

the Daily STEM

Volume 2 Issue 13

December 15, 2019

Super-Double-Issue!

STEM in the News

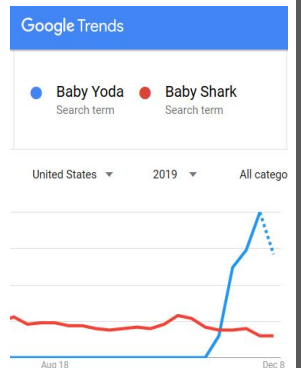
17 fish, 15 geckos, eight flowering plants, six sea slugs, five arachnids, four eels, three ants, three skinks, two skates, two wasps, two mosses, two corals and two lizards. No, that's not a song about Christmas gifts. It's the 71 new species discovered by the California Academy of Sciences. One fish that lives in "secretive and isolated African reefs" has very bright purple scales. It was named *Cirrhilabrus Wakanda* in honor of the Marvel movie *Black Panther*. In all, about 19000 new species, or kinds of living things, were discovered in 2019. "Despite decades of tirelessly scouring some of the most familiar and remote places on Earth, scientists estimate that more than 90% of species remain unknown," says Shannon Bennett. Would you like to discover new creatures someday?



To learn more: cnn.it/35mrtCH

STEM + Trends

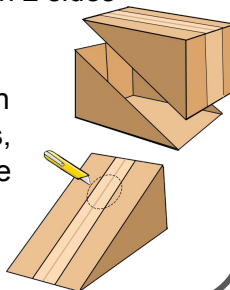
Do you know what a "trend" is? It's defined as a "general direction in which something is developing or changing." Fashions, musicians, video games, and toys can all be trends as new ones get popular and others lose popularity. Every December, Google shares information about trends in the world. Because so many people use Google to search for things, they have a lot of data on what is "trending." They can notice if songs are becoming popular because more people search for them. Would you be surprised to learn Disney Plus was the top search in the US? Or that Baby Yoda is now more popular than Baby Shark? What kind of jobs would find information on trends useful? What do you think is most popular? Check out the top trends of 2019 here, or type in your favorites and see how they change in popularity: bit.ly/36xyvVh



STEM Challenge

In this holiday season, many gifts are packaged in boxes (or arrive in the mail in boxes). Don't just throw them away, turn them into a fun game in 4 easy steps:

- 1: Find a big box and draw diagonals on 2 sides
- 2: Have an adult cut along the line
- 3: Find something round (like a coffee can) to trace and cut out a hole on each
- 4: Get some beanbags, rolled up socks, or crumpled up wrapping paper and see who can toss them in!



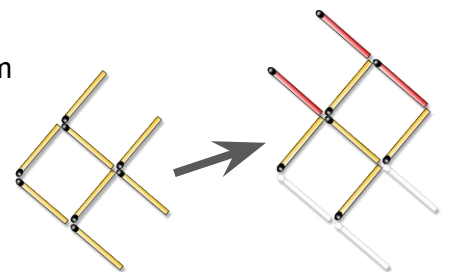
Find more ideas for repurposing empty boxes at bit.ly/2LWSepp

The Puzzle

If a duck costs \$8, a spider costs \$32, and a bee costs \$24, how much would a cat cost?

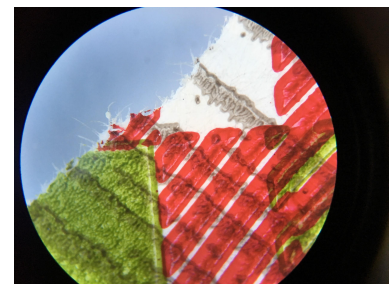
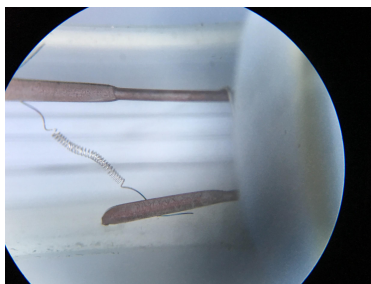
Last week's answer:

To make the fish swim the other direction, move the following three matches:



Mystery Photos

What's under the microscope?
(answers are in code, C = T)
qxurmjh urpqcb & fajyyrwp yjyna



Last week's answer:
The tip of a marker

(more) Daily STEM

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STEM in the Winter

In many places, winter can be a time where cold weather makes outdoor activities challenging. Did you know that you can still do STEM even when you're stuck inside? Here's a few ideas to get you started:

- Fix a broken toy
- Plant an indoor garden
- Turn a picture into a puzzle
- Learn to bake cookies
- Make a blueprint of your house
- Make a "How-To" video
- Invent something
- Try origami
- Design a 1-minute hourglass
- Draw a picture using only circles

Print a list of 77 ideas (in English, Spanish, or Arabic) at dailystem.com/resources



Super STEM Movie

Paper Planes (Not Rated, 2014, 96 min)

Ideas for Projects: Paper making machinery, eagles, flight, sailing, innovation, model rockets, airplanes, biomimicry, competitions, origami, papermaking, acupuncture, drones, lasers



Top Scenes: 5:07-8:06 The paper plane challenge, 17:06-21:11 Investigating Flight

Big Question: Which can fly better: planes or birds?
Further Study: Study the history of flight, try making some paper airplanes of your own, & find a paper airplane competition (or start one)

Hour of Code

Every December, Computer Science Week helps introduce kids to the basics of computer science. Coding, or how computers do the steps that make games and apps work, is something anyone can learn. It helps build problem-solving skills, logic and creativity. If you start learning coding skills early, you'll be able to use those skills in all types of careers someday.

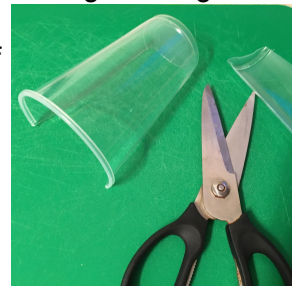
Find great coding activities: hourofcode.com/learn



If you did Hour of Code, you don't have to stop. Find out what you can do next: hourofcode.com/beyond

STEM Challenge

Holidays are a great time for family fun. Board games & card games are fun to play while building strategy and logic skills. But if you're looking for a different kind of game to challenge your family, try making a mini-golf course in your home. Take an empty plastic cup and cut it in half lengthwise for the hole. Cut "U" shapes in cardboard boxes to make tunnels. Stand up books for the ball to ricochet off. You can even make a golf club using cardboard. Just be sure to use a soft ball so you won't accidentally break something. When you finish, invite your family to play it together!



Mystery Photos

What's under the microscope?
(answers are in code, 37 = W)

- 38,16,29,38 18,23,33,17
- and
- 30,23,28,19,0,34,32,19,19 16,32,15,28,17,22

