Southeast Region STEM Advisory Board
March 25, 2020 3:00 – 4:00 p.m.

VIRTUAL LOGIN INFORMATION:
You can join this event from a PC, Mac, iPad, iPhone or Android device:
Please click this URL to start or join.
https://uni.zoom.us/j/534411959?pwd=K0pCb0NaMndaQlY2WIIxUUJ3WXdXdz09
Or, go to https://uni.zoom.us/join and enter meeting ID: 534 411 959 and password: 032634
Join from dial-in phone line:
Dial: +1 646 558 8656 or +1 312 626 6799
Meeting ID: 534 411 959
Participant ID: Shown after joining the meeting

Wednesday, March 25, 2020	
3:00 – 3:05 p.m.	**Welcome and roll call of members**
3:05 – 3:25 p.m.	**Review of Iowa STEM Scale-Up Programs and Applications Received** • List of programs (also listed below) • Eligible organizations – public and private K-12 schools, informal organizations such as libraries, museums, extension offices, after school programs and others directly serving K-12 students • Review process – rubric below with maximum score of 15 • Questions to consider: • Priorities – minimum score? Number of students served? High need schools? Diversity of age groups or programs? Max. # awards per applicant?
3:25 – 3:30 p.m.	**Scale-Up Approval Vote**
	Next Meeting May 21 11:00 – 1:00 – MERGE Iowa City

2020-21 STEM SCALE-UP PROGRAM MENU

Bootstrap: Data Science
Description: Students develop questions and learn how to analyze data critically to make meaning from the data. Flexibly designed for inclusion within courses such as math, computer science, business, and social studies.
Grade Level: 8-12
For Settings: In school
Contact: Jennifer Poole, Bootstrap, jen@bootstrapworld.org
For more information: https://www.bootstrapworld.org/materials/data-science/

Computer Science Discoveries
Description: Inspire students as they build their own websites, apps, games and physical computing devices. This course takes a wide lens on computer science by covering topics such as programming, physical computing, HTML/CSS and data.
Grade Level: 6-10
For Settings: In school

Contact: Samantha Dahlby, NewBoCo, samantha@newbo.co
For more information: https://newbo.co/code-org-partnership/

Computer Science Fundamentals
Description: Foster equity and diversity in the classroom, breaking down barriers and stereotypes around computer science. This course is designed to be flexible for the classroom.
Grade Level: K-5
For Settings: In school and out of school
Contact: Samantha Dahlby, NewBoCo, samantha@newbo.co
For more information: https://newbo.co/code-org-partnership/

Computer Science Principles
Description: Introduce students to the foundational concepts of computer science and challenge them to explore how computing and technology can impact the world. This course is a rigorous, engaging and approachable exploration of the foundational ideas of computing.
Grade Level: 9-12
For Settings: In school
Contact: Samantha Dahlby, NewBoCo, samantha@newbo.co
For more information: https://newbo.co/code-org-partnership/

Curriculum for Agricultural Science Education (CASE) - Agricultural Power and Technology
Description: Information not yet available - coming soon!
Grade Level: 9-12
For Settings: In school
Contact: Joshua Remington, Iowa FFA Foundation, joshua.remington@iowaffafoundation.org
For more information:

Desmos Middle School Math
Description: A digital upgrade of the widely-adopted and highly-rated middle school math curriculum authored by Illustrative Mathematics. Desmos has added to IM's curriculum a) engaging game-like feedback, b) a powerful activity dashboard that helps teachers respond to student learning, c) and a continuous professional development model supporting teachers throughout the year.
Grade Level: 8
For Settings: In school
Contact: Dan Meyer, dan@desmos.com
For more information: bit.ly/desmos-iowa-sample

Differentiated Math Centers
Description: An easy-to-manage resource that provides 3 levels of instruction tied to the same Standard of Learning. Each game or activity is standards-aligned, hands-on and complete with formative assessment writing prompt and skills practice.
Grade Level: K-5
For Settings: In school and out of school
Contact: Julie Law, jlaw@hand2mind.com
For more information: https://www.hand2mind.com/Brands/Differentiated-Math-Centers

Pint Size Science
Description: Engage and inspire young minds to explore scientific phenomena. This course is designed to build science understanding and respond to the ever changing interests and abilities of children.
Grade Level: PreK-2
For Settings: In school and out of school
Contact: Jolie Pelds, Science Center of Iowa, jolie.pelds@sciowa.org
For more information: https://www.sciowa.org/scaleup

Project Lead The Way (PLTW) Cybersecurity
Description: Introduce the tools and concepts of cybersecurity and encourage students to create solutions that allow people to share computing resources while protecting privacy. Students solve problems by understanding the vulnerability of computational resources and closing these vulnerabilities.
Grade Level: 9-12

For Settings: In school
Contact: Vic Dreier, PLTW, vdreier@pltw.org
For more information: https://www.pltw.org/our-programs/pltw-computer-science-curriculum#curri...

STEM in Action
Description: Incorporate three-dimensional learning with an emphasis on authentic hands-on, problem-based learning. This course follows the Engineering Design Process of defining the problem, planning solutions, making a prototype, reflecting, communicating results and redesigning.
Grade Level: PreK-5
For Settings: In school and out of school
Contact: Julie Law, Hand2Mind, jlaw@hand2mind.com
For more information: https://www.hand2mind.com/brands/stem-in-action

STEM Innovator
Description: Transform the classroom into incubator spaces where student teams solve real-world problems alongside industry mentors. This course prepares students with the skills and mindset to persist in STEM education, pursue STEM careers and become innovators of the future.
Grade Level: 6-12
For Settings: In school and out of school
Contact: Leslie Flynn, University of Iowa, leslie-flynn@uiowa.edu
For more information: https://jacobsoninstitute.org/STEM-Innovator

VEX IQ Challenge - Presented by the REC Foundation*
Description: Provide the opportunity to learn introductory programming and engineering skills with a snap-together robotics system designed from the ground up.
Grade Level: 4-8
For Settings: In school and out of school
Contact: Mike Martus, REC Foundation, mike_martus@roboticseducation.org
For more information: https://www.roboticseducation.org

VEX V5 - Presented by the REC Foundation*
Description: Provide the opportunity to learn introductory and advanced programming and engineering skills with a snap-together robotics system designed from the ground up.
Grade Level: 9-12
For Settings: In school and out of school
Contact: Mike Martus, REC Foundation, mike_martus@roboticseducation.org
For more information: https://www.roboticseducation.org

Scale-Up Program Applications Guidelines for Scoring Rubric

Question to be evaluated: #30 - The "What is Required" Question	30) After reading the "What is Required" section of the program's one-pager, describe how you envision fulfilling the expectations of this program in the context of your learning environment, how you plan fulfills the program expectations, and how this program fits your school/organization's long term plans for STEM?	
	Score	**Reason for assigning the score**
Ample Demonstration	5	Clear, thorough, and systematic description of how you will implement the program, including who, what, when, where, and why.
Reasonable Demonstration	3	Basic description of most implementation components of who, what, when, where, and why.

| Not Demonstrated | 1 | Very basic description of implementation, but may be missing some important details of one or more component of the who, what, when, where, or why. |
| | 0 | No answer provided or the answer does not address implementation of the STEM program. |

Question to be evaluated: #31 - The sustainability question	31) Given that the STEM Scale-Up Program of the Iowa Governor's STEM Advisory Council is intended to "seed" or start programs (not sustain), what are your school/organization's plans to sustain this program in future years in terms of costs for consumables, licensing, training, etc and leadership advocacy?
	Score	**Reason for assigning the score**
Ample Demonstration	5	Explicitly states sustainment strategy and integration into established program/curriculum. Examples include funding sources, leadership involvement and integration into standard practice and organization culture.
Reasonable Demonstration	3	Basic integration into established program curriculum. Basic plans for future use.
Not Demonstrated	1	Little evidence of integration into established program. Not integrated into established program.
	0	No answer provided or the answer does not address implementation of the STEM program.

Question to be evaluated: #32 - The demographics question	32) The STEM Council established the priority to reach children of high need and/or under-representation (specifically ethnic/racial minority, gender distribution, free or reduced lunch, special needs and low STEM test scores). Please describe the barriers in your community which restrict participation of these underrepresented groups in STEM programming. How will you address those barriers to involve these subpopulations?
	Score	**Reason for assigning the score**
Ample Demonstration	5	Clear, thorough and systematic description of the equity components of the program to be implemented. Implementation plan shows a high level of priority to breaking down barriers for diverse populations.
Reasonable Demonstration	3	Wrote explanation, but weak indicators of breaking down barriers for high need populations.
Not Demonstrated	1	No examples of need/no data indicators.
	0	Nothing written of substance. For example, "we have need for STEM in our school"