters, and incredible sculptures from South and Southeast Asia made more than a millennia ago. Standard admission is $12 but the Museum is free for all visitors the first Friday of every month from 5pm to 8pm.

PASADENA CITY COLLEGE FLEA MARKET

If the Rose Bowl Flea Market seems too pricy or too overwhelming, consider this a great alternative. The PCC Flea Market takes place the first Sunday of every month from 8am to 3pm, features tons of great vendors and is FREE to enter. Just as important, parking is just $2.

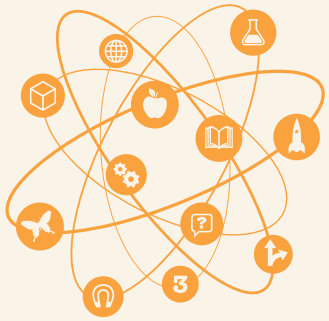
VROMAN'S BOOKSTORE

Pasadena's oldest bookstore, and also one of L.A.'s finest. This is the perfect spot to spend a rainy afternoon perusing, reading, or just hanging out, and they also have plenty of signings, readings, and other community oriented events on their calendar to keep you coming back week in and week out. Two locations for your convenience, one on Colorado Blvd and the other on Foothill.

SOUTH LAKE AVE

If you've exhausted your capacity for shopping on Colorado Blvd, then take a stroll down Lake Ave. A few miles east of Old Town proper, this 12 block strip along South Lake Ave features shops, markets, restaurants, and retailers. Recommended: Abricott for breakfast, Mediterranean Cafe for lunch, and Euro Pane Bakery (just a block east) for macarons.

NOTES



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