

Stop! Did You Wash Your Hands?

Video Introduction: <https://youtu.be/1LWbIiRRNh0>

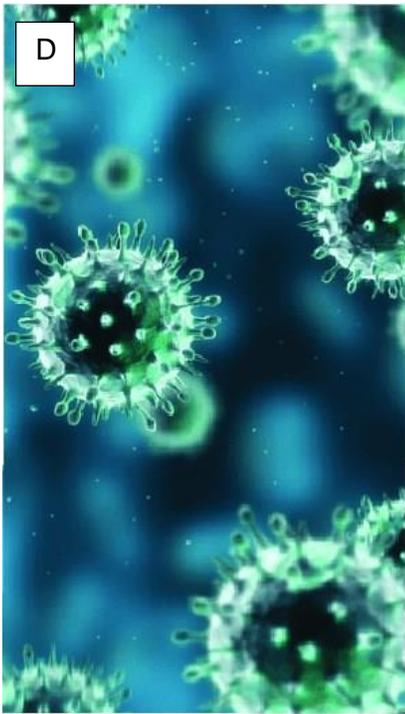
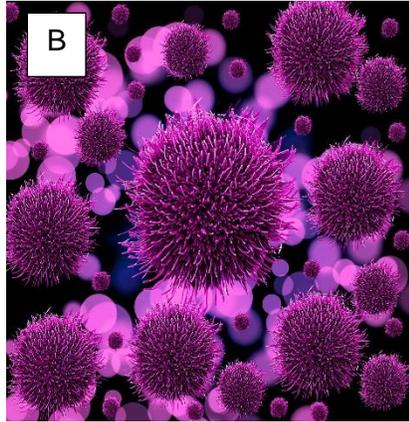
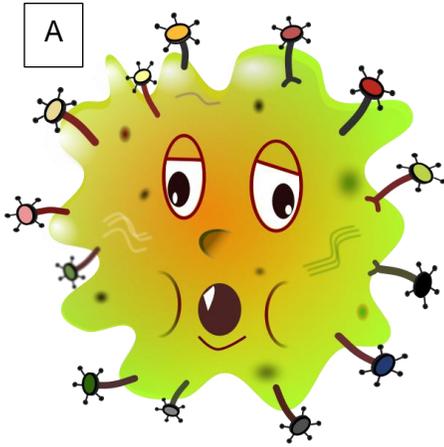
Science Topic	Through this activity we will be teaching kids and parents the importance of washing your hands and how to properly wash your hands
Ideal Age	This activity is appropriate for all ages and is definitely important for all ages!
Driving Question	The goal of this activity is to hopefully educate people on why hand washing is so important and how you can properly do so.
Materials Needed	You need soap, water, and your hands!
Activity Instructions	<ol style="list-style-type: none">1. It is important to tell the kids what germs are. Play the Germ Identification Game (at the end of this document). Germs are little “monsters” that live on people and objects, so when you touch other people or objects you get germs on you. Sometimes these germs can make you very sick so it is important that you wash your hands at all times!2. For the first step, have the kids get their hands dirty with flour or dirt, really anything that will make their hands visibly dirty.<ol style="list-style-type: none">a. Another optional activity would be having the child use washable paint on their hands, wearing rubber gloves is optional. Pretend the paint is soap, this will give them a better visual on when they rub the soap (paint) on their hands and the areas they may miss during their normal scrubs. Because if there are areas on the hand that don't have paint on them that means those areas aren't getting clean so it is important for their whole hands to be covered in soap (paint) to ensure that they are fully washing them.3. Now have the kids put hand sanitizer on to try to clean their hands. Emphasize that this doesn't remove the ickiness from their hands and doesn't really effectively clean them at all.4. Now it's time to bring the children to the sink and wash their hands. Turn the water on so it is lukewarm, then have the children get their hands wet.5. Next they should apply soap. They should sing their ABC's while they are rubbing the soap in. Make sure they include the backs of the hands, in between fingers, under nails, and the wrists.6. Then have the children rinse their hands with water and dry them with a clean rag or paper towel.7. Ask the children how their hands feel.

	<p>8. Highlight that you should always wash your hands over using hand sanitizer, hand sanitizer is only better when you don't have access to washing your hands. Explain to them that now you are physically removing the dirt and grime from their hands to effectively clean them.</p> <p>9. Show this video called "Weird Science Handwashing Children's Museum of Indianapolis." Then discuss the video with the children and about how germs can stay in certain places like on your nails even after rinsing your hands so that's why it's important to scrub. Ask your children if they think they washed their hands better than the children in the video and why they think the kids in the video had so many germs left on their hands even after they washed. (Answer: they didn't wash for the full ABC's and they didn't scrub around their nails and areas that were glowing well enough)</p> <p>By having the children get their hands dirty, this helps to demonstrate the difference between cleaning your hands with soap and water and cleaning them with hand sanitizer.</p>
<p>Questions</p> <p>Parents, ask these questions while the kids are doing the activity!</p>	<ul style="list-style-type: none"> ● Why is it important to wash your hands? <ul style="list-style-type: none"> ○ So you don't get yourself and others sick. When you touch stuff you are picking up germs that could make you sick, that's why it's important to wash them off. ● When should you wash your hands? <ul style="list-style-type: none"> ○ You should wash your hands before eating, after playing outside, before touching your eyes, nose or mouth, and anytime your hands are visibly dirty. ● Does everybody need to wash their hands? <ul style="list-style-type: none"> ○ Yes, everyone can carry germs so it's important that we all wash our hands. ● What happens if you don't wash your hands? <ul style="list-style-type: none"> ○ You can carry germs and get sick if you touch your eyes, nose, or mouth. You can also pass germs to other people which can make them sick. ● How long should I wash my hands? <ul style="list-style-type: none"> ○ Sing the ABC's ● When should I use soap and water and when should I use hand sanitizer? <ul style="list-style-type: none"> ○ You should always use soap and water when it's available because it kills more germs, but if all you have is hand sanitizer then use that. It's important to kill bacteria on your hands.

<p>Science Content</p>	<p>The science behind hand washing is extremely important to understand especially right now. As you are all aware, we are under a Safer At Home order due to COVID-19 or Coronavirus. So what do you do if you have to go out for necessities and you are possibly exposed? The most important step to limiting your chances of getting the Coronavirus or any virus/illness for that matter, is to wash your hands before eating, touching your face, or after touching something that could be contaminated.</p> <p>How does this work? By physically scrubbing your hands with water you are physically removing the pathogens (i.e. germs/virus/whatever you want to call it) from your skin. Once you add soap to this mixture, you are essentially paralyzing the pathogen. The soap works to destroy the outer coating, kind of like the skin of the virus. This outer coating is what allows the virus to latch onto new cells to invade. By adding soap you are making the virus unable to attack and infect a human cell.</p> <p>If you are running errands and don't have access to soap and water in between errands, alcohol based hand sanitizers work in a pinch but be sure to wash your hands as soon as you can. Make sure to look for alcohol based hand sanitizers of 60% alcohol or more, this information is located on the back of the bottle.</p> <p>The alcohol does something similar to the soap and water. Instead of destroying the outer coating like soap and water, alcohol changes the outer coating into something that isn't as stable or as effective at invading human cells. "Natural" or "baby-safe" hand sanitizers that are made without alcohol do not have the same effect and will be essentially useless. Remember to always wash your hands if you have visible dirt or other grime on your hands. Hand sanitizer won't physically remove the dirt and grime in the same way that water and soap will.</p>
<p>Process of Science</p>	<p>By doing this activity, kids and parents are engaging in one of the most important steps in health and they're learning the science behind how this works. This is an everyday skill that will help to keep you and your loved ones safe and healthy!</p> <p>First, scientists begin by asking a question. In this case our question is, "Why is handwashing so important?". Now we're going to develop a model to try to make a prediction about our question. This is called a hypothesis. In our case, our hypothesis is "If I wash my hands frequently and properly, then I will lower my chances of getting sick.". Luckily, many scientists have put a lot of research into this so you don't have to. We know that hand washing works better over hand sanitizer so it is important to practice these techniques listed above to keep you all safe and healthy!</p>
<p>Authors</p>	<p>Hunter and Allie</p>

Germ Identification Game

Below are some pictures of germs; these are what can make us really sick. So it's important to wash your hands after touching things, before touching our face, and before eating! Have your child look at the pictures below and ask them which ones are germs and which ones are not.



Answers: Only picture F and picture C are bugs. B, D, & E are viruses. A is a cartoon virus!