

How were your tests? Did you have fun? Sorry. Stupid question. Now they are over, you can start looking forward to the summer. It is only 7 weeks until the summer vacation. Are you excited? Are you going to go anywhere? I am excited, but I really don't like the hot weather. I don't mind if it is hot during the day, but I need it to cool down at night or I can't sleep properly<sup>1</sup>. The weather we have at the moment is perfect. What do you think? But, before we get to the summer vacation, we have the high school festival, which is coming up very soon. High school students, are you ready for it? Have you decided what you are going to do? I'm looking forward to it. The high school festival is a lot of fun every year.



12 differences!

Last week's answer.  
This one was too easy



### Something you didn't know about blood

1. We all have a different amount of blood. It makes up about 8% of our body weight.
2. Blood is made up of 90% water. If you become dehydrated<sup>2</sup>, your blood gets thicker.
3. Our blood is red, but octopuses have blue blood. This is because they use a protein<sup>3</sup> called hemocyanin<sup>4</sup> to carry oxygen<sup>5</sup>. It contains copper<sup>6</sup>, which looks blue. Our blood contains hemoglobin<sup>7</sup>, which contains iron<sup>8</sup> and looks red.
4. There are four blood types: A, B, AB, and O. Each type can also be Rhesus positive or negative, which makes 8 blood types.
5. The most common blood type is O+. 38% of people have O+ type blood.
6. You have about 30 trillion red blood cells.

### Artificial Blood

I found this news fascinating<sup>9</sup>. Nara Medical University, in Japan of course, has started clinical trials<sup>10</sup> of artificial blood<sup>11</sup>. I hope you will never have an accident or have an operation where you need a blood transfusion, but it happens to a lot of people. If you do need a transfusion<sup>12</sup>, the blood that the hospital uses comes from donations. Everybody over the age of 18 can donate about 500 ml of blood once every two months. Most countries have the same rules. The problem is that there are never enough people donating blood to provide for all of the people that need blood transfusions. You can only keep donated blood for a few months before it can't be used anymore. There is always a shortage, especially with rare blood types. You probably know that you can't have a blood transfusion of a different blood type unless it is O negative, which is the universal donor<sup>13</sup>. Some countries try to make up supplies by paying for blood donations, but that brings a lot of problems. Another problem Japan faces is that most people that donate blood are young and most people that need blood transfusions are old. As the population ages, there will be a huge shortage of blood. There didn't seem to be a solution but scientists at Nara University have come up with artificial blood that can be used for patients with any blood type. The scientists take hemoglobin from expired blood and make a shell for it. And that is the artificial blood. It is obviously more complicated<sup>14</sup> than just that, but it seems to work on any person. They are testing it on people now. If it works, then it could drastically change medicine. The goal is to have it in circulation (pun intended) by 2030.



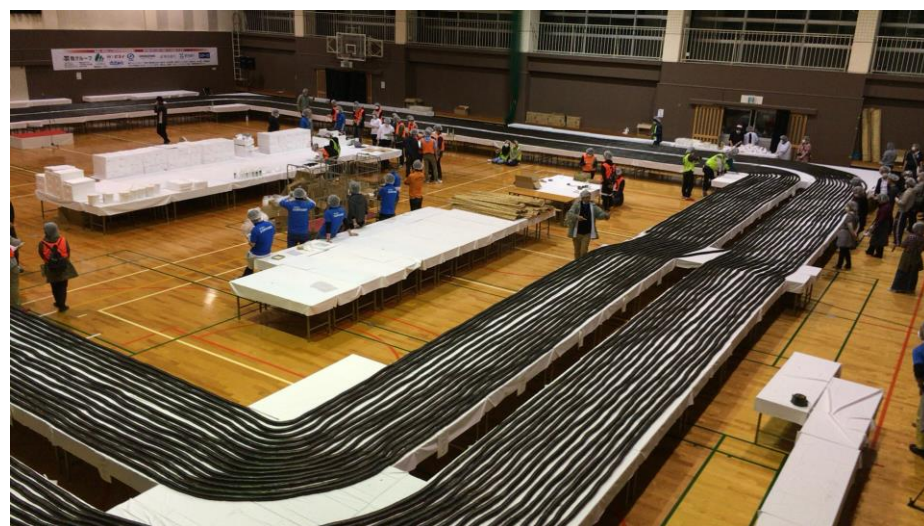
- 1.properly 適切に 2.dehydrated 脱水状態 3.protein タンパク質 4.hemocyanin ヘモシアニン 5.oxygen 酸素 6.copper 銅 7.hemoglobin ヘモグロビン 8.iron 鉄 9.fascinating 魅了 的な 10.clinical trials 臨床試験 11.artificial blood 人工血液 12.blood transfusion 輸血 13.universal donor 万能提供者 14.complicated 複雑な





### World record

How about some sushi world records this week? Do you like sushi rolls<sup>1</sup>? How much could you eat? The longest sushi roll was made at the Kumamoto Tamana Otawara festival. It contained sesame and daikon and was 2,845 m long! I wonder how many people it fed. Could you eat it? Can you eat a lot of sushi? The record for the most sushi eaten in 6 minutes is held by an American called Tim Janus. He ate 141 pieces of sushi, which is 4.76 kg! Not everyone likes sushi. If you don't like sushi, maybe you like rice balls. How many onigiri can you eat? The record for the most onigiri eaten in 30 minutes is held by Takeru Kobayashi. He ate 150 onigiri, which works out to be<sup>2</sup> 9.66 kg! How does anyone fit almost 10 kg of food inside them? That doesn't seem possible. Do you feel like breaking some of these records? Maybe we could have a go at the school festival.



“Don't count the days, make the days count.”  
Muhammad Ali.

### An Interesting Fact

#### Why do we have different blood types?

There are 8 different blood types<sup>3</sup>, and nobody really knows why we all don't have one single blood type. If we only had blood, rather than A type blood and B type blood, it would make transfusion a lot easier. There is a pretty good theory<sup>4</sup> why we evolved<sup>5</sup> different blood types. There are a lot of diseases, viruses, and parasites<sup>6</sup> that don't do as well with some blood types. For example, O blood type is much more resistant to<sup>7</sup> malaria<sup>8</sup> than any other blood type. That might explain why so many people have O. So, why don't we all have O? Well, just because O is resistant to malaria, doesn't mean it is resistant to other diseases. If there are a mix of blood types, there is no way a disease, virus, or parasite can wipe out<sup>9</sup> all people at once. It might harm<sup>10</sup> people with one blood type, but people with another type will be ok. That means humans have a better chance of surviving. This theory has more strength because humans are not the only animals that have different blood types. Most animals have different blood types. Cats have two different blood types. Dogs have 13 different types of blood. Cows have 11 different types of blood. When you take your dog to the vets, the vet needs to be careful if they do a blood transfusion in the same way that our doctor needs to be careful.



- 1.sushi roll 巻きずし 2.works out to be〜になる 3.blood type 血液型 4.theory 理論  
5.evolve 進化する 6.parasite 寄生虫 7.resistant to〜に耐性がある 8.malaria マラリア  
9.wipe out 全滅させる 10.harm 害を与える