# The ultimate kids' guide to the new coronavirus

livescience.com/coronavirus-kids-guide.html

Live Science Staff

A new coronavirus called SARS-CoV-2 is spreading across the globe. Kids like you are likely wondering, "Will school be closed?" and, "Should I be worried about getting sick?" To help guide you through a confusing situation, here are answers from science to all the questions you may have.

What is a virus?

A virus is a teensy, tiny germ, way smaller than anything you can see. Viruses can make us sick, but they can't do anything on their own — they need to live inside another creature (their host) to survive. To do that, they have to get into our cells.
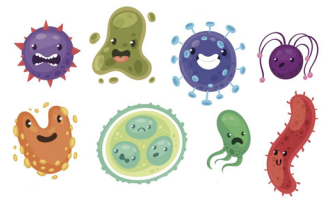
(Image credit: Shutterstock)

What is the coronavirus?

You may have noticed lots of adults talking about a "coronavirus." There is a new kind of this virus spreading around the world. It's called a coronavirus because "corona" means "crown" in Latin. And the virus looks like it's wearing a spiky crown.
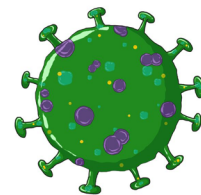
Mostly, it makes people cough, feel tired and have a fever. But older people and people who have other conditions can get very sick from it. The disease the virus causes is called COVID-19.

(Image credit: Shutterstock)

## Where did the coronavirus come from?

The virus was first found in a city in China, called Wuhan, last December. But we think the virus actually comes from bats. From there, it hopped into another type of animal, who gave it to humans. No one knows for sure what this mystery animal was, but some people think it might have been a pangolin, a scaly animal that eats ants.
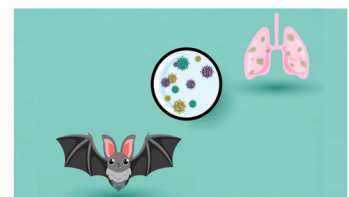
(Image credit: Shutterstock)

How does the virus get into cells in the body?

The virus enters cells using a special "door" on the outside of human cells. The new coronavirus also needs a "key" to get into cells. In this case, the coronavirus has a special "spike" on its surface that it uses as a key to open the door.
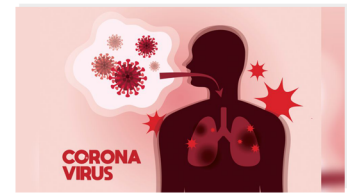
Once inside cells, the virus makes lots of copies of itself. Those copies break out of cells, then infect other cells. At a certain point, there are so many virus particles being produced that our normal cells can't work properly ... and we get sick.

(Image credit: Shutterstock)

How does it make people sick?

Viruses make people sick by killing human cells or making them not work properly. Like we said, the new coronavirus uses a special door to get into cells. Those special doorways are on cells in the nose and lungs. If the virus grows too much in the lungs, it can make it hard to breathe. That is called pneumonia.
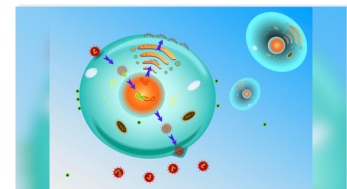
(Image credit: Shutterstock)

Luckily, your body has an army to fight germs like the coronavirus. It's called the immune system. When a virus enters your body, the immune system attacks the virus. You know how you can get a fever, headache or runny nose when you're sick? That's caused by the immune system, and it's good! These yucky symptoms are signs that your body is fighting the virus.

Most people who get COVID-19 just have symptoms like a cough, fever or runny nose. Doctors are not sure why, but some people get really sick. Some peoples' immune systems may not fight hard enough. Other peoples' immune systems may fight too hard, hurting their own cells. Both of these things can make people sicker.

How will I know if I get it?

There's a special test to see if you have COVID-19. If you feel sick, tell your parents. They will call your doctor to see if you need the test. It's just like a flu test; they stick a Q-tip up your nose and test your snot for the virus. The results come back a day later.

(Image credit: Shutterstock)

What can I do to help?

You can help stop the virus by washing your hands. This means sudsing up with soap and rubbing your hands together to clean all your fingers, under the fingernails and between the fingers. You can sing the ABCs or come up with another tune that lasts about 20 seconds.

(Image credit: Shutterstock)

Also, try to keep your hands off your face, so no rubbing your eyes or nose or putting your hands in your mouth. That way, if there is any of the virus on your hands, you won't give it a way to enter the body where it can make you sick.

And remember to cough or sneeze into your elbow (like a vampire!), and stay home when you're sick.

Should I be worried?

There's no need for you to worry, because adults are working very hard to keep kids and other adults safe. Even if you do get this virus, kids usually don't get very sick from it. It's more like a mild cold.

(Image credit: Shutterstock)

But you still have a special role to play in protecting others! Older people, like grandparents, need your help to stay healthy. That means washing your hands and staying home if you're sick. It may also mean skipping your activities or not going to school if your principal and other grown-ups in charge decide that's best. That can slow down the spread of the virus and protect older and sicker people.

What is being done to keep us safe?

Doctors and government officials are working hard to make sure families stay safe. That's why they may ask people to cancel activities, like sports events. They may close schools to stop the virus from spreading. They may tell you to keep your distance from other people when you're out. All these tricks make it hard for the virus to jump from one person to the next. If the virus can't spread, fewer people get sick.

(Image credit: Shutterstock)

Doctors are also working hard to care for sick people. Scientists are trying to make a coronavirus vaccine — kind of like the shots you get at the doctor's office. Others are trying to make medicines to help sick people get better.

Will my school close?

Each school may make a different decision. Schools may close if there are lots of cases of COVID-19 in your area or if someone at the school gets the virus. But it's not easy to close schools. There are many things to think about before doing that. For example, some children eat school meals and may not have enough food at home if schools close. And parents who work in hospitals may not be able to care for sick people if they need to stay home with their children. Parents, teachers and principals probably won't decide to close a school on their own. City leaders will help make the decision.

(Image credit: Shutterstock)

If your school does close, they may teach your classes online. Or they may send home workbooks so you can still learn.

Will I be able to see my friends?

It may be harder to see your friends if you are told to stay in your home. However, there are lots of great ways to stay in touch online. You probably already know about these, and you can also get creative! There are ways to play games and have fun with friends, even if you're not able to see them in person.
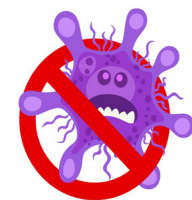
(Image credit: Shutterstock)

If you can meet with friends, you'll probably have to keep the group small. So, no birthday parties for now. Meeting in large open spaces like parks, where you can keep lots of distance, is probably the best choice.

When could the coronavirus outbreak end?

We don't know for sure. (I know, not what you want to hear!) But using math, we can make educated guesses. Left on its own, the virus would take many months to spread all around the world. But that doesn't mean your city would be affected for that long. And a vaccine could stop the virus sooner — if scientists can create one.

(Image credit: Shutterstock)

Some scientists think that the virus will go away when the weather gets warm. That's what happens with other coronaviruses and the flu. Lots of viruses like cold, dry air. But we don't know if that is true for this new virus.

With impressive cutaway illustrations that show how things function, and mindblowing photography of the world's most inspiring spectacles, How It Works represents the pinnacle of engaging, factual fun for a mainstream audience keen to keep up with the latest tech and

the most impressive phenomena on the planet and beyond. Written and presented in a style that makes even the most complex subjects interesting and easy to understand, <u>How It Works</u> is enjoyed by readers of all ages.