ENGLISH NEWS

EDITION NO. 416

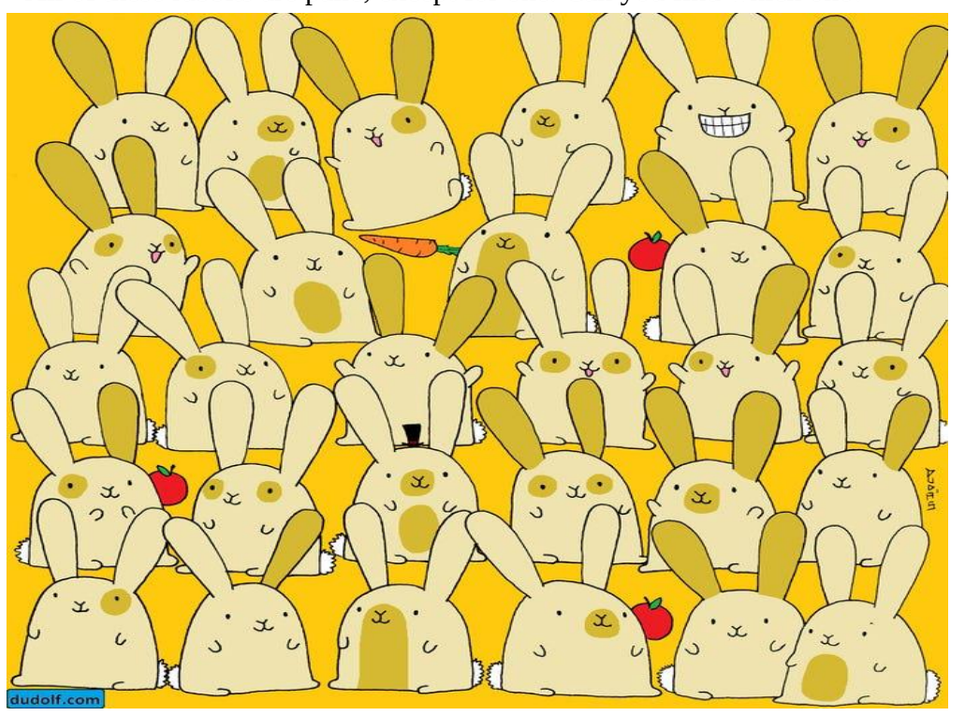
7/13/2020 (#6 this year)

It's starting to get hot. Are you ok with your mask on? I'm doing ok, but it does get very hot. I think I have a solution[1] though. I'm going to fill my mask with ice cubes before every class. I know that I will have trouble talking and I won't be able to teach very well, but my face will be nice and cool. I might put ice creams in my pockets as well. I will be the coolest teacher in Hokusei. Ha ha. Seriously though, I hope you are all drinking lots of water. You should try to drink about one to two liters of water every day. Stay healthy.

Something You Don't Know (Robots)

1. The first robot was a steam driven[2] bird created by Archytas of Tarentum in the 5th century BC[3].
2. There are currently thousands of robots serving in the American army. Some are remote controlled, but some are completely autonomous[4]. Scary.
3. The word robot means "work" in Czech and the word came from a Czech play in 1920.
4. The smallest robot is 10^{-9}m which is one nanometer[5]. 314,000,000 could fit on a one-yen coin.
5. The first "Death by Robot" was in 1981 when a robot arm crushed a Japanese factory worker.
6. Some people are scared of a point called the singularity[6]. That is when robots become more intelligent than humans and are able to remake themselves without human help.
7. One robot can make power from dead flies, so it is independent of[7] human power sources.

All of these rabbits are pairs, except for one. Can you find which one?



Robot Scientist

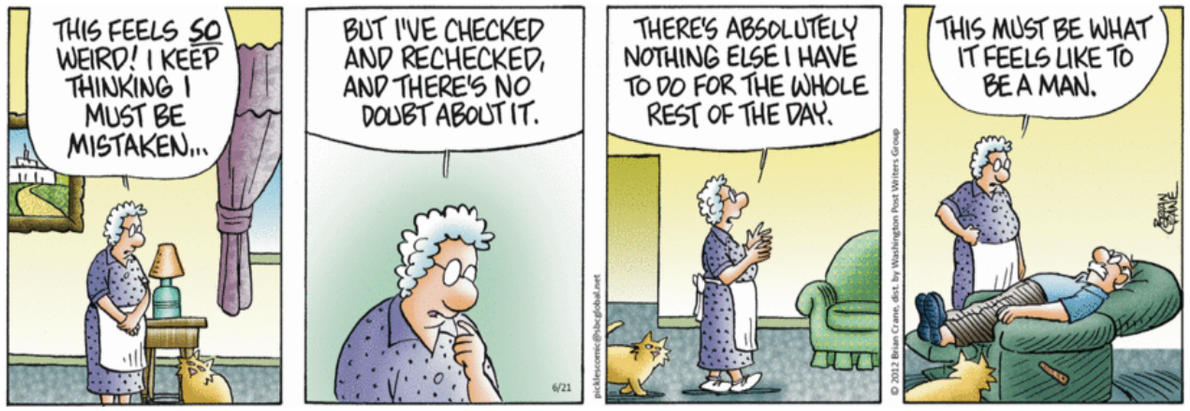
Engineers at the University of Liverpool, UK, have designed a robot that can perform chemistry experiments[8]. The robot can work 1,000 times faster than a human and it can work for 20 hours before it needs to be recharged. It has one arm that is incredibly delicate and far more precise[9] than a human arm could ever be. The robot managed to discover a new photocatalyst[10] by performing 688 experiments over 8 days. The robot is heavy, 400kg, but it can move around the laboratory and is the same height as a human, so they didn't need to remake anything.

The robot is programmed with an AI brain. When a human does an experiment, they see what happened and then they can decide what experiment to do next. Sometimes they choose the right experiment and sometimes the wrong one. The robot has a catalogue of 98 million experiments in its memory and it can judge[11] which experiment to perform next with a very low failure rate[12]. By being able to work faster, more accurately, and with a very high success rate, it can outperform human chemists.

Robots like this will become far more commonplace[13] in the future and they will replace many of the jobs we do in the workplace. However, they will also create many more jobs for us, and they will, hopefully, free us to do many more creative and imaginative jobs than we do at the moment. If robots do manual and repetitive tasks, we can do much more rewarding work. I wonder how long before we get our first AI robot at school. I wonder what it would be programmed to do. I hope it is programmed to make all of my tests and do all of my marking! That would be helpful.

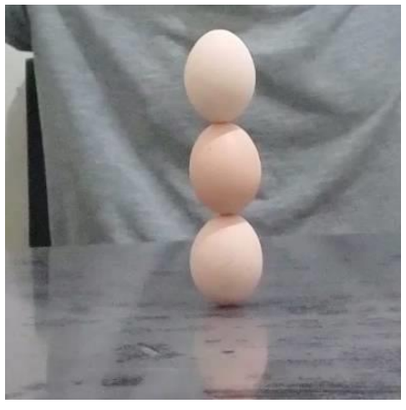
Last week's answer

1.Solution 解決 **2.Steam driven** 蒸気駆動の **3.BC (Before Christ)** 西暦紀元前 **4.Autonomous** 自律性の **5.Nanometer** 1 mの 10 億分の 1 **6.Singularity** 技術的特異点 **7.Independent of**～独立している **8.Chemistry experiments** 科学の実験 **9.Precise** 詳細な **10.Photocatalyst** 光触媒 **11.Judge** 判断する **12.Failure rate** 失敗率 **13.Commonplace** 普通の



World Records

Have you ever felt that you have too much time on your hands[1]? Picture the scene: It's raining, your smartphone has run out of battery, you've read all of the books in the house, the TV's broken, you have absolutely nothing to do, you open the fridge to look for a snack, you see the eggs, and you think, "hmm. I wonder how many of those I could balance." Well, the answer is this week's world record. Mohammed Muqbel from Malaysia managed to balance three eggs one on top of the other! I don't know how long it took him, but I guess he was extremely bored. So, do you think we should try and break this one? I'll let you know how I get on. If you don't see me next week, it's because my wife killed me for getting egg all over the carpet.

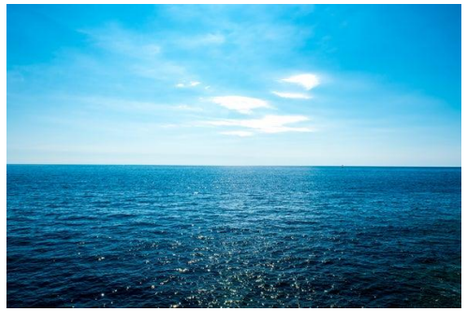


Talk about your blessings[2] more than you talk about your problems.

The ～est in the world

Let's have a look at the blue whale this week. It is the largest living mammal[3] on Earth at the moment. Obviously, there were larger dinosaurs, but they are all extinct[4]. Some blue whales can grow to be over 30 m long and they can weigh up to 190 tons. They are able to be so heavy because seawater is very buoyant[5] and helps them to float. Blue whales can dive to a depth of 315 m and they can swim underwater for about 30 minutes. They eat krill, which are like small shrimp, and they have to eat about 1.5 tons every day. They dive under the krill and swim up with their mouths open. They swallow about 200 tons of water at one time and then eject the water, keeping the krill. One mouthful of krill can give them about 500,000 calories! There used to be many blue whales, but they were almost hunted to extinction. Blue whale hunting was banned[6] in 1967, and they have started to recover.

Something You Probably Didn't Know



Why is the ocean salty? There are two reasons. When it rains on land, over thousands of years, rocks are eroded[7]. When they break apart, they release chloride[8] and sodium[9] (which are salts), which are washed into the rivers and then flow into the sea. In the sea a lot of small creatures live on these salts, but they don't eat all of them and the salt builds up. The second reason is vents in the ocean floor. Salts rush up into the sea. The sea is actually less salty by the equator and at the poles, but saltier between these two points. Seawater generally has 3.5% salt in it. Some companies are starting to desalinize[10] saltwater so that we can use it as drinking water.

New words: 1.Time on one's hands 持て余した時間　2.Blessing 幸いなこと
3.Mammal 哺乳類　4.Extinct 絶滅した　5.Buoyant 浮揚性の　6.Ban～を禁止する
7.Erode 浸食する　8.Chloride 塩化物　9.Sodium ナトリウム　10.Desalinize 脱塩する