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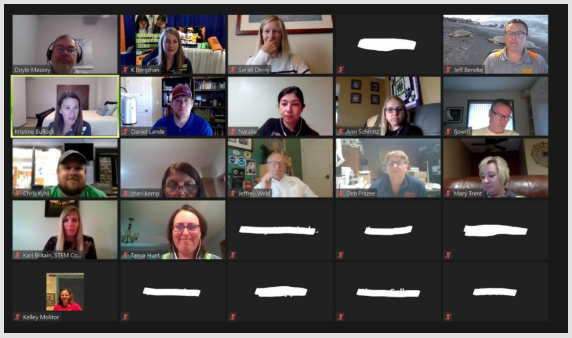
NORTH CENTRAL IOWA REGION GOVERNOR'S STEM ADVISORY COUNCIL

STEM Scale-Up Virtual Professional Development is Underway

One of the reliable pillars of the Iowa Governor's STEM Advisory Council's STEM Scale-Up Program is the quality Professional Development delivered every summer by program providers. With the COVID-19 pandemic, the STEM Council has worked closely with the program providers to transition traditionally in-person Professional Development to virtual delivery. Thank you to all the program providers for their efforts to implement virtual training for Iowa Educators! STEM Scale-Up Professional Development kicked off this week with the PLTW: Cybersecurity course (pictured below).



Children's Stories Provide a Great Context for Learning STEM

Books are a great way to engage children in STEM. They appeal to a variety of children and make STEM subjects more accessible. Research suggests that students learn science best when it is integrated into other subject areas such as reading and language arts. Now that libraries are reopening across Iowa, it is a great time to check out books with a STEM theme.

To learn more about great STEM books available, we checked in with Joa LaVille, the Youth Services Librarian at the Marshalltown Public Library. Ms. LaVille is always looking for fun ways to include educational learning in the library programs. During Storytime, she likes to integrate storytelling with hands-on activities. For example, for one of her popular programs the children learn facts about polar animals and then they do a snow activity from a polymer that expands into a snow type material through an exothermic reaction.

“Another popular program has been bridge building, where we started out with the Billy Goats Gruff story,

NEW Monthly STEM Challenge: Make a Chromatography Butterfly

What you need: Non-permanent markers, white coffee basket filters, pencil, cups of water, pipe cleaner (or clothespin), string, scissors

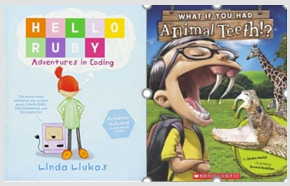
Method:
1. Draw a thick circle around the center of the coffee filter. (Put newspaper or some kind of material underneath to protect the table.)
2. Use a pencil to write the color of the marker being used in the center of the circle.
3. Fold the coffee filter in half and then in half again in the same direction, resulting in a cone shape.
4. Get a short glass of water. Pull apart the cone shaped coffee filter so it balances on the glass with the tip of the cone just touching the water. (Be sure to NOT let the marker circle go in the water, just the uncolored tip of the color filter cone.)
5. Let it sit and watch what happens as the water begins to flow up the paper.
6. After the water has reached the outer edge of the coffee filter, unfold and place it on newspaper to dry. Repeat with different color markers
7. Cut pipe cleaner in half. Pinch the top and bottom edge of the coffee filter together and wrap the pipe cleaner around the center. Shape the ends of the pipe cleaner to form antennae.
8. Tie string in the center and hang!

Questions: *What happened to the marker as it got wet? How many colors do you see? What colors do you see? How are the colors different for different markers?*

then built a life-sized bridge together and acted it out, ending with a chance for students to play with simple machine Lego kits," says Ms. LaVille.

"Our strategy at the library is often to give kids a taste or intriguing experience with a concept that maybe raises more questions than it answers, and then encouraging them to seek out further information in books," she says. Check out some favorite books she has used in her STEM programs in the last couple of years:

Ms. LaVille's picks: The Sun is Kind of a Big Deal by Nick Seluk, Counting on Katherine by Helaine Becker, The Secret Life of Snowflakes by Kenneth Libbrecht, and Volcano Rising by Elizabeth Rusch

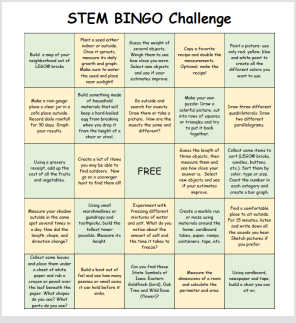


North Central STEM picks: Hello Ruby: Adventures in Coding by Linda Liukas and What If You Had Animal Teeth? by Sandra Markle

STEM Bingo

To help encourage children to explore the world around them, the North Central STEM Region created a STEM Bingo Challenge Board containing simple activities requiring few household materials and designed to inspire kids all summer long! Download your copy here:

STEM Bingo Challenge



Upcoming Events and Deadlines

August 6
North Central Regional STEM Advisory Board Meeting

August 17
2021-2022 STEM Scale-Up Program Provider Applications Open (Programs Only)

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