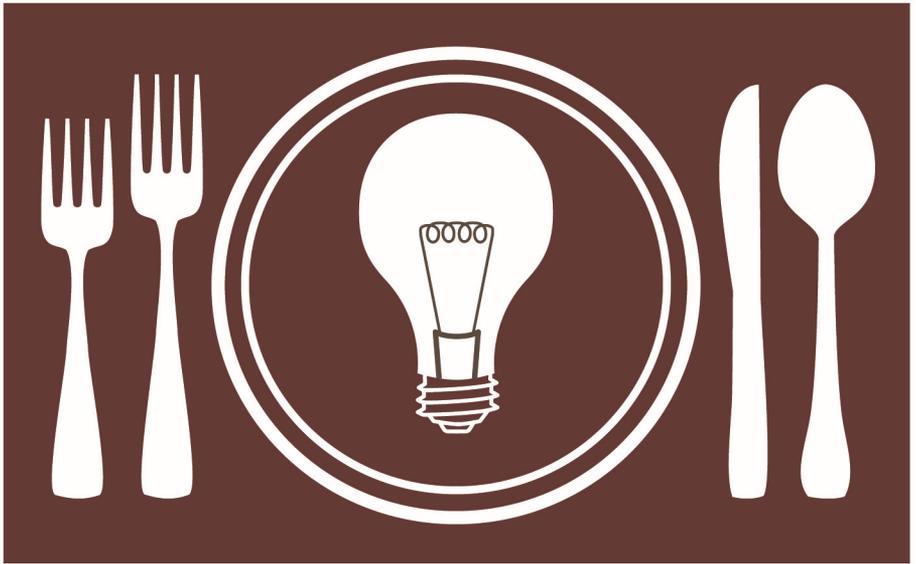

Oakland Unified School District



DINNER with
a SCIENTIST

May 28, 2014, 5-8 pm

Welcome to Oakland Unified School District's sixth annual Dinner with a Scientist! We are proud to collaborate with Chevron Corporation, Oakland Zoo, and many other science organizations in the Bay Area to offer an evening of science exploration and conversation. Science teaching and learning occurs daily in our schools, but seldom do we have the opportunity to connect scientific concepts with the real work of scientists. Tonight is that rare opportunity to converge education with the local scientific community.

I want to especially thank all the scientists, volunteers, and teachers who made this event possible. The field of science is ever changing as evidenced by the diverse group of scientists in attendance. Whether you are a student interested in science, a science teacher, or a scientist working to improve our understanding of the world around us, my hope is that you broaden your perspective through this evening's activities.

Caleb Cheung
Science Manager, OUSD

On behalf of the Oakland Zoo, we would like to thank the Oakland Unified School district for organizing this inspiring, exciting event. We are honored to be a part of an evening that brings together teachers, students, and scientists who are interested and energized about science. Among us are current and future leaders of the scientific community. Also among us are the tireless, extraordinary mentors, the ones that have brought all of us to where we are now - teachers.

Whether you are aspiring to become a biologist, chemist, veterinarian, green engineer, or simply a nature lover, we invite you to explore the Oakland Zoo and be inspired by our animals, research, programs, and plans for the future. We hope this evening will help fuel new ideas for learning and bring about career opportunities that many youth have never explored or thought about. Thank you for being passionate about science and have a wonderful evening.

Dr. Joel Parrott
Executive Director, Oakland Zoo

Program

- 2:00 Visit Zoo (optional)
- 5:00 Registration & Live Animal Encounters
- 5:25 Welcome & Ice Breaker
Caleb Cheung
Science Manager, OUSD
Gary Yee
Superintendent, OUSD
Sarah Cramer
ZooCamp Director/Education Specialist, Oakland Zoo
- 5:50 Dinner & Conversation with Scientist #1
- 6:20 Keynote
Kenneth Wesson
Educational Consultant, Delta Education
- 6:45 Dinner & Conversation with Scientist #2
- 7:15 Raffle
- 7:20 Dessert & Conversation with Scientist #3
- 7:50 Appreciations and Conclusion
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Menu

Random Leaves and Solutions
Wheat, Yeast, and Garlic Mixture
Extract of Newton's Favorite Fruit
Dihydrogen Monoxide in Two States with Citrus Accents
Sodium Chloride & Piper nigrum
Steamed Random Plant Parts
Grass Seeds and Random Plant Parts
Grilled Poultry with Fungus and Roots
Herbivore Option: Plant Pasta with Marinara Sauce
Heat-Treated Cacao Carbohydrate Solids with Ripened Plant Ovaries
Wrapped Cacao with Metha or Rubus

Scientist Biographies

Kenneth Wesson

Keynote

Educational Consultant,
Delta Education

kenneth.wesson@schoolspecialty.com

I work as a science consultant for Delta Education and regularly share about the neuroscience of learning to educational organizations and institutions around the world. I am very interested in early brain development, design and engineering, and STEM (Science, Technology, Engineering, and Math). My goal is to help teachers and students understand how the brain works and so you can be more successful in school. The brain is an amazing organ, capable of much more than most people realize. Writing and speaking about the brain has given me opportunities to share my work across the United States and even in other countries.

Adam Zeilinger

Tables 1, 2, 3

Postdoctoral Scholar, UC Berkeley

arz@berkeley.edu

I am an agricultural ecologist at the University of California Berkeley. I study why some insects cause lots of damage to the plants that we grow and eat and why others don't. I love my work because it can enhance the amount of food produced by farmers and protect the environment at the same time. Additionally, I find the complexity of the interactions between insects and plants to be exhilarating. And I love all the great foods that plants produce!

Amanda Veitch

Tables 2, 3, 1

Scientist, The Clorox Company

amanda.veitch@clorox.com

I am a Research and Development (R&D) scientist at the Clorox Company where I develop products and manufacturing processes for Kingsford charcoal. I have always been interested in learning how things work, which inspired me to pursue science and engineering. I love to cook and bake, and working on product and process development is very similar to creating and following your own recipe! There is something for everyone in science!

Ashley Gibb

Tables 8, 9, 7

Graduate Student, UC Berkeley

I'm a graduate student researcher at UC Berkeley. I studied chemistry in college, then spent a year living and teaching in Indonesia. Now I work to solve problems in physics, chemistry, and materials science. My research involves making and studying new nanomaterials. This means that I get to work with really small things. Occasionally, I get to use an awesome microscope that can see atoms! I went into science because I love learning about the world!

Carlin Hsueh

Tables 5, 6, 4

Science Instructor,

Chabot Space & Science Center

chsueh@chabot.space.org

I pursued science because I loved learning about how things work. However, while getting my PhD at UCLA, I wondered "What good is it to do science if no one knows what you're doing?" That's when I began sharing science with the public, which included developing classroom activities, working with artists, and even getting to be on a TV show! I had so much fun with all these experiences that I decided to work at a science museum.

Christopher Allen

Tables 12, 10, 11

Scientist, The Clorox Company

christopher.allen@clorox.com

I hold degrees in Mechanical Engineering and Management from the University of Central Florida. I have always been fascinated with building things and figuring out how things work. I currently work Clorox developing new packages that people use every day. This means I get to use my imagination to think of all the possible ways a package may be used and develop experiments to see how well they will work.

Desiré Whitmore

Tables 6, 4, 5

Postdoctoral Researcher, UC Berkeley

laserchick@berkeley.edu

I am a laser scientist at UC Berkeley studying the chemistry and physics of light interacting with matter. Growing up, I was always curious about how and why things work the way they do, and because I was good at math and chemistry, I studied Chemical Engineering at UCLA. After graduation, I decided to focus more on science than engineering and went to UC Irvine to get my PhD in Chemical and Material Physics.

Donna Johnson Gressler
Patent Agent, Morrison & Foerster LLP

Tables 11, 12, 10
dgressler@mfo.com

I am an organic chemist who chose an alternative career in science. I loved every subject in high school, but chemistry was far and away my favorite because of my teacher. He made learning the principles of chemistry and discovering how the natural world works fun. With his encouragement, chemistry became my passion. I studied chemistry at Duke University and went on to specialize in organic chemistry at Harvard University, where my research focused on making complex natural products—including one that is used currently to prevent rejection in organ transplantation. As a scientist, I worked to develop new medicines. As a patent agent, I use my chemistry expertise and my writing skills to protect inventions such as new medicines and medical devices.

Elise Piazza
Graduate Student, UC Berkeley

Tables 10, 11, 12
elise.piazza@gmail.com

As a lifelong musician, I've always wanted to know how our different senses (hearing, vision, touch) combine to allow us to understand and play music. As a graduate student at Berkeley, I test how people respond to different types of images and sounds in the lab. These results tell us a lot about how the brain interprets the world around us, from other people's faces and voices to instrument sounds and photographs.

Elliot Alvarez
Senior Associate, Altura Associates

Tables 9, 7, 8
elliotalvarez@gmail.com

I am a mechanical engineer who helps make buildings use energy more efficiently. I grew up with a curiosity for how things worked, from remote controlled cars to Christmas lights. This curiosity led me to study mechanical engineering, and today I use those skills to discover how buildings are using their energy, and what the best way to reduce their energy consumption.

Eve Robinson

Tables 7, 8, 9

Sea Grant Fellow,

California Ocean Science Trust

eve.robinson@calost.org

I work at California Ocean Science Trust (OST) as a 2014 California Sea Grant State Fellow. I apply my interdisciplinary expertise to link science with policy by addressing topics like fisheries, ocean health, marine debris, climate change, and ocean acidification. I have a Ph.D. from the University of California, Berkeley, where I researched flow patterns in the ocean to understand how small animals interact with their predators. By studying marine animals and waves along the coasts of California, British Columbia, Belize, Israel, and Australia, I want to know how we can best care for our coasts.

James Frank

Tables 4, 5, 6

Supervising Naturalist,

East Bay Regional Park District

jfrank@ebparks.org

As a kid I grew up near the ocean. I never really liked the feeling of salt water because I would sometimes get rashes when I went swimming at the beach. As I grew up, I learned more about pollution and realized that this was the cause of my problem. Most people have no idea when pollution is hurting them. Today I help people learn how to stop pollution from getting into our water and food.

Ke Xu

Tables 14, 15, 13

Assistant Professor, UC Berkeley

I'm a chemistry professor at UC-Berkeley. We work at the interface between chemistry, biology, and physics: biophysical chemistry! Basically, we are using the tools from physics (lasers and optics) and chemistry (dyes and labeling methods) to study the wonderful world of biology, with a focus on subcellular structures in cells at the nanometer-scale. Science is fun: state-of-the-art equipment is our toy, and the nature is our playground!

Kester Allen

Tables 19, 20, 21

Software Engineer, Amyris, Inc.

kester@gmail.com

I am a software engineer, and I write computer programs that help scientists modify yeast to produce medicine, biodiesel, and other useful chemicals. I have previously worked for NASA on the Kepler Space Telescope, which has discovered thousands of planets around other stars in our galaxy. I attended college at Amherst College in Massachusetts. It is very exciting to work in science and learn new things every day.

Kevin Metcalf

Graduate Student, UC Berkeley

Tables 17, 18, 16

kjmetcalf@berkeley.edu

I am a graduate student in chemical engineering. Being a scientist is a great job because every day at the laboratory is different! I study bacteria, a type of organism that lives almost everywhere, even inside you! Even though bacteria are very small, they are very similar to you and me. They have DNA, they reproduce, and they make protein, just like us! I am studying how bacteria secrete protein, which make them great for manufacturing proteins.

Maria Schriver

Mechanical Engineer, LightSail Energy

Tables 3, 1, 2

mcschriver@gmail.com

I've always like solving problems and building things and in college I decided to study physics because I enjoyed understanding the basics of how everything around me works. After college, I wanted to work on a big problem that matters to a lot of people, so I focused on clean energy. In graduate school I made solar cells, devices that turn sunlight into electricity. Now I work on compressed air energy storage, which is similar to a battery, but big enough to power an entire neighborhood.

Marius Cătălin Iordan

Graduate Student, Stanford University

Tables 18, 16, 17

mci@stanford.edu

Since I was little, I've been fascinated with how our brains give rise to our understanding of the world. Now, I'm a graduate student at Stanford studying neuroscience. I use advanced math to try and figure out how our brains group the visual world into categories and how each and every one of us can instantaneously put a name to something we see, such as a dog, your shoe, or a picture of a beach.

Matthew FillingimResearch Physicist,
UC Berkeley, Space Science Laboratory

Tables 15, 13, 14

matt@ssl.berkeley.edu

I am a research physicist at the Space Sciences Laboratory at UC Berkeley where I study the upper atmosphere and space around Earth, Moon, and Mars. I try to understand the information that comes back from satellites. I have always been fascinated by other planets. I can remember seeing pictures from the surface of Mars taken by Viking and pictures from Voyager as it flew by planets never seen up close before and thinking, "I want to know more about those places." I also like to tell people about the neat things we've found.

Michelle Moy

Tables 13, 14, 15

Food Technologist III,
Del Monte Foods, Inc.michelle.moy@delmonte.com

I am a food scientist working at Del Monte Foods, Inc. in Vegetable Research and Development creating new products. I received a Bachelor's Degree in Food Science from the University of Illinois at Urbana-Champaign. Food science combines my interest in cooking and chemistry. Understanding the science behind food products makes walking through the grocery store an adventure.

Natalie Stauffer

Tables 16, 17, 18

Graduate Student & Aquatic Ecologist,
UC Berkeley & US Geological Surveynatjst@berkeley.edu

I first became interested in sustainability and environmental science as an undergraduate at UCLA. After working for several years as an environmental consultant, where I worked mostly with water resources and endangered species, I decided to go back to graduate school. At Cal I study freshwater insects (aka benthic macroinvertebrates) because they are frequently used in bioassessment and biomonitoring programs, which assess ecosystem health, and because insects have super interesting life histories and functions in the aquatic ecosystem.

Rachel Pepper

Tables 21, 22, 19

Postdoctoral Fellow, UC Berkeley

rachel.pepper@berkeley.edu

I am a physicist at UC Berkeley, and I study how fluids (like water) move. In the past I've studied splashing, similar to what happens when a rain drop hits the ground. Now I study how tiny organisms move the water around them to get enough to eat. I got my Ph.D. at Harvard, and worked for two years at the University of Colorado studying how people learn physics before I moved to Berkeley. I decided to go in to physics because I like to understand how things work.

Randolf Klein

Tables 22, 19, 20

Instrument Scientist, SOFIA - NASA Ames

rklein@sofia.usra.edu

I received my doctoral degree from the University in Jena, Germany, in 1999. There I started working on FIFI-LS, one of the instruments for the US-German airborne observatory SOFIA. Now I am working for SOFIA as the responsible scientist for FIFI-LS, which flew on SOFIA for the first time in March and again in April. Apart from my work on the instrument (mostly software), I research how massive stars form.

Stefan Brown

Scientist, The Clorox Company

Tables 20, 21, 22

stefan.brown@clorox.com

I am a Chemical Engineering Graduate from UCSB and currently work for The Clorox Company as a Process/Product Developer. I went into Science because I love numbers and experimenting. My initial interest was sparked by watching Bill Nye the Science Guy on TV do fun experiments that almost seemed like magic.

Participating Schools

*Acorn Woodland Elementary, Allendale Elementary,
Bella Vista Elementary, Bridges Academy, Cleveland Elementary,
Franklin Elementary, Fruitvale Elementary, Garfield Elementary,
Glenview Elementary, Global Family School, Horace Mann Elementary,
International Community School, La Escuelita Elementary, Laurel Elementary,
Manzanita Community School, Manzanita SEED Elementary,
Melrose Leadership Academy, Redwood Heights Elementary,
Think College Now*

Acknowledgements

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Volunteer Scientists

Kenneth Wesson

*Adam Zeilinger, Amanda Veitch, Ashley Gibb, Carlin Hsueh,
Christopher Allen, Desiré Whitmore, Donna Johnson Gressler, Elise Piazza,
Elliot Alvarez, Eve Robinson, James Frank, Ke Xu, Kester Allen, Kevin Metcalf,
Maria Schriver, Marius Cătălin Iordan, Matthew Fillingim, Michelle Moy,
Natalie Stauffer, Rachel Pepper, Randolph Klein, Stefan Brown*

Oakland Unified School District

Gary Yee

*Caleb Cheung, Christine Chen, Claudio Vargas,
David Avery, Duffy Ross, Julia Feldman, Laura Prival,
Liz Martin, Liz Woodward, Ricky Logan,
Sonnie Dae, Tasha Russell*

Other

*Sandra Lee-Takei, Community Resources for Science (Setup)
Howard Ruffner (Photography)
Espresso Gourmet (Catering)*

Photos from tonight's event are available at
<http://science.ousd.k12.ca.us>