

There's an easy explanation for how to flip a water bottle like an expert

By Smithsonian.com, adapted by Newsela staff on 10.04.18

Word Count 572

Level 690L



Image 1. A paper by undergraduate students at University of Twente in Netherlands illuminates the physics behind the Water Bottle Challenge. Photo by: Image Source/Getty Images

In 2016, kids in America were all about one cool trick. It was the water bottle challenge. The idea is simple. It's just easier said than done.

You have to toss a full or partly empty water bottle so it lands upright. Kids around the country recorded their successes and failures on YouTube. Meanwhile, the crinkling of tossed water bottles drove parents and teachers crazy.

The craze may have faded. The mystery behind the trick remained.

Glass Half Empty Or Half Full?

A group of college students was curious about the bottle-flipping challenge. They wanted to learn more about the science of it. They recently wrote an article about the water bottle trick. The students demonstrated how to land a water bottle every time.

The five students are in their first year at the University of Twente. This school is in Netherlands, a country in Europe. The students wanted to discover how the bottle can land upright. The students were taking a class called Dynamics and Relativity. This is a class on physics, a type of science. In physics, people study objects and motion.

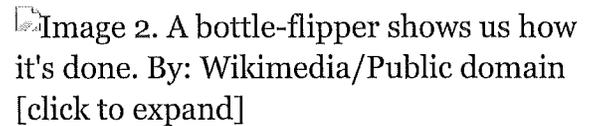
Using a high-resolution camera, the students filmed many bottle tosses. They used bottles full of water. They also used bottles partly full of water. They filmed tosses with bottles containing two tennis balls as well.

They studied the videos. They broke down the movements into physical formulas, which are math equations. These equations represent how objects move. What the students found is a toss causing the greatest decrease in speed had the highest chance of sticking the landing.

The team found the bottle must be less than half full of water. The bottle can be almost half full of water, at 41 percent. That bottle will land often. The bottle can be emptied all the way to a little less than a quarter full, at 20 percent. That bottle will often land, too. If the bottles are filled with more than 41 percent of water or less than 20 percent, they won't work as often.

Slowed-Down Bottle

According to the study, landing a full bottle of water is almost impossible. That is because the speed while the bottle is rotating doesn't change.

Image 2. A bottle-flipper shows us how it's done. By: Wikimedia/Public domain [click to expand]

Pim Dekker is one of the students. Dekker said they looked at the water and tennis balls as the same. Both caused the bottles to move in the same way.

The students figured out that the amount of water in the bottle makes a big difference. If the bottle isn't full, the water can spread more. This slows down the bottle's speed. When the bottle slows down, there is a better chance it will land upright.

Students Published In Journal

The students' findings appear in the American Journal of Physics. The team didn't intend to have an article in a well-respected science journal.

Mees Flapper is one of the students. He said they chose the topic when the water-bottle flipping challenge was a big hit online. Their teachers really liked the topic. The teachers asked the students to help them write a paper. "That surprised us, but of course we agreed," Flapper said.

It's too late to save parents from the constant noise of flipping water bottles. Yet Flapper told LiveScience their work has a bigger point.

"You shouldn't be afraid to think outside the box," he says.

Quiz

1 Read the selection from the section "Students Published In Journal."

The students' findings appear in the American Journal of Physics. The team didn't intend to have an article in a well-respected science journal.

Based on this selection, choose the answer that is TRUE.

- (A) The students had been trying to share their work for a long time.
- (B) The students had hoped to publish bottle-flipping videos on YouTube.
- (C) The students were surprised that their research was published.
- (D) The students were excited they might become famous for their work.

2 Which sentence from the article helps the reader understand that the bottle-flipping challenge can be annoying?

- (A) Kids around the country recorded their successes and failures on YouTube.
- (B) Meanwhile, the crinkling of tossed water bottles drove parents and teachers crazy.
- (C) Using a high-resolution camera, the students filmed many bottle tosses.
- (D) According to the study, landing a full bottle of water is almost impossible.

3 What is the main idea of the article?

- (A) Students learned about the bottle-flipping challenge from a physics teacher.
- (B) Students made a new bottle-flipping challenge that includes tennis balls.
- (C) Students around the world are crazy about the bottle-flipping challenge.
- (D) Students studied the bottle-flipping challenge and found out how it works.

4 Read the paragraph from the section "Glass Half Empty Or Half Full?"

The team found the bottle must be less than half full of water. The bottle can be almost half full of water, at 41 percent. That bottle will land often. The bottle can be emptied all the way to a little less than a quarter full, at 20 percent. That bottle will often land, too. If the bottles are filled with more than 41 percent of water or less than 20 percent, they won't work as often.

How does this paragraph support the main idea of the article?

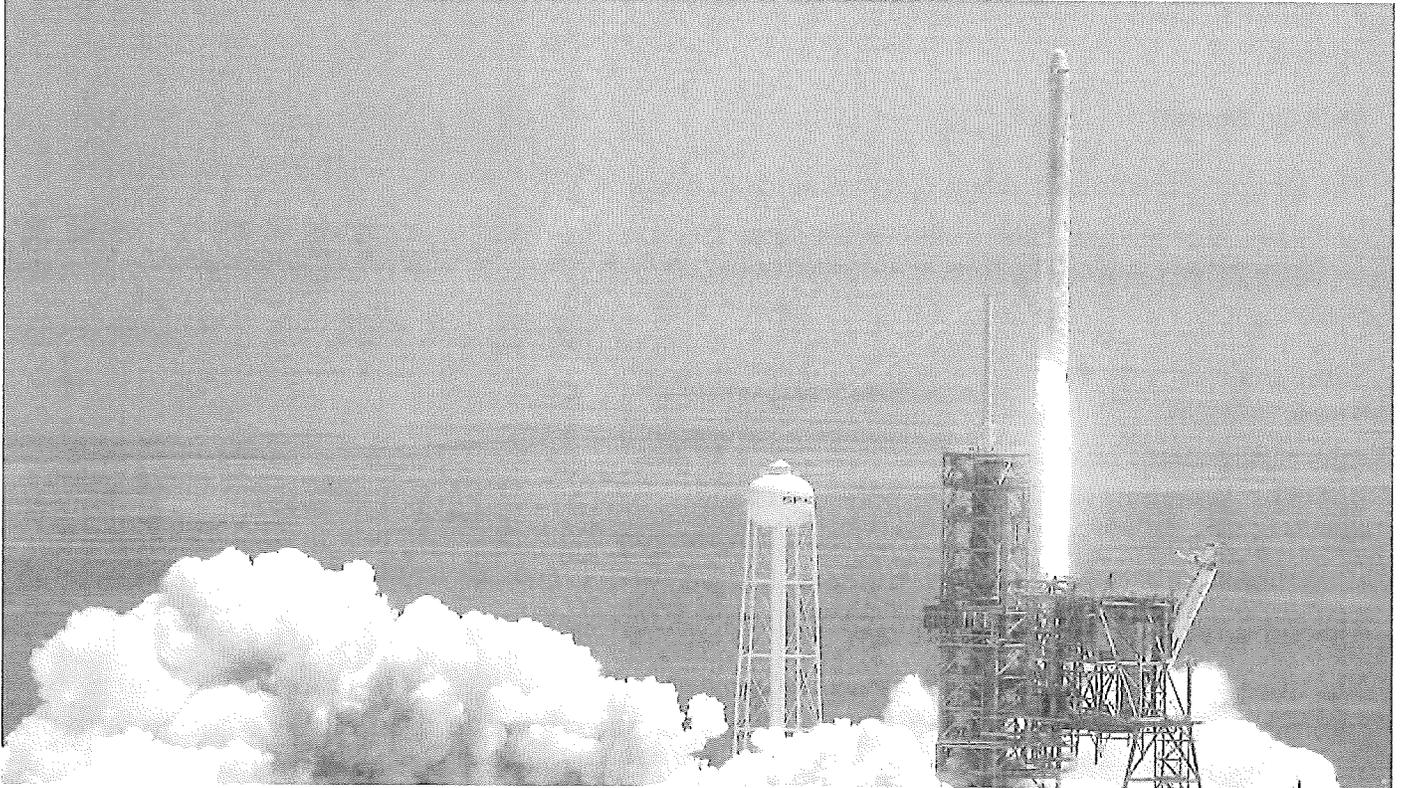
- (A) It describes the physics that are involved in landing a bottle upright.
- (B) It explains the interest that students had in the bottle-flipping challenge.
- (C) It shows the reader how to measure the amount of water in a water bottle.
- (D) It mentions the bottle-flipping videos that were most popular on YouTube.

SpaceX rocket set to do experiments — and bring ice cream to astronauts!

By Associated Press, adapted by Newsela staff on 08.17.17

Word Count **638**

Level **790L**



A Falcon 9 SpaceX rocket launches from pad 39A at the Kennedy Space Center in Cape Canaveral, Florida, August 14, 2017. The mission of the spacecraft is a cargo and supply delivery to the International Space Station. Photo from: AP Photo/John Raoux.

SpaceX is a spacecraft company that builds rockets. It works with NASA, the U.S. space agency, to launch these rockets into space.

On Monday, SpaceX launched a type of space capsule called the Dragon. It rocketed to the International Space Station (ISS). The capsule carried tons of materials for science research, plus a sweet treat for the ISS astronauts: ice cream!

When the rocket took flight, its target — the space station — was zooming 250 miles above the Atlantic. The ISS is like a science lab up in space. Astronauts live there for months at a time, running science experiments on board.

Reusing Rocket Boosters

After the capsule lifted off, the rocket booster successfully landed back at Cape Canaveral in Florida. That is the launch site for SpaceX and NASA rockets. The booster is the part of the rocket

that launches the capsule into space. SpaceX has figured out a way to reuse its rocket boosters. This is a part of a long-term plan to recycle rockets and cut costs.

Monday's booster landing was the 14th successful attempt for SpaceX. It was the 6th time the company perfectly landed the booster on a giant X on the launch pad. It was another perfect landing.

"It's right on the bull's-eye, and a very soft touchdown," said Hans Koenigsmann. He works for SpaceX.

Mice On Board!

The Dragon capsule carried up 6,400 pounds of cargo. Experiments make up most of the cargo. That includes 20 live mice. The mice will be part of a study.

Some male astronauts suffer visual problems in space. Those problems can linger long after spaceflight. The mice study might help scientists understand why this happens. Scientists will study the pressure in the mice's eyes while in space. They will also study the way fluid moves in their brains. According to the scientist in charge of the experiment, for mice, 30 days in space is like three years for humans. The study may also help explain why female astronauts don't have this vision problem.

The mice won't be left behind. They will return to Earth inside the Dragon capsule in about a month. The Dragon is the only supply ship that can return items to Earth. Other capsules burn up when they re-enter the atmosphere, the cloud of gases around Earth. The Dragon does not. It parachutes safely into the Pacific.

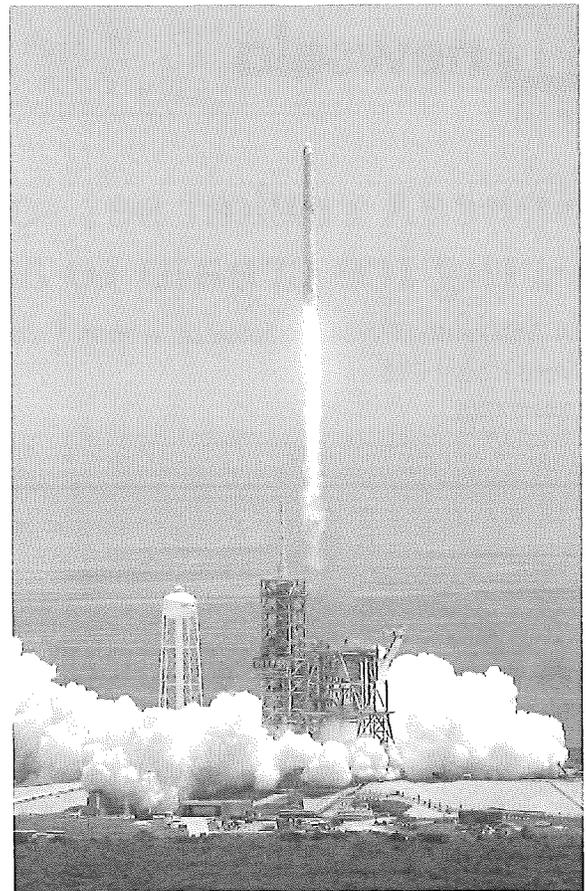
Instruments For Experiments

Along with the mice, the Dragon carries materials for a few other experiments. One is an instrument to measure cosmic rays. These are high-energy rays in space. There are also protein crystals on board. These protein crystals are linked to Parkinson's disease, a disorder that makes it difficult for people to control their movements. Conditions in space will allow crystals to grow bigger and with fewer defects. That will help scientists study and understand their structure. Studying these crystals might help scientists find better treatments for Parkinson's disease.

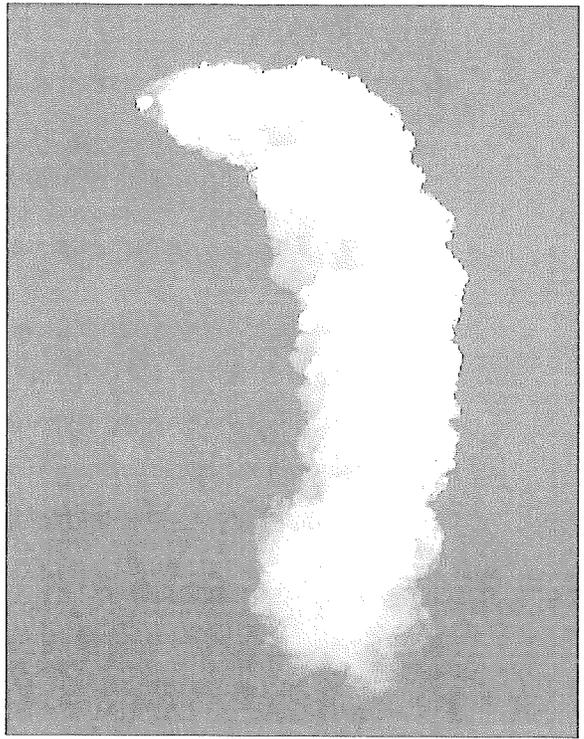
Three Americans and one Italian will do the scientific work in orbit. The space station also is home to two Russians.

Ice Cream Truck In Space!

The astronauts will enjoy a sweet reward for their hard work. The Dragon is doubling as an ice cream truck! There was extra freezer space on board, so NASA packed in cups of vanilla, chocolate



and birthday-cake ice cream. They sent up some ice cream candy bars, too. Those treats should be especially welcomed by U.S. astronaut Peggy Whitson. She has been in orbit since November. Maybe she will save the birthday-cake ice cream for a new arrival, U.S. spaceman Randolph Bresnik. He will turn 50 on the ISS next month.



Quiz

1 Read the selection from "Reusing Rocket Boosters."

After the capsule lifted off, the rocket booster successfully landed back at Cape Canaveral in Florida. That is the launch site for SpaceX and NASA rockets. The booster is the part of the rocket that launches the capsule into space. SpaceX has figured out a way to reuse its rocket boosters. This is a part of a long-term plan to recycle rockets and cut costs.

Which sentence from this selection BEST supports the conclusion that Dragon does not burn when it re-enters the atmosphere?

- (A) That is the launch site for SpaceX and NASA rockets.
- (B) The booster is the part of the rocket that launches the capsule into space.
- (C) SpaceX has figured out a way to reuse its rocket boosters.
- (D) This is a part of a long-term plan to recycle rockets and cut costs.

2 Read the section "Mice On Board!"

Select the paragraph from the section that shows how mice will help scientists learn more about certain effects of space on astronauts.

3 One main idea of the article is that astronauts on the ISS will do experiments on mice, cosmic rays and protein crystals.

What is another MAIN idea of the article?

- (A) Dragon has landed perfectly six times onto the launch pad.
- (B) Dragon will fall back with a parachute into the Pacific Ocean.
- (C) Dragon will bring the mice back after 30 days at the space station.
- (D) Dragon brings useful supplies to astronauts on the space station.

4 Which sentence from the article would be MOST important to include in a summary of the article?

- (A) There was extra freezer space on board, so NASA packed in cups of vanilla, chocolate and birthday-cake ice cream.
- (B) Those treats should be especially welcomed by U.S. astronaut Peggy Whitson.
- (C) Maybe she will save the birthday-cake ice cream for a new arrival, U.S. spaceman Randolph Bresnik.
- (D) He will turn 50 on the ISS next month.

Space-grown lettuce to give astronauts a more varied diet

By Hannah Devlin, The Guardian, adapted by Newsela staff on 03.13.20

Word Count 576

Level 720L

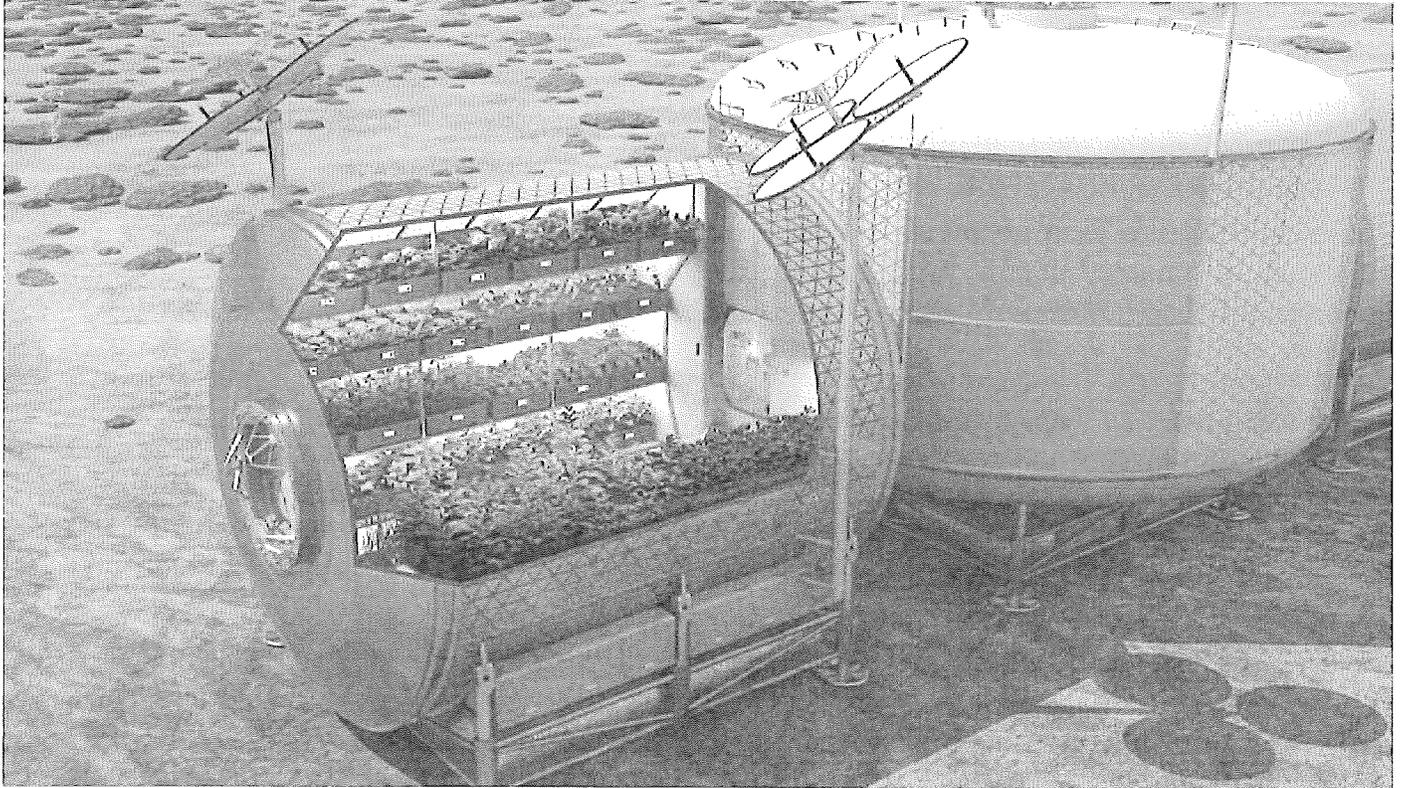


Image 1. NASA's Veggie system for growing fresh food on future spacecraft and on other planets. Photo by: NASA

Astronauts get to experience many interesting attractions. When astronauts go to space, they can become weightless. They get to see Earth as a little blue dot. Astronauts get to experience shooting up into space at 20,000 miles per hour. That is more than three times faster than an airplane.

Still, food is not one of the interesting parts of being an astronaut. Space travelers have had to eat strange foods. One example is liquid salt and pepper. They have also had to eat dried shrimp cocktail. The astronauts add water to it to make it a liquid again before eating.

Menu Is Going To Grow

However, the menu for astronauts is going to grow. Scientists have been growing lettuce in outer space. The lettuce is just as safe, nutritious and tasty as lettuce grown on Earth.

Gioia Massa works at the NASA Kennedy Space Center in Florida. She is the lead scientist on the lettuce-growing project. She said that growing food in space could be crucial for astronauts on long

missions. One mission is Artemis III. That mission will send humans to the moon by 2024. NASA will also send its first crew of astronauts to Mars in the late 2020s.

Massa says that today's space food may not work for these longer missions. This packaged food is stored for a long time. The quality and taste of the food goes down. In addition, the vitamins in the food start to break down. Massa says the astronauts may not get enough nutrition from these foods during long missions.

Looking After Plants

She also added that there could be another benefit to growing food in space. Looking after plants could help astronauts emotionally.

Space food has improved in recent years. Many astronauts visit the International Space Station (ISS). It is a research station in outer space. Anything sent to ISS has to score at least a 6 out of 9 on a taste test.

Even so, astronauts can grow tired of eating the same old vacuum-packed meals. Massa says many of the astronauts end up losing weight.

Lettuce was grown in batches onboard the ISS between 2014 and 2016. The vegetable production system is known as Veggie. It is made of plant pillows. These are sealed units full of soil. There is also a lighting system and a watering system.

The lettuce crops grew for 33 to 56 days. Some of the lettuce was harvested and eaten. The rest was frozen and returned to Earth to be tested. Astronauts rubbed the lettuce leaves with sanitized wipes before eating. Massa says they did this to keep astronauts from getting sick.

More Nutrients

The space-grown lettuce was similar to Earth-grown lettuce. In fact, some of the space-grown plants had more nutrients than Earth-grown lettuce. The space lettuce also had higher levels of bacteria. This was possibly because the lettuce grew in a warmer, more humid system. However, none of this bacteria was dangerous.

NASA plans to grow other produce on the ISS. There are plans for tomatoes, peppers and other plants to be grown later this year. However, it will be a long time before astronauts can cook these ingredients. Massa says there is nowhere to cook on the ISS. That is why NASA is trying to grow foods that taste good fresh.



Quiz

- 1 Which sentence from the article helps the reader to understand that the benefits of astronauts growing their own food go beyond nutrition?
- (A) When astronauts go to space, they can become weightless.
 - (B) Still, food is not one of the interesting parts of being an astronaut.
 - (C) Looking after plants could help astronauts emotionally.
 - (D) The space-grown lettuce was similar to Earth-grown lettuce.
- 2 Read the section "Menu Is Going To Grow."
Which selection explains WHY the foods astronauts currently rely on might not work on future NASA missions?
- (A) She said that growing food in space could be crucial for astronauts on long missions.
 - (B) NASA will also send its first crew of astronauts to Mars in the late 2020s.
 - (C) Massa says that today's space food might not work for these longer missions.
 - (D) In addition, the vitamins in the food start to break down.
- 3 What happened as a result of the lack of flavor and variety in astronauts' diets?
- (A) Many astronauts brought some of their favorite foods with them to space.
 - (B) Many astronauts lost weight while in space.
 - (C) NASA started training astronauts to enjoy vacuum-packed foods.
 - (D) NASA started sending astronauts foods that are tasty rather than nutritious.
- 4 HOW do astronauts grow food in space?
- (A) There is a greenhouse room on the ISS.
 - (B) They use recycled water and solar powered lamps.
 - (C) There is a special room on the ISS that is filled with soil for farming.
 - (D) They use a system of lighting, watering and soil pods called Veggie.

Teeny skull trapped in amber belongs to smallest dinosaur ever found

By Washington Post, adapted by Newsela staff on 03.24.20

Word Count 643

Level 760L



Image 1. Burmese amber with the tiny dinosaur skull nearly perfectly preserved inside. Photo: Lida Xing

It appears researchers have found the tiniest dinosaur ever.

Imagine a hummingbird with fangs. That would be about the size of this dinosaur, which lived 99 million years ago.

Paleontologists study fossils. An international team of paleontologists named this dinosaur *Oculudentavis khaungraae*. The first name is its genus. It uses Latin words that mean "eye-teeth-bird." The second word represents its species. It was named after a person, Khaung Ra. Ra donated the skull to China's Hupoge Amber Museum. Amber is hardened tree sap. The skull and its toothy beak were found inside amber. Both were described in the journal *Nature* on March 12.

Minus the snout, the skull measures about one-fourth of an inch long. This dino head could easily fit atop a triple-A battery.

Even Smaller Than A Hummingbird Skull

"It's smaller than the skulls that we find in hummingbirds," said study author Lars Schmitz. He is a paleobiologist at the Keck Science Center in California, studying ancient life. Birds are living dinosaurs. Of that group, bee hummingbirds are the tiniest. But, estimating its body size from its skull, this newly discovered dinosaur compares in size with the bee hummingbird.

Its large eyes, rounded skull and slender snout are characteristics of dinosaurs. More specifically, they look like ancient birds. Without a skeleton to study, though, the scientists do not know whether the dinosaur could fly.

The fossil has a strange mixture of lizard and birdlike traits. Fossils are remains of living things from long ago.

Lawrence Witmer is an expert in dinosaur heads at Ohio University. He was not involved with the research. Witmer wants to know "what kind of body was attached to that weird skull."

In the past, when describing fossils, paleontologists have mistaken young animals for species that just happened to be small. But *Oculudentavis'* bone structure sure looks like it could be a mature adult, Witmer says.

Seeing Well Meant Eating Well

The skull's bony plates look to be well stitched together. Such a pattern is a hint that this dinosaur was likely an adult, Witmer says.

Schmitz saw a digital scan of the dinosaur's skull. "I was like, holy moly, this is really interesting," he said. The fossil has an incredible amount of detail, said Schmitz.

Seeing well was important to this animal, said Schmitz. He is an eye expert. The size of the skull's eyehole suggests the dinosaur hunted during the day.

Hummingbirds eat nectar. *Oculudentavis* was different. Each jaw sprouted about 30 sharp teeth per side. The dinosaur probably ate insects, Schmitz said.

"A Little Hummingbird-Like Critter With Teeth!"

The skull was dug up in the Southeast Asian country Myanmar.

Amber is very good at preserving small life forms, Schmitz said. This dinosaur head joins other animals found in amber. An ancient spider was frozen while attacking a wasp. Old frogs have been found too, even the nib of a feathered dinosaur tail.

"It blows my mind," said ReBecca Hunt-Foster. She is a park paleontologist at Dinosaur National Monument in Utah. She was not part of the research team. Miniature bones such as this are "so delicate," she said. They would "not have a chance" to survive the petrifying process. The petrifying process happens when natural matter turns to stone under layers of sediment, or soil. That creates large dinosaur fossils we see at museums.

Paleontologists expect that small dinosaurs would have lived alongside the bigger dinos. *Oculudentavis* helps us understand how many different kinds of dinosaurs there were, Hunt-



Foster said.

Though it was but little, perhaps it was fierce. As Hunt-Foster pointed out, small creatures can often be fighters. Hummingbirds, for example, will bully other birds away from flowers.

"A little hummingbird-like critter with teeth!" Hunt-Foster said. "Can you imagine a flock of these guys?"

Quiz

- 1 Which selection from the article helps the reader understand how rare the small fossil is?
- (A) Imagine a hummingbird with fangs. That would be about the size of this dinosaur, which lived 99 million years ago.
 - (B) In the past, when describing fossils, paleontologists have mistaken young animals for species that just happened to be small. But *Oculudentavis*'s bone structure sure looks like it could be a mature adult, Witmer says.
 - (C) The skull's bony plates look to be well stitched together. Such a pattern is a hint that this dinosaur was likely an adult, Witmer says.
 - (D) Miniature bones such as this are "so delicate," she said. They would "not have a chance" to survive the petrifying process.

- 2 Read the paragraph below from the section "Even Smaller Than A Hummingbird Skull."

Its large eyes, rounded skull and slender snout are characteristics of dinosaurs. More specifically, they look like ancient birds. Without a skeleton to study, though, the scientists do not know whether the dinosaur could fly.

What inference can the reader make based on this paragraph?

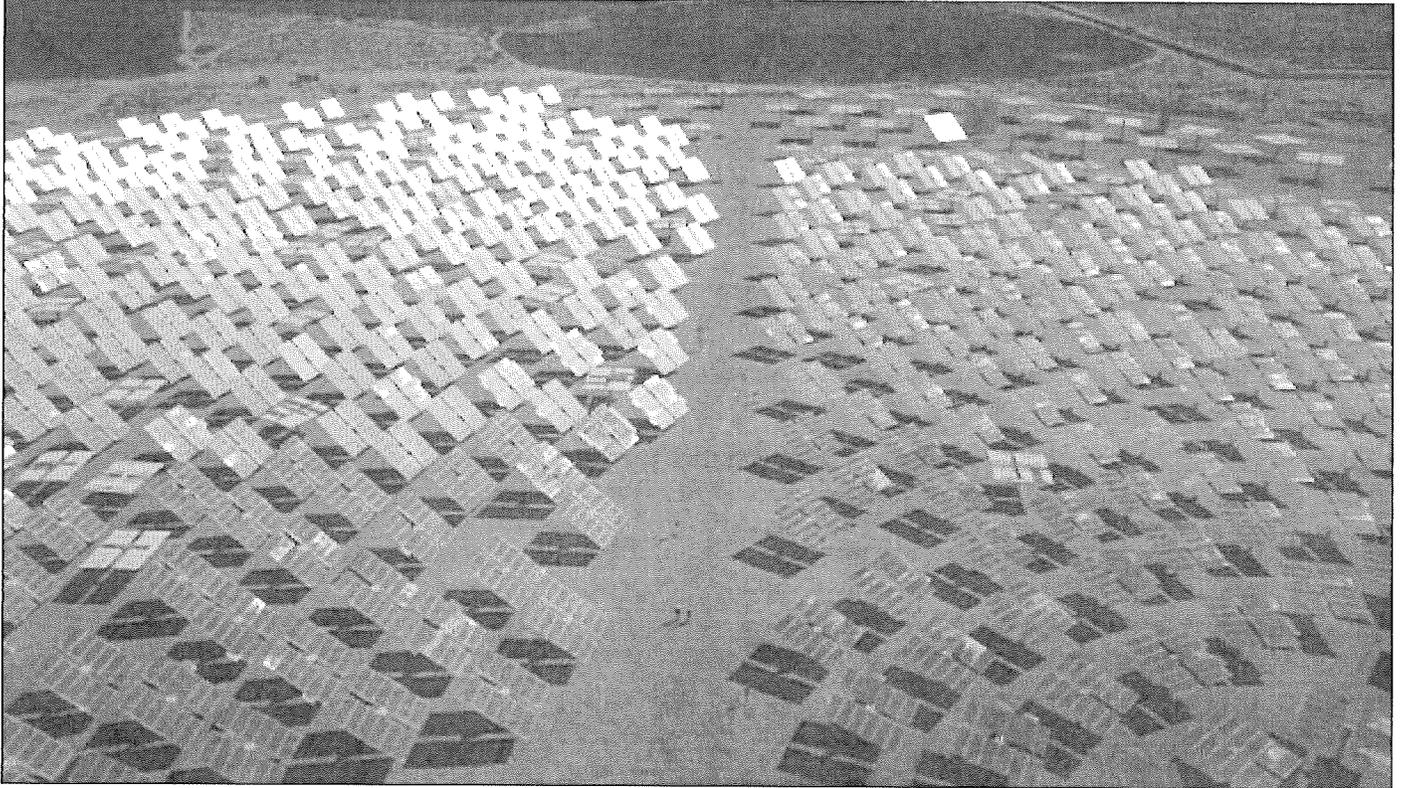
- (A) Birds are modern day dinosaurs.
 - (B) Some dinosaurs had bird-like feathers.
 - (C) A skeleton can show if a dinosaur was able to fly.
 - (D) All dinosaurs had rounded skulls and slender snouts.
- 3 What happened as a result of Khaung Ra donating the skull to China's Hupoge Amber Museum?
- (A) The skull was removed from the amber for study.
 - (B) The skull was examined by specialists in California.
 - (C) Paleontologists named the new species of dinosaur for him.
 - (D) Paleontologists searched for similar dinosaur fossils to study.
- 4 Why does Lars Schmitz feel amazed about the tiny dinosaur skull?
- (A) It was trapped in amber.
 - (B) It was found in Myanmar.
 - (C) It is extremely old and fragile.
 - (D) It contains a lot of detail to study.

Issue Overview: Solar energy

By Bloomberg, adapted by Newsela staff on 09.15.16

Word Count **621**

Level **860L**



TOP: Solar panels are pictured in California in October 1996. Photo by Raphael Gaillarde. BOTTOM: Graphics by Solar Energy Industries Association.

People used to believe that power from the sun could not be used all over the world. This kind of power is called solar power. It can be collected using photovoltaic cells, which are installed on large surfaces called solar panels. As the light hits these panels, they generate electricity. In doing so, they provide homes, computers, and cars with the energy they need to work.

Solar panels used to be expensive and did not provide enough energy to be worth buying. Over the past few years, however, the price has gone down. At the same time, the electricity produced by solar panels keeps increasing. About \$150 billion each year is poured into this industry. In some places, the cost is already as low as that of fossil fuels like carbon, coal and gas.

Even so, the idea that solar could soon meet the energy needs of the world is not very likely. In 2013, solar power made up less than 2 percent of the electricity used in the world. So while it is getting cheaper, it is also not catching on very quickly.

This is not the only hurdle. People like their power always to be available. A big problem is keeping electric power running when it is dark and cloudy. As soon as the sun is covered, solar

panels have no way to make electricity. The future of solar power might not be so bright after all.

The Situation

A global deal was reached in Paris in December to help fight climate change. Fossil fuels are cheap, but they also harm the planet. The deal was meant to increase funding for the business of renewable energy, including solar. Other forms of renewable energy are water and wind.

Almost all U.S. states have set goals for renewable power. California plans on having half of its power be renewable by 2020. Since August 2015, all states are required to lower carbon emissions.

China has installed the most renewable power plants, followed by Japan. In India, plans have been announced for \$160 billion in solar power projects. Some big businesses have made splashy announcements. For example, Apple claims that it will spend \$850 million on solar power.

DEFINITIONS

carbon emissions

The release of carbon dioxide into the atmosphere from activities like burning fossil fuels

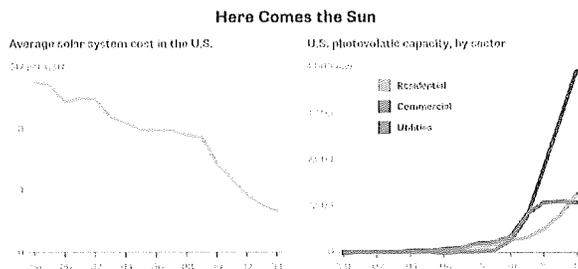
fossil fuel

A source of energy that is formed deep in the ground from dead animals and plants; coal and gas are examples

renewable energy

Energy that is collected from natural resources that will not run out, like wind, water, and sunlight

The



Background

The first photovoltaic cell was made by Bell Labs in New Jersey in 1953. By the 1990s, Japanese companies were producing most of the world's cells. By 2004, Germany led the world in solar panel manufacturing. Eventually, more solar energy companies started competing with each other. The result was a huge price drop, and some companies were forced to close.

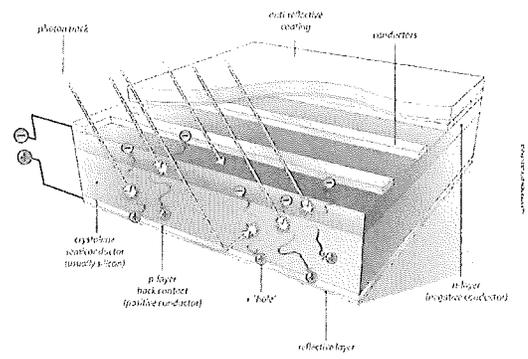
The industry then shifted to China. There, companies led by Suntech Power built giant panel factories. Funding was given in the form of loans from the government. Foreign investors brought cash. These companies have been able to survive longer than those in Europe.

The Argument

The environmental group Greenpeace says solar "could meet the world's energy demands many times over." Others are a bit more cautious. The International Energy Agency says that photovoltaics might generate 16 percent of the world's electricity by 2050. This will only happen if the right laws and deals are in place.

Supporters of fossil fuels say that solar power will never be practical. It requires constant sunlight and is too expensive, they say.

The future of solar depends on which countries are willing to pay now. In the long run, solar power may be cheaper. It will also undoubtedly be cleaner. The deal in Paris suggests that many countries are willing to switch to renewables. If scientists can figure out an affordable way to store electricity for use at night, some worries could be resolved. Right now, this is solar's biggest weakness.



Quiz

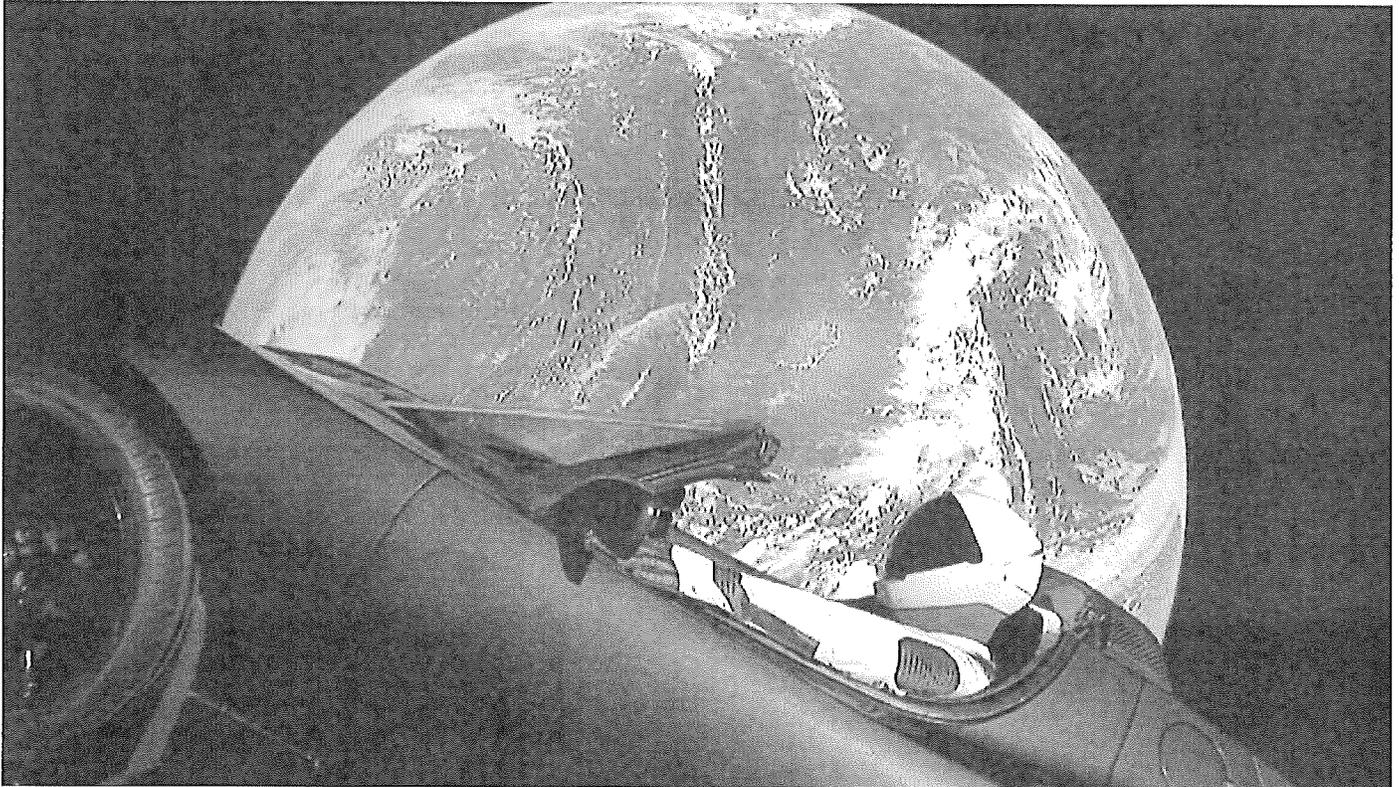
- 1 Which of the following are two MAIN ideas from the article?
1. *The idea that solar could soon meet the energy needs of the world is not very likely.*
 2. *People like their power always to be available.*
 3. *Since August 2015, all states are required to lower carbon emissions.*
 4. *In the long run, solar power will be cleaner, and may be cheaper.*
- (A) 1 and 2
- (B) 2 and 3
- (C) 1 and 4
- (D) 3 and 4
- 2 Read the section "The Argument." Which detail BEST reflects the MAIN goal of scientists who work with solar power?
- (A) to figure out an affordable way to store electricity for use at night
- (B) to meet the world's energy demands many times over
- (C) to make sure the right laws and deals are in place
- (D) to suggest that many countries switch to renewable energy
- 3 Use the "Here Comes the Sun" graphic and the information from the article to select the TRUE statement.
- (A) The photovoltaic capacity of U.S. solar panels keeps going down.
- (B) U.S. utilities are building more solar panels to have lower solar system costs.
- (C) U.S. residents get low photovoltaic capacity when it is dark and cloudy.
- (D) The average solar system cost in the U.S. has dropped over the past ten years.
- 4 Look at the diagram of the solar panel. What do the yellow star shapes represent?
- (A) positive conductors
- (B) photon tracks
- (C) holes in the solar panel
- (D) reflective layers

A powerful rocket with an unusual passenger has been sent to space

By Associated Press, adapted by Newsela staff on 02.16.18

Word Count **396**

Level **610L**



This image from video provided by SpaceX shows owner Elon Musk's red Tesla sports car which was launched into space during the first test flight of the Falcon Heavy rocket on February 6, 2018. Photo by: SpaceX via AP

CAPE CANAVERAL, Florida — For the first time, a sports car is flying into space. The car will travel very far in space. It will fly to Mars, which is the fourth planet in the solar system.

The car is called a Tesla Roadster. It is flying on board the new rocket called the Falcon Heavy. The company SpaceX sent the rocket on its first test journey on February 6. SpaceX is run by Elon Musk. He also owns the car company Tesla. It is Musk's red Roadster now flying through space.

Musk, astronauts and others cheered the new rocket. It took off from Florida. The Heavy is now the mightiest rocket in space.

The Heavy and Musk's Roadster are on a long trip. They will go all the way to the asteroid belt. This is an area between Mars and Jupiter. Space rocks and small planets float there.

"Starman" Is On A Wild Ride

In pictures, it looks like a person is sitting in the Roadster. It is not a real person though. It is a dummy that SpaceX dressed in a spacesuit. Musk named him "Starman." Usually, test flights carry heavy blocks, or other things that are not worth much. Musk called that boring. He decided to put his cherry-red Tesla on top of the rocket.

Pictures of "Starman" and the Roadster appeared all over the Internet. Behind the car is Earth.

Musk said the pictures look impossible. Still, he said they are real.

Astronaut Ricky Arnold was awe-struck by "Starman" and the new rocket. Arnold works for NASA, the U.S. space agency.

Arnold tweeted about SpaceX. He said, "Awesome! At this speed, two hands on the steering wheel please #Starman."

Dreams Of A City On Mars

The Heavy is made of three Falcon 9s. SpaceX uses these rockets to send supplies and satellites into space.

Musk dreams of sending people to Mars. He wants to build a city there. This is the reason his company builds rockets.

Musk said he doesn't plan to fly people on the new Heavy though. This rocket will mainly be used to send supplies into space. SpaceX is building an even bigger rocket to fly people far into space.

A first step for SpaceX is flying people into space. Musk said SpaceX plans to send its first astronauts into space by the end of this year.

Quiz

- 1 Finish the sentence below.
One MAIN idea of the article is that ____.
- (A) the asteroid belt is made of floating rocks and small planets
 - (B) Ricky Arnold is an astronaut who works for the NASA program
 - (C) the Falcon Heavy and Elon Musk's Roadster will fly past Mars
 - (D) "Starman" is a dummy that is dressed up in an astronaut suit
- 2 What is the section "Dreams Of A City On Mars" MAINLY about?
- (A) what Musk's goals for the future are
 - (B) why "Starman" has become popular
 - (C) where the Falcon Heavy is now
 - (D) how the Falcon Heavy landed on Mars
- 3 HOW is the Falcon Heavy's test flight different from other test flights?
- (A) It is going to travel for a long distance.
 - (B) It is going to take a human being to Mars.
 - (C) It is carrying rocks and heavy material.
 - (D) It is carrying a red sports car on top.
- 4 What event happened after pictures of "Starman" were posted?
- (A) People said the pictures were fake.
 - (B) An astronaut tweeted about them.
 - (C) Musk sent a test rocket into space.
 - (D) The Heavy got to the asteroid belt.

