

the Daily STEM

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STEM + Golf

Have you ever gone golfing? The goal is to hit the ball into the hole in as few swings as possible. Because each golf course is built differently and every golfer is different, it's impossible to know exactly how likely a hole-in-one (or ace) is. The odds of an ace by an amateur golfer (not a professional) are about 1 in 12,500. Gary Choyka, a retired teacher and basketball coach from Philadelphia didn't get one ace. He got two! If you're wondering how rare that is, try about 1 in 67 million. Do you think a robot could be programmed to get a hole-in-one? What other sports events would be as rare as an ace?



Player	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	Total
Phil	5	8	4	5	4	5	7	4	5	4	7	5	5	3	5	4	3	5	43
GARY	5	8	6	3	5	5	7	4	5	4	7	5	5	3	5	4	3	5	43
Bill	5	4	3	5	6	3	4	5	7	4	5	5	4	5	5	4	4	5	40
LES	5	8	5	7	4	5	5	5	5	5	5	5	5	5	5	4	4	5	70

To learn more:

bit.ly/3bEpME0

STEM in the News

How long is a day? 24 hours, right? Yes, if you live on Earth. But as people start to think about someday living on Mars, it's important to think about time on other planets. A day is "the amount of time it takes for a planet to completely spin around and make one full rotation." So even though Earth spins once every 24 hours, Mars spins in about 25 hours and Saturn in about 11 hours. Using satellites and telescopes, astronomers can measure how long a day is on most planets fairly accurately. Venus is different because it's surrounded by a thick cloud cover making it hard to measure. NASA's Magellan spacecraft found Venus days to last 243 Earth days and 26.6 minutes. ESA's Venus Express measured it to spin once every 243 Earth days and 26.6 minutes. Accuracy is important, because if we want to land on a planet, we need to be able to calculate exactly where the planet will be at a certain time. To learn more: bit.ly/39BQJq1 Learn about other planet days: go.nasa.gov/39Hfp0x



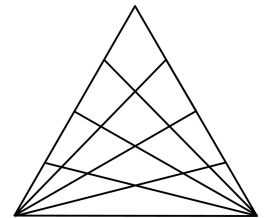
STEM Challenge

Do you have a dog? Or maybe you know someone with a dog? Everyone knows that pets like to play, and when no one is home, the dog doesn't have anyone to play with. Why not try to invent a machine that throws a tennis ball (make sure your machine doesn't throw it too hard or towards anything that can break). To watch one tennis ball launcher in action: youtu.be/4PcL6-mjRNk

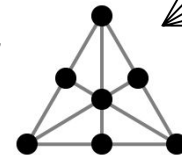


The Puzzle

How many triangles are in the picture at right?



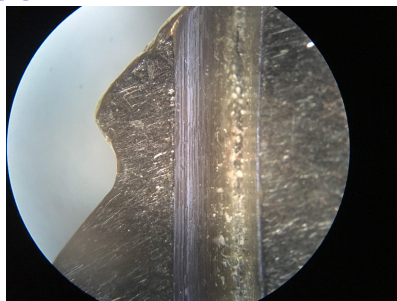
Last week's answer:
Here's how to arrange 7 trees so 6 straight lines contain 3 trees each



Mystery Photo

What's under the microscope?
(answer in next issue)

Last issue's answer:
An Apple lightning cable



Incredible Inventions

Look around your classroom. What's the most incredible invention you see? A TV? A laptop? How about the stapler? The first staplers in the 1860's had to be reloaded after each staple. In 1895, the E.H. Hotchkiss Company invented a stapler that used a long strip of staples so you could keep stapling. It was so popular that people called a stapler a Hotchkiss. In fact, the Japanese word for "stapler" is "hochikisu." What other inventions do you want to learn about? Learn more about the stapler: bit.ly/2UYpbaj

