

EXSEED

EXcellence in STEM Experiential Education

STEM Inspiration and Excitement



CATALYSTS WORKSHEET DUE AT THE END OF CLASS TODAY

Use what you remember to answer these questions.

\$5.00 Reward for the highest score

1. The energy needed to start a chemical reaction is called:
2. What is a catalyst?
3. What are the main molecules that act as catalysts in living things called?
4. Enzymes are made of what kind of macromolecule?
5. Why are enzymes important in living things?
6. Why do enzymes allow chemical reactions to happen faster?
7. The specific reactants acted upon by an enzyme are called:

- **Loma Linda University, Host & Facilitator**
- Andrews University
- Kettering College
- La Sierra University
- Northern Caribbean University
- Oakwood University
- Pacific Union College
- The Mico University College
- Union College
- University of the West Indies
- Walla Walla University

EXSEED Partners



EXSEED Conference 2013

EXC

13

- 100 K-12 educators for the full week
- Additional participants for the Two Days of Workshops
- 9 Unions
- 25 Conferences
- San Bernardino City Unified School District
- Canada
- Mexico
- Jamaica
- Curacao and Bonaire

EXSEED Conference 2016

Workshop	Presenter/Institution
Counting Molecules with Light-emitting Diodes	Richard Clark – Union College
iPads: Are They Game Changers for K-12 Students and Teachers?	Kirk Campbell - LLU
The Math of Drugs	Willie Davis - LLU
Felonious Faculty: A brief but repeated life of crime [DNA]	Rodney Roath - LLU
Demonstrating the molecular basis of finger formation: The role of Sonic hedgehog	Kerby Oberg - LLU
Producing Proteins: Fun with Biotechnology	Janice McKenzie Radzikowski - WWU
Building the Bridge between K-12, Industry, and Academia	Alan Kay, Brian Williamse – Indian Springs High School

A Few of the Workshops



SAN BERNARDINO

EXSEED Partners with The San Bernardino
City Unified School District



Bing Wong Elementary School



Curtis Middle School



Indian Springs High School

LABOR STATISTICS

Within San Bernardino County, the 10 fastest growing jobs with a livable wage (2 adults / 1 child):

Job Area	Median Salary	Level of Education
Medical Scientists	\$72,914	Doctoral Degree
Network and Data Analysts	\$69,405	Bachelor's Degree
Physician Assistants	\$83,147	Bachelor's Degree
Compliance Officers	\$54,988	Long-Term On-the-Job Training
Systems Software Engineers	\$101,604	Bachelor's Degree
Physical Therapist Assistants	\$56,432	Associate Degree
Respiratory Therapists	\$62,045	Associate Degree
Physical Therapists	\$80,542	Master's Degree
Applications Software Engineers	\$80,941	Bachelor's Degree
Registered Nurses	\$76,486	Associate Degree

Employment Development Department, Labor Market Division, Sep. 2010.
Livable Wage Calculator: <http://www.livewage.geog.psu.edu/county/06071>

Challenges *Critical?*

ISHS Principal: Dr. Alan Kay

- LLU and EXSEED are partnering with the ISHS Health Academy
 - Health Science STEM Projects
 - Research
 - Health Science Careers
 - Every High School student graduates with a certificate in a recognized marketable job paying greater than minimum wage
 - CNA, CMA, CMRA, *etc.*
 - Engineering, Machining, Orthotics & Prosthetics
 - Grants
 - ISHS faculty interacting/shadowing
 - And exploring more opportunities

ISHS Health Academy

- **Adventist STEM Academy?**
- **Adventist Health Academy?**

EXSEED

By Design Lab Videos?

DNA



WHAT ELSE CAN LLU DO?

Brainstorm new possibilities

- Douglas Havens
- Director of EXSEED
- Loma Linda University
- dhavens@llu.edu



EXSEED

www.llu.edu/exseed
