

November 2020 -- SC STEM Hub Newsletter

Sharing the Best of STEM News

GREATNESS[®]
STEMS
FROM IOWANS

Drake
UNIVERSITY
SOUTH CENTRAL IOWA REGION
GOVERNOR'S STEM ADVISORY COUNCIL



**Grateful for our
STEM Community!**

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Van Meter Hosts Scale-Up Reveal Party

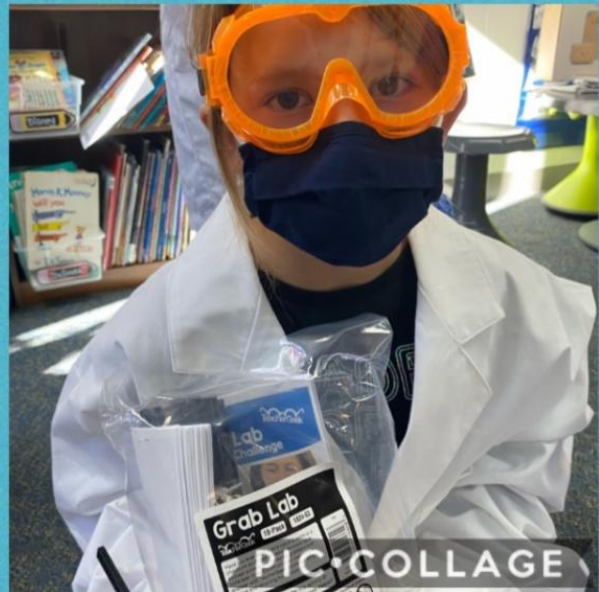
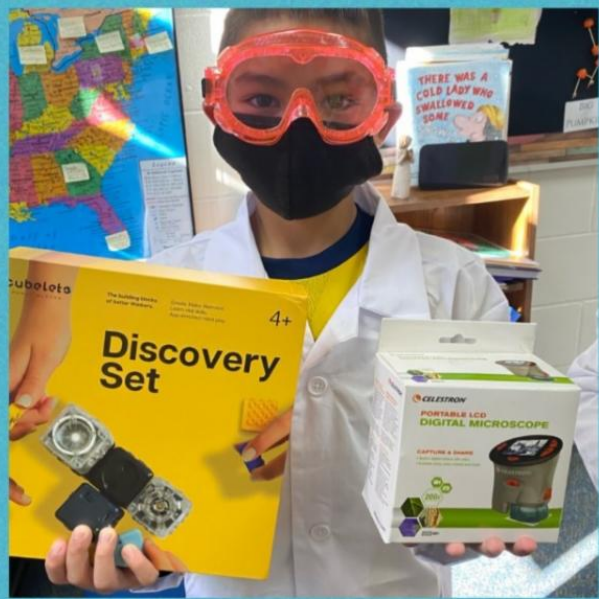


Photo and video courtesy of Tracy Ferguson at Van Meter Elementary.

[Click HERE to watch a video of the reveal.](#)

This year, it's been much harder to see Scale-Ups in action. So we're especially happy that Tracy Ferguson, 2nd grade teacher at Van Meter Elementary, shared her school's Pint-Size Science Reveal Party. This is a tradition for many Pint Size awardees and a fun glimpse into classroom life.

"We are so excited here at Van Meter," said Ferguson. "It was like Christmas opening our Pint Size Science Program this morning!"

She noted her students are excited to explore all the contents. "The possibilities are endless with all of these supplies! Thank you so much for supporting Van Meter Elementary and our STEM program! We are so appreciative of everything."

We're sending gratitude right back to Ferguson and her students for capturing the moment. We're also grateful for all the hard-working teachers seeking innovative

If you have photos or video of your students engaged with Scale-Up materials, we'd love to share them. Email them to **Dr. Sarah Derry** at the Hub.

Click here to watch a recording of the STEM, Equity & Community conversation.

On Diversity and Innovation:

"Inventing is about new ideas and perspectives. If you do the same thing in the same way, you'll lose the edge to be creative."

Action: 1.) Become or support a role model with a diverse background. 2.) Examine the intersection of how food is produced and how it comes to our table. Rural farmers often produce it; big cities eat it--how can we all do better?

--Dr. Nadilia Gomez, AgTech Innovator Executive Director

On the Strength of Rural STEM:

"There is a nationwide teacher shortage. Fewer people are going into STEM education...To entice someone to teach at a rural school is a feat in itself."

Action: 1.) Address student loan concerns. 2.) Often rural teachers are the entire 7-12 department--make sure to support them through networks. 3.) Change how we view and talk about teachers. It's not a profession that is glorified very often.

--Mauree Haage, North Mahaska Teacher & Statewide Science Leader

On Creating Inclusive Policy:

"Keep [equity issues] a priority. Ask, do we have systemic group think? Do we have people who will challenge us to continually improve? When we have a lack of priority, it can result in a lack of representation...and representation matters."

Action: 1.) Create a welcoming environment for everyone; that sets a positive culture in your district or classroom. 2.) Build relationships with the parent and student. 3.) Ensure diversity is represented in your leadership, faculty, and staff.

--Dr. Kim Wayne, Jewels Academy Founder and Executive Director

On How Higher Ed Can Enrich K-12 Equity Solutions:

"If you don't live it, you'll have to learn it."

(originally stated by Kendra Colbert, Drake School of Education)

Action: 1.) Model a diverse community--representation matters. 2.) Complete equity audits and take a careful look at how teachers are prepared for the classroom. 3.) Integrate diversity into all courses, not just those with a title like Community Relations. 4.) Build partnerships with neighborhoods and schools that surround college campuses. 5.) Make sure to *act* on equity issues, not just talk about them.

--Dr. Ryan Wise, Drake School of Education Dean

Experience Frames School-Business Talk



On Contacting Businesses:

"Do your reasearch. Google the company to see if they've been in the news lately. Look at their mission statement, vision satement, goals. Then align your case to them...at the end of the day, it's about the bottom line."

Action: Instead of pulling out the phone book and cold calling people, try the acronym **LIE**: **L**ocate (use the STEM network), **I**nvestigate (do your research), **E**ngage (find a specific person to email or visit).

--Joe Collins, Sector Partnersip--Iowa Department of Education

On the Career Benefits of Outreach:

"It really gives you a different perspective on your career. It makes you a more diverse thinker. You actually start to bring that outlook into your job and it

helps you to consider things when you are making decisions."

Action: Outreach encompasses many elements. You might be a career day speaker, visit with a hands-on career-related classroom activity, host an onsite event, be a part of someone else's event, provide a tour, be an event judge, host an extern. Start by doing just one thing.

--Amber Pargmann, John Deere Global Program Manager

On Business-Education Relationships:

"Sometimes education and business can talk two different languages...
There are going to be differences. Just be patient with each other."

Action: It's easy to say students don't have the soft skills needed to be successful in their chosen career, but we all have to equip them with the tools needed to build these skills. Oftentimes, it's just a matter of mentors or teachers taking extra time to explain more thoroughly and double checking that the student is understanding.

--Teri Vos, Director of Work Based Learning in Pella

We're Listening! What Topics Would Benefit You?

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**Community
Conversations** *fall 2020*

This month, the Hub hosted two conversations. Thanks to those who took part via Zoom--perhaps you've already filled out a similar survey.

For everyone else, we want to hear from you!

- Do we need these virtual opportunities to create a gathering point?
- Are there topics you'd like to hear more about?
- Experts you'd like to hear from?

If so, please take a moment to fill out this survey. It's quick, requiring only checkmarks, but leaving space for those who want to write a comment.

We'd love to hear from you! Click [HERE](#) for the survey.

Meet Joe Murphy

Bringing Facts & Integrity to Public Policy



Welcome, Joe Murphy! He brings expertise in policy and processes, bridging the topics of STEM education and economic success.

There is a scientific method to every process, and those who can distill and apply it to organizational structure possess a rare ability for guiding systemic success. Whether it be in the political, business, or educational arena, Joe Murphy has a talent for understanding policy development, and he stresses the importance integrity plays in the decision-making process. This fall, Murphy brings his unique set of skills to the South Central STEM Region through his role as an Advisory Board Member.

STEM & Economics

Murphy spends his days as the Executive Director of the Iowa Business Council (IBC), which is comprised of CEOs and top executives from some of Iowa's largest companies. "We focus our efforts on highlighting policies and initiatives that expand Iowa's economic vitality," said Murphy. "You can almost think of the IBC as a mini thinktank with three pillars: research, global thought leadership, and advocacy."

His interest in STEM encompasses the economic success of individuals and businesses in Iowa. He views STEM education as "a critical tool for the future success of our state!" He notes that most jobs have some components of STEM within them. "The more individuals Iowa can cultivate into STEM fields, the more opportunities Iowans will have to find a sustainable, wealth-generating, and fulfilling career."

A Scientific Approach to Policy Development

Murphy's personal interest in STEM began with a curiosity for how ideas develop. "For as long as I can remember, I've been interested in how policy is created and implemented," he noted. "Whether that was through the political process or a

process through an organization or company.”

Starting in middle school, he became active in activities like student council and other organizations. “That allowed me to explore the process of policy development and from that moment on, I was hooked.” He adds that process and policy extend way past politics and connect people in ways that engage them to the larger society. “Being schooled on how to go about that process – fact gathering, debate, and public or organizational input – will really be a useful tool for anyone to capture.”

The organizational process of fact-gathering, debating, and inputting mirrors similar problem-solving processes used in science and math, like researching, testing, evaluating, and implementing. Those who can translate and use elements of the scientific method to analyze and fix organizational flaws can help drive inclusive, thoughtful policy.

Public Policy & Personal Integrity

For students interested in public policy, business leadership, and/or politics, Murphy offers this insight: “Always take a long-term view of a situation, problem, or opportunity. By being purposeful and deliberate, you are able to remove emotion from a process and evaluate the situation in a more deliberate way, which almost always leads to a better decision.”

At a time when students may be getting mixed messages about leadership, democratic systems, and personal responsibility, Murphy focuses on the role

character plays in policy and decision-making. “Always enter and leave any situation with your integrity intact,” he advises. “At the end of the day, your integrity – whether someone can depend on you and whether you are honest – is the only currency that matters.”

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— Joe Murphy, IBC

December 10th Twitter Chat:

STEM Scale-Up Program



Join Iowa STEM on December 10 at 7-8 p.m. for a discussion about the STEM Scale-Up Program.

Participation Tips

1. Follow @IowaSTEM on Twitter.
2. Use the reply icon to answer with A1, A2, A3, A4 so we know which questions (Q1-4) you are answering.
3. Tag all tweets with #IASTEMchat and hit refresh often to see new posts.

Visit **Iowa STEM** for updates.

Google Invests in Iowa STEM Externships

CEDAR FALLS, Iowa – The Iowa Governor's STEM Advisory Council is receiving significant support from Google for its Iowa STEM Teacher Externships Program. Google is investing \$60,000 to provide educators with the opportunity to work side-by-side with industry



Connecting classrooms to careers through the immersion of secondary STEM educators engaged in workplace settings for six weeks in the summer.

Total STEM Teacher
Externships
2009 to 2019

578

Total Workplace
Partners
2009 to 2019

181

Total approximate
cost-share by
workplace hosts
from 2009 to 2019

\$891,400
(\$129,700 this year)

professionals and bring examples of real-life applications of STEM to students in Iowa. Externships also work to create a lasting partnership between workplaces and local schools.

“Teacher Externships are an innovative opportunity that provide real-world application to help teachers inspire and prepare students for careers in STEM fields,” said Dan Harbeke, head of public policy and external affairs at Google in Council Bluffs. “Google is proud to call Iowa home and support our local teachers as they prepare the workforce of tomorrow.”

Google’s investment will provide support for 10

externships specific to IT projects during the summer of 2021, covering the cost of teacher stipends, graduate credits through the University of Northern Iowa, and other program needs and resources. Project managers are now reaching out to engage IT employers as hosts for the 10 to-be-named externs.

“When we immerse our students in STEM fields and hands-on learning opportunities, they find something they are passionate about and you can see them light up with excitement,” said Gov. Reynolds. “Google’s investment helps support our efforts to provide Iowa educators valuable insight and knowledge into real-world applications of STEM, so that they can create life-changing classroom experiences for their students.”

For additional information on how teachers can apply to be an Extern or on how businesses can sign-up to host Externships, click [**HERE**](#).

Calendar of Events

Dec 1 -- Blank Park Zoo Wild Art Closes
Dec 2 -- SCI Homeschool: Bones & Fossils
Dec 10 -- STEM Twitter Chat
Jan 14 – SC STEM Regional Board Mtg
Jan 15 – STEM Scale-Up Educator App Opens

Need help?
Our Board is here to serve!

- Bridgette Andrews
- Creighton Cox
- Katrina Cummings
- Carla Eysink
- Sherry Ford

Jan 19 -- Jewels -- Math Tutoring Begins
March 3 -- STEM Scale-Up Educator App Due
March 13 -- Jewels -- Spring App Camp Begins

If you have a STEM-related class, celebration, tribute, or event, please **email us** so we can share via social media and/or our event calendar.

For more events and details, please visit our **website calendar**.



- Nadilia Gomez
- Mauree Haage*
- Jonathan Holmen
- Ronda McCarthy
- Alison Mohr*
- Joe Murphy
- Amber Pargmann
- Jen Williams
- Laura Williams

** = board co-chairs*

