The EHS Summer Institute for K-12 Educators

Todd Sherron, Ph.D.
JW Breeden
Gus Elizondo, MPH
Tosin Bewaji, MPH
Benjamin Stephenson

Chee Umah, MPH
Robin Fuchs-Young, Ph.D.
Madison Spier
Lisa Pipper
Kacey Stephenson

SEPA SCIENCE EDUCATION PARTNERSHIP AWARD
SUPPORTED BY THE NATIONAL INSTITUTES OF HEALTH

NIH National Institute of Environmental Health Sciences

K-12 Summer Institute

July 24 – July 28, 2017

- 4-5-day P.D. conference for teachers of all grades from all over Texas.
- Features a variety of workshops that introduce innovative, classroom-ready, research-inspired, educational materials and activities.
- Constructivist, inquiry-based, problem solving, student centered.
- Workshops developed and presented by expert trainers from leading institutions such as MIT, Baylor College of Medicine, National Center for Atmospheric Research (NCAR), NASA and TAMU.

Workshops

- **Workshops lead by scientists, university educators and master teachers.**

- **Journey of WATER –** **SEPA (MIDAS)**

- **Beyond the Lab – Application of Insects Explorations of Health and Environmental Sustainability.** **Walter Read Army Institute of Research**

- **Earth Right Now, Your Planet is Changing -** **NASA**

DNA is Elementary

Teaching DNA

Using LEDs to Make Puppets that Light Up

Planet, People and Policy

The Good the Bad and the Ugly of Energy

Archaeology of Texas

Expanding Energy Education

Fighting With Food: Battling Environmental Toxicants with Nutrient Rich Food

Project Learning Tree

Junior Master Gardner

Its Weathermental

Wanna Be Healthy: Promoting Healthy Behaviors in the Early Learning Classroom

K-12 Summer Institute

- **We provide (free of charge):**
  - **Training resources and materials.**
  - **Hotel accommodations (double occupancy) for the night(s) before workshops attended.**
  - **Breakfast and lunch daily.**
  - **G/T registered trainings.**
  - **CE Hours for each workshop attended.**

- **Online registration**
  www.k12summerinstitute.org

Climate Change Causes, Consequences, and Solutions

Forensic Investigation

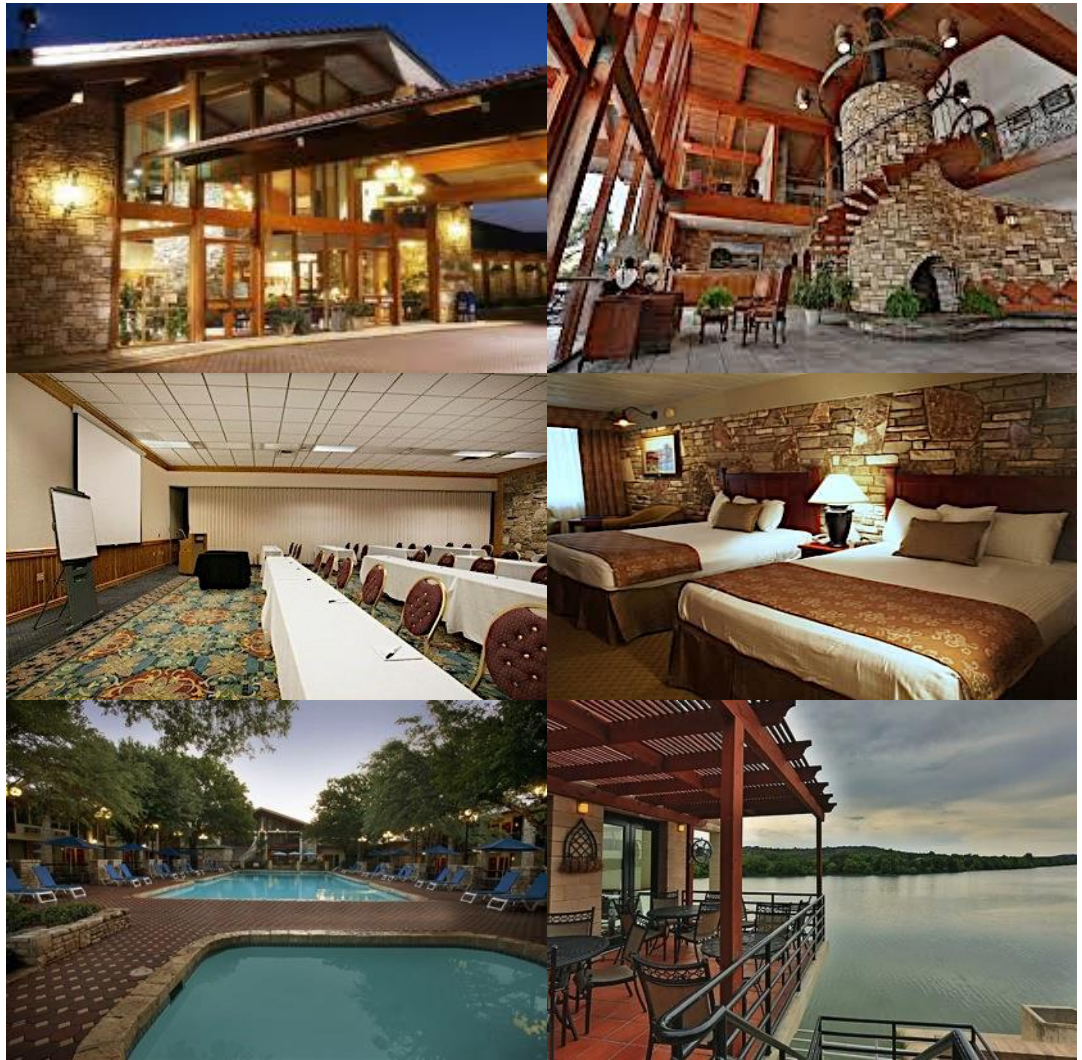
K-12 Summer Institute

- Venue:
  - Inn of the Hills Conference Center and Hotel.

    1001 Junction Highway
    Kerrville, TX 78028.

    Toll free: 800-292-5690

    www.innofthehills.com



K12summerinstitute.org

16th Annual Environmental Health Sciences Summer Institute (SI) For K-12 Educators

What is K12 Summer Institute?

The K-12 Summer Institute offers an extensive variety of professional development workshops focused on the connections between health and the environment. Participants will learn how to help students use inquiry based learning to develop an enhanced understanding of science concepts, apply the scientific method and better understand how the environment affects our health.

Learn More

	Monday, July 24					Tuesday, July 25					Wed, July 26				Thurs. July 27			
PreK -K	NEW Invent-a-Wheel (PreK-1) J. Hilton & G. Benenson		DNA is Elementary (K-5) M. Ventura & L. G-Mugambi			NEW Engaging Strategies (K-2) K. Diaz & J. Sloan		Wannabee Healthy (PreK-2) L. Staton & J. Parker			NEW Poverty, Sleep & Classroom (PreK-2) L. Staton & J. Parker				PLT: Growing Up Wild (PreK-2) M. Bowie		NEW "Earth Right Now"- Your Planet is Changing (K-5) V. Leija & J. Martinez	
1																		
2				Journey of Water & You (2-5) C. Kellogg & D. Breeden			Fantastic Elastic (2-5) J. Hilton & G. Benenson	Junior Master Gardener Program (3-5) L. Whittlesey			PLT: Explore the Environment (3-5) M. Bowie	Journey of Water & You (2-5) D. Breeden & V. Breeden			NEW Teaching Big Science with Tiny Protozoa (3-5) M. Gonzales & G. Kapler			
3	NEW The Good, Bad &Ugly of Energy (3-5) K. Diaz & J. Sloan															Teaching Science Through Digital Media (4-6) B. Kantorski & D. Stratton		
4		Make Your Own Electric Car (4-8) D. Johnson & C. Cannon				LEDs to Make Puppets that Light Up (4-8) D. Johnson & C. Cannon							Teaching Science Through Digital Media (4-6) B. Kantorski & D. Stratton					
5																		
6	Raising Your Water IQ (6-8) M. Conyers & S. Luther				It's Elemental (6-10) D. Zoda, K. Stevenson & S. Rebecca		NEW Simplify Your Life (6-8) W. Klemm	It's Elemental (6-10) D. Zoda, K. Stevenson & S. Rebecca	NEW Planet, People, Policy (6-10) T. Eastburn	Raising Your Water IQ (6-8) M. Conyers & S. Luther	Teaching DNA & Protein Synthesis (6-8) A. Mayer	NEW Simplify Your Life (6-8) W. Klemm		NEW Teaching Big Science with Tiny Protozoa (6-8) M. Gonzales & G. Kapler	Brains Change During Learning (6-8) J. Dubinsky		NEW The Archeology of Texas (6-8) S. Stoutamire	NEW Story of Carbon (6-8) K. Busch
7				NEW Planet, People, Policy (6-10) T. Eastburn														
8																		
9	NEW Human Embryology, Stem Cells and CRISPR (9-12) S. Rhine	NEW The Archeology of Texas (9-12) S. Stoutamire	NEW Beyond the Lab (9-12) E. Kuehn, E. Rowon & A. Morales			Teaching Science Through Digital Media (9-12) B. Kantorski & D. Stratton	NEW Beyond the Lab (9-12) E. Kuehn, E. Rowon & A. Morales				Brains Change During Learning (9-12) J. Dubinsky	Teaching Cancer (9-12) R. Masilamani	NEW Using Sickle Cell Anemia to Understand Gene Expression (9-12) K. Busch		Teaching DNA & Protein Synthesis (9-12) A. Mayer	NEW Teaching Infectious Diseases & Case Studies (9-12) R. Masilamani	NEW Beyond the Lab (9-12) E. Kuehn, E. Rowon & A. Morales	
10																		
11																		
12																		

PLANET, PEOPLE, POLICY: COMMUNICATING AND TEACHING ABOUT GLOBAL CLIMATE CHANGE

Texas educators have an opportunity to deepen their content knowledge and expand teaching resources to effectively bring climate change – one of the most relevant, controversial, and misunderstood scientific and societal topics of our time – into their classrooms. In this workshop, secondary teachers will engage in data- and inquiry-rich activities using an Earth system approach and look at climate change impacts globally to locally. Workshop content will be aligned to Texas TEK standards and the needs of individual teachers. After covering activities that address the basic science of climate change, participants will turn to consequences attributed to our changing climate; effective interdisciplinary communication/education methods; and policies proposed locally, nationally, and internationally to reverse impacts and vulnerabilities to people and the planet. Join the discussion, strengthen your teaching effectiveness, and expand your understanding of this complex issue.

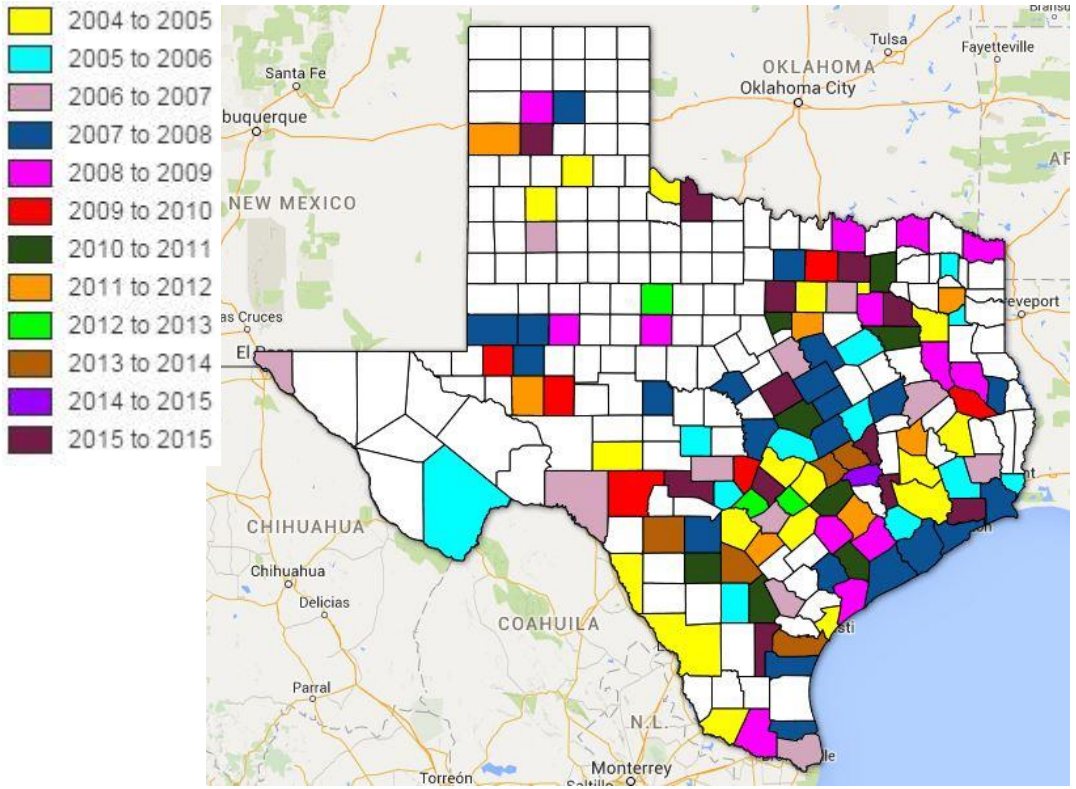
I. Planet: The workshop will start with student activities that convey and reinforce the scientific bases of climate change, climate change impacts, and future projections. We'll answer the question: With over 30 years of projections behind us, how accurate have scientific projections thus far been? We'll also look closely at Houston and climate game with NCAR's GIS initiative.

- Physical Science Basics of Climate Change and its Past, Present, and Future.
- Impacts: Climate and Weather – The Two Go Together.

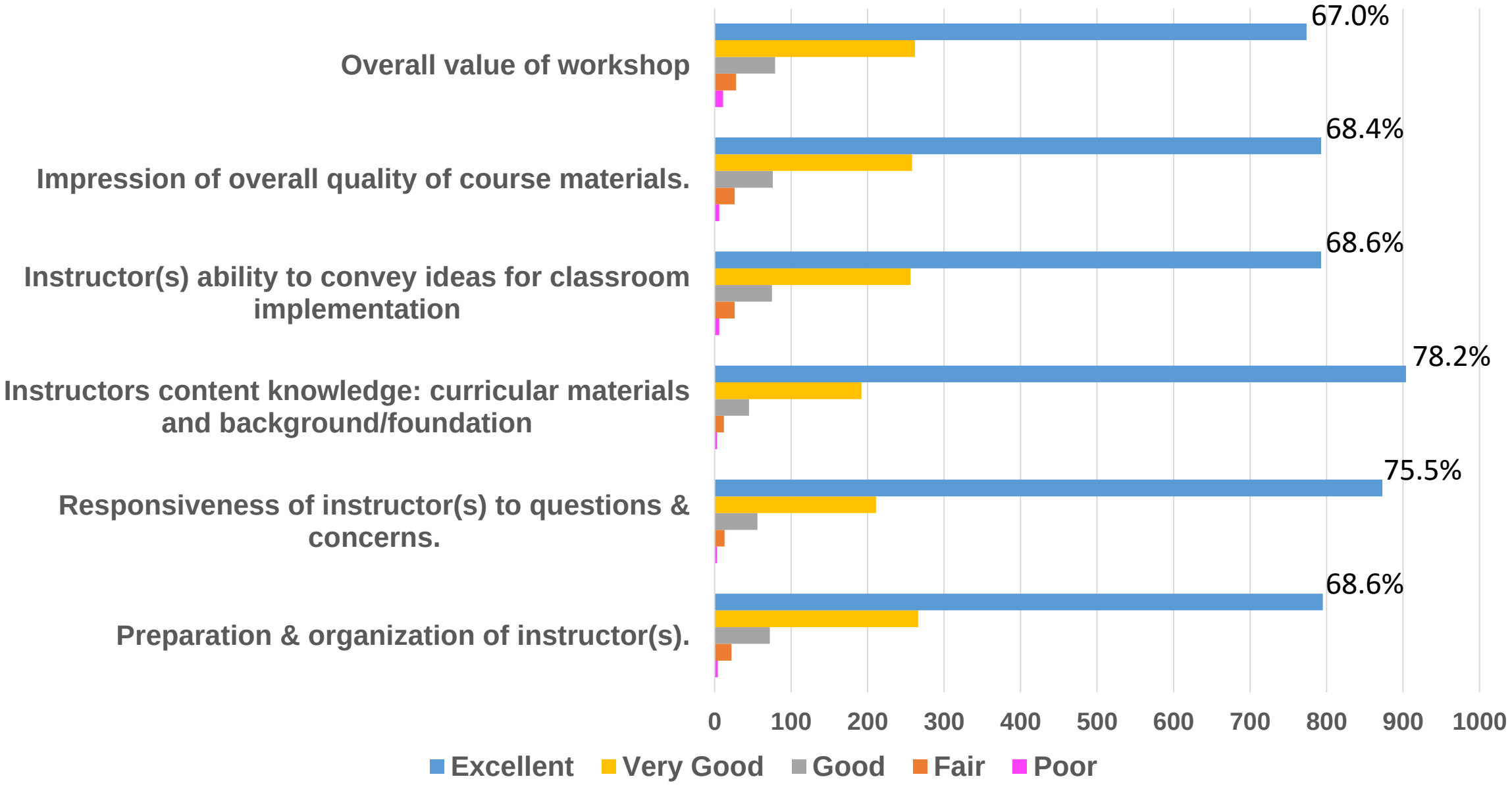
II. People: In the second section of the workshop, we'll look at the social science that seeks to explain the difficulties society

K12 Summer Institute

Annual	Attendees	Trainings	ISDs	Counties	Students	Work shops	New Workshops
4	191		69	50	13250	23	
5	178	492	57	40	13820	31	13
6	186	526	72	37	13710	29	12
7	237	709	88	50	18040	26	13
8	218	714	104	51	16380	30	15
9	186	590	83	42	15300	34	12
10	221	702	74	37	15900	42	22
11	248	771	74	40	18690	40	17
12	189	620	74	37	14340	35	13
13	198	714	67	34	12392	37	14
14	210	569	63	35	17730	28	6
15	208	641	73	34	15414	36	17
Totals	2470	7048			184,966		



Formative Survey - Workshop



Formative: What did you like best about this workshop?

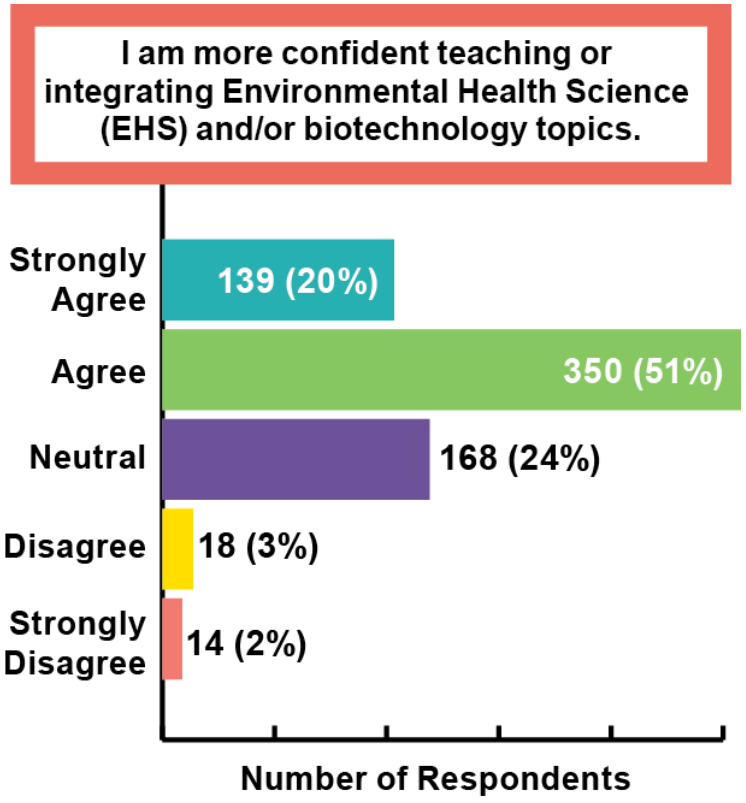
"The presenter was phenomenal! The whole workshop was engaging and the activities were great!"

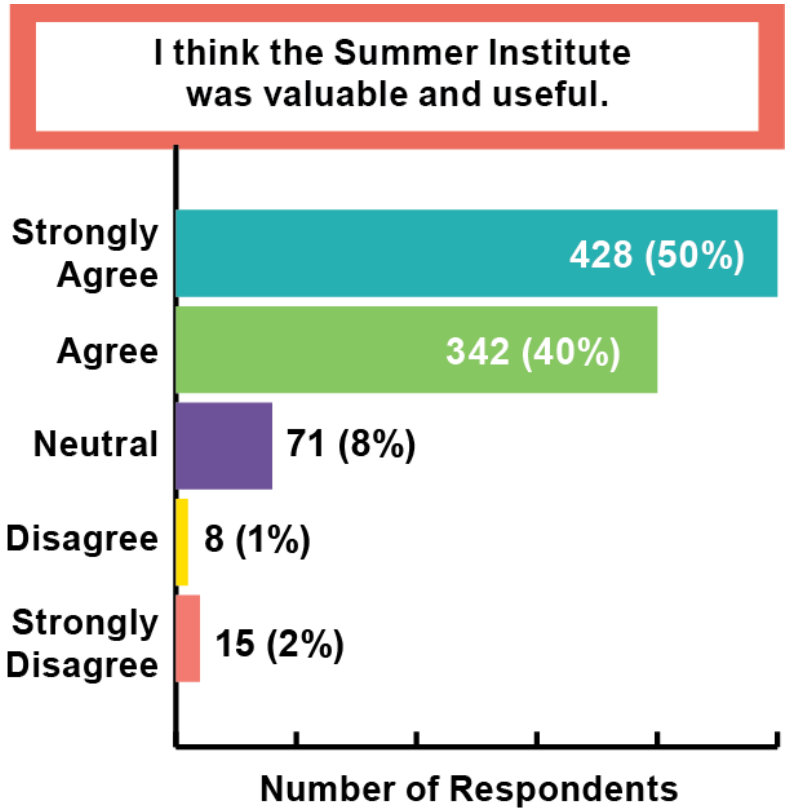
"Loved getting the curriculum so I can use it ASAP!"

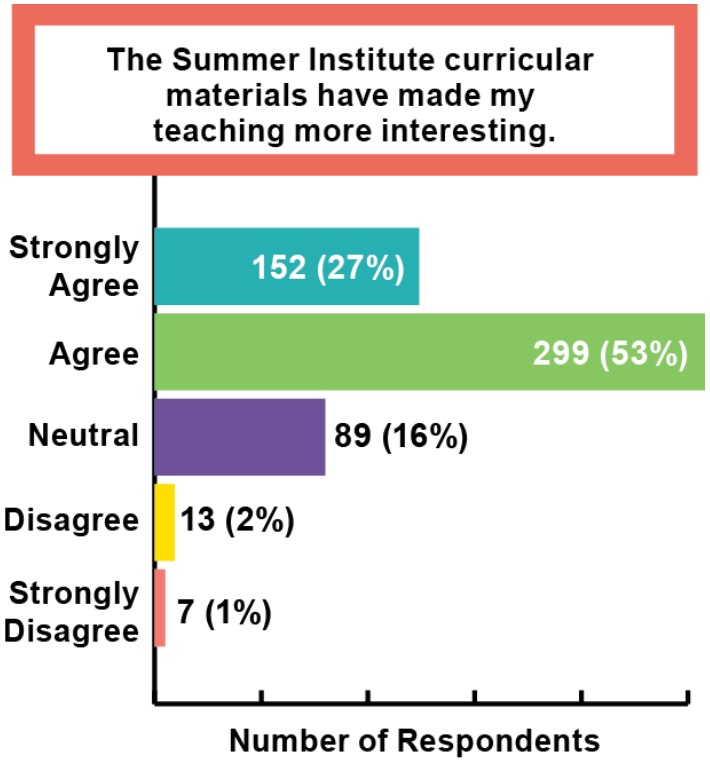
"The material was presented in such a way that it can be tweeked so that portions can be implemented in all classrooms. The instructor was awesome!"

"The hands on programs were very good. Enjoyed the mix of the technology. It was a great renewable non renewable workshop with personable instructors that went above and beyond to furnish information that was useful in the classroom and expanded on programs in the materials furnished. A great workshop."

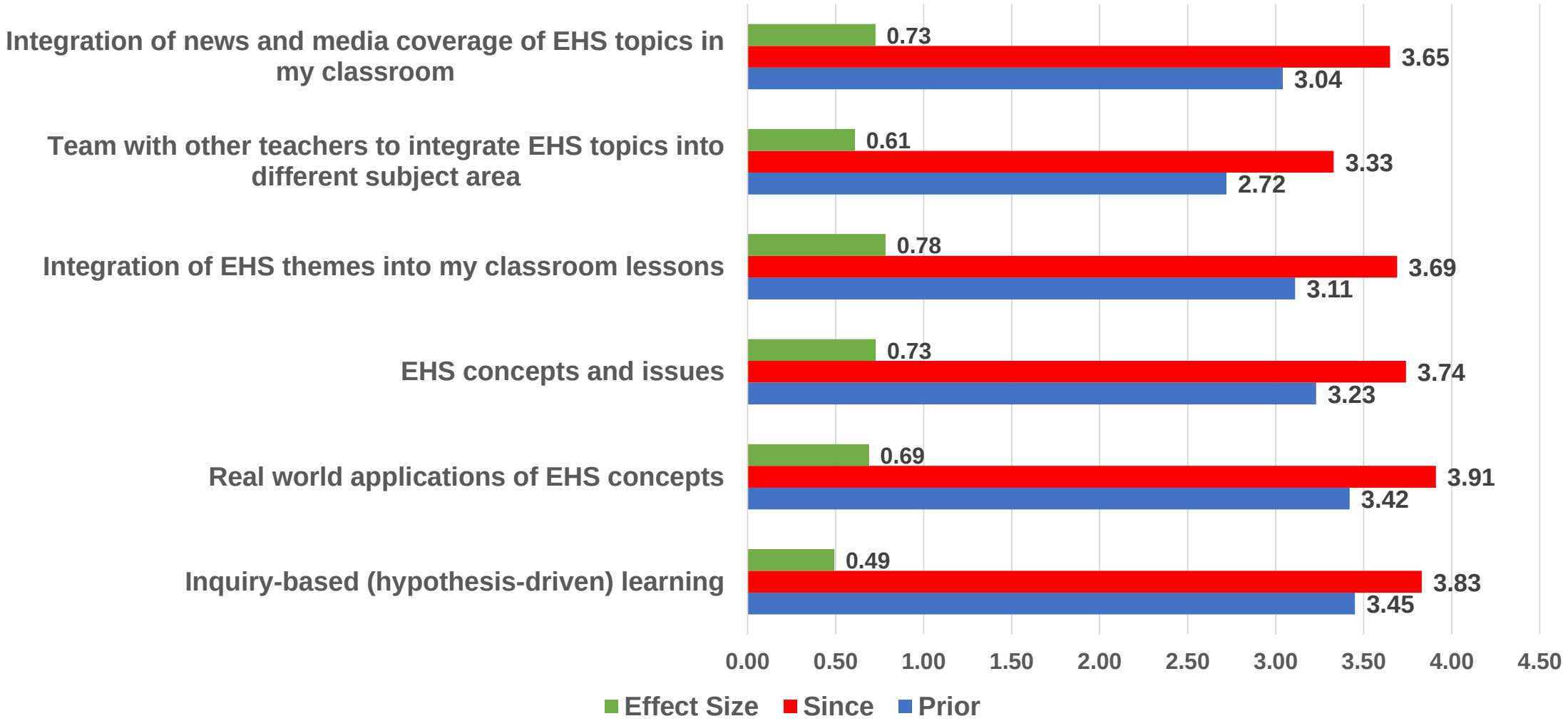
Summative Evaluation







How frequently did you incorporate the following Prior To / Since the Environmental Health Science (EHS) Summer Institute?



Quotes: Summative, Impact

"Many of my students have never had the opportunity to do hands-on activities, or had anyone use these ideas in real world scenarios. I observed them as they began to have a deeper understanding of what EHS is and how it affects us all. I saw excitement and enthusiasm that they did not have at the beginning of the year, when it comes to the environmental sciences. I am thrilled to watch their eyes light up when I say we are going outside to do science - they love it, so they are definitely more open to learning. I witnessed children get excited about science class, and that is a valuable asset to the future of this country. Most of what they enjoyed, I got from the Institute!"

"The curricular materials and training I received have made my students more aware of Env Health Science issues. They are more motivated with the units provided. The hands-on activities allow them to learn in cooperative groups."

"My inclusion of more hands on activities, makes for a noisier classroom, but when they reflect, publish and share with the class, they are thinking on a higher level than with worksheets and quizzes."

"When students are engaged and interested in learning, their achievement and behavior improve exponentially. This is why I continually seek new ideas on which to build my curriculum. Each summer the EHS Summer Institute is one resource I know I can count on as it gives me a chance to reflect on my practice and infuse it to keep it fresh to best motivate my students."

Joining the Discussion

Teacher Participants

Sandra Geisbush – STEM Academy, NE ISD, San Antonio, TX

Middle School Science, Engineering and Forensic Science

National Board Certified, NSF Albert Einstein Distinguished Educator, Presidential Awardee, Math and Science Teaching

David Kohlhase - South Texas High School for Health Professions (Med High), Mercedes, TX

HS Social Studies, World Geography

Trainer

Terri Eastburn – University Corporation for Atmospheric Research, National Center for Atmospheric Research Workshops on Climate Change