OVERVIEW
Students discuss the importance of wearing face masks during the COVID-19 pandemic and learn best practices for wearing and removing a face covering. The Centers for Disease and Prevention Control (CDC) has recommended that everyone older than 2 years of age wear a face covering over the nose and mouth when they are in public areas or around others who do not live in the same household (unless there is a specific medical reason not to). As we work to establish this healthy habit during the pandemic, it is important to understand why masks are needed and how they are helpful to all of us.

Recent research has shown that face masks offer some protection to the wearer against the virus, called SARS-CoV-2, that causes COVID-19. In addition, people can be infected with SARS-CoV-2 and not feel sick. Masks prevent people who don’t know they are infected from spreading the disease.

LEARNING OBJECTIVES
Students will describe how wearing a face mask can help stop the spread of infectious diseases, particularly COVID-19. They also will demonstrate appropriate, healthy ways to put masks on and take them off.

SCIENCE, HEALTH AND MATH SKILLS
• Observing
• Comparing and Contrasting
• Communicating

NGSS SCIENCE AND ENGINEERING PRACTICES
• Asking questions and defining problems
• Planning and carrying out our investigations

TIME
• Activity: 45 minutes

MATERIALS FOR SCIENCE INVESTIGATION
Teachers
• Device and ability to project or share the videos linked below
• Paper or cloth mask for demonstration

Students
• Paper or cloth mask for each student (students may use the masks they have worn to school or a clean mask at home, if learning remotely)
• Sheet of paper and markers, crayons, pencils, etc. or a device on which to create a unique digital design for a face mask
• Copy of, or access to instructions on the COVID-19 Mask Art page
SET UP AND TEACHING TIPS
You may conduct the first sections of this activity as a whole class activity.

Grades K–2
• https://www.pbs.org/video/wearing-mask-helps-stop-spread-germs-mjjg7e/

Grades 3–5, 6–8
• https://www.youtube.com/watch?time_continue=2&v=Mn6axdkbGd4&feature=emb_logo

PROCEDURE

■ ENGAGE

1. Ask, Why do you think it’s important to wear masks these days when we are with others? Accept all responses. Follow by asking, Do we have to wear masks when we are in our own homes with family? Discuss students’ responses.

In general, it’s not necessary to wear masks inside the home. However, there are a few times when it is advisable to wear a mask at home: (1) when you have guests and you are not certain about their close contacts, (2) when someone in the household has had a close contact exposure to the virus and has been advised to quarantine, and (3) when someone in the household has COVID-19 symptoms or has tested positive for COVID-19.

“Close contact” is defined as being within six feet of someone for more than 15 minutes (regardless of whether one or both persons were wearing masks).

■ EXPLORE

2. Explain that face coverings (masks) help to reduce the spread of a virus that is making people sick all around the world. The virus, which is a kind of coronavirus, causes a disease called COVID-19 (which stands for “coronavirus disease 2019”).

3. Tell students that the virus travels in tiny droplets that go into the air when you sneeze, cough, talk and sing. Wearing a mask helps prevent the spread of the virus to others. Masks also provide some protection to wearer from droplets.

4. Masks also keep you from touching your face, which is very important because the virus can be transferred from your hands into your eyes, nose and mouth. Finally, masks provide some protection from droplets sprayed into the air when other people talk, laugh or sing.

5. Select a grade-appropriate informational video from the list to watch with your class. The videos are focused on the proper, most healthy way to wear and handle face masks.

■ EXPLAIN

6. After watching the video, engage students in a discussion about what they learned regarding the proper way to put on and take off a mask. Suggested questions: Why is it important for a mask to cover your mouth and nose? Why is it necessary to put on and remove a mask carefully? The video explained that handwashing is important when putting on and taking off a mask. Why? What about washing your cloth mask?

Masks should be washed regularly to keep them clean. Most cloth masks can be washed in a washing machine along with regular laundry. They also can be washed by hand with soap and warm water.

7. Using your own face mask, demonstrate how to remove the mask by handling only the ear loops or ties. To show students how a mask should be handled before washing, fold the mask in half by bringing the outside corners together. Then, put your mask back on holding only the ear loops (see illustration below).
8. Have each student practice handling her or his mask, using only the ear loops. If students are at home or outside, have them remove their masks and put them back on by touching only the ear loops or ties. If possible, have students wash their hands after handling the masks.

![How to take off a mask](image)

9. Ask for any question’s students may still have regarding wearing a mask. You also might ask if anyone has a funny mask story to share!

10. You may wish to share your own feelings about wearing a mask to create a safe space for children to express their feelings and concerns.

11. Use the slides accompanying this activity to show students characteristics of masks that are effective in preventing respiratory diseases like COVID-19.

**EXTEND**

12. Explain that people have been very creative in finding fun and interesting ways to make face coverings. Ask students to describe their favorite mask designs.

13. Tell students that they will have a chance to create their own mask designs!

14. Show them the student page and review the directions with them.

15. Assign a time for sharing their designs later.

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The virus, which is a kind of coronavirus, causes a disease called COVID-19 (which stands for "coronavirus disease 2019"). The virus travels in tiny droplets that go into the air when you sneeze, cough, talk and sing. Face coverings (masks) help to reduce the spread of the virus that is making people sick all around the world.
THE SCIENCE

The latest science affirms that wearing a mask is critical in slowing the spread of COVID-19, especially when everyone in a community is wearing one. Masks provide a simple barrier to help prevent droplets from travelling into the air and onto other people when we breathe, cough or talk. Masks reduce the spray of droplets when they are worn properly, over the mouth and nose.

It is possible for someone to spread coronavirus even though they feel healthy. If you have COVID-19 and don’t know it, a mask will reduce the chance of you spreading it to others.

Depending on the type of mask, it also can provide some protection to the wearer. Although viruses are very tiny, they usually travel inside droplets of moisture which can be partially screened by a mask. Face shields and goggles help protect the eyes from droplets. However, they should be worn in combination with a mask over the mouth and nose.

RESOURCES

COVID HEALTHY ACTIONS, COMMUNITY KNOWLEDGE AND SCIENCE

A SCIENCE-BASED CURRICULUM FOR THE COVID-19 PANDEMIC

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OVERVIEW
People all over the world are creating interesting and fun designs for face masks during the COVID-19 pandemic. Wearing a mask is one of the most important things you can do to help stop the spread of the virus. Masks block droplets that come from your mouth and nose when you sneeze, cough, talk, laugh or sing. Masks also provide protection from virus particles that come from others. Also, they keep you from touching your nose and face. Since the mask is close to your eyes, it is a great reminder not to touch your eyes either.

No one really likes wearing a mask, but we have to do it to protect others and ourselves. Since we need to wear masks anyway, we might as well have fun with them!

If you could design your own face mask, what would it look like?

INSTRUCTIONS
• Your mask can be any shape, as long as it covers your nose and mouth.
• Mask designs can be drawn on any type of paper that measures 8 ½ x 11 inches (like notebook paper, construction paper or copy paper). Or, you can create a mask design on a tablet or computer using drawing software or in PowerPoint.
• The design should fill most of the sheet or screen, so that it can be seen clearly and easily.
• If you’re working on paper, you may use any type of media to draw and color your mask design (pencils, crayons, map pencils, markers, etc.). You also may create your design on a tablet or computer using digital tools.
• Check with your teacher for any other instructions.
• When complete, share your drawing with your teacher and classmates, either in person or on your computer. You also may take a clear, closeup photo of your mask design only and email it to your teacher to share with your class.
CREATE
MASK DESIGN