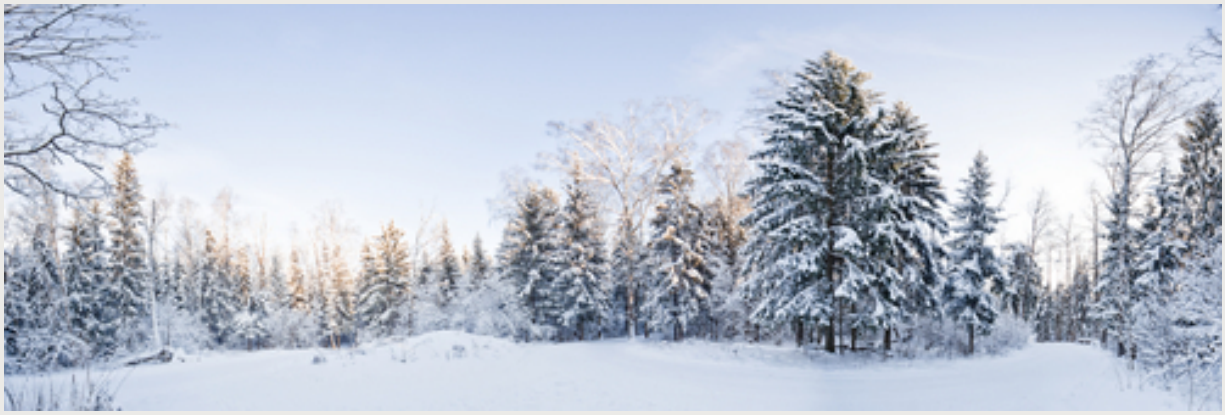

January, 2022

North Central STEM Region

Monthly News

In this Issue

Register Your Classroom
Discovering Careers in STEM Webinar
February 22, 1-2 PM

In celebration of Engineering Week, a panel of STEM professionals will discuss their career journey and personal interest in STEM careers. We welcome classrooms to submit their questions for the panel! The primary audience includes; high school and middle school students as well as teachers and counselors. The webinar will be recorded and available to view at anytime.

Register HERE

Our Panelists:

Mason Berg

Process Development Engineer II, Renewable Energy Group

Jason Grabe

Manufacturing Engineer, 3M

Matthew Stephan

Production Manager, Cargill

Anh Tran

Environmental Engineer, Renewable Energy Group

Kerry Weig

Principal, INVISION Architecture

NEW 2022-2023 STEM Scale-Up Application Now Open!

The Iowa Governor's STEM Advisory Council is now accepting applications for the STEM Scale-Up Program. These programs are FREE for PreK-12 educators in formal and informal education settings. See program descriptions below! Link to full menu of programs click **HERE**. The application period for the STEM Scale-Up Program closes on February 28, 2022.

Program Information Sessions

Program Details

Computational Thinking in Action with Micro:bit, Grade Level: 3-12
Daily Math Fluency, Grade Level: K-8
Ioponics, Grade Level: PreK-12
Iowa Leadership in Engineering Design, Grade Level: K-12
Nepris: Real World Connections to STEM Career Professionals,Grade Level: K-12
Project GUTS, Grade Level: 6-9
Project Lead The Way: Energy and Environment, Grade Level: 6-8
Ready, Set, Drone!, Grade Level: 4-8
Robot Investigations with Finch Robot, Grade Level: 4-12
SoapyCilantro: Introduction to Precision Health and Agriculture, Grade Level: 6-12
Storytime STEM-packs: STEM + Computer Science, Grade Level: PreK-2
Tiny Techies, Grade Level: PreK-2
Waterworks, Grade Level: PreK-2

For information regarding the application process or the programs, contact Kelly Bergman, kbergman@iastate.edu, or call 515-203-7247.

Makerspace Guide! Taking the First Steps

Guest Article by Teresa Green
STEM Teacher
North Central Iowa STEM Advisory Board Member
2018 Iowa STEM Teacher of the Year Award Recipient

Interested in implementing a makerspace in a corner of your classroom or as a separate room in your building, but not quite sure how to begin? A simple internet search will provide you with resources, but it can also completely overwhelm any beginner.

Every makerspace varies depending on the organization's goal. The underlying themes of these spaces, however, are collaboration, discovery, exploration, creativity, building, tinkering, failing, trying again, and, most importantly, sharing in learned experiences. As each space is unique in its atmosphere, character, and what it produces, there are no hard and fast rules. It's truly a matter of igniting your students' curiosities and helping them explore while learning.

Educational makerspaces have come a long way since they came onto the learning scene. There are now companies that create mobile carts that can travel from classroom to classroom and are stocked with various STEM learning tools. But, for a simple classroom, it isn't necessary to spend a massive budget to create a STEM maker corner for your students. A few basic supplies and a stack of project task cards, problems to solve, or ideas to create will get your kids building, tinkering and exploring in no time.

A first step to creating your makerspace is understanding who it will serve and knowing the appropriate tools for the population. A second concern is if your makerspace will have supervision or if students will work without guidance. And finally, what types of challenges, tasks, projects or outcomes are appropriate for the population the space will serve.

With these decisions in mind, the next step is to find or design learning challenges, projects, or idea-starters for your students to explore. These can be one-time creations that students take home or can be short activities with reusable supplies. There are literally hundreds of project and challenge websites where you can find great age-appropriate challenges and supply ideas. To start your journey, I've only listed a few.

Makerspaces.com is a wonderful site for everything one needs to get started. A sub page of this site - **25 Makerspace Projects for Kids** - is another excellent resource to begin your journey. **Invent to Learn** - the book that helped to launch the maker movement - has a wonderful resource page on all things Maker. Finally, **Science Buddies** is a free resource that has hands-on science projects for home and for school.

Once you have a plan, you can gather the necessary materials your students will need. The websites listed above include links to supply lists that are essential to any makerspace. Acquiring the materials, however, is another issue, and this is where creative crowdsourcing for supplies is extremely helpful. Petition your parents and students for cardboard and leftover craft supplies as well as junk electronics. It is also helpful to reach out to school parent organizations as well as local businesses for materials and funds. If you have the writing skills, the time, and the passion, there are numerous corporate grants that you can apply for.

Keep in mind, however, that you don't need to have every supply on the list in order to create a maker environment. Start small and simple and just keep adding and building to your inventory and project list. Before you realize it, you'll have a full-blown makerspace for your students.

Calendar of Events

February 9
STEM Day at the Capitol

February 22
Discovering Careers in STEM Webinar

February 28
STEM Scale-Up Applications Close

2021-2022 NC STEM Advisory Board

Jared Brown, Ankeny
Lindsey Falk, St. Ansgar
Ashley Flatebo, Garner
Teresa Green, Boone
Allyson Krull, Mason City
Sara Nelson, Ames
Todd Oesterle, Mason City
Michael Pedersen, Ames
Kathy Rogotzke, Mason City

March 29
NC STEM Advisory Board Meeting

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Matthew Stephan, Fort Dodge
Anne Tedore, Marshalltown
Yen Verhoven, Ames
David Zrostlik, Garner

Connect with us