

2013 EXSEED Conference Highlights

Location and Dates

- Loma Linda University – Centennial Conference Center
- June 24-28, 2013

EXSEED Higher Education Partners: 7

- Andrews University*
 - Kettering College*
 - La Sierra University
 - Loma Linda University – host and facilitator
 - Pacific Union College*
 - Union College
 - Walla Walla University
- *Partners not able to participate in the 2013 EXSEED Conference*

Conference Expenses and Requirements

- Free:
 - Food and lodging
 - Transportation to and from the airport to LLU
- Requirements:
 - Teachers had to apply and indicate a willingness to participate in EXSEED during the school year and not just during the conference.
 - \$50 registration fee

K-12 Teachers and Administrators: 68 (1 no-show)

Union/District	Number of Participants
Atlantic Union	1
Columbia Union	10
Lake Union	1
Mid-America Union	4
North Pacific Union	4
Pacific Union	36
SDA Church in Canada	2
Southern Union	7
Southwestern Union	1
San Bernardino City Unified School District	1
Total	67

Union/Other	Number of Participants
SDA K-12 teachers	57
SDA K-12 administrators	3
SDA conference representatives	6
SDA higher education professor/administrator	1
San Bernardino City Unified School District K-12 teacher	1
Additional K-12 Teachers who attended only the 2 days of workshops	34

EXSEED Presenters: 56 in 62 sessions

Institution/Org.	Presentations	Workshops	Tours
EXSEED Alumni		3	
Apple	2		
La Sierra University	1	4	
Loma Linda University	14	23	2
Union College		2	
Walla Walla University		2	
Adventist academy teachers (active or retired)	2		
Adventist public school teacher	1		
STEM consultant	3		

iPad 4

- Each K-12 teacher was given an iPad 4 with the following apps and accessories:
 - **Pages** – develop word processor documents compatible with MS Word
 - **Keynote** – develop presentations that are compatible with MS PowerPoint
 - **Numbers** – develop spreadsheets compatible with MS Excel
 - **iMovie** – produce short instructional videos
 - **GarageBand** - create copyright-free music for instructional videos and to create new music
 - **Notability** – take notes and capture classroom presentations for sharing with students and flipping the classroom
 - **Camera Conversion Kit** –download and/or share photos and movies between iPads, iPhones, cameras, and computers
 - **Apple Care+** - protect and support iPad with a two-year warranty that includes up to two accidents per year so teachers will feel ‘safe’ to have their students use the iPads as tools for learning in the classroom.

- **Goal for iPads:** To empower teachers and students to use iPads as teaching and learning tools in the classrooms. Many of the teachers have little or no technology in their classrooms.

- **iPad Agreement:** In accepting the iPad, each teacher agreed to
 1. Participate in EXSEED
 2. Have their students produce at least one instructional video to share with EXSEED during the school year

3. Use the iPad for instructional purposes with their students.
- **iPad Instruction:**
 - After giving the teachers their iPads, an Apple engineer gave an “iPad 101” session about how to use them. Tech support was provided throughout the conference all week until 9 pm Monday through Thursday, and until 2 pm on Friday.
 - An Apple Education Specialist demonstrated many apps specifically useful in classroom and education situations.
 - iPads were used throughout the conference in a variety of ways. Many presenters had teachers download specific apps as tools for their sessions’ topics.
 - **Group Instructional Video Assignment:** Teachers divided themselves into groups of 3-4 to develop a short instructional video to be shared with the full group on the last day of EXSEED. The videos were shot and produced exclusively on their iPads. The goal was to prepare teachers to teach their students how to develop short instructional videos to teach their peers or others. Each teacher’s students will produce at least one video to share in the EXSEED portal. We all learn best by teaching someone else!

Teachers’ Reactions and Comments

Participants’ Major Complaint and Comfort Zones

- The major “complaint” was “I wish I could have more time so I could take more workshops.”
- The conference was designed to stretch teachers beyond their comfort zones. In spite of this, teachers were engaged and participated.

Hands-on Sessions, Labs, and Workshops

- Wednesday and Thursday were full days with 24 half-day or full-day workshops. Some workshops were repeated so more teachers could participate.
- Some comments from teachers about hands-on sessions:
 - “The break-out workshops have been amazing. They have given me so many new ideas, better ways to present information, easy to use hands-on labs for my kids, and great ways to foster learning through experimentation. Thanks again for helping be a teacher that inspires others.”
 - “I have not only gained further knowledge in several topics this week but have also learned many affordable, exciting hands-on projects to try with my students. For instance, yesterday I took Cheap Science and was able to dissect a chicken wing. I had never done this before but found it is part of next year’s curriculum. In the same workshop, I got experience with and directions for many more projects besides. In other workshops, I have built my own working spectrometers. One is used to distribute light waves into spectrums. The other helps determine the concentration of molecules in solutions. This afternoon I studied plate tectonics with the San Andreas field trip group to learn more about geology and earthquake activity. All of these will bring higher levels of knowledge and excitement to my 5th and 6th graders this coming school year.”

- “I have long been interested in Lego Robotics but thought it was too hard or complex for me to tackle in the classroom, until this conference. I attended the workshop for robotics on Wednesday and yes, it was challenging, but the encouragement I received from the presenters assured me that I was not alone. As a result of this workshop I have decided to embark on a robotics program at my school and I am very excited.”

Teachers’ Comments on What EXSEED Meant to Them:

- “I believe that that this week of education and the tools provided to me will make a tremendous positive difference in my classroom. In addition, I look forward to seeing all that the EXSEED community will offer me and I look forward to giving back. As a next step, I am planning to connect with teachers from other school that do collaborative science projects next year. I can hardly wait to make that connection and start the planning.
- “I feel that LLU, sponsors, presenters, IT people, truly cared and wanted to support those of us who are in the trenches. I made connections with other teachers, master teachers, and mentors to help in this mission we call Adventist education. STEM is not limited to science, technology, engineering and mathematics, but is an interdisciplinary approach to curriculum. Step outside your comfort zone and connect with people who can help. “
- “The best thing of this week is the opening of my mind to all the possibilities that are out there. Thank you for being a part of my renewal for this next year.”
- “There are several ways that I believe this experience will enhance my teaching and will be beneficial to my students. I'm excited about "Flipping the Classroom", a technique that I will implement several times this year. Although my students don't all have iPads I can envision how the iPad that I received can be used by my students for help in reviewing systems in Anatomy & Physiology and looking at the structures of atoms and of cells plus a whole lot more. The opportunity I had visiting and observing in the Anatomy Lab will definitely enliven the discussions in A & P as well. I'm also very excited about using Gel Electrophoresis in my Biology classrooms. What an opportunity for my students to use some of the latest technology in a high school lab!”
- “Once again, thank you for the most amazing opportunity to learn and network I have experienced in my career as a Christian educator.”

Teachers’ Concluding Take-Away Thoughts on STEM, Religion, and God:

- “I was also quite impressed with the lineup of speakers and researchers who spoke at the conference. The cooperation and support of so many of the faculty and departments is key to making this conference so successful. It goes to show the tremendous leadership from the EXSEED staff.”
- “Many conferences I have attended over past years have been good but never where I left the session with multiple strategies and detailed information on how to use the information the next day at church or in the classroom. Some of the science demonstrations could double for church story time.”
- “I have been enormously blessed by the spiritual nature of this conference. The presenters are all distinguished scientists with a wealth of knowledge, but they are able

to share with lay people like me in a way that is not only understandable, but thoroughly connected to the Source of all knowledge and wisdom, and the Creator of all science.”

- “I believe that the advances in science and technology are revolutionizing the world. And I believe that our church has a small window of opportunity to embrace these changes and revitalize our school system or fall behind and maybe out of existence.”
- “I have been a teacher in the Canadian Adventist system for 32 years and I have attended many National Science Teachers Association conferences but this one has by far been the most beneficial. Not only did it meet my academic and professional thirst, it is providing me with an opportunity to share and collaborate with my colleagues in the future.”

Workshops

The following pages cover the workshop titles, descriptions, presenters, and schedule. It was the workshops list that participants used when registering. Workshop notes:

- **Closed** – maximum enrollment was reached
- **Cancelled** – due to minimum enrollment not reached
- **Twice** – some workshops were offered two times

EXSEED Website

- <http://www.llu.edu/exseed>



S.cience
T.echnology
E.ngineering
M.ath

mission-focused, integrative STEM Learning

EXSEED

for the future of Adventist K-12 science education

2013 Conference: The STEM of Healthy Living

Time	Monday – 24th	Tuesday – 25th	Wed. – 26th	Thurs. – 27th	Fri. – 28th
	7:45-8:15 Check-in , Centennial Complex – 4 th Floor	7:45-8:15 Conference room open	7:30-8:00 AM Check in for Workshop-only Participants , Centennial Complex – Damazo Amphitheater		7:45-8:15 Conference room open
	8:15-8:30 Worship : Ron Carter	8:15-8:30 Worship : Jon Paulien	8:00-8:30 Worship : Jerry Winslow Welcome : Ron Carter	8:00-8:30 Worship : Calvin Thomsen Welcome : Ron Carter • Richard Hart • Juan Carlos Belliard	8:15-8:30 Worship : Terry Swenson
	8:30-9:15 EXSEED Vision Goals of the Conference ~Ron Carter & Marilyn Eggers	8:30 – 9:30 “Inspiring Students by the Way We Teach” ~ Willie Davis	Workshops Sessions ¹		8:30-8:45 EXSEED: Visions ~Ron Carter & Marilyn Eggers
	9:15-10:15 Changing Ecology of	9:35-10:35 Morphology level			8:45-9:15 Group 1 Team Videos 9:15-9:45 EXSEED: This School

¹ http://www.llu.edu/central/exseed/2013conference_workshops_descriptions.page

Time	Monday - 24th	Tuesday - 25 th	Wed. - 26 th	Thurs. - 27 th	Fri. - 28 th
	K-G Education ~Dick Osborn	[structure function - developmental genetics] ~Kerby Oberg			Year ~Ron Carter & Doug Havens 9:45-10:15 Group 2 Team Videos
	Break - 10:15 - 10:30	Break - 10:35-10:50			Break - 10:15-10:30
	10:30-11:40 "Introducing Critical Thinking Skills Through Research" ~ Eugene Joseph	10:50-noon "Aging: Do I Have To?" ~Penny Duerksen-Hughes			10:30-11:00 ~ Richard Hart with Tom and Vi Zapara
	11:40-noon Apple iPads & Downloading Apps ~Tim Parker				11:00-11:30 EXSEED: Making a Difference ~Alumni and 2013 Teachers
					11:30-12:15 • Groups 3 & 4 Team Videos • Group Photo with Zaparas • Dedicatory Prayer for Teachers ~Ron Carter
Noon-1:00 1 hr.	Lunch				Lunch with the Zaparas Dismissal
1:00-2:30	Medical Simulation Center Tour • 12:00 - Group 1 • 12:30 - Group 2 • 1:00 - Group 3 • 1:30 - Group 4 • 2:00 - Group 5	"Humor/Laughter in Education? —You got to be Serious!" ~Lee Berk, Karyn Buxman, & Gurinder Bains			
2:20-2:40	Break	Break - 2:30-2:45			
	Apple Team	2:45-3:45			

Time	Monday - 24th	Tuesday - 25 th	Wed. - 26 th	Thurs. - 27 th	Fri. - 28 th
	<p>2:30-3:30 iPad Essentials ~Tim Parker</p> <p>3:30-5:00 iPads in K-12 Education ~ Cheryl Lee</p>	<p>"Food for Thought: The Power of Food for a Healthy Start ²" ~Cory & Krystal Gheen</p> <p>3:45-4:15 <i>Capstone: Higher level of Adventist Health Study: Summary of what they have heard and experienced</i> ~Tricia Penniecook</p> <p>4:15-4:45 EXSEED during the School Year ~Marilyn Eggers & Doug Havens</p> <p>4:45-5:00 Wrap Up and Introduction to Workshop Days ~Ron Carter & Marilyn Eggers</p>			
5:00-6:00	Dinner				

² The health problems faced by our youth today are unlike any in the past. Over the past three decades, childhood obesity rates in America have tripled, and today, nearly one in three children in the United States is overweight or obese. Poor diet and lack of exercise put today's children at greater risk for heart disease, diabetes, and cancer later in life. A foundation for healthy eating at a young age is needed to promote a healthy lifestyle and lessen the risk for chronic diseases.

Time	Monday - 24th	Tuesday - 25th	Wed. - 26th		Thurs. - 27th	Fri. - 28th
6:00-9:00	6:00-9:00 <i>Required: Instructional Video Beginner & Intermediate</i> ~Stew Harty & Stephen Robertson	6:00-9:00 <i>Optional - Video Lab</i> ~Marilyn Eggers & Tech Support Team	6:00-9:00 <i>Optional - Grant Writing ... The Steve Jobs' Way</i> ~Denver Drieberg, Leanne Drieberg, & Aloma Lively	6:00-9:00 <i>Optional - Video Lab</i> ~Marilyn Eggers & Tech Support Team	6:00-9:00 <i>Optional - Video Lab</i> ~Marilyn Eggers & Tech Support Team	

Drayson Center Hours: M-Th 5:30 am – 10:00 pm

<http://www.llu.edu/central/drayson>

Must show EXSEED badge

2013 EXSEED Workshop Schedule

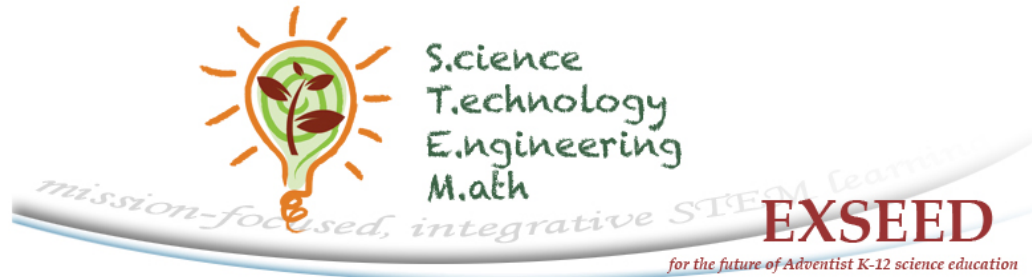
Full workshop list and schedule: http://www.llu.edu/central/exseed/2013conference_workshops_descriptions.page

Time	Wednesday - 26th	Thursday - 27th
8:00-8:30	Welcome: Ron Carter Worship: Jerry Winslow	Worship: Calvin Thomsen Welcome: Ron Carter • Richard Hart • Juan Carlos Belliard
8:30-8:45	Break	Break
8:45-12:15	Morning Workshops	Morning Workshops
12:15-1:15	Lunch <i>Centennial Conference Kitchen and Dining Area</i>	Lunch <i>Centennial Conference Kitchen and Dining Area</i>
1:15-1:30	Break	Break
1:30-5:00	Afternoon Workshops	Afternoon Workshops
5:00-6:00	Dinner	Dinner
6:00-9:00	<i>Optional - Grant Writing ...</i> The Steve Jobs' Way ~Denver Drieberg, Leanne Drieberg, & Aloma Lively	<i>Optional - Video Lab</i> ~Marilyn Eggers & Tech Support Team
		<i>Optional lab</i> Optional - Video Lab ~Marilyn Eggers & Tech Support Team



Central University > 2013 Summer Conference > Workshops (June 26 & 27) > Workshop Schedule & Descriptions

- [Signing Up](#)
- [Workshop Schedule & Descriptions](#)
- [Conference Main](#)



EXSEED Summer Conference: Workshops (June 26 & 27)

June 24-28, 2013
 Loma Linda University

The application period for the FULL CONFERENCE has closed.
 This information is in regards to the workshops provided on Wednesday & Thursday of the conference week.
Individuals not registered for the full conference MAY sign up for workshops.
 See the [list of groups we are excited to have join us!](#)

HOW TO SIGN UP:

1. Review the workshop schedule & descriptions below
2. [Complete the online sign-up form here](#) (SurveyMonkey)
 - *Seats are first-come, first-serve*
 - *Workshop(s) for which minimum seats are not filled may be cancelled*

Workshop Schedule

We are excited to provide a rich variety of workshops this year! Seats are **first-come, first-serve** and are open to full-conference and workshop-only groups (view who is eligible to sign up [here](#)). Below is the schedule for the half- and two-day workshops. Click on a workshop title for more information.

Please note for both days:

- **7:30-8:00 AM** = Check-in for workshop-only groups (those who received confirmation of registration)
- **8:00-8:30 AM** = Welcome & worship
- [View the schedule for the full conference here](#)

Workshops

Updated 06-14-13

	Wed., June 26		Thurs., June 27	
	8:45 AM-12:15 PM	1:30 PM-5:00 PM	8:45 AM-12:15 PM	1:30 PM-5:00 PM
• Anatomy: "Where the Dead Teach the Living"		CLOSED		
• Basic Video Techniques	✓	✓		
• Building the Bridge Between K-12, Industry and Academia				✓
• By Design Labs: Hands-on Lab Preview for Grades 1-4			✓	✓
• Cheap Science: No Budget, No Equipment, No Training -- Help!	✓	✓		
• Clickers, Spreadsheets & LMS: Leveraging Technology for Mundane Tasks		✓*		✓*
• Counting Molecules with Light-emitting Diodes	✓	✓		
• Deadly or Curative? Venomous Animals and Their Venoms		✓		✓
• Demonstrating the Molecular Basis of Finger Formation: The Role of Sonic Hedgehog (SHH)	✓			
• Felonious Faculty: A Brief But Repeated Life of Crime	✓			
• Fossils: The Good, the Bad, and the Ugly	✓			
• Grant Writing ... The Steve Jobs' Way			CLOSED	
• iPads: Are They Game Changers for K-12 Students and Teachers?			CLOSED	CLOSED
• Listening to Atoms with a Pizza Box			✓	✓
• Making an iPhone App		CLOSED		
• Making Lego Robotics Work in Education	CLOSED	✓	✓	
• Pack It Right, Wear It Light!		CANCELLED		

- [Producing Proteins: Fun with Biotechnology](#)
- [San Andreas Fault: Whole Lotta Shakin' Going On](#)
- [Science, The Language of Math](#)
- [Spatial Thinking Through Geographic Information Systems](#)
- [Studying Sound with an iPad](#)
- [The Chemistry Cuisine](#)
- [The Math of Drugs](#)

	CLOSED	
	✓	✓
	✓	
	special hours (see description below)	
	✓*	✓*
	✓	✓

✓ = workshop is provided during this time period
 * = iPad required or recommended (see full description)

Descriptions

[Return to top](#)



Offered: **CLOSED**

Anatomy: "Where the Dead Teach the Living"
Ben Nava, PhD, Vice Chair & Professor, Pathology & Human Anatomy & Team
School of Medicine
Loma Linda University

A hands-on cadaver workshop that will explore the anatomy of certain organ systems. (Seats: 6-12)

June 26 / 1:30 - 5:00 PM

[Return to top](#)



Offered: **Twice**

Basic Video Techniques
Stew Harty, Director, Media Ministries
Paul Galvez, Post-production
Loma Linda University Church

This workshop will demonstrate how to use some of the new tools to create video in the classroom. It will also use some hands-on examples of some simple ideas on how to make better-looking and more effective videos. (Seats: 5-20)

June 26 / 8:45 AM - 12:15 PM
June 26 / 1:30 - 5:00 PM

[Return to top](#)



Offered: **Once**

Building the Bridge Between K-12, Industry and Academia
Alan Kay, Ed.D, Principal
Brian Willemse, Teacher
Indian Springs High School
San Bernardino City Unified School District

This presentation will review how the newest high school in San Bernardino (opened August 2012) has been collaborating with medical institutions, industry, and academia in order to provide students in a low-income area a clear career path that will gain them entrance into a variety of fields within the health field. (Seats: 10-30)

June 27 / 1:30 - 5:00 PM

[Return to top](#)



Offered: **Twice**

By Design Labs: Hands-on Lab Preview for Grades 1-4
Nikki Gonzalez, MA, Retired Teacher
Penny Richards, BS, Teacher
Loma Linda Elementary School

Get a jump on labs in all four major subject areas for grades 1-4 and multiple grades -- complete with hints and tips from Nikki. You will set up labs, collect data, and analyze results in typical labs with everyday equipment. Inventory of the science bins for sale from the publisher provided so you can assemble bins on a shoestring budget yourselves (or give donors a concrete list). (Seats: 10-50)

June 27 / 8:45 AM - 12:15 PM
June 27 / 1:30 - 5:00 PM

[Return to top](#)



Offered: **Twice**

Cheap Science: No Budget, No Equipment, No Training -- Help!
Nikki Gonzalez, MA, Retired Teacher
Penny Richards, BS, Teacher
Loma Linda Elementary School

Real science that is "shovel ready", fun, and relevant -- on the cheap. Demonstrations and labs for students to learn how science works, how to collect their own DNA, examine sometimes tricky subjects such as pH, osmosis and diffusion, functions of plant tissues, and more - using cheap supermarket supplies. (Seats: 10-24)

June 26 / 8:45 AM - 12:15 PM
June 26 / 1:30 - 5:00 PM

[Return to top](#)



Clickers, Spreadsheets & LMS: Leveraging Technology for Mundane Tasks
Jennifer Helbley, PhD
Assistant Professor, Chemistry

La Sierra University

An introduction to how to use three technologies to help you interact with students:

1. A clicker technology and the variety of ways that it can be used (not just for PowerPoint)
2. Spreadsheets for keeping track of grades
3. Learning Management System (LMS), what is easy to use and what you can do with it from forums and files to assignments and grades.

Bring your laptop (clickers require laptop with USB) and iPad to try out all three with hands-on help. (Seats: 4-12)

June 26 / 1:30 PM - 5:00 PM - *Laptop & iPad recommended*
June 27 / 1:30 PM - 5:00 PM - *Laptop & iPad recommended*

[Return to top](#)

Counting Molecules with Light-emitting Diodes

Richard Clark, PhD
Professor, Chemistry
Union College

Participants will learn a few basics of absorption spectrometry and spectrometer design then build a small, take-home spectrometer and use it to analyze an everyday sample. (Seats: 1-10)

June 26 / 8:45 AM - 12:15 PM
June 26 / 1:30 - 5:00 PM

[Return to top](#)

Deadly or Curative? Venomous Animals and Their Venoms

Carl Person, PhD Candidate
Gerad Fox, PhD Candidate
Eric Gren, PhD Candidate
Wayne Kelln, MS
Earth & Biological Sciences
School of Public Health
Loma Linda University

Venomous animals often sport dazzling colors and extraordinary adaptations that ensure their survival. Because of their deadly brew of toxins, they often inspire extreme emotions: fear and loathing, or intense fascination. Although many venomous animals are killed when encountered, they comprise an essential part of the natural environment and help to maintain balanced ecosystems. In doing so, nature's toolbox has carefully shaped their chemical weaponry via countless ongoing experiments to yield an extraordinary diversity of compounds that interact in highly specific ways with physiological systems. In this seriously cool workshop, you will learn the basic biology of venomous animals and the complex ways in which humans interact with them. You will get to see live animals, watch how venom is extracted from them, and discover how many venoms have been converted to cures for human ailments. You will even get your hands on some state-of-the-art equipment to get acquainted with the techniques researchers use to explore the various components of venom, including high-pressure liquid chromatography, mass spectrometry, quantitative PCR, and enzyme-linked immunosorbent assay. (Seats: 5-8)

June 26 / 1:30 - 5:00 PM
June 27 / 1:30 - 5:00 PM

[Return to top](#)

Demonstrating the Molecular Basis of Finger Formation: The Role of Sonic Hedgehog (SHH)

Kerby Oberg, MD, PhD
Associate Professor, Pathology & Human Anatomy
School of Medicine
Loma Linda University

This workshop will overview the process of scientific discovery. The participants will first discuss the basic scientific process as a group, then individually participate in several molecular techniques that are actively used in the discovery of molecules that orchestrate limb development. The participants will:

1. Evaluate the expression pattern of SHH in the limb bud;
2. Stage chicken embryos for experimental manipulation;
3. Observe 3 experimental approaches to evaluate SHH function by over-expression (electroporation, bead implantation) and chemical inhibition (Cyclopamine);
4. Document the effectiveness of the electroporation protocol in ovo fluorescence;
5. Harvest an experimental embryo;
6. Document and digitally record experimental outcome; and
7. Evaluate the data and suggest a role for SHH in digit formation.

(Seats 2-6)

June 26 / 8:45 AM - 12:15 PM

[Return to top](#)

Felonious Faculty: A Brief but Repeated Life of Crime

Rodney Roath, MBA, MT(ASCP), Chair & Instructor, Clinical Laboratory Science
School of Allied Health Professions
Loma Linda University
Doug Havens, MA, Director, Development
Escondido Adventist Academy

DNA fingerprinting: See behind-the-scenes production of a DNA fingerprinting lab session, complete with setup and performance of the DNA-testing process. (Seats: 6-24)

June 26 / 8:45 AM - 12:15 PM

[Return to top](#)

Offered: [Twice](#)



Offered: [Twice](#)



Offered: [Twice](#)



Offered: [Once](#)



Offered: [Once](#)



Offered: **Once**

Fossils: The Good, the Bad, and the Ugly

Tim Standish, PhD

Researcher

[Geoscience Research Institute](#)

Adjunct Associate Professor, Earth & Biological Sciences

School of Public Health

Loma Linda University

This workshop is designed for those teaching grades 1-4 science using the new [Kendall Hunt By Design](#) science textbooks. We will look not just at what fossils are, but how they fit into the fossil record, what they can tell us about the past, and why they challenge the faith of some who study them. Our time will include a tour of some of the amazing fossils in the GRI collection as well as fun ways to use the information and activities in the *By Design* textbooks. Participants will leave more informed and better equipped to teach about fossils and the fossil record in an informed, responsible, and faith-affirming way. (Seats: 10-25)

June 26 / 8:45 AM - 12:15 PM

June 26 / 1:30 - 5:00 PM

[Return to top](#)



Offered: **CLOSED**

Grant Writing ... The Steve Jobs' Way

Denver Drieberg, MEd, Technology Teacher

Carter High School

Leanne Drieberg, RN, MPH

Aloma Lively, MA

Learn Academicians are trained in depth to perform research. Paradoxically, however, they usually receive little or not formal training on how to support their studies, projects, and fantastic lesson plans - with grant dollars. We are going to help you overcome that problem. Our workshop is intended for those who have little or not grant writing experience, and will give you the confidence and know-how to develop a successful grant proposal. Please bring an open mind and heart. You will leave with resource materials and a new found desire to go after and get grant money. (Seats: 10-40)

June 26 / 6:00 - 9:00 PM

[Return to top](#)



Offered: **CLOSED**

iPads: Are They Game Changers for K-12 Students and Teachers?

Kirk Campbell, MEd

Director, Educational Support Services

Loma Linda University

Learn how innovative trends, strategies, and apps for iPads in K-12 education are empowering student learning, and learn how teachers can improve the physical, mental, and spiritual aspects of their own lives, as well. Teachers will develop classroom and personal "game changer" iPad strategies. (Seats: 1-25)

June 27 / 8:45 AM - 12:15 PM

June 27 / 1:30 - 5:00 PM

[Return to top](#)



Offered: **Twice**

Listening to Atoms with a Pizza Box

Richard Clark, PhD

Professor, Chemistry

Union College

Participants will learn a few basics of emission spectrometry, build a spectrometer and use it to observe light emitted from atoms. (Seats: 1-12)

June 27 / 8:45 AM - 12:15 PM

June 27 / 1:30 - 5:00 PM

[Return to top](#)



Offered: **CLOSED**

Making an iPhone App

Enoch Hwang, PhD

Professor, Computer Science

La Sierra University

This workshop will teach you how to create a simple iPhone app and put it on the app store. (Seats: 4-5)

June 26 / 8:45 AM - 12:15 PM

June 26 / 1:30 - 5:00 PM

[Return to top](#)



Offered: **Three Times**

Making Lego Robotics Work in Education

Ralph Stirling, MSEE, Project Engineer

Walla Walla University

Fred Singer, Teacher

Monterey Bay Academy

This workshop will provide an overview of the FIRST Lego League program and give suggestions for use of Lego Robotics in the curriculum. It will include hands-on experience with building and programming Lego Mindstorms robots. (Seats: 6-12)

June 26 / 8:45 AM - 12:15 PM

June 26 / 1:30 - 5:00 PM

June 27 / 8:45 AM - 12:15 PM

June 27 / 1:30 - 5:00 PM

[Return to top](#)



Offered: CANCELLED

Pack It Right, Wear It Light

Liane Hewitt, DrPH, Associate Professor & Chair
Karen Pendleton, MA, OTR/L, Assistant Professor
Occupational Therapy
Loma Linda University

Introduction to backpacks and bags. **Review of posture** - angles, lengthening/shortening of muscles, etc. **Body mechanics** - lifting, impact on posture, muscles, etc. **Backpack/bag issues** with a hands-on activity to determine the appropriate weight for a given age, **how to wear backpacks** to facilitate good posture, etc. **Take-home strategies** for students/staff - what can we do at their schools to ensure long-term health. (Seats 10-30)

June 26 / 8:45 AM - 12:15 PM

[Return to top](#)

Producing Proteins: Fun with Biotechnology

Janice McKenzie, PhD
Associate Professor
Walla Walla University

We are in the age where we use microorganisms as miniature protein factories. Human Growth Hormone and Human Insulin are examples of proteins that are produced this way. We will look at the process of inserting a gene for protein production into bacteria. We will then talk about producing large quantities of the protein and purifying it. This is a fun and practical workshop that allows you to experience this affordable technology before teaching it to your students. (Seats: 2-30)

June 26-27 / 8:45 AM - 12:15 PM

[Return to top](#)

San Andreas Fault: Whole Lotta Shakin' Going On

Tim Standish, PhD
Researcher
[Geoscience Research Institute](#)
Adjunct Associate Professor, Earth & Biological Sciences
School of Public Health
Loma Linda University

If you are lucky, during your time in Southern California you will literally feel the earth move under your feet. What makes the earth move? Why do we have so many earthquakes in this part of the world, but not in Texas or Colorado or Washington, DC? We will look at the dynamic mechanisms our earth uses to move materials around, create fertile volcanic soils, put on spectacular displays, make new rocks and transport Los Angeles toward the North Pole. But we will not just talk about it, we will travel up into the Cajon Pass to stand in the San Andreas Fault and look at mountains that have literally slid past one another! **Participants will carpool to the fault.** (Seats: 10-25)

June 27 / 8:45 AM - 12:15 PM

June 27 / 1:30 - 5:00 PM

[Return to top](#)

Science, The Language of Math

Julie Lattuca, MA
Adjunct Professor, Curriculum & Instruction
La Sierra University

Participants will practice methods of using Academic Vocabulary as written within the Common Core standards. Application of strategies for problem solving will be exchanged and discussed. Step-by-step lessons show how interest in science topics will help students become engaged in the arithmetic needed to solve their inquiries. (Seats: 10-20)

June 27 / 8:45 AM - 12:15 PM

[Return to top](#)

Spatial Thinking Through Geographic Information Systems

Ed Santos, BS, GIS Lab Instructor
Richard Blanco, MBA, GIS Lab Instructor
David Zarate, GISP, GIS Lab Instructor
Karla Barrow, Graduate Student
Loma Linda University

Geotechnologies bring an innovative approach to enhance community development and the well-being of human populations by collecting, organizing, managing, analyzing, sharing, and presenting data about where we live, who we are, and how we live. A Geographic Information Systems (GIS) manages location-based information and provides the tools to display and integrate it, whether it is population characteristics, economic development opportunities, or environmental types. The participants will learn the capabilities of GIS following step-by-step tutorials; they will receive a spiral-bound guide for the workshop and an 8GB flash drive. (Seats: 10-20)

Learn more about GIS here:

- [About GIS \(LLU School of Public Health\)](#)
- [ESRI - GIS Education](#)
- [ESRI - GIS for K-12 Education \(PDF\)](#)
- [ESRI - EdCommunity](#)

June 26-27 / 8:45 AM - 5:00 PM (Wed.); 1:30 - 5:00 PM (Thurs.)

[Return to top](#)

1-day

Offered: CLOSED



Offered: Twice



Offered: Once



Offered: Once



Offered: [Twice](#)

Studying Sound with an iPad

Ivan Rouse, PhD, Professor & Chair, Department of Physics
Chris Francis
La Sierra University

We will use iPads to study various properties of sound, including period, frequency, and velocity. (Seats: 6-24)

June 26 / 1:30 - 5:00 PM - *iPad required*
June 27 / 1:30 - 5:00 PM - *iPad required*

[Return to top](#)



Offered: [Twice](#)

The Chemistry Cuisine

Cory Gheen, MS, BPS, Executive Chef & Instructor, Nutrition & Dietetics
School of Allied Health Professions
Krystal Gheen, MPH, MS, RD, Assistant Director, Continuing Professional Education
Loma Linda University

What captures the interest of students? FOOD! Yes, food can be used to engage students in inquiry-based science – really! Chemistry of Cuisine offers innovative and interactive nutrition and health-focused curriculum ideas for teaching core science concepts in K-12 science classes. (Seats: 6-24)

June 26 / 1:30 - 5:00 PM
June 27 / 1:30 - 5:00 PM

[Return to top](#)



Offered: [Once](#)

The Math of Drugs

Willie Davis, PhD, Chair & Associate Professor
Rashid Mosavin, PhD, MBA, Associate Dean & Associate Professor
Danyetta Anderson, PhD, Assistant Professor
Department of Pharmaceutical Sciences
School of Pharmacy
Loma Linda University

This workshop is designed to provide STEM teachers with an opportunity to see how drugs can be used to teach basic mathematical concepts. In this session, teachers will be shown how a complex topic like drug action can be broken down into very simple demonstrations, which can be adapted for use with a range of students, to provide easily understood examples of a variety of mathematical concepts. These concepts include: understanding fractions and proportions, understanding rate of change and steady rate, and understanding how to interpret and graph data. After the session is complete, each teacher will have electronic access to the video demonstrations and will receive a facilitator's guide which will enable them to utilize the demonstrations in their own classrooms. During the session, teachers will also have the opportunity to develop their own demonstrations for use in their classrooms. (Seats: 15-40)

June 27 / 8:45 AM - 12:15 PM
June 27 / 1:30 - 5:00 PM

Contact: exseed@llu.edu