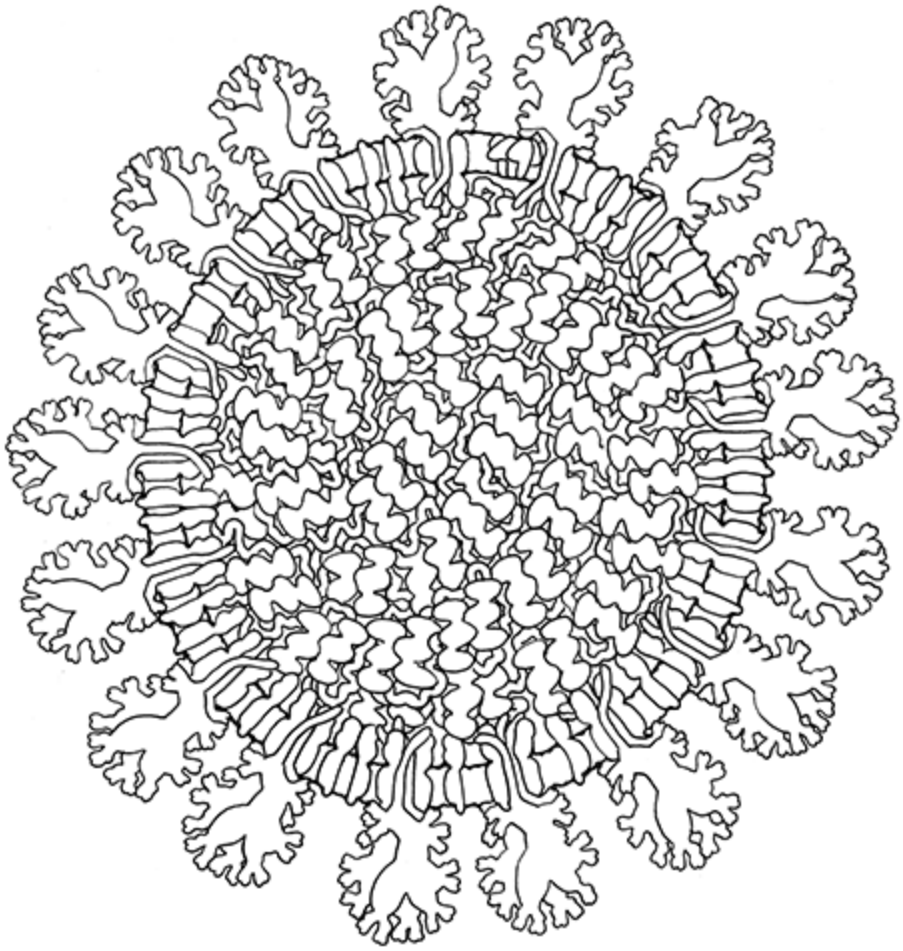


Let's Learn about COVID-19

- Color the COVID-19 molecule. This is what the virus would look like under a powerful microscope.
- Each COVID-19 molecule is surrounded by a lipid membrane – which is like a wall of fat. Inside it is filled with RNA – which are the instructions for how the virus can replicate and grow. When a virus replicates, it makes more virus molecules.

Why are people so worried about COVID-19?

People are worried because COVID-19 is a new virus, that is causing illness in many people. Most people only have a mild illness if they get infected with COVID-19. In fact, for almost all kids that get COVID-19, they just feel like they have a cold. Some kids don't even know they are sick! However, for very old adults and people with serious illnesses (like heart problems, diabetes, kidney problems, breathing problems, or issues with their immune system), COVID-19 is more serious. These people can get very ill and have severe breathing problems like pneumonia. People who get really sick from COVID-19 need to go to the hospital. Some of these people even die. By preventing the spread of COVID-19, we can help to keep ourselves and others healthy and decrease the number of people that have severe illness and need to go to the hospital.

From Leanne Kontur, PharmD, BCPS, BCGP. Please share this resource with others.

How does COVID-19 spread?

It is important to know how COVID-19 is spread. The virus gets inside a person, and after replicating, becomes an infection. But how does the virus get inside the person? A sick person may breathe out the virus, and the virus can float in the air for a short period of time. Also, sick people may cough or sneeze, which can launch the virus much further through the air than just breathing. Lastly, the virus is also in the poop of infected people (see why you need to wash your hands after you go to the potty?!?) The virus can live on surfaces for a while too – so if someone coughs on their hands and then touches a doorknob – the doorknob can become a source of transmission! The virus gets inside a person through mucus membranes like the mouth, nose, or eyes. This is why it is recommended to not touch your face and why you should always wash your hands before you eat!

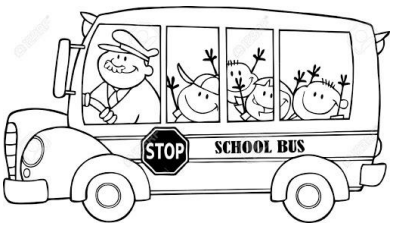
How can we prevent or slow the transmission of COVID-19?

Circle the things below that can prevent or slow the transmission of COVID-19.

Social distancing	Watching TV
Giving hugs to all your friends	Playing outside
Washing hands often	Using hand-sanitizer
Only using water to rinse hands	Washing towels and hand towels frequently
Cleaning frequently touched surfaces	Drying your hands with a towel/paper towel
Drying your hands with a hand dryer	Wearing a hat
Wearing a mask if you are sick	Cough or sneeze into your elbow or a tissue
Cough and sneeze on our hands	Wearing a mask when you are not sick

Social Distancing

Circle the images that are good examples of social distancing

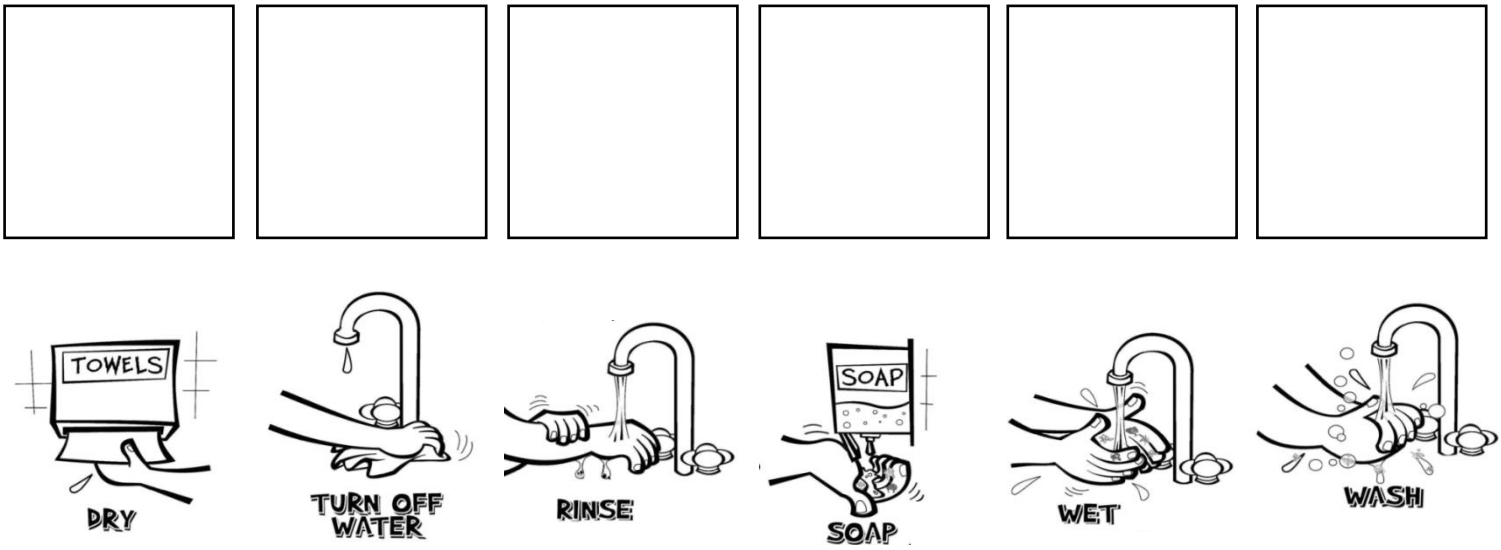


Hand Washing

Handwashing facts:

- Soap is magical! It has both water-loving (hydrophilic) and fat-loving (lipophilic) properties, which means that it can attack many types of molecules and germs. The soap dissolves the grime and germs on your hands. For many germs, it can disrupt the structure of the organism, and kill it! However, for all grime and germs, the soap binds to it and creates "micelles" which are like little groups of soap and grime, which traps the grime and germs. When you rinse your hands, the grime and germs rinses off your hands and goes down the drain.
- All steps to hand washing are important. Don't forget to scrub! Scrubbing uses friction to help remove some of the dirt and grime from your hands. Make sure you wash your hands for at least 20 seconds. If you wash your hands without scrubbing, you will leave a lot of germ on your hands.
- Hand dryers can put germs back on your clean hands! They pull air from the surrounding room, which can have various germs floating in the air. Then the air from the hand dryers (with some of these germs) is blown onto your hands. Ewww!
- Drying your hands with a clean towel or paper towel actually helps to further remove germs. The friction you use to dry your hands can wipe off germs that you may have missed when you were washing your hands.

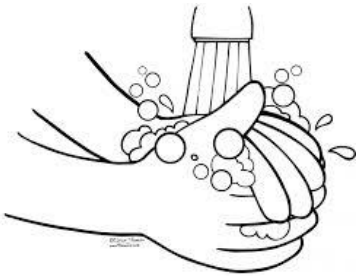
Put the steps for washing your hands in the correct order. Cut out the images below and glue them in the squares.



Introduction to Your Immune System

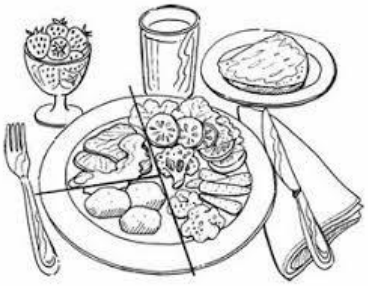
Your immune system is like your own personal army! It is made up of various cells and organs in your body that fight pathogens that cause infection. Your immune system is smart – once it is exposed to a germ, it will remember that germ and be able to fight it more efficiently if you are exposed to it again. Your immune system isn't perfect though. Sometimes germs are too strong for your immune system to fight on its own (in these situations, we should go to the doctor to get help or special medications). Also, your immune response is a lot of work. It requires a lot of energy from your body and this can leave you feeling very tired and run down. So, if you are sick, help your body by getting plenty of rest, drinking water, and eating healthy!

Color the images below of things that you can do to help your immune system work as well as possible.



Wash your hands so your immune system doesn't have to try to fight as many pathogens.

Get plenty of sleep and rest. Kids under 12 years old should get 9 to 13 hours of sleep per night!



Eat healthy foods – especially fruits and vegetables that have important vitamins and nutrients.

Keep active and get plenty of exercise.

Minimize stress. When we are stressed or worried, our immune system doesn't work as well. Find ways to decrease or process your stress.

VOCABULARY WORDS

Coronavirus – a group or family of viruses responsible for respiratory tract infections. These viruses are responsible for the common cold as well as more serious illnesses like SARS, MERS, and COVID-19.

COVID-19 – also sometimes called coronavirus. A virus that can cause an upper respiratory tract infection, but sometimes leads to more serious symptoms like pneumonia in both lungs.

Pathogens – also sometimes called germs. Pathogens are tiny invaders like virus, bacteria, fungus and parasites that can cause infection or illness. It is important to note that not all tiny organisms are bad – in fact, we need certain bacteria to live!

Social distancing – While in public, everyone (including people without symptoms or thought to have an illness) keeping a distance (usually 6 feet) from other people in order to prevent the transmission of an infection. Also included with social distancing is trying to avoid touching objects in public places.

Transmission – the spread of the virus from one person to other people.

Upper Respiratory Tract Infections – infections that cause some or all of the following symptoms: coughing, sneezing, runny nose, sinus congestion and/or pain, sore throat, fever.

Virus – a type of tiny organism or germ that can cause infections. Viruses must live inside of other living organisms (like people or animals)

ANSWERS

Things that prevent/slow transmission:
Social distancing, Washing hands often, Using hand-sanitizer, Washing towels and hand towels frequently, Cleaning frequently touched surfaces, Drying your hands with a towel/paper towel, Wearing a mask if you are sick, Cough or sneeze into your elbow or a tissue

Good Examples of Social Distancing:
Kids waving, kid alone at desk, kid using hula-hoop, person talking on phone, stay at home

Handwashing correct sequence:
Wet, Soap, Wash, Rinse, Dry, Turn off water