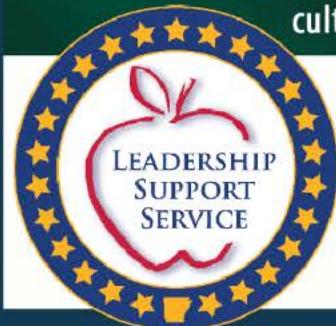


the KIDS GUIDE to the CORONAVIRUS

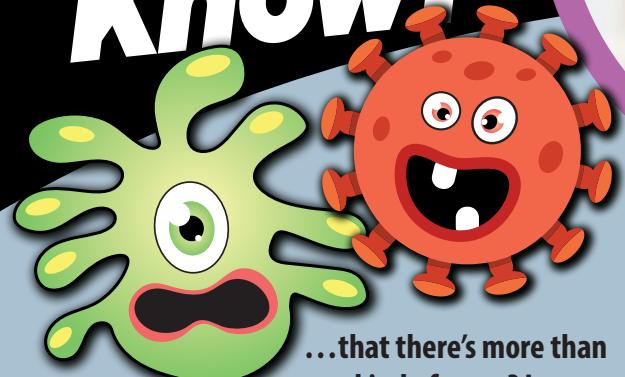


Please take this opportunity to help establish family conversations and a culture of reading as you browse through this booklet provided to you by:



DIVISION OF ELEMENTARY
& SECONDARY EDUCATION

Did You Know?

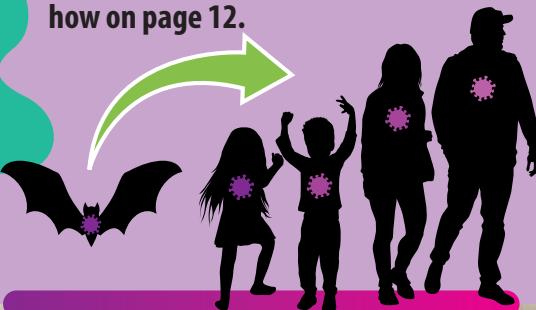


...that there's more than one kind of germ? Learn about them on page 6.



...that viruses can spread from things that you touch. See how on page 10.

...that some viruses mutate very quickly, which makes it difficult to create vaccines for them? Find out how on page 12.



...that viruses thrive in cold and dry places? Learn more on page 8.



...that washing your hands is the best way to prevent Coronavirus and other sicknesses? Learn more on page 4.



There's a new virus spreading around the world called Coronavirus, and it's causing a disease called COVID-19. It's much too small to see with your eyes, but you've probably already noticed some of the ways that it's impacting daily life. The most important thing to remember is that you shouldn't worry. Your family will keep you safe. And you can help by letting them know some of the tips in this book!

Whether it's cancelled trips and events, **quarantines**, closed stores and restaurants, or just all of the talk on TV, the **Coronavirus pandemic** is affecting just about everything. It can feel pretty intense, but learning more about what Coronavirus is and how to prevent it can help make it a little less scary.

Scientists think that the Coronavirus that's spreading right now started as a **virus** that infected bats, but a kind of change called a **mutation** made it infect people. It's more contagious than a normal winter bug, and it can be dangerous for some people.

Before it started spreading around the world, this Coronavirus first appeared in China where it started to spread very quickly and became an **epidemic**. Doctors and scientists around the world are working together to create a cure and vaccine for Coronavirus, but right now the most important thing that we can do is to help stop Coronavirus from spreading, which is why it's important to learn how it works.

HELPFUL HINT!

You'll find the definitions to important words in the Glossary on Page 19

STAYING SAFE

Since the Coronavirus and other harmful viruses and **bacteria** can be lurking on almost anything that we touch, it's super important to remember to wash your hands frequently. It's the number one thing you can do to keep yourself and others safe.

Follow these five simple steps to make sure you're doing it the right way:



What if you touched something gross and don't have soap or water?

Use alcohol-based hand sanitizer instead. It's not as effective at killing germs as washing your hands, but it will still get rid of most of what can make you sick. Use the same method as washing your hands: scrub for 20 seconds, and don't forget to clean between your fingers!



STAYING HEALTHY

What you eat plays a big role in keeping your immune system strong. That's the part of your body that fights infections. While eating certain foods won't keep you from getting sick all on its own, eating a balanced and healthy diet with plenty of fresh vegetables and avoiding sugar and junk foods will help keep your immune system ready to fight off germs. Getting plenty of sleep and exercise is important, too, because all of your body's health is connected.



Other important things to remember to do to avoid getting sick and making other people sick include:

- Don't touch your face
- Cover your nose and mouth with your elbow, not your hand, whenever you cough or sneeze.
- Keep 'social distance.' Stay at least 6 feet away from other people and avoid anyone who's sick.
- Never touch something a sick person has touched without sanitizing it first.

THINGS TO DO WHEN YOU'RE STUCK AT HOME

To help stop the spread of Coronavirus, many schools have cancelled classes for weeks or months, and many stores, malls, restaurants, and libraries are closed. That doesn't mean all of the time indoors has to be boring. Here are some ideas to keep yourself busy while helping keep Coronavirus from spreading.



- Try writing a letter to say thank you to a doctor, nurse or researcher.
- Read a book – find something interesting and read for fun.
- Be creative; try to invent your own board game and rules. See our Creativity Contest on page 19!
- Get outside – keeping social distance doesn't mean you can't play outdoors!
- Learn something new, like drawing, playing a musical instrument, or writing a story.

ALL ABOUT GERMS

We all know that germs are bad, but we don't always think about how there's more than one kind of germ. Coronavirus, influenza (also known as the flu), and the common cold are all diseases caused by viruses, while diseases like strep throat and sinus infections are caused by bacteria.

It might not seem like a big deal, but the difference between these two types of germs is very important since they each have to be treated differently.

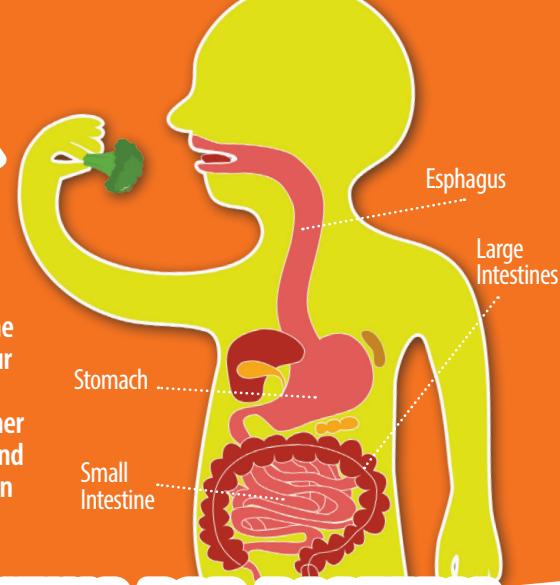
Even though they're much too small for us to see, bacteria live pretty much everywhere.

Different species of bacteria thrive in different environments, and for some species of bacteria, that environment is the human body.



GOOD BACTERIA

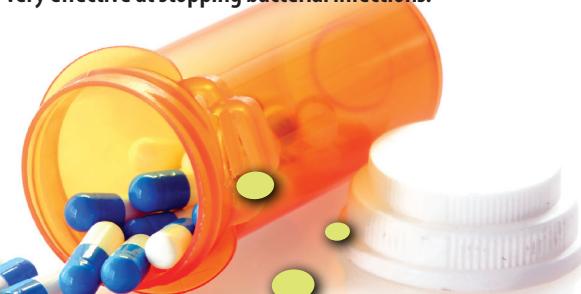
Not all of these bacteria are bad, though; some of them help our bodies, like the ones that live inside our intestines and help us digest food. On the other hand, if bad bacteria end up inside of us, they can make us very sick.



FIGHTING BAD BACTERIA

Diseases like strep throat, sinus infections, and even cavities in our teeth are just some of the illnesses caused by bad bacteria. While they can spread from person to person, bacteria often infect someone by exploiting a weakness in the immune system which defends our body.

This is why bacterial diseases like sinus infections often make us sick after a virus like the common cold has already weakened our immune system. Luckily, doctors have a secret weapon to fight bad bacteria: An antibiotic is a special kind of medicine that targets bacteria and is very effective at stopping bacterial infections.



ANTIBIOTIC RESISTANCE

Because they can mutate to adapt and become stronger, bacteria can become immune to antibiotics. That's why it's important to use antibiotics exactly how your doctor says.



Bacteria or Virus?

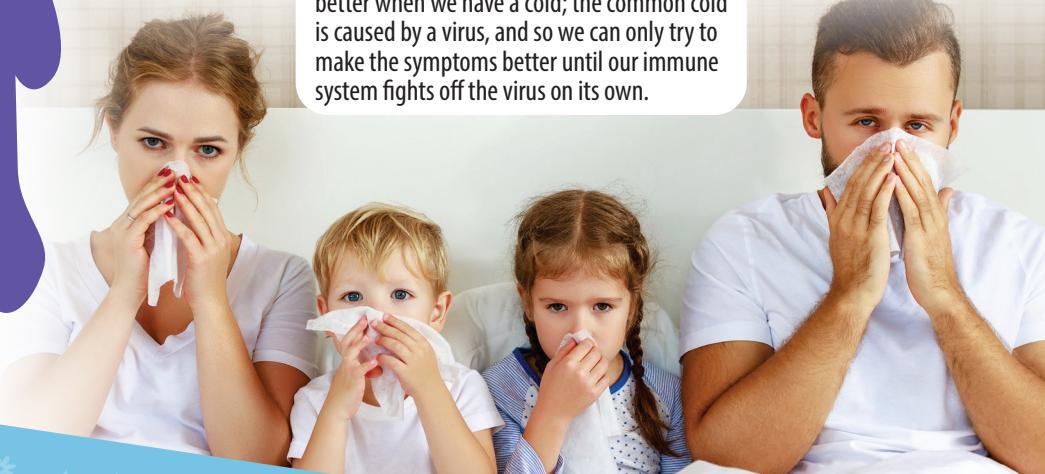
BACTERIA

- Strep throat
- Sinus infections
- Pneumonia
- Dental cavities
- Ear infection

The really bad news about viruses is that they can't be treated with antibiotics. Because there are so many different kinds of viruses that are constantly mutating into new strains, it gets even more difficult to treat them effectively.

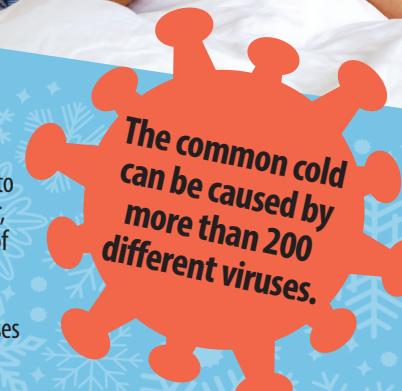
Luckily, our immune system is pretty good at fighting off most viruses, even if they make us sick in the meantime.

That's why we can't just take antibiotics to get better when we have a cold; the common cold is caused by a virus, and so we can only try to make the symptoms better until our immune system fights off the virus on its own.



WHY DO WE GET SICK MORE IN THE WINTER?

Although the common cold is caused by a virus, not by being out in the cold, winter is still the best time for viruses like it and influenza to spread. Viruses can last longer outside the body in cold, dry weather, so the germs left on surfaces by a sick person have a better chance of being picked up by someone else. Another big reason is that people spend more time indoors and close to one another when it's cold outside. Both of these factors make winter the perfect time for viruses to thrive. Bacteria, on the other hand, love wet and warm places.

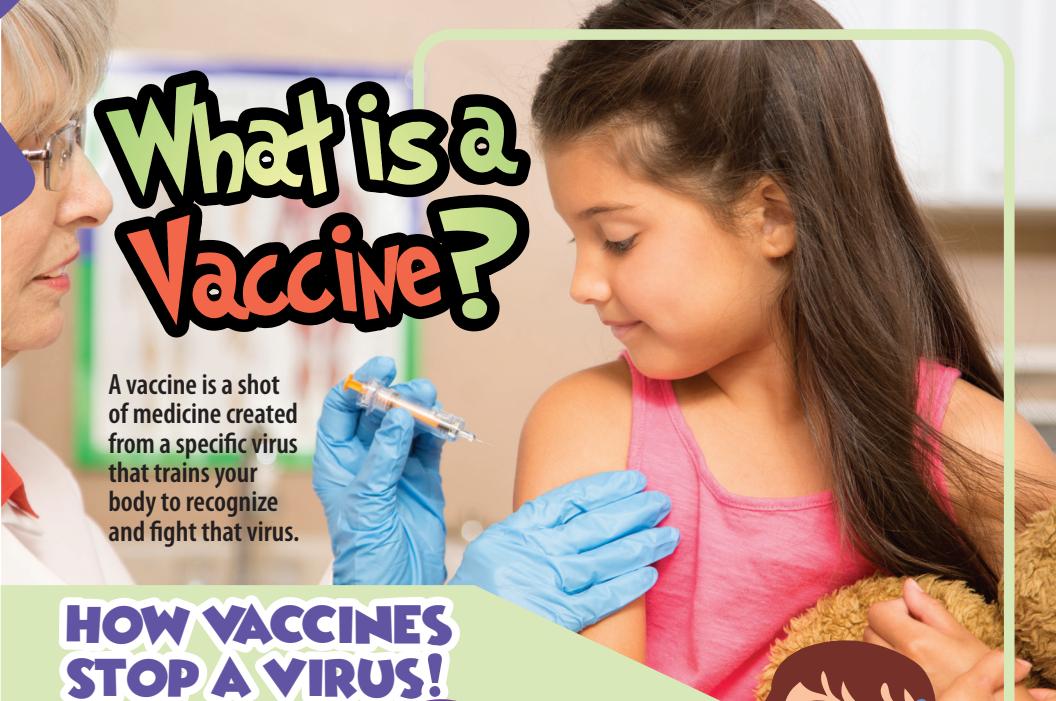


VIRUS

- Coronavirus
- Common cold
- Influenza ('the flu')
- Norovirus ('stomach flu')
- Chickenpox

What is a Vaccine?

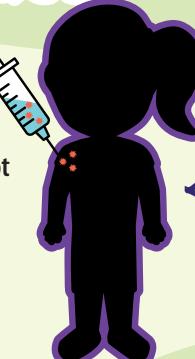
A vaccine is a shot of medicine created from a specific virus that trains your body to recognize and fight that virus.



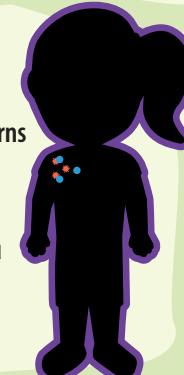
HOW VACCINES STOP A VIRUS!



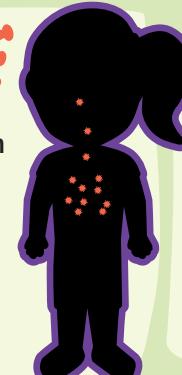
The doctor will give you a shot with a very small amount of the actual virus. That trains your body to be on the lookout for it in the future.



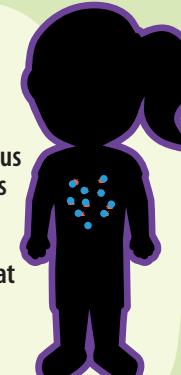
Your body learns to identify the virus so it can prepare to protect you against it.



You catch a virus.



Your body attacks the virus and eliminates the virus. You become immune to that strain of the virus.



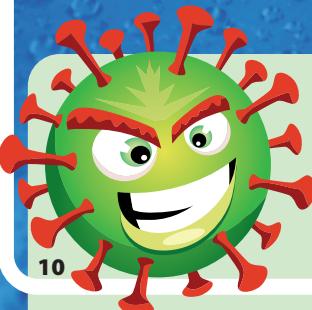
Unfortunately, because the Coronavirus that causes COVID-19 is a new virus, there is no vaccine available just yet. But scientists are working hard to develop one.

GOING VIRAL

HOW VIRUSES SPREAD!

One of the most common ways for viruses to spread outside of our bodies is when we cough or sneeze, which sprays tiny mucus droplets into the air. Even if the viruses in those mucus droplets can only live a few hours outside of the body, that's still long enough for them to spread to someone else's body.

If the droplets are floating in the air, someone just walking by can inhale them and get infected. If they land on a surface like a table, they can stick to the hands of anyone who touches it. If they touch their face after that, they can put the virus right into their body! This is bad news, since the viruses can then start taking over cells inside the new person's body. When they do this, they damage those cells and make us sick.



10

While viruses have some things in common with bacteria, they're also different from bacteria in a few very important ways. Viruses are parasites, which means that they can't live on their own. Instead, viruses live and reproduce inside other cells, the tiny units of life that make up our bodies, and they can only survive for a little while outside of the body.

Someone coughs or sneezes, spreading germs.

1



INCUBATION TIME

Once a virus infects a cell, it takes a while before we start to notice symptoms caused by the infection. The time after infection but before symptoms appear is called the **incubation period** of a virus.



During this time, the virus is still growing inside our bodies. For some viruses, this period doesn't last long, but for others, like Coronavirus, it can last a very long time.

During the incubation period, some viruses can still be 'latent,' which means that they are contagious to other people even if we aren't showing any symptoms yet.



SAFETY TIP
It's better to cough into your elbow, not in your hand!

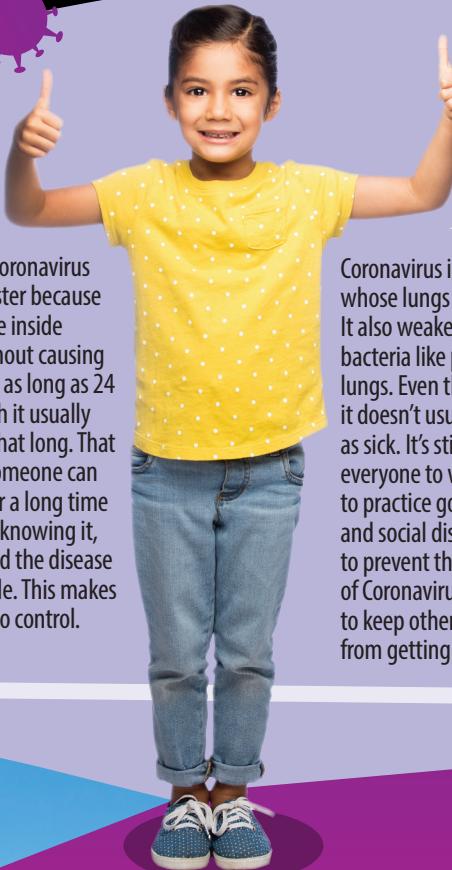
11

WHY THE CORONAVIRUS IS DIFFERENT AND DANGEROUS

There are a few reasons why this Coronavirus is considered worse than a normal winter bug. For starters, since COVID-19 is a new strain, scientists are still trying to learn more about it. That means that there isn't a vaccine or cure for it yet.

Second, this Coronavirus can spread faster because it can incubate inside someone without causing symptoms for as long as 24 days, although it usually doesn't take that long. That means that someone can be infected for a long time without even knowing it, and still spread the disease to other people. This makes it really hard to control.

KEEP OUR GRANDPARENTS SAFE... PRACTICE SOCIAL DISTANCING!



Coronavirus is especially dangerous for the elderly, whose lungs aren't as healthy as a younger person's. It also weakens the immune system enough that bacteria like pneumonia can more easily infect the lungs. Even though kids can get Coronavirus, it doesn't usually make them nearly as sick. It's still important for everyone to work together to practice good hygiene and social distancing to prevent the spread of Coronavirus and to keep other people from getting sick!



VIRUS MUTATIONS

Viruses can change quickly and adapt themselves to different animals. This change is called a mutation. Scientists believe that a bat in Wuhan, China first had the virus. Then, it mutated and jumped to humans. Then, it spread quickly around the world.

WHAT'S IN A NAME?

Corona means 'crown' in Latin. Under a microscope, a Coronavirus looks sort of like it's wearing a spiky crown. The points of the crown are actually spikes that it uses to attack cells!



DEALING WITH A PANDEMIC

In 2003, another strain of Coronavirus called SARS (severe acute respiratory syndrome) became a pandemic in China. Thanks to a quick medical response, it was stopped before it was able to spread very far.

Outbreaks like this show that early prevention is very important to dealing with dangerous diseases. Unfortunately, COVID-19's long incubation period has made it harder to contain, and it's already spread more than these other strains. That doesn't mean that it's too late to do anything about it or that we need to panic, though!

When someone is infected with a dangerous disease, one of the most effective ways of stopping it from spreading is a quarantine. This is when a person or group of people is isolated from others, such as staying at home or in a hospital.

This prevents them from making other people sick. While it isn't very much fun, it's usually a pretty effective way of slowing down diseases. With COVID-19, the long incubation time has made it harder to know when someone needs to be quarantined, unless they've definitely been around someone who has Coronavirus.

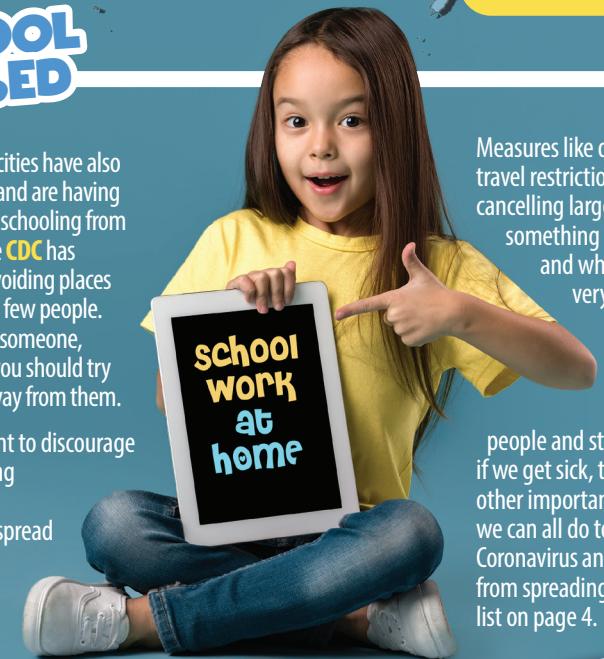


Since someone can be contagious a long time before they feel sick, one way that people are trying to stop Coronavirus is by encouraging everyone to stay at home more. This is why many big events like sports, concerts, and conventions have been cancelled.

SCHOOL CLOSED

Many states and cities have also cancelled school and are having students do their schooling from home. In fact, the [CDC](#) has recommended avoiding places with more than a few people. If you are around someone, experts say that you should try to stay six feet away from them.

All of this is meant to discourage people from going to places where Coronavirus can spread easily, which should slow down its spread.



EPIDEMICS AND PANDEMICS

A disease which spreads very quickly within a certain area is called an epidemic. A pandemic is similar but more serious, since it spreads very quickly worldwide, not just in a single region. Coronavirus started out as an epidemic in the Chinese city of Wuhan, but after a few months it started to spread rapidly around the world and was declared a pandemic.

Measures like quarantines, travel restrictions, and cancelling large events are something we all notice, and while they're not very much fun, they do help keep us safe. Besides avoiding sick

people and staying isolated if we get sick, there are some other important things that we can all do to help prevent Coronavirus and other diseases from spreading. Check out the list on page 4.

CDC stands for **Centers for Disease Control and Prevention**. It's a branch of the Federal Government that studies diseases and tries to keep them from spreading.



Don't Panic!

QUESTIONS AND ANSWERS

When it comes to being prepared, one thing that doesn't help is panicking. Even though things might seem scary, the best way to keep Coronavirus from spreading is by following common sense measures like remembering to wash your hands, staying away from crowds, and staying home if you feel sick.

Panicking, on the other hand, can make things worse for everyone. In response to the Coronavirus pandemic, many people have rushed to stores to buy things like food, toilet paper, masks, and hand sanitizer. While it makes sense to keep enough food at home to last through a possible quarantine, taking more than necessary can make things worse by causing shortages.



Face masks aren't recommended as a way of preventing Coronavirus for healthy people, but so many have been sold during the panic that there aren't enough for the doctors and nurses who need them. A hand sanitizer shortage is even worse, since it makes it harder for people to follow the steps to prevent Coronavirus. Everyone has to work together to stop Coronavirus, and so we need to avoid panicking and instead make sure that everyone can get the supplies that they need.

Experts recommend keeping a 2-week supply of medicine, food, and other essentials as a reasonable way of preparing for a pandemic. Taking more than necessary only makes things worse.



How can I tell the difference between Coronavirus and a cold or the flu?

Why is it so hard to keep Coronavirus from spreading?

Where did Coronavirus come from?

When will the Coronavirus outbreak end?

Why isn't there a vaccine for Coronavirus?

Why does Coronavirus make some people sicker than others?

Why do events and gatherings like school or church have to be cancelled because of Coronavirus?

The only way to tell for sure is to get tested by a doctor, so if you don't feel well, you should tell an adult. The main symptoms are fever, coughs, and trouble breathing. Depending on how healthy a person is, the symptoms of Coronavirus can be similar to a cold or the flu.

This strain of Coronavirus is especially contagious, but it also has a really long incubation period. This means that someone can be contagious without even knowing that they're sick, which makes it harder for them to avoid making other people sick.

Scientists think that the COVID-19 strain of Coronavirus first appeared in China, in a city called Wuhan. It originally infected bats, but mutated to infect people, too.

We don't know yet, but if it's like many other viruses, such as influenza, then it may slow down during the summer.

The strain of Coronavirus causing the current pandemic is a new mutation, so doctors haven't had time to make a vaccine to prevent it yet. Doctors around the world are working to develop a Coronavirus vaccine as soon as possible.

Doctors are still trying to learn more about Coronavirus, but it usually makes older people sicker because their immune systems are weaker and they are less healthy in general. Coronavirus isn't as dangerous for kids, but they still need to avoid it to help keep other people safe.

Germs spread really easily in crowds, so cancelling these events is meant to help stop the virus from spreading. This is similar to why sick people are being told to stay away from other people.

SUMMING IT UP



Coronavirus is scary, and we definitely have to work together to do everything that we can to keep it from spreading. Even so, it's no reason to panic. Diseases and pandemics have been around since civilization started, but thanks to advances in modern medicine, we're better at preventing and fighting them than ever before.

Because Coronavirus has spread globally and is impacting just about everyone, people all around the world are working together to stop it from spreading, and doctors around the world are working to develop a cure and vaccine. Because of this, we can hope that the pandemic will be over soon. Until it is, it's important that you help fight Coronavirus by avoiding germs and making sure that you don't spread them.

Everything that we know says that prevention is the best thing that we can do to win against Coronavirus. Remember to keep social distance, follow good hygiene practices, and not to panic. Pandemics don't last forever, and whether it's warmer weather, a new treatment, or a vaccine, the Coronavirus pandemic will end soon. Even so, we should remember everything that we've learned about hygiene and fighting germs to make sure that we all stay safe and healthy in the future! History shows that these are the keys to stopping a pandemic.

GLOSSARY

Bacteria – Bacteria are tiny organisms that live in all sorts of environments. Some of them live in the human body and are helpful, but others can cause diseases. Bacterial infections are treated with antibiotics.

CDC – The CDC, or Centers for Disease Control and Prevention, is an agency operated by the Federal Government which works to understand diseases and to prevent their spread.

Epidemic – An epidemic is an outbreak of a disease which spreads very quickly within a single area, such as a city or region.

Incubation Period – The amount of time when a virus has infected someone but before they show symptoms. Some viruses can be contagious during this period.

Mutation – A change in the DNA of viruses and bacteria which changes how they work. Mutations can be good or bad for viruses or bacteria.

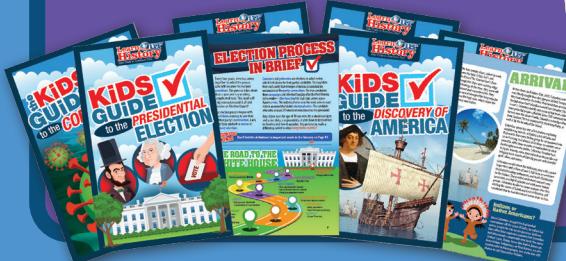
Pandemic – A pandemic is an outbreak of a disease which spreads very quickly over a large area, such as a country or the entire world.

Quarantine – When someone is isolated and kept away from other people to prevent the spread of disease.

Virus – Tiny organisms that invade other cells and take them over to reproduce. Viruses are parasites and can't live outside of other cells.

the KIDS GUIDE ✓ CREATIVITY CONTEST

Write an essay or draw a picture showing how you're spending your time away from school.. Send your entry to contests@thekidsguide.com for your chance to win one of five 1-year subscriptions to The Kids Guide!





STATE OF ARKANSAS
ASA HUTCHINSON
GOVERNOR

Welcome back to school!

I know how much you have missed your friends and teachers and how excited you are to be at school again.

As each of you moved to a new way of learning this past March, please know that it was because I truly care about your health and safety. I know your life changed very quickly, and I want to thank you for being brave and continuing to learn through the challenges of COVID-19.

In this booklet, you will learn more about words you probably have heard often, like social distancing, pandemic, and masks. I hope this information helps you to better understand why we closed schools and how important you are.

You and your teachers worked hard last year, and I know you will work hard again this year. Together, we will have a great school year. Continue to grow, learn, and make Arkansas proud!

Sincerely,

A handwritten signature in black ink, appearing to read "Asa Hutchinson".

Asa Hutchinson

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