

The Daily STEM

Volume 8 Issue 4

November 23, 2025

STEM in the News

Have you ever been riding in a car or bus and felt the bumps in the road? Or maybe you've walked along a sidewalk and noticed it was cracked and falling apart? Like most materials, concrete expands when it is hot and contracts when it is cold. This repeated expanding and contracting causes cracks and leads to potholes. Researchers at Michigan State University have found a solution for making concrete that is bendable, which allows it to resist the cracking and breaking. They have installed 4 squares on the campus, and will monitor it this winter. One other feature of the concrete is that it absorbs heat during the sunny days and releases it slowly during cool nights. This can help prevent ice from forming and keep you from slipping and sliding while requiring less salt. What kinds of places would be good to install this type of concrete? Learn more:

bit.ly/48uS6Iq and bit.ly/47XkUZR



STEM Career: Bakers

Did you ever eat some bread and wonder how it got so fluffy? Or have you wondered how the same basic ingredients make both crunchy cookies and soft cakes? A **Baker** uses recipes to make tasty things for any meal of the day. Baking bread, cookies, cakes, and pies requires close attention to the details of recipes. Many pastries also involve creativity when



decorating the treats to look delightful. Also, there is a lot of science to ensure that bread rises, cakes stay fluffy, and cookies don't burn. To become a baker, most people study at a culinary school, while others work as an apprentice with an experienced baker to learn the skills "on the job." As a student, it is important to learn math skills (especially fractions, measurement, and ratios), business skills (many bakers run their own businesses), and science (like chemistry). If you want to learn more about how STEM is part of baking, learn more: bit.ly/48vUhvd, see some **baking science infographics** bit.ly/4oXl0qk, or watch engineers talk about baking bit.ly/44i5Qni and bit.ly/47Yofli

STEM Challenge

The time between the seasons is a great time to practice observation skills. Here's a few ideas:

- 1) Go for a walk and look at trees without their leaves to find bird and small animal nests.
- 2) Record the sunrise and sunset times and graph their change each day.
- 3) Set up a birdfeeder and start learning about what types of birds stay in your area or migrate through.



The Puzzle

Suppose an energy drink brand advertised a new "98% caffeine free" version of their drink. How many 20 ounce cans would you have to drink to equal the caffeine in one regular 20 ounce can?

Decode the answers using Morse Code:

... .. - - - - / - - - - - ...

Mystery Photos

Can you identify the mystery items under the Microscope?

Decode the answers using Morse Code: - - - - /

... .. - - - - /
- - - - - /
... .. - - - - / - - - -

