KC STEM Alliance

STEM SUMMIT 2019

Kauffman Foundation Conference Center
Monday, Sept. 30, 2019

WELCOME

Role of

KC STEM Alliance

Champion	• Champion all things STEM! • Understand the landscape…advocate.
Communicate	• Communicate effectively – Increase STEM awareness
Convene	• Convene partners around common interests & priority areas
Connect	• Connect partners with resources & • Connect learners with opportunities
Collaborate	• Collaborate **everywhere** to leverage synergies
Celebrate	• Celebrate best practices and successes!

KC STEM Summit 2018

Introduce STEM Learning Ecosystem

Invitation to connect & collaborate!

- STEM Connect-KC

Networking Time

Highlight ecosystem initiatives

STEM Connect-KC Workshop - January

- Update on STEM Connect-KC

- Populating the calendar

- #SummerofSTEM

- Joint branding campaign & tools

- CACI Project – KC Public Library

KC STEM Summit 2019

Welcome

Ecosystem Updates

STEM Connect-KC Update

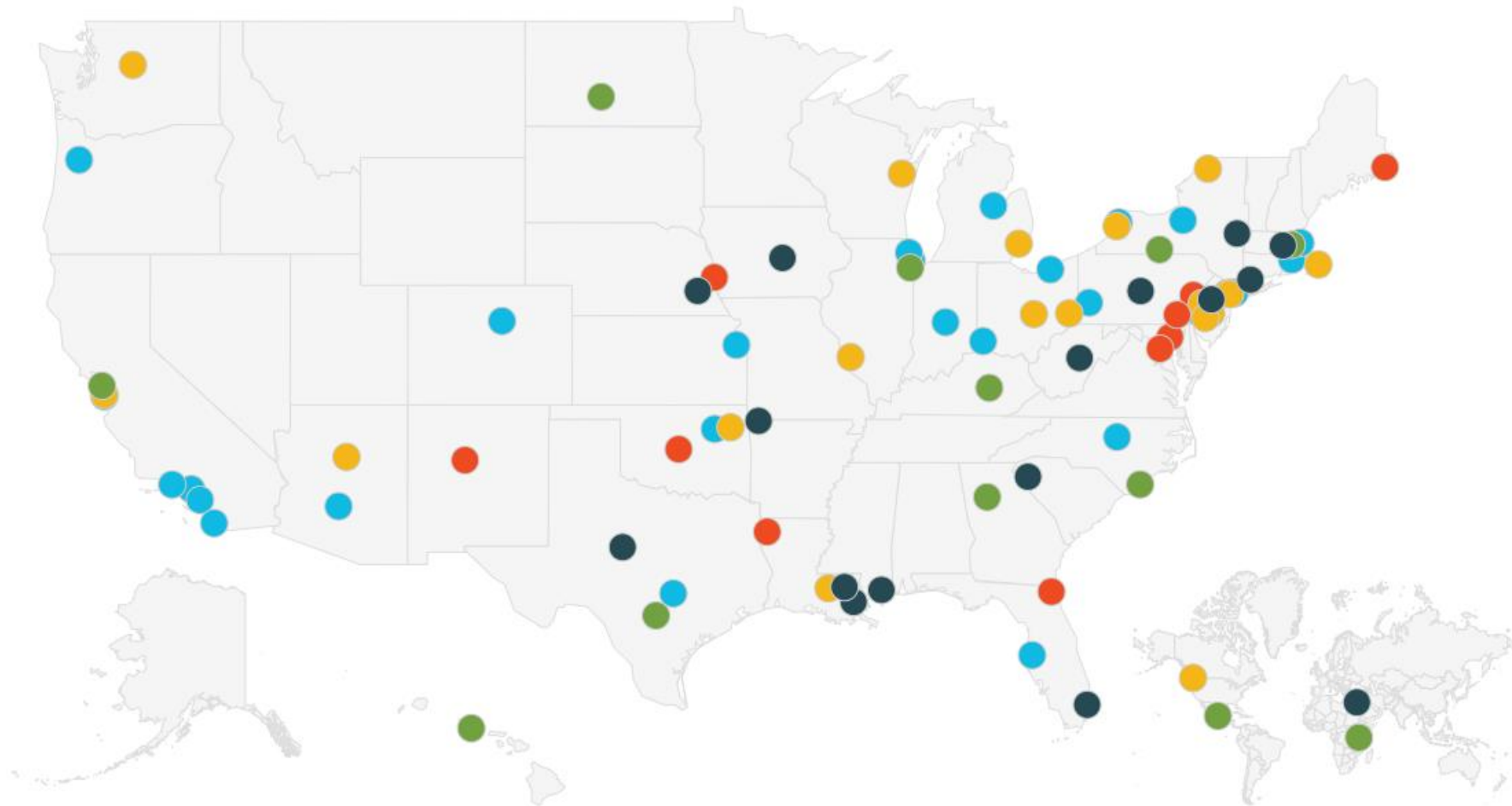Real World Learning Initiative & Conversation

Pop-up Partnering Networking Break

Table Conversation – Connected Learning & "What's Next?"

Ways to Connect

Participating STEM Learning Ecosystems – 84 communities

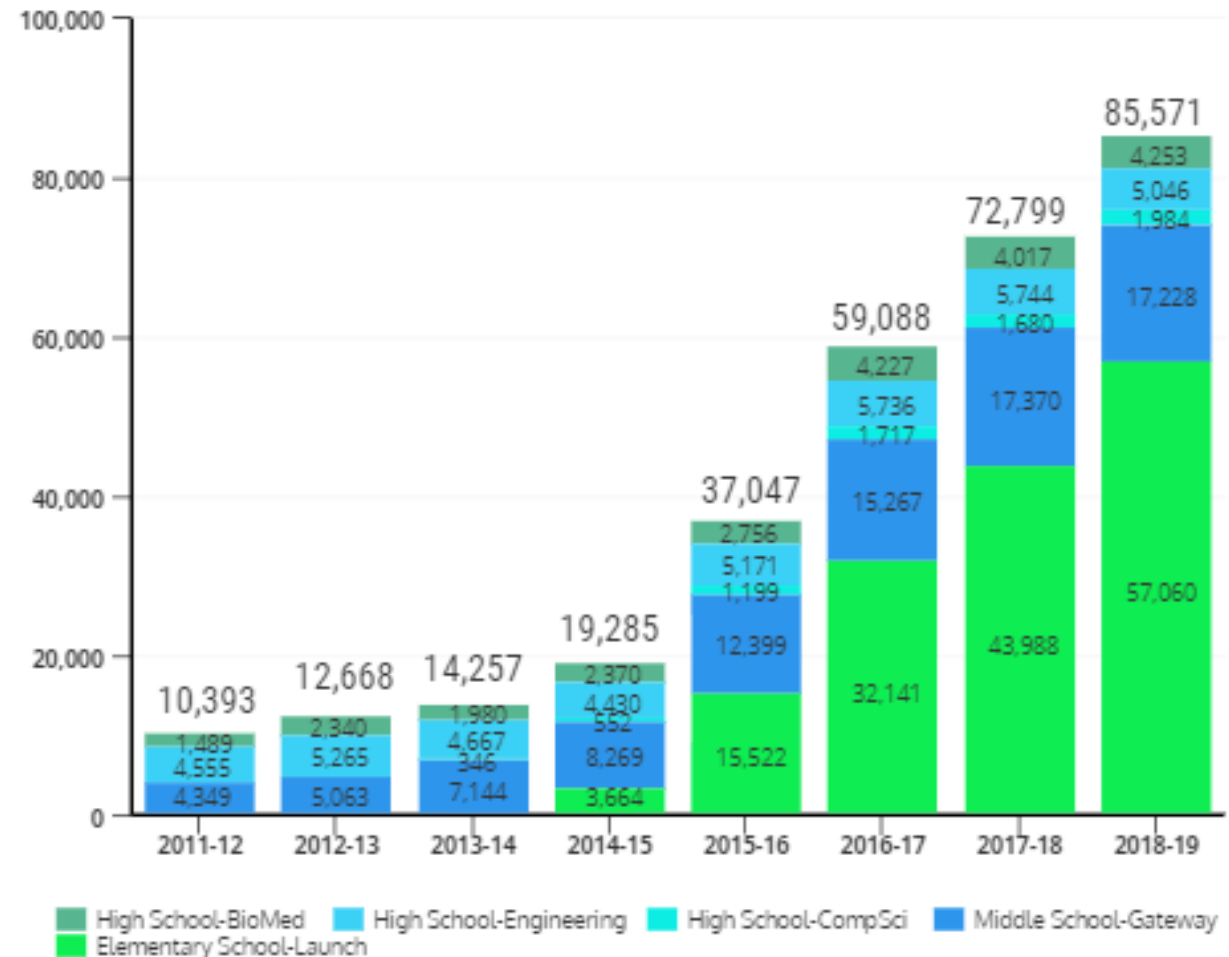# Charting a Course for Success: America's Strategy for STEM Education (5 Year Strategic Plan)

- STEM Ecosystems website: www.stemecosystem.org; Resources section - Policy (full copy of the report)
- Develop and Enrich Strategic Partnerships
  - Foster STEM Ecosystems that unite communities
  - Increase work-based learning and training through educator-employer partnerships
  - Blend successful practices across the learning landscape

GOALS FOR AMERICAN STEM EDUCATION
★ Build Strong Foundations for STEM Literacy ★
★ Increase Diversity, Equity, and Inclusion in STEM ★
★ Prepare the STEM Workforce for the Future ★

Pathways	Objectives	DOC	DoD	DOE	DHS	DOI	DOL	DOS	DOT	ED	EPA	HHS	NASA	NSF	SI	USDA
Develop and Enrich Strategic Partnerships	Foster STEM Ecosystems that Unite Communities	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
	Increase Work-Based Learning and Training through Educator-Employer Partnerships	●	●	●	●	●	●			●		●	●	●	●	●
	Blend Successful Practices from Across the Learning Landscape	●	●	●	●		●	●						●	●	●
Engage Students where Disciplines Converge	Advance Innovation and Entrepreneurship Education	●	●	●				●		●	●	●		●		●
	Make Mathematics a Magnet	●	●							●				●		●
	Encourage Transdisciplinary Learning	●	●	●	●	●		●		●	●	●	●	●	●	●
Build Computational Literacy	Promote Digital Literacy and Cyber Safety	●	●		●			●		●		●		●		●
	Make Computational Thinking An Integral Element of All Education	●	●	●	●			●		●				●	●	●
	Expand Digital Platforms for Teaching and Learning	●		●	●			●		●				●	●	●

PROJECT LEAD THE WAY
PLTW

- Large growth in PLTW Launch (elementary program)

- 161 schools in KC Metro

- Flexible educator training

- Modules can be done in a variety of settings

- PLTW.org for info

KC Metro Region
PLTW Student Enrollment Growth

	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19
Total	10,393	12,668	14,257	19,285	37,047	59,088	72,799	85,571
High School-BioMed	1,489	2,340	1,980	2,370	2,756	4,227	4,017	4,253
High School-Engineering	4,555	5,265	4,667	4,430	5,171	5,736	5,744	5,046
High School-CompSci			346	552	1,199	1,717	1,680	1,984
Middle School-Gateway	4,349	5,063	7,144	8,269	12,399	15,267	17,370	17,228
Elementary School-Launch				3,664	15,522	32,141	43,988	57,060

Legend: High School-BioMed, High School-Engineering, High School-CompSci, Middle School-Gateway, Elementary School-Launch

A Labor Analysis of Skilled Trades Industries and Occupations in Greater Kansas City

MID-AMERICA REGIONAL COUNCIL
JANUARY 2019

KC Rising
Talent to Industry Exchange

- KCrising.com (People Strategy)

- 3 TIES
  - Global Design
  - Life Sciences
  - **NEW – Skilled Trades**

- Challenges – Skilled Trades
  - Growing demand for jobs in the trades
  - Negative Perception
  - Lack of Exposure

Skilled Trades TIE - Recommendations

- Increase awareness and experiences
  - K-12 pipelines – PLTW Engineering Pathway
- High School Trade Programs
- Out of School Programs

"*There are numerous out-of-school opportunities to strengthen the talent pipeline for the trades, including YMCA programs that incorporate STEM experiences, 4-H Clubs, Girl Scouts and Boy Scouts, library programs, community-based maker spaces, the Academic Camp for Enrichment, National Institute of Construction Excellence and National Association for Women in Construction.*"
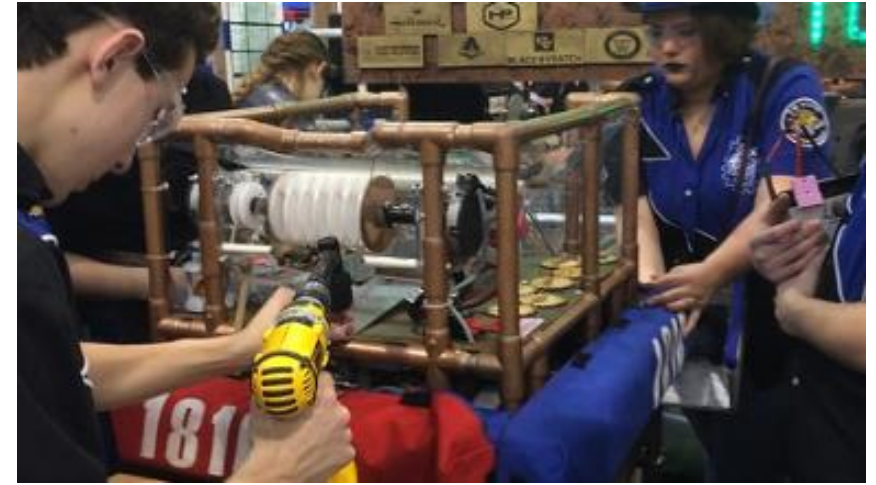
STEM Connect-KC

Create a central resource for the Kansas City region to explore and discover STEM programs and opportunities.

STEM Connect-KC

Search below to find organizations that offer STEM programming or support STEM education and workforce development in Greater Kansas City. Use the calendar to search for specific events, camps and activities.

If you are a STEM program provider, **fill out this form** to add your information to the directory.

SEARCH EVENT CALENDAR

STEM CONNECT-KC FAQ

Organizations

Showing 1 to 10 of 74 organizations.

Filter by

Opportunities Offered

| All |

Focus Areas

| All |

Audience Served

| All |

Acellus – International Academy Of Science

KANSAS CITY, MO 64153

The International Academy of Science is a nonprofit 501(c)(3) organizati...

Audience Served	Educators
Focus Areas	Coding/Programming, Computer Science, Engineering, General Science, Robotics

APPLY   **RESET**

American Royal

KANSAS CITY, MO 64102

As an organization dedicated to youth and education, the American Roy...

Events for October 2019

NARROW YOUR RESULTS   Collapse Filters ↻ Reset Filters

Event Category ▼   Audience ▼   STEM Focus ▼   Venues ▼   City ▼   State/Province ▼

« September   November »

MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY	SUNDAY
30	1	2	3	4	5	6
			Kid STEAM: Stop Motion Animation | Boardwalk Library UMKC School Of Computing & Engineering Open House		Block Kids Building Competi Science City's ScienceWise | Engineering Design Challenges View All 5 Events »	Science City's Educator STEM Fest
7	8	9	10	11	12	13
	Black & Veatch Explorer Post: Mechanical Engineering				Science City's ScienceWise | Spheros At The Station	

KC
S T E M
Alliance

STEM Connect-KC   Students & Parents   Educators   STEM Community   About   Q   ☰

STEM Connect-KC Calendar

ESPECIALLY FOR GIRLS

Try these STEM exploration ideas

SUMMER CAMPS

How to plan a #SummerofSTEM

EDUCATORS

Especially for Educators

STEM Connect-KC

FAQ

FIND STEM PROGRAM PROVIDERS

SUBMIT EVENT

Events for October 2019

EVENTS IN	SEARCH	NEAR		VIEW AS
2019-10	Keyword	Location	FIND EVENTS	📅 Month ▼

STEM Connect-KC by the Numbers

- 21,000 active users
- 63,000 page views
- Average 4 pages per session

- Top 3 pages

  - #1 Summer Camps

  - #2 Events Calendar

  - #3 Directory

SUMMER CAMPS

How to plan a #SummerofSTEM

STEM Connect-KC by the Numbers

➢ 239 summer camps

➢ 31 day-camps

➢ 10 fairs and festivals

➢ 160 youth programs

➢ 86 drop-in activities

➢ 31 competitions & showcases

➢ 24 opportunities especially for girls

46 Professional Development Sessions
30 Talks/Lectures

STEM Connect-KC
by the Numbers

- 77 organizations

- 144 organizers have listed events

STEM Connect KC Monthly E-newsletter

Document and celebrate successes

Highlight innovative approaches

Share best practices

Amplify stories YOU want to tell

Help identify and tell the stories that too often don't get told

DECEMBER 2017

KC STEM Alliance

Your monthly report on Kansas City STEM happenings

Exploring the power of code: #GirlsinTechKC reaches nearly 400 girls during seven events

390 girls + 110 volunteers + 7 corporate locations + 6 school districts and 1 charter school over 4 days = lots of fun and hands-on exploration of opportunities for women in tech! Thanks to DST, Commerce Bank, Federal Reserve Bank of Kansas City, University of Missouri-City School of Computing & Engineering and Cerner (which offered events at three hosting Hour of Code activities for girls during Computer Science Education Week.

Real World Learning Initiative

Time to Rethink Education

How Real World Learning Can Better Prepare Students for the Future of Work

EWING MARION
KAUFFMAN
FOUNDATION

Laura Evans
Business & Education
Advisor in Residence

Pop-up Partnering – Networking Edition

____

- Write on back of business card
  - Resource, strength or best practice
  - i.e. Mentor connections, connection to youth, program expertise, youth development, resource connection, teacher professional development, etc.
- Network and share your strength
- Place one card in the KC STEM basket on the stage
- We will share the list!

CACI
Project

Kansas City Public Library

THE QUESTION

"How can we support young people in discovering and accessing learning opportunities across the city?"

How can we help build connections?

The Learning & Design Principles of Connected Learning

by Connected Learning Alliance

LEARNING PRINCIPLES
DESIGN PRINCIPLES

INTEREST-POWERED
PRODUCTION-CENTERED
PEER-SUPPORTED
SHARED PURPOSE
ACADEMICALLY ORIENTED
OPENLY NETWORKED

teachthought

Table Conversation – "What's Next?

Our goal is to help young people connect with more interest-driven STEM experiences that can open pathways and opportunities.

- What is the best approach or format to help students find "What's Next" and help them move along the continuum?

- (Explore – Engage – Immerse)

- What does that look like for different age groups?
    - Pre-K – 5th grades
    - Middle School – 6th – 8th grades
    - High School – 9th – 12th grades

Balance Between Technical Skills & Core Competencies

Common Sector Competencies

Fundamental: core competency

Advanced: leader competency

Easier to fulfill

More difficult to fulfill
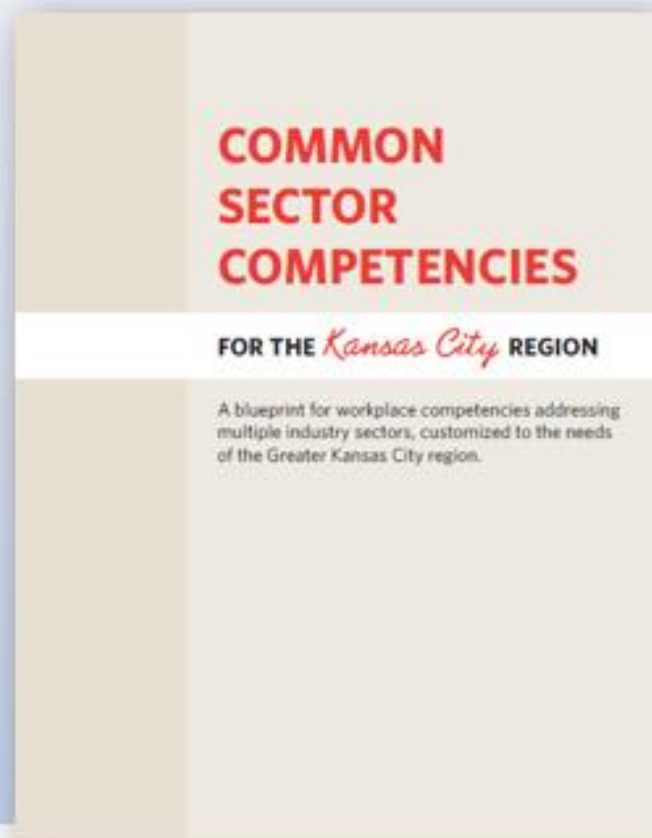
Price of admission

Competitive edge

COMMON SECTOR COMPETENCIES

FOR THE *Kansas City* REGION

A blueprint for workplace competencies addressing multiple industry sectors, customized to the needs of the Greater Kansas City region.
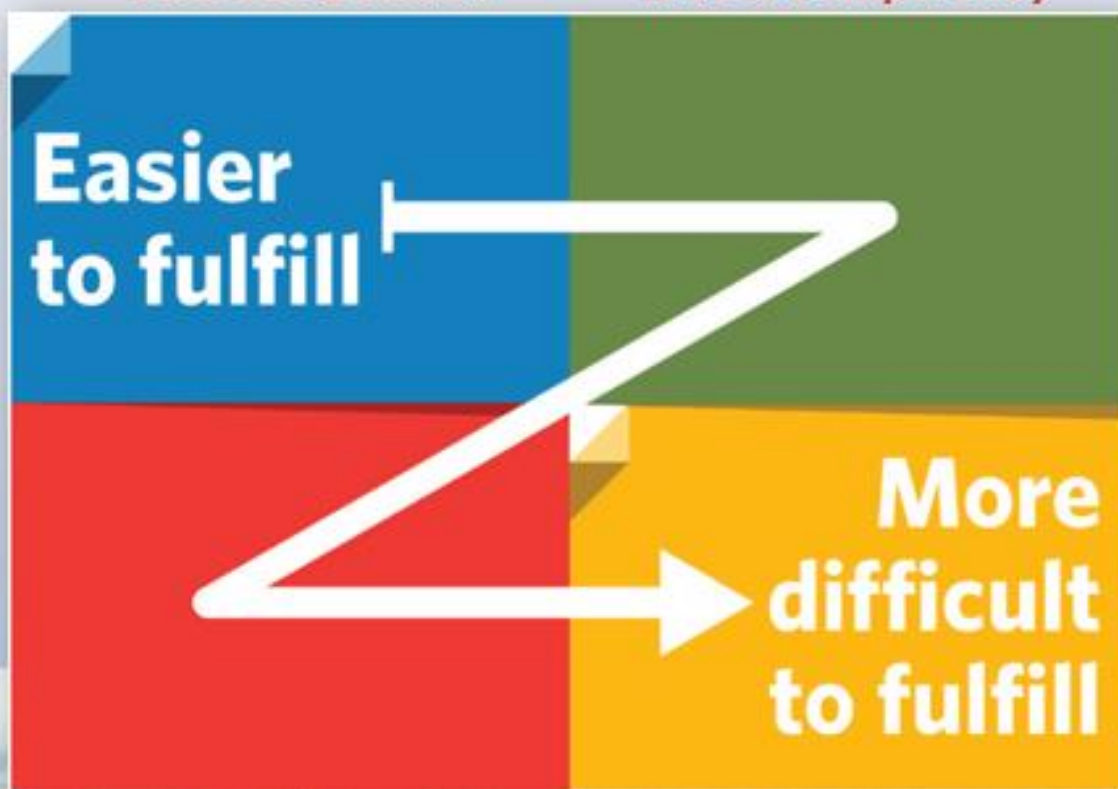
RISING

Young Professionals Survey – Essential Skills

- Young professionals
  (1-5 years on the job)

- Focus Groups – What skills were most important when you started your first job?

- Identified 6 Essential Skills

Young Professionals Survey – Essential Skills

- Online survey – 600+ respondents across all sectors

- How important was each skill?

- Were you prepared?

- What experiences helped you learn each skill?
  - College (in school/out-of-school/job)
  - High school (in school/out-of-school/job)

Results: November 2019

Task Force: School STEM Nights

- Question: How can ecosystem partners support School STEM Nights?

- Initial brainstorming session – Summer 2019

- Next step: Survey of School Districts/Schools (Oct. 2019)
  - Who is doing STEM Nights?
  - What are barriers?
  - What help/resources do they need?

- Next meeting: Nov. 4, 2019

Task Force:
STEM Exploration Days

- Build on STEM Connect-KC Platform
- Coordinated week of STEM/STEAM Activities
- Broad geographic area
- FREE admission (increase access!)
- Umbrella marketing campaign
- Potential pilot in Summer 2020
- Task Force Meeting: Nov. 4, 2019

EVENT FOR 2018!

remake
learning
days
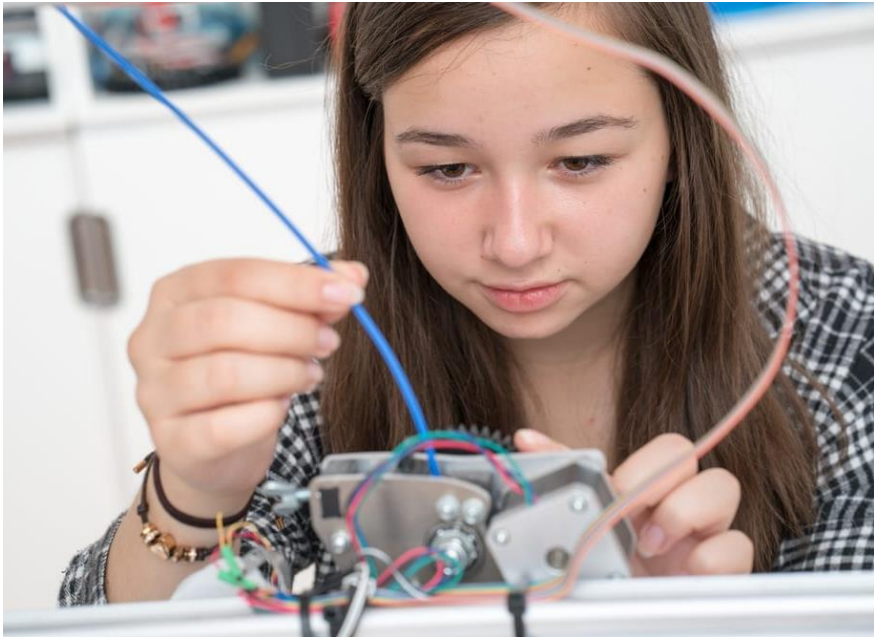
Computer Science & Technology Education Landscape Analysis

Let us know about your programs!

EDUCATOR STEM FEST

Sunday, October 6
12pm - 3pm

KANSAS CITY
SCIENCE CITY®
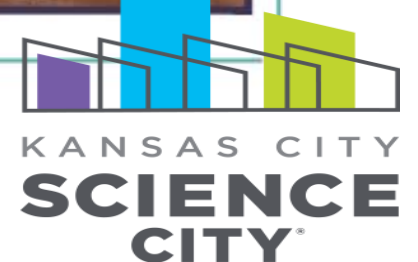
INNOVATION DAY

- Educator Professional Development Day
- Hosted by Inventor's Hall of Fame
- Nov. 2, 2019
- Guadalupe Centers High School
- FREE
- Contact: Laura Liebman, lliebman@invent.org

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THANK YOU!