November 8, 2019
Colorado Science Conference
PRESENTATIONS AT-A-GLANCE*

Session 1: 8:00-8:55

Mindfulness, Empathy, and Enthusiasm in the Science Classroom
Nadene Klein
Daniel C. Oakes High School
Focus: General Science
Audience: General
Room: K 35-39

Implementing NGSS for Engagement, Equity, and Agency
Shannon Wachowski
University of Wyoming
Focus: General Science
Audience: Middle School / High School
Room: K 49-53

Crosscutting Concepts: Putting Them To Work To Support Learning
Craig Gabler
Horizons Educational Consulting
Focus: General Science
Audience: Elementary (3-6)
Room: J 41-47

I’m Leading STEM Club! What’s Next?
Heathre Palige
Pinnacle Charter School
Focus: General Science
Audience: General Elementary (K-6)
Room: K 41-47

Using a Variety of Methods to Assess for the Three Dimensions
Dawn Smith
TCI
Focus: General Science
Audience: General
Room: H 39-45

“What’s your Problem?”
Cassie Whitecotton
Educational Consultant
Focus: Technology Education
Audience: General
Room: H 31-37

Push, Pull, Go!
Erik Benton
Carolina Biological
Focus: Physical Science
Audience: Elementary (K-2)
Room: G 30-36

What makes an assessment “3D?”
Kerri Wingert
University of Colorado at Boulder
Focus: General Science
Audience: Middle / High School
Room: G 38-44

Using Improvisational Theater Exercises to Teach Science Communication and Collaboration Skills
Megan Littrell
CIRES Education & Outreach
Focus: General Science
Audience: Middle School / High School
Room: H 40-46

Industry Partner Immersion For Focus on Integrating NGSS Science and Engineering Practices
Shanna Atzmiller
Bear Creek High School
Focus: Life Science/Biology
Audience: High School
Room: G 31-37

Practical Strategies for Teaching with PhET Interactive Simulations
Amy Rouinfar
University of Colorado Boulder
Focus: General Science
Audience: Middle / High School
Room: H 30-38

It’s DEMO Time!!!!
Josh Morris
EDGE Program at Legend High School
Focus: Chemistry
Audience: General
Room: J 49-53

Bat Biology for Beginners and Experts
Dave Jackson
CaveSim
Focus: Life Science/Biology
Audience: General Elementary (K-6)
Room: J 30-38

Nature in YOUR Teaching: Turning Your Classroom Inside OUT!
DeLene Hoffner
EE SE Regional Council
Focus: Life Science/Biology
Audience: General Elementary (K-6)
Room: J 40-46

Chem Major 2.0: a modern curriculum at scale
Anthony Rappe
Colorado State University
Focus: Chemistry
Audience: High School
Room: J 48-52

Science and Literacy: Making the Connection
Kenn Heydrick
STEMscopes / Accelerate Learning
Focus: General Science
Audience: General Elementary (K-6)
Room: J 31-39

*Please Note:
Sessions & room numbers may change. Any changes will be posted accordingly at the conference.
Session 2: 9:10-10:05

CSEN Gathering: Leveraging partnerships toward a common vision
Lori Reinsvold
MAST Institute, University of Northern Colorado
Focus: Other
Audience: General
Room: K 35-39

Transplantation Science - A FREE Hands-on Workshop for Students
Anne Gaspers
Donor Alliance
Focus: Life Science/Biology
Audience: Middle / High School
Room: K 41-47

EarthComm: A Project-Based Earth Science Curriculum that Uses an Authentic NGSS Approach
Marilyn Schmidt
Focus: Earth/Space Science
Audience: General
Room: K 49-53

Cave Rescue meets Electromagnetism
Dave Jackson
CaveSim
Focus: General Science
Audience: Middle / High School
Room: J 30-38

Modeling Nutrients as Contaminants
Lisa Yemma
Slavens with Lab Aids and SEPUP
Focus: Environmental Science
Audience: Middle School
Room: J 40-46

Colorful Chemistry Demos
Linda Cummings
UCCS
Focus: Chemistry
Audience: Middle / High School
Room: J 48-52

“Phenomenal” Design Challenges by Raft
Nick Haag
RAFT
Focus: General Science
Audience: General Elementary (K-6)
Room: J 31-39

Little Shop of Physics: We Are All Connected!
Sheila Ferguson
Colorado State University
Focus: Physics
Audience: General
Room: Exhibit Hall

Getting Students Excited About Stoichiometry with Project Based Learning
Deanna Detmer
Kent Denver School
Focus: Chemistry
Audience: High School
Room: J 49-53

Engineering Design Project-Based Labs Using PASCO Technology
Rosario Rodolfo
PASCO scientific
Focus: General Science
Audience: Middle / High School
Room: H 40-46

Landing on Mars with Inquiry-Based Learning
Monnie Barrett
Science Matters in America
Focus: Earth/Space Science
Audience: General Elementary (K-6)
Room: G 39-45

Going 3D: Making Sense of the New Colorado Science Standards
Jessi Davis
US Learning Services
Focus: General Science
Audience: General
Room: F 38-44

Bring Science and Math together with the Technology thru Engineering
Cassie Whitecotton
Educational Consultant
Focus: Physical Science
Audience: General
Room: H 31-37

Engineering Design in the NGSS
Dawn Smith
TCI
Focus: General Science
Audience: Middle School
Room: H 39-45

Modeling Changes on the Earth’s Surface
Erik Benton
Carolina Biological
Focus: Earth/Space Science
Audience: Elementary (3-6)
Room: G 30-36

Ute STEM: Colorado’s First Scientists
Liz Cook
History Colorado
Focus: Environmental Science
Audience: Informal Education
Room: G 38-44

2020 Colorado Science Standards
Maya Garcia
Colorado Department of Education
Focus: Other
Audience: General
Room: G 31-37

The CU Boulder Museum’s Fossils in the Classroom Project:
The Hands-on Study of Fossils
James Hakala
University of Colorado Museum
Focus: Earth/Space Science
Audience: Elementary (3-6)
Room: H 30-38

Fire Ecology at Rocky Mountain National Park
Danielle York
National Park Service
Focus: Environmental Science
Audience: Middle / High School
Room: G 47-53

The CREATE Open Program: a next-level robotics program focused on freedom of choice
Jim Schulte
CREATE Foundation
Focus: Technology Education
Audience: Middle / High School
Room: F 30-36

Reimagining Field Trips: Ranger Led Virtual Programs with Rocky Mountain National Park
Kathryn Ferguson
Rocky Mountain National Park
Focus: Environmental Science
Audience: General
Room: H 48-52

Rocky Mountain Environmental Hazards Challenge - An Engaging Approach to Natural Hazards Education
Justin Zakoren
Earth Force
Focus: Environmental Science
Audience: Middle / High School
Room: F 46-52

Project Based Learning with HyperDuinos and Animals in Elementary Classrooms
Jennifer Parrish
University of Northern Colorado
Focus: General Science
Audience: General Elementary (K-6)
Room: J 41-47

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Jennifer Parrish
University of Northern Colorado
Focus: General Science
Audience: General Elementary (K-6)
Room: J 41-47
Session 3: 12:15-1:10

The First Step in 3-D Printing
Nadene Klein
Daniel C. Oakes High School
Focus: General Science
Audience: General
Room: K 35-39

Growing a Gender-Inclusive Biology Curriculum
Sam Long
Jeffco Public Schools
Focus: Life Science/Biology
Audience: Middle / High School
Room: K 41-47

A Focus on Modeling in the Phenomenon-Based Classroom
Marilyn Schmidt
Academic coach
Focus: General Science
Audience: Middle / High School
Room: K 49-53

Explore a Cave to Learn Geology and Chemistry
Dave Jackson, CaveSim
Focus: Chemistry
Audience: General Elementary (K-6)
Room: J 30-38

ATMOSPHERE, CLIMATE & GLOBAL WARMING
Lisa Yemma
Slavens with Lab Aids and SEPUP
Focus: Environmental Science
Audience: Middle School
Room: J 40-46

AP Chemistry Teaching Nuggets
Linda Cummings, UCCS
Focus: Chemistry
Audience: High School
Room: J 48-52

Creating Effective Outdoor Science Activities
Katie Navin
Colorado Alliance for Environmental Education
Focus: Environmental Science
Audience: General
Room: J 31-39

Phenomenon “What, Where, When, Why?”
Craig Gabler
Horizons Educational Consulting
Focus: General Science
Audience: Elementary (3-6)
Room: J 41-47

Do It Like A Scientist! Claims, Evidence, & Reasoning
Josh Morris
EDGE Program at Legend High School
Focus: General Science
Audience: General
Room: J 49-53

Order Up a Helping of Forensics, With a Side of Maggots!
Jeff Lukens
Retired Science Teacher
Focus: Other
Audience: Middle / High School
Room: H 30-38

STEPUP: A cultural change to inspire girls in Physics
Alisa Grimes
Focus: Physical Science
Audience: General
Room: H 40-46

CLEAN & NGSS
Katie Boyd, CIRES
Focus: Earth/Space Science
Audience: Middle / High School
Room: H 48-52

Take Flight With Wings Over the Rockies’ Aerospace Programs
April Lanotte
Wings Over the Rockies
Focus: Technology Education
Audience: General
Room: H 31-37

Integrating Crosscutting Concepts into Your Classroom
Dawn Smith, TCI
Focus: General Science
Audience: General Elementary (K-6)
Room: H 39-45

Elementary Science Make-and-Take
Teresa Higgins & UNC Students
University of Northern Colorado
Focus: General Science
Audience: General Elementary (K-6)
Room: G 46-52 & H 47-53

Get Inspired to Teach NGSS with GLOBE Weather
Emily Snode-Brenneman
University Corporation for Atmospheric Research
Focus: Earth/Space Science
Audience: Middle School
Room: G 30-36

Astronomy Outside the Box
Mary Gregory
Lewis Palmer High School
Focus: Earth/Space Science
Audience: Middle / High School
Room: G 38-44

Designing Inclusive Science Learning Environments: Supporting Students Who Receive Special Education Services
Maya Garcia
Colorado Department of Education
Focus: Other
Audience: General
Room: G 31-37

Soil- Life’s Main Ingredient
Melissa Bigge
Nutrients for Life Foundation
Focus: General Science
Audience: Middle / High School
Room: G 39-45

A Medical Mystery—A Free Online Curriculum for Middle School
Betty Stennett
BSCS Science Learning
Focus: Life Science/Biology
Audience: Middle School
Room: G 47-53

On-Target® Water Testing Kits
Josephine Hofstetter
Access Sensor Technologies
Focus: Environmental Science
Audience: General
Room: F 30-36

Houghton Mifflin Harcourt - Scientific Modeling K-5
James Oliver
Houghton Mifflin Harcourt
Focus: General Science
Audience: General Elementary (K-6)
Room: F 38-44

Ecology Field Methods in the Classroom
Katelin Gaeth
Denver Botanic Gardens
Focus: Environmental Science
Audience: General
Room: F 46-52

Little Shop of Physics: We Are All Connected!
Sheila Ferguson
Colorado State University
Focus: Physics
Audience: General
Room: Exhibit Hall
Session 4: 1:55-2:50

Raising the Bar With At-Risk Youth
Nadene Klein
*Daniel C. Oakes High School*
Focus: General Science
Audience: Middle / High School
Room: K 35-39

You CAD Do This
Rob Funk
*Sagewood Middle School*
Focus: Technology Education
Audience: General
Room: K 41-47

Making Three-Dimensional Learning Meaningful for Students Using Science Storylines
Marilyn Schmidt
*Academic coach*
Focus: General Science
Audience: Middle / High School
Room: K 49-53

Hands-on Physics with a 12 Foot Tower
Dave Jackson
*CaveSim*
Focus: Physics
Audience: General Elementary (K-6)
Room: J 30-38

Citizen Science in the Classroom
Theresa Hemming
*Douglas County HS*
Focus: General Science
Audience: Middle / High School
Room: J 40-46

Playing with the Periodic Table
Sandra Weeks
*Rocky Mountain High School*
Focus: Chemistry
Audience: High School
Room: J 48-52

Using the 4Cs in the Elementary Science Classroom
Katie Poulsen
*eleSTEMary*
Focus: General Science
Audience: General Elementary (K-6)
Room: J 39-45

Balanced and Unbalanced Forces
Erik Benton
*Carolina Biological*
Focus: General Science
Audience: Elementary (3-6)
Room: G 30-36

Claim, Evidence, Reasoning that supports ELD students
Linda Flohr
*Glenwood Springs High School*
Focus: General Science
Audience: Middle / High School
Room: G 38-44

Planning for 3D Instruction: Introducing the Five Tools
Maya Garcia
*Colorado Department of Education*
Focus: Other
Audience: General
Room: G 31-37

Citizen Science in the Classroom
Theresa Hemming
*Douglas County HS*
Focus: General Science
Audience: General Elementary (K-6)
Room: J 49-53

Discover the world with Atlas Robotics
Tom Frederick
*Higher Order Innovation*
Focus: Technology Education
Audience: Middle / High School
Room: H 40-46

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Tom Frederick
*Higher Order Innovation*
Focus: Technology Education
Audience: Middle / High School
Room: H 40-46

Worm Composting: A Complete Ecosystem in Your Classroom
Diane Odber
*Knowledge Quest Academy*
Focus: Life Science/Biology
Audience: Middle School
Room: H 48-52

Incorporating Native Plants Into the Classroom
David Julie
*Colorado Native Plant Society*
Focus: Life Science/Biology
Audience: Middle / High School
Room: G 47-53

Using Authentic Science Notebooks in K-5
Brian Campbell
*Lawrence Hall of Science*
Focus: General Science
Audience: General Elementary (K-6)
Room: J 41-47

Healthy Oceans as an Elementary School Curriculum Topic
Nancy Carlisle
*retired*
Focus: Environmental Science
Audience: General Elementary (K-6)
Room: J 49-53

Is a Zombie Apocalypse Eating at You? Try These STEM Strategies!
Jeff Lukens
*Retired Science Teacher*
Focus: General Science
Audience: Middle / High School
Room: H 30-38

Evolution for Middle School Educators
Shauna Chapa
*TIES*
Focus: Life Science/Biology
Audience: Middle / High School
Room: H 39-45
Session 5: 3:05-4:00

Meeting the Needs of Noyce Scholars
Rob Reinsvold
University of Northern Colorado
Focus: General Science
Audience: Middle / High School
Room: K 35-39

Critical Creativity in the Secondary Classroom
Pamela McWilliams
Euclid Middle School
Focus: General Science
Audience: Middle / High School
Room: K 41-47

Astronaut Health: Science Education Resources for K-12 and Beyond
Dana Abbey
NNLM
Focus: General Science
Audience: Middle / High School
Room: J 30-38

3e NGSS EVOLUTION: INVESTIGATING EMBRYOLOGY
Lisa Yemma
Slavens with Lab Aids and SEPUP
Focus: Life Science/Biology
Audience: Middle School
Room: J 40-46

Avogadro’s Number, Surprise!
Tom Bindel
Retired / Pomona High School
Focus: Chemistry
Audience: High School
Room: J 48-52

Let’s Use the 5-Es to Provide Equity in Science Instruction
Kenn Heydrick
STEMscopes / Accelerate Learning
Focus: Other
Audience: General
Room: J 31-39

Effects of TDS (total dissolved solids and temperature on Ocean and Local Water Systems)
Rachel Kissner
American Meteorology Society-AMS
Focus: Chemistry
Audience: Middle / High School
Room: J 49-53

Sweating Alcohol in 3-D
Jeff Lukens
Retired Science Teacher
Focus: General Science
Audience: Middle / High School
Room: H 30-38

Play with phones and robots!
Tom Frederick
Higher Order Innovation
Focus: Technology Education
Audience: Middle / High School
Room: H 40-46

Meaning Making in Primary Grades
Eileen Patrick
FOSS Science
Focus: General Science
Audience: Elementary (K-2)
Room: H 48-52

Empowering Behavior Change through Student-Centered Energy Reduction Competition
Shannon Oliver
Adams 12 Five Star Schools
Focus: General Science
Audience: General
Room: K 49-53

For more details and presentation descriptions, please see the conference program or app.

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