

Infectious Disease Patch Program

A collaboration between Girl Scouts of Virginia Skyline Council and Virginia Tech Carilion School of Medicine



In the wake of COVID-19, Girl Scouts of Virginia Skyline, in collaboration with Katherine L. Brown, Ph.D., an Assistant Professor at Virginia Tech Carilion School of Medicine, have created an Infectious Disease Patch Program. The overall purpose of this patch program is to educate Girl Scouts about infectious diseases, how they are spread and treatment and prevention of global pandemics. We have thoughtfully assembled age-appropriate content for this virtual STEM program, not only to provide girls with knowledge in the face of this health crisis, but also to engage the natural-born scientist in each of them by utilizing a relevant, real-world situation. It is the council's hope that this virtual program inspires girls to consider how they can build, invent, create, study, develop, cure and design their STEM futures to make the world a better place.



Senior & Ambassador:

Purpose: When I've finished this patch program, I'll know more about infectious diseases, who studies them, how pandemics are possible, and how to treat and prevent the spread of viruses globally.

Steps:

1. Learn what an infectious disease is.
 - Watch "[Infectious Diseases-An Introduction](#)"
 - Complete "[About Infectious Disease](#)" in *student view*
 - Alternatively, explore "[How Infection Works](#)"
2. Explore infectious disease epidemiology.
 - Watch "[What is epidemiology?](#)"
 - Complete "[Seeking the Cause](#)" in *student view*
 - Alternatively, explore "[Disease Threats](#)"
3. Discuss how pandemics are possible and how to prevent them.
 - Complete "[Viruses go Viral](#)" in *student view*
 - Alternatively, explore "[Global Challenges](#)"
 - Create a healthy habits poster
4. Research how to treat and prevent infections.
 - Complete "[Treatment and Prevention](#)" in *student view*
 - Alternatively, explore "[Prevention & Treatment](#)"
 - Conduct a [handwashing experiment](#) and create a video to educate younger Girl Scouts on the importance of handwashing
5. Solve real world outbreak investigations.
 - Play "[Solve the Outbreak](#)"



Cadette:

Purpose: When I've finished this patch program, I'll know more about infectious diseases, who studies them, what outbreaks and pandemics are, and what can be done to control them.

Steps:

1. Learn about germ theory and infectious disease.
 - Watch ["The Dramatic Origin of Germ Theory"](#)
 - Watch ["Infectious Diseases-An Introduction"](#)
2. Explore infectious disease epidemiology.
 - Watch ["What is epidemiology?"](#)
 - Learn about ["Disease Detectives"](#)
3. Find out about outbreaks and pandemics.
 - Watch ["Outbreak Investigation"](#)
 - Watch ["What Happens When There is a Pandemic?"](#)
 - Watch ["Slow Motion Sneezes"](#) and conduct your own [sneezing experiment](#)
4. Explore how we can control infectious diseases.
 - Explore ["How do vaccines work?"](#)
 - Learn about the [eradication of smallpox](#)
 - Alternatively, [learn how vaccines mimic disease agents and stimulate the immune system](#)
5. Solve real world outbreak investigations.
 - Play ["Solve the Outbreak"](#)
 - [Create a video meme](#) using Vidcode to demonstrate we can help prevent the spread of infectious diseases ([Create](#) a Vidcode student account to save and submit your work. The class code is: [all eighty two nice floors.](#))



Junior:

Purpose: When I've finished this patch program, I'll know more about infectious diseases, how they spread, and how my body protects itself from getting sick.

Steps:

1. Learn how germs are spread to people.
 - Explore ["How Do Germs Spread \(and why do they make us sick\)?"](#)
 - Complete this [clean hands experiment](#)
 - Alternatively, read the graphic novel ["Ask a Scientist: How Do People Become Infected with Germs?"](#)
2. Explore how germs make you sick.
 - Explore ["Cell vs. virus: A Battle for Health"](#)
 - Alternatively, watch ["What is a Virus?"](#)
 - And, learn how ["A Virus Attacks a Cell"](#) and ["How Viruses Reproduce"](#)
3. Know how our bodies can protect themselves from getting sick.
 - Explore ["How Does the Immune System Work?"](#)
 - Alternatively, read the graphic novel ["Ask a Scientist: How Does My Body Fight Disease?"](#)
 - Or, learn more about the body's [immune response](#) and the different types of immunity
4. Research how vaccines prevent you from getting sick.
 - Explore ["How Do Vaccines Work?"](#)
 - Explore ["How Vaccines Give the Body Immunity"](#)
5. Learn to become a disease detective.
 - Read the graphic novel ["The Junior Disease Detectives: Operation: Outbreak"](#) and create your own scene or character to demonstrate how to solve the "Operation: Outbreak"
 - [Meet these germs and the heroes that help to power against them](#)
 - Alternatively, read about [Edward Jenner](#) and [Martinus Beijerinck](#)



Brownie:

Purpose: When I've finished this patch program, I'll know more about infectious diseases, what germs are, and how I can keep from getting sick.

Steps:

1. Learn what germs are.
 - Watch ["Germs, Germs, Germs"](#)
 - Or, watch ["Colds, the Flu, and You"](#)
 - Alternatively, watch ["Why Do We Get Sick?"](#)
 - Make a model of a germ using play-doh or clay and q-tips



2. Explore how to stop germs from getting you sick.
 - Watch ["Fight Germs. Wash your Hands!"](#)
 - Investigate these [Vaccine Heroes](#) to discover what makes them great
3. Know how your body stops you from getting sick.
 - Watch ["How the Immune System Works"](#)
 - Complete this [clean hands experiment](#)
4. Research how your doctor can help you from getting sick.
 - Watch ["Why Do We Get Vaccines?"](#)
5. Become a germ fighter.
 - Print and complete ["Be a Germ Buster"](#)



Daisy:

Purpose: When I have finished this patch program, I will know more about infectious diseases, what germs are, and how I can keep from getting sick.

Steps:

1. Learn what germs and viruses are.
 - Watch "[Germs, Germs, Germs](#)"
 - Or, watch "[Good Germs vs. Bad Germs](#)"
 - And, watch "[What Is a Virus?](#)"
2. Explore how to stop germs from getting you sick.
 - Watch "[Hand Washing for Kids - Get Rid of Germs Learn How to Wash Your Hands](#)"
 - Or, watch "[How to Wash Your Hands](#)"
 - And, do this [germ experiment](#)
3. Know how your body stops you from getting sick.
 - Watch "[How the Immune System Works](#)"
4. Find out how your doctor can help you from getting sick.
 - Watch "[Why Do We Get Vaccines?](#)"
5. Become a germ fighter.
 - Watch "[Daniel the Germ-Fighting Superhero](#)"
 - Print and complete "[Be a Germ Buster](#)"



Congratulations!

You've completed the Infectious Disease Patch Program and earned your patch! Please complete the following evaluation, which includes the opportunity to order your program patch.

You can find the evaluation form [here](#).

Or, copy and paste the following link into your browser:

<https://gsvscgirlscouts.wufoo.com/forms/infectious-disease-patch-program-evaluation/>



June 2020