

Me Ogg.
Me a
rock star.



IT'S EARLY FOR HUMANS

Early people lived in caves, hunted with clubs, and liked to dabble in art. They had tough lives, especially since their neighbors were saber-toothed tigers. But there was definitely hope for the future.

MEET LUCY

This fossilized skeleton found in Ethiopia (and named Lucy) is around 3 million years old. It is the most ancient human skeleton that has ever been found.

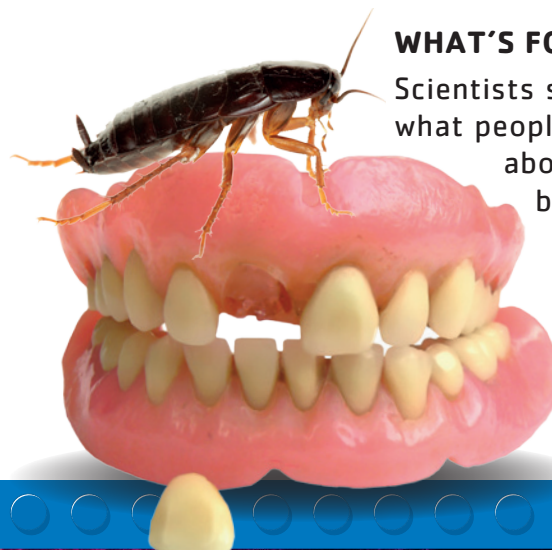


Can you invent
fire already?



WHAT'S FOR DINNER?

Scientists study prehistoric teeth to figure out what people ate. It turns out they munched on just about anything. Nuts, seeds, grasses, ferns, bugs, fruits, animal guts, and wild bird eggs were all on the menu. They even ate papyrus (a tough plant later used to make paper)—so they might have eaten the menu, too!



Many early artists left
their handprints on cave walls.
A handy way to sign their
art, perhaps?



CAVE PAINTING

- Prehistoric artists created paint by mixing dirt, ground-up rocks, and charcoal with animal fat.
- Paintings have been found all around the world. Most are similar, featuring animals.
- Paintings of animals show lots of details, but humans are usually stick figures.
- In 1940, four teenagers found amazing caves with paintings in the woods at Lascaux, France.
- More caves with more cave paintings are likely still out there, waiting to be found.
- No one knows for sure why prehistoric people painted caves. Was it part of a hunting ritual? To tell people a story? Or just art for art's sake?



TIME LINE

2,500,000–
1,400,000 BCE: The
first knives (really
just rock flakes).
No forks, though.

1,000,000 BCE:
Fire—AWESOME! It
was much easier to
keep warm, cook,
and work at night.

500,000–
100,000 BCE:
The first fashion,
with fur, leather,
leaves, or grass
draped or tied
around the body.



Me have facts
ON head. Need
IN head.

60,000 BCE: Boats!
Island-hopping people
in Southeast Asia
made boats from
logs. Splashy!

50,000 BCE: Flutes, made
from mammoth tusks. Art
and music—things
were looking up!

5000 BCE: Wheels!
They made moving
heavy loads wheel-y
much easier.

About 7,000 years later,
in 1978, the LEGO®
Minifigures were invented.
Purr-feet!



MINI PIX



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Earth is moving 200 miles (320 km) a second. Hold on tight!

1 MILLION Earths could fit inside our Sun.

THERE ARE 2 GOLF BALLS ON THE MOON.

MORE THAN 95 PERCENT OF THE UNIVERSE IS INVISIBLE TO US.

There are about half a million pieces of space junk orbiting Earth. Heads up!

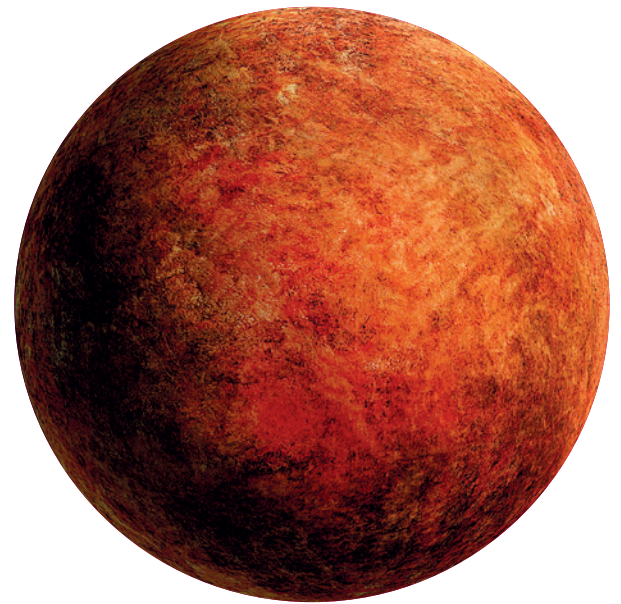
It would take you 800 years to fly a jet to Pluto.

We are 92,900,000 miles (149,500,000 km) from the Sun. But don't forget to wear sunscreen.

THE SUN ACCOUNTS FOR 99.8 PERCENT OF THE MASS OF OUR SOLAR SYSTEM.

THERE ARE ABOUT 3 SEPTILLION STARS. THAT'S 3,000,000,000,000,000,000,000,000,000. GIVE OR TAKE 1 OR 2.

If you stood on Mercury, the Sun would look 2 and a half times bigger than it does on Earth.



ERIS, THE COLDEST, FARTHEST OBJECT IN THE SOLAR SYSTEM, TAKES 557 YEARS TO ORBIT EARTH. SLOWPOKE.

THERE ARE 6 AMERICAN FLAGS ON THE MOON.

Fact Attack

OUT-THERE NUMBERS IN SPACE

Attention, humans! Prepare to be amazed. Read on!



Astronaut means "star sailor" . . . cool!

Volcanoes on Mars are 100 times bigger than those on Earth.

A full NASA space suit costs \$12 million.

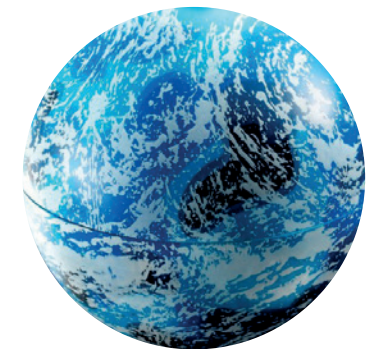
JUPITER HAS 64 MOONS.

IT WOULD TAKE 130 DAYS TO DRIVE A CAR TO THE MOON.

A single day on Mercury equals 176 days on Earth. Now that is upside down.

The black hole closest to Earth is about 10,000 light-years away.

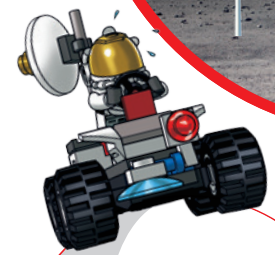
A single asteroid can contain more gold than has ever been mined on Earth. Mine, all mine!



THE AVERAGE DISTANCE BETWEEN STARS IS 20 TRILLION MILES (32 TRILLION KM).

The Moon is moving about 1.5 inches (3.8 cm) away from our planet every year. See you later!

The smallest stars found are 12 miles (19 km) wide.



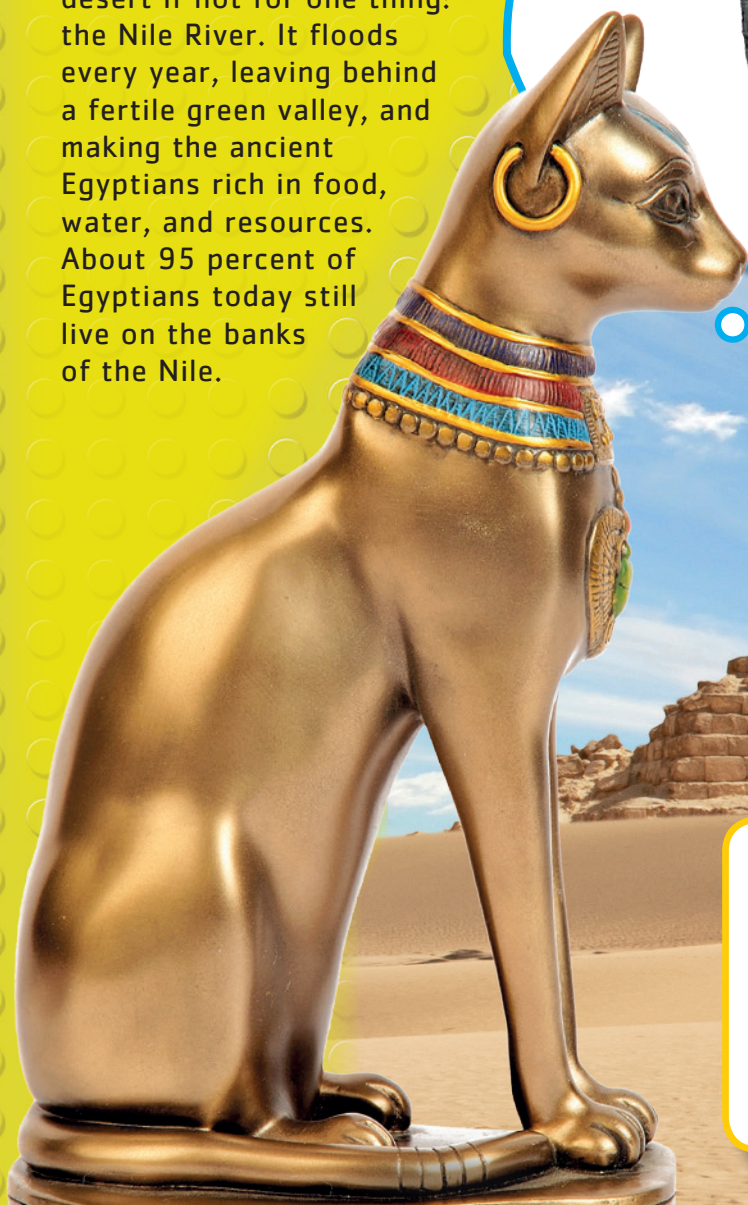


WALK WITH THE EGYPTIANS

Around 3000 BCE, most people in the world were still living in caves and hitting one another over the head with clubs. Not in Egypt! Ancient Egyptians were busy writing, feasting, inventing, farming, boating, trading, conquering, building pyramids . . . until they became one of the most awe-inspiring ancient civilizations, and the first wrap stars.

DESERT RIVER

Egypt would be a massive sand bowl in the northern Sahara desert if not for one thing: the Nile River. It floods every year, leaving behind a fertile green valley, and making the ancient Egyptians rich in food, water, and resources. About 95 percent of Egyptians today still live on the banks of the Nile.

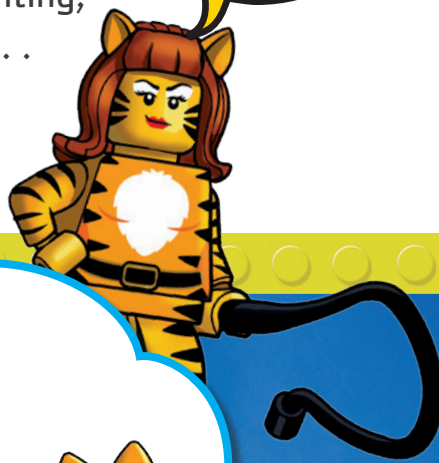


GODS AND CATS

Ancient Egyptians worshipped more than 2,000 different gods and goddesses. One of them was the protective goddess Bastet, who was half cat and half woman—the original cat woman! In fact, cats were favored animals in ancient Egypt. Not only did they hunt rodents and snakes, they were also sacred.



Wicked!
I'm sacred!



Whoa!
These pyramid sides
are way steep! I don't want
to end up in bandages like
that gnarly dude.



FANTASTIC PHaraohs

Pharaohs ruled in ancient Egypt. They were worshipped as gods, and everything they said was made into law. The pharaoh's job was to run the empire, build enormous temples, and plan a fabulous afterlife. No one was allowed to touch the pharaoh, and approaching people had to rub their noses in the dust seven times.



HIEROGLYPHS

Ancient Egyptians called their picture writing *medu netjer*, meaning "words of God." But it was the ancient Greek name that stuck: *hieroglyph*, or "sacred carving."



The discovery of King Tut's tomb
caused a sensation!
The whole world went CRAZY for
everything Egyptian.



Ancient Egyptians believed that they needed their stuff to enjoy the afterlife. So they filled their tombs with treasures and goodies. These were magnets for thieves, and the pyramids were all raided. Then tomb planners added secret underground chambers. These worked better. King Tutankhamen's tomb wasn't discovered until 1922, by British archaeologist Howard Carter.



WHAT WAS INSIDE?

- Lots of amazing jewelry
- 2 thrones
- A solid gold coffin
- Golden and jeweled chests full of treasure
- A solid gold mask
- 139 ebony, ivory, silver, and gold walking sticks
- Clothing made of the finest linen
- Food and 30 jars of wine
- Perfumes, oils, and ointments
- King Tut's sandals, with paintings of his enemies on the soles

If you had all the LEGO® bricks ever made (about 472 billion), you would have enough to make only **ONE** life-size Great Pyramid of Giza.

The Great Pyramid of Giza, built 5,000 years ago, is 36,750 LEGO® Minifigures high!

You have escaped from the secret chamber inside the pyramid. Return at once. I don't want to rub your nose in it, but your pharaoh is displeased.



I had an idea
in there. I'm off to
invent wrap music.

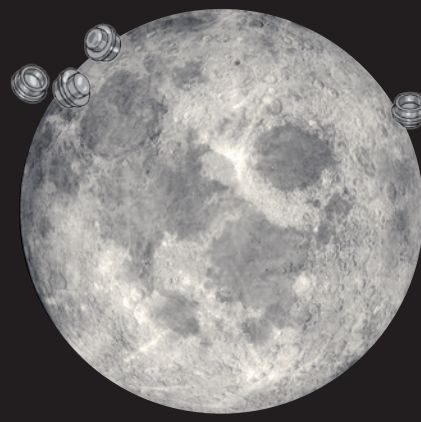
14 DISSES BY WILLIAM SHAKESPEARE

1. Toads, beetles, bats, light on you!
2. Away, you mouldy rogue, away!
3. You scullion! You rampallian!
You fustilarian! I'll tickle
your catastrophe.
4. Truly, thou art . . . like an ill-
roasted egg.
5. You elf-skin, you dried neat's
tongue, . . . you stock-fish!
6. Is his head worth a hat?
7. He's a most notable coward, an
infinite and endless liar, an hourly
promise breaker.
8. Pray you, stand further from me.
9. The rascally, scald, beggarly,
lousy, pragging knave.
10. I do wish thou wert a dog, that
I might love thee something.
11. Thou art a boil, a plague sore,
an embossed carbuncle, in my
corrupted blood.
12. Away, you three-inch fool!
13. Methinks thou art a
general offense.
14. Eat my leek.



MOON LANDING

There is no air, weather, or life of any kind on the Moon, but that doesn't mean that we don't want to go there and see what it's like. Let's zoom to the Moon in the company of the first people to ever walk on its surface—Neil Armstrong and Buzz Aldrin.



10 things on the Moon that you wouldn't expect to find there

1. BAGS OF PEE (FROM MOON MISSIONS)
2. EMPTY PACKAGES OF SPACE FOOD
3. NAIL CLIPPERS
4. USED WET WIPES
5. A PAIR OF BOOTS
6. A HAMMER
7. BACKPACKS
8. BLANKETS
9. A RAKE
10. GOLF BALLS (HIT BY ALAN SHEPARD WITH A CLUB HE SMUGGLED INTO SPACE)

A VIEW TO REMEMBER

The crew members of Apollo 8 were the first to see an "Earthrise," when they flew around the Moon in 1968.



IT'S MOON-TASTIC!

The Moon is not round—it's egg shaped.

The Moon has no atmosphere, so the sky appears black.

Humans may walk on the Moon again. NASA plans to return astronauts there to set up a space station by 2019.

The Moon doesn't shine. It reflects light from the Sun.

During the day, the temperature on the Moon can reach 253°F (123°C). At night, it can drop to a chilly -387°F (-233°C).

It takes three days to fly to the Moon from Earth.



The backpack contained the vital air supply.

Each suit was made specifically for the astronaut. There were three suits for each astronaut.

The suit weighed 180 pounds (82 kg) on Earth, but 0 pounds on the Moon.

With no wind or weather to disturb them, these footprints could stay like this for millions of years.

Armstrong said that setting foot on the Moon was "one small step for [a] man, one giant leap for mankind." Giant LEAP!!!!!!



SPLASHDOWN!

The astronauts made a safe return to Earth by parachuting down into the Pacific Ocean inside their command module, *Columbia*.



MOONWALKING

When Apollo 11 reached the Moon, a special lunar landing module named *Eagle* dropped down to the surface. Astronauts Neil Armstrong and Buzz Aldrin were the first people to set foot on the Moon. They collected a lot of rocks.



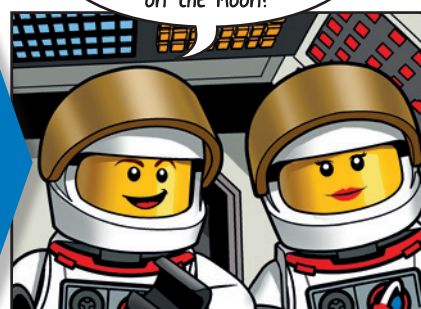
TRIP TO THE MOON

The Moon is the only place in space where humans have walked (apart from Earth!). There have been six successful Moon missions. In 1969, three US astronauts left Earth on a mission called Apollo 11. They were launched by the Saturn V, a powerful rocket.

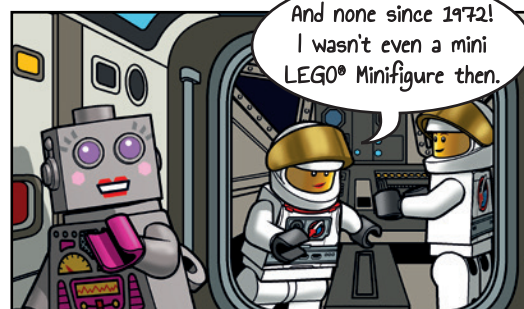
Apollo 11 launching



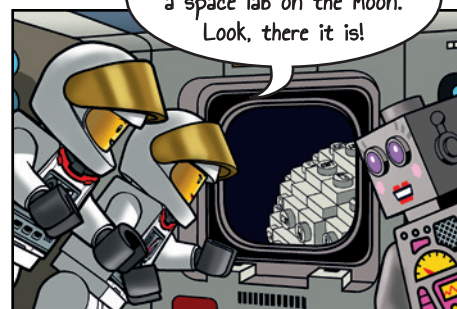
Did you know that only 12 people have ever walked on the Moon?



And none since 1972! I wasn't even a mini LEGO® Minifigure then.

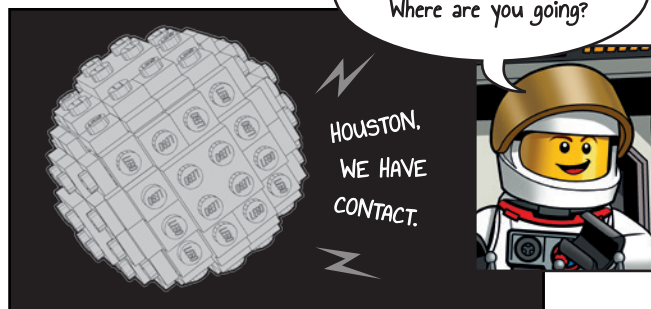


Someday robots will run a space lab on the Moon. Look, there it is!

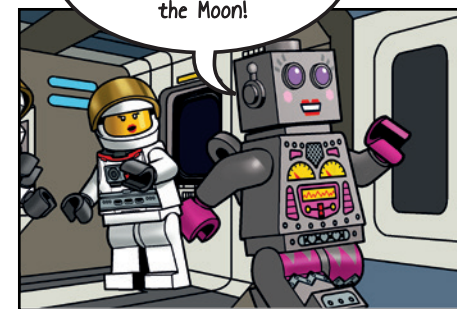


Hey, what are you doing? Where are you going?

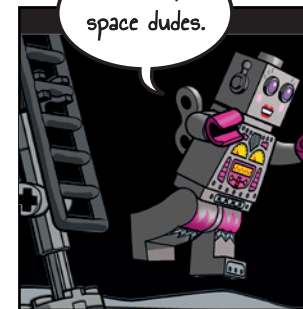
HOUSTON. WE HAVE CONTACT.



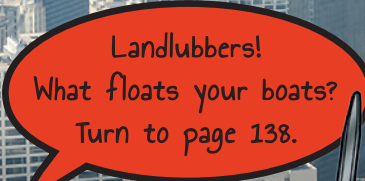
I'm going to make history... the first female robot on the Moon!



Later, space dudes.



MINIPIX



MEGA

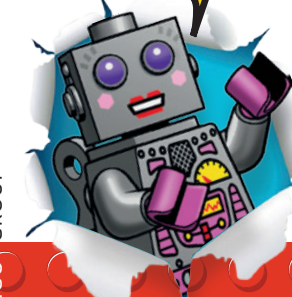
Explore the most amazing buildings and superstructures in this chapter. Learn behind-the-scenes

STRUCTURES

secrets of construction, from highways to harbors. What's the best way to get around? Zoom through these pages with some awesome vehicles. It's going to be a bumpy read, so hang on!

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I'm not here to replace you . . . I'm just here for the par-tay. 24/7!



RISE OF THE ROBOTS

They're here now. In the future, they'll be everywhere: an army of robots in our homes, at our schools, even inside our bodies. Bots are getting busier and brainier. The latest robots are even starting to think for themselves.



10 things real robots can really do

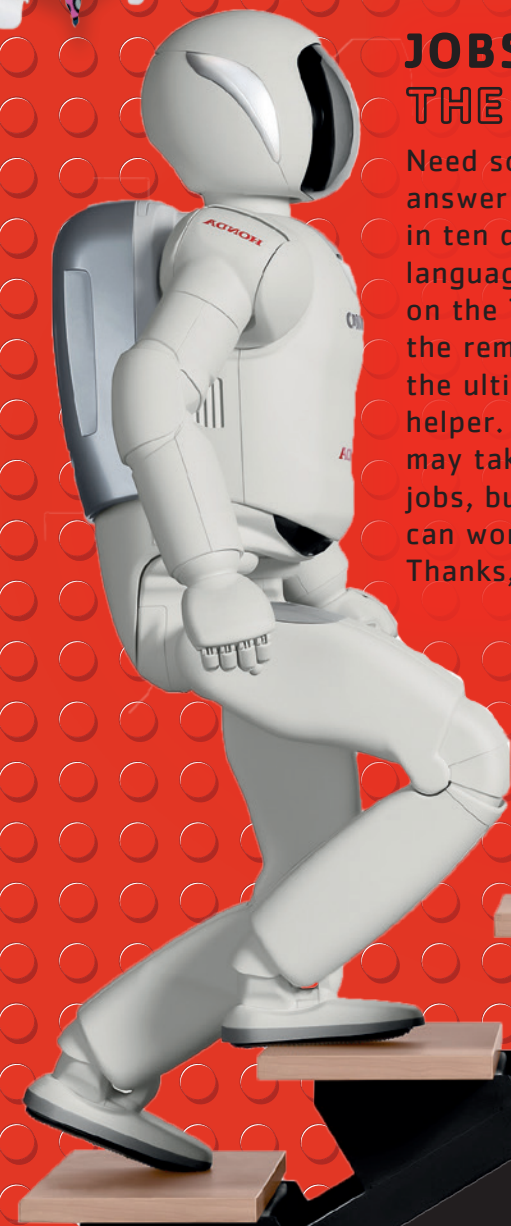
1. CLEAN WINDOWS
2. WRITE COOKBOOKS
3. PRACTICE PING-PONG
4. BE LIFEGUARDS
5. PLAY POKER
6. DRIVE CARS AND TRUCKS
7. PLAY THE PIANO
8. DELIVER ROOM SERVICE
9. COMPETE ON TV GAME SHOWS
10. ZIP UP ZIPPERS . . . AND ALL WITHOUT A BATHROOM BREAK.

Blinking building bots! I can't control them. They're after my job . . . They're after me!



JOB FOR THE ROBOTS

Need someone to answer the phone in ten different languages? Or switch on the TV and pass you the remote? ASIMO is the ultimate home helper. Someday robots may take over all our jobs, but for now we can work side by side. Thanks, buddy!



Scientists guess that 30,000 flying robots could fill US skies by 2020. Duck!



I stay safe while the bot does all the dangerous stuff.

BOT, DO YOU COPY?

FLYING BOTS

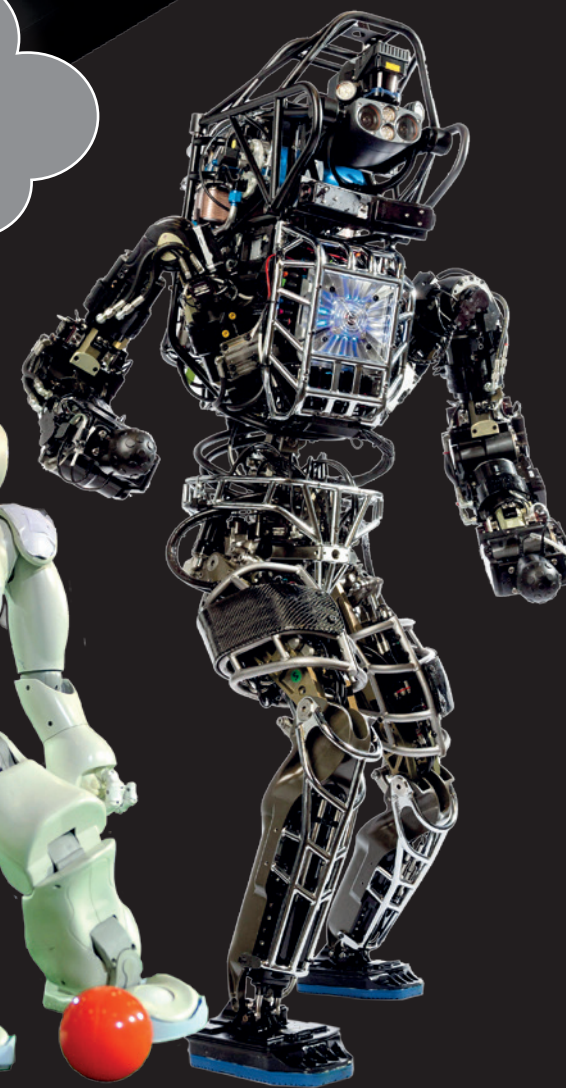
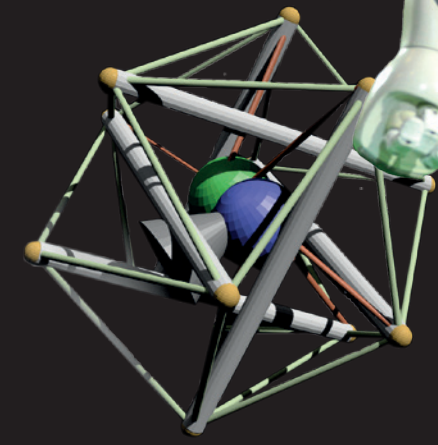
Our skies will someday be filled with busy bots. Flying robots can already:

- Herd sheep from a hillside to their home
- Inspect tall bridges and buildings for safety
- Wear robot bee disguises to pollinate plants
- Check weather from high up in the sky
- Find evidence of lost, buried ancient cities
- Look for mines underwater
- Deliver mail and even pizza!
- Film big games from the air
- Carry medicines to disaster areas



Hmmm . . . that's no criminal. It's a sheep. Could be a baa-d one, though.

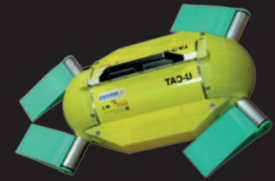
To keep all those bots from crashing into planes, a new air traffic control system will be built.



Handy bot **ASIMO** can do many tasks. It can walk, run, carry things, and even recognize your face and answer commands.

Someday our bodies may be crawling with tiny **nanobots**, keeping us healthy and fit from the inside. Creepy!

This **turtle bot** can dive down to explore the ocean depths in search of shipwrecks, going way deeper than submarines.



This funky robot, **Jibo**, is a walking, talking camera phone. It can chat with you to help you plan your day.

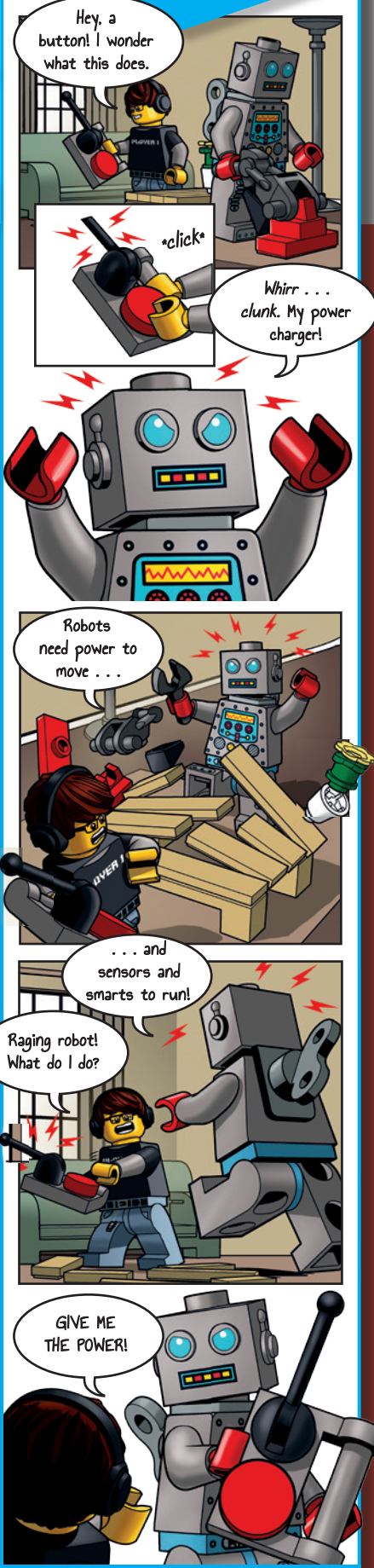


This cool bouncing **space bot** can land on a planet without a parachute and boing over rocky ground. Out of this world!

Teacher bot **NAO** can ask questions and understand answers. NAO helps people with autism learn. A class act!

Superhero **Atlas** can lift heavy rubble, drill through rocks, and walk through fire to help rescue people and save lives.

MINI PIX



Hey, a button! I wonder what this does.

Whirr . . . clunk. My power charger!

Robots need power to move . . .

. . . and sensors and smarts to run!

Raging robot! What do I do?

GIVE ME THE POWER!

In the future, robots will power and move themselves, and run forever!

10 SHARK BITES TO SINK YOUR TEETH INTO

1. More people die from bee stings each year than shark attacks.
2. Sharks are super smellers. A shark can sniff out a colony of seals up to 2 miles (3.2 km) away.
3. A shark loses about one tooth a week, but there are more behind it, waiting to pop into place. A shark uses up over 10,000 teeth in a lifetime.
4. Thresher sharks smack their prey with their long tails, slapping fish to death. Oooof!
5. Almost 50 different kinds of shark have photophores, organs that give off light.
6. Sharks don't really like the taste of people. They may bite them out of curiosity before spitting them out and finding something more delicious.
7. Although most sharks are gray or brown, some are pink, yellow, or blue.
8. After a big meal, a great white shark can go up to three months without feeding again. No between-meal snacking.
9. Sharks don't have bones. Instead, their skeletons are made of lightweight and flexible cartilage.
10. A great white shark gives birth to two to ten babies, called pups. Pups can swim right after they are born.

I'm the Ocean King, even though the sharks think they own the place.

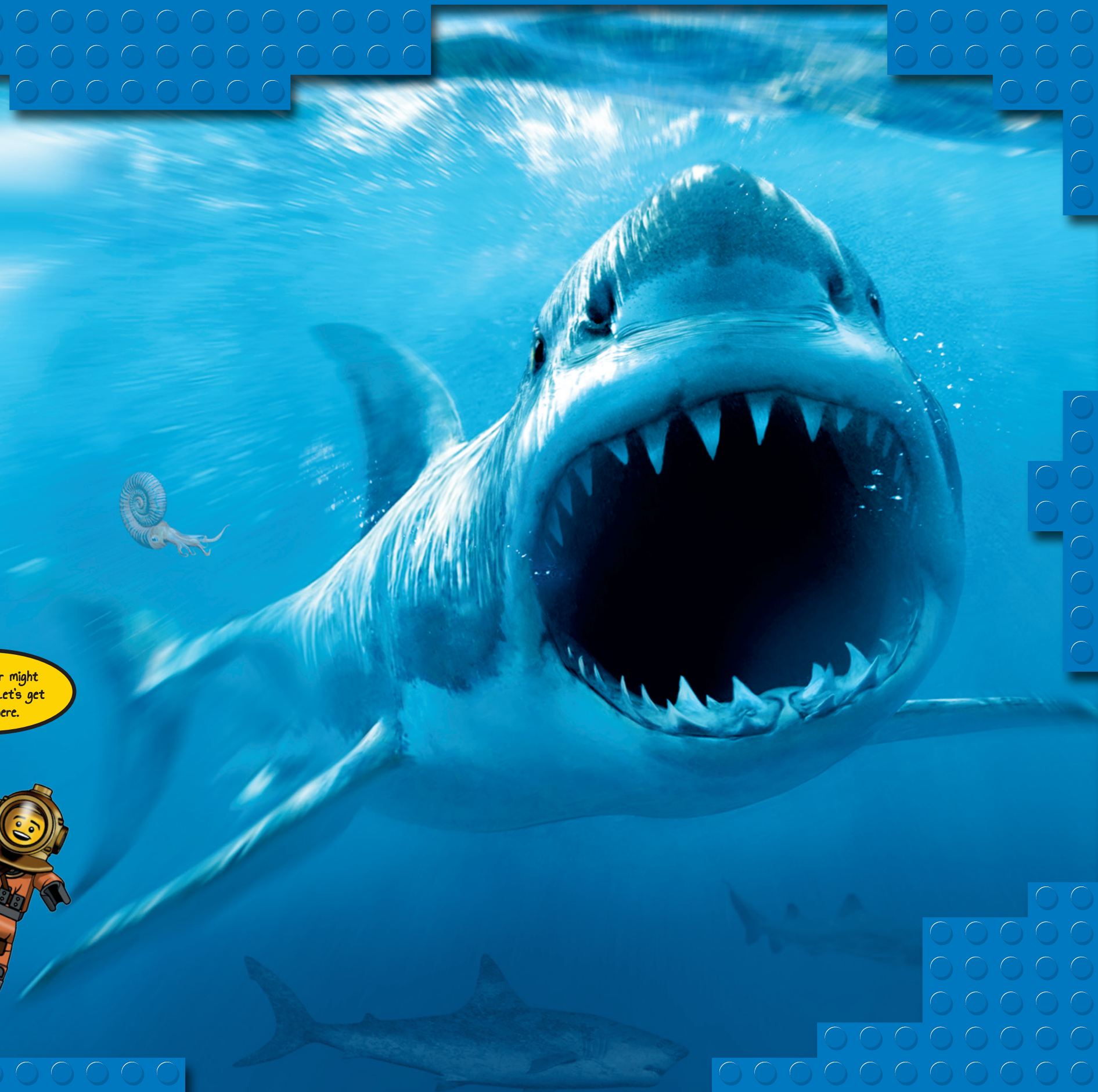
Yes, sharks have a pretty bad reputation . . .

Man-munching monsters . . . You know the drill . . .

But only 20 of the 350 shark species attack people . . . and not mermaids.

So maybe that guy over there is number 19!

Your number might just be up. Let's get out of here.



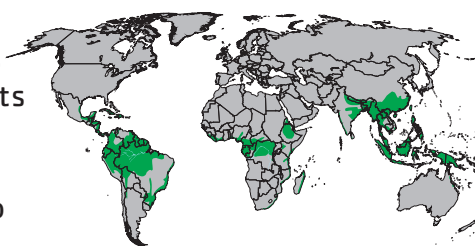
WET AND WILD

Imagine exploring a hot, damp forest with trees as tall as 20-story buildings. All around, you hear the noise of hoots and howls, buzzes and screeches. Welcome to the tropical rainforest. It's wild!

It's a jungle out there!

WHERE ARE RAINFORESTS?

Tropical rainforests are found along the Equator, where it's hot, sunny, and rainy. Plants grow quickly in dense layers, so there is lots of food for animals to chomp. Mmm!



WHY ARE THEY A BIG DEAL?

Rainforests produce about 25 percent of the oxygen that we breathe every day. The plants also absorb carbon dioxide (CO₂), cleaning the air. So take a deep breath and say thanks to the rainforest.

IN THE JUNGLE

- Blue morpho butterflies are so bright that pilots flying overhead can spot them.
- A river won't stop an **armadillo**. It can jump in, hold its breath for six minutes, and run across the bottom to the other side.
- The **jaguar**, a top predator, not only climbs trees but is also an expert swimmer. A jaguar attack? Cat-astrophic.
- One **poison dart frog** has enough venom to kill ten adult humans.
- The **tree boa's** babies are red, orange, or yellow. Like a sandwich left behind the sofa, they turn green as they age.
- The male **great hornbill** hides the female and their chicks inside a tree and feeds them through a tiny hole.
- Twisty vines called **lianas** can grow as thick as your leg.
- Leaf-cutter ants** chomp up and take away huge slices of leaf to feed a crowd of millions.

Blue morpho

Jaguar

Armadillo

Tree boa

Great hornbill

Poison dart frog

Liana

Leaf-cutter ant

Cacao pod

Keep your leaf, Mr. Ant! We'll snack on chocolate, made from cacao beans from the rainforest.

There are 3 million different species of insect in the rainforest. And I forgot my bug spray.

This place is crawling with animals, but the mighty Aztecs once made their home in the rainforests of central and southern Mexico.

HELP! RAINFORESTS ARE IN DANGER. AN AREA THE SIZE OF A SOCCER FIELD TYPICALLY HAS . . .

- 1,500 flowering plant species
- 750 tree species
- 125 mammal species
- 400 bird species
- 100 reptile species
- 60 amphibian species
- 150 butterfly species

A RAINFOREST AREA THE SIZE OF A SOCCER FIELD IS CUT DOWN EVERY DAY. FOUL!

RAINFORESTS PROVIDE US WITH:

- | | |
|-------------|--------------|
| oxygen | chewing gum |
| rubber | coconut oil |
| medicines | shampoo |
| coffee | cinnamon |
| chocolate | cocoa butter |
| cashew nuts | vanilla |

MOST FANTASTIC CREATURE. BUILD IT!

BUILD IT!

IMAGINE YOU'RE A RAINFOREST EXPLORER WHO HAS DISCOVERED THE