

CITIZEN SCIENCE AND ZONOSIS (Health and Science Literacy) – Adult/Teen Program

Zoonosis is the word scientists use to describe infectious diseases that may be spread to humans which originate in animals. The coronavirus that causes COVID is just one of many human diseases thought to be caused by zoonosis, or a “spillover” event. This program will introduce patrons to the concept of zoonosis, ways it is tracked and studied, and what is being done to prevent or minimize the risks of future spillover events.

PROGRAM DESCRIPTION

Participants will be introduced to the topic of zoonosis, which is the spread of disease from animals to humans. The CDC One Health page (listed below) is an excellent resource to find more information, as well as graphics and flyers. Participants will then be introduced to the SciStarter platform and one or more citizen science projects related to the topic of zoonosis and disease tracking. The following are some recommended projects.

- [Outbreaks Near Me](#) - This is a project of Boston Children’s Hospital and Harvard School of Public Health to track outbreaks of infectious disease through self-reported symptoms. Some of the diseases they are tracking, including COVID and flu, likely have zoonotic origins.
- [Mosquito Byte](#) - This project is sponsored by NCSU to track mosquito activity. Mosquitos are a common animal source or vector for multiple human diseases, including malaria, zika and yellow fever.
- [The Three Mosquiteers](#) - Sponsored by the Laboratory of Vector Ecology and Applied Entomology, this project aims to raise awareness about mosquito-borne diseases.
- [Fight Malaria At Home](#) - This program allows you to donate some of your computer’s work capacity/processing speed, to be used to help researchers looking at possible protein targets for malaria treatments.
- [Open Pandemics](#) - The World Community Grid project, sponsored by IBM, aims to use crowdsourced computing power to tackle pandemics, such as COVID.

MATERIALS

- Selection of recommended books and films
- Device with internet access

PERSONNEL

- 1-2 Staff to set up program space (or virtual space)
- 1-2 Staff to set up passive program display

SPACE

- Program room or outdoor space appropriate to local COVID guidelines
- Virtual program platform such a Zoom, WebEx or Google Meet
- Table, counter top or similar display space

ACTIVITIES

Virtual Options

Citizen Science Webinar - Introduce the concept of zoonosis through research with citizen science with a live webinar or shared streaming video through SciStarter. SciStarter has an [Introduction to Citizen Science](#) tutorial that introduces the who, the what, the how, and the why of citizen science. There are several ongoing projects you and your patrons can get involved in that help track diseases with zoonotic roots or animal vector spread. If possible, partner with a local disease ecologist, infectious disease doctor, or similar expert to share their expertise and answer questions about zoonosis and what human populations can do to help.

Introduce Zoonosis in your book club - [The NNLM Reading Club](#) is a selection of “ready-to-use” book titles along with free and downloadable materials designed to help libraries support the health information needs of their communities. The selections are reflective of national health observances like Mental Health Awareness, LGBTQ Health, Nutrition, Racism and Health, and many others. NNLM Reading Club also includes Public Health titles and information about infectious diseases and vaccination. Each month topics and titles are added along with downloadable resources to facilitate either a book club including the book discussion guide, print & social media promotional materials & corresponding health info pieces.

Passive Program

Create a virtual or in-person display of several of the suggested titles below, or similar titles in your collection along with a QR Code linking patrons to recommended citizen science projects. You might also include flyers or graphics from the CDC One Health resources page ([link below](#)).

Alternate Program Suggestions

Alternative programs might include a discussion with a local veterinarian about the importance of vaccination in limiting the spread of zoonotic infections, a book club featuring one of the suggested titles below, or a film screening of one of the suggested programs below.

RESOURCES

Non-Fiction

- Quammen, David. *Spillover: Animal Infections and the Next Human Pandemic*. W. W. Norton & Company. 2020. 978-0393066807.
- Andiman, Warren. *Animal Viruses and Humans: A Narrow Divide*. Paul Dry Books. 2018. 978-1589881228.
- Quammen, David. *The Chimp and the River: How AIDS Emerged From an African Forest*. W. W. Norton & Company. 2015. 978-0393350845.
- Quammen, David. *Ebola: The Natural and Human History of a Deadly Virus*. W. W. Norton & Company. 2015. 978-0393351552.

- Spinney, Laura. *Pale Rider*. PublicAffairs. 2017. 978-1610397674.
- Murphy, Jim and Alison Blank. *Invincible Microbe: Tuberculosis and the Never-Ending Search for a Cure*. Clarion Books. 2012. 978-0618535743.
- Shah, Sonia. *The Fever: How Malaria Has Ruled Humankind for 500,000 Years*. Picador USA. 2011. 978-0312573010.
- Crosby, Molly Caldwell. *The American Plague: The Untold Story of Yellow Fever, The Epidemic That Shaped Our History*. Berkley. 2007. 978-0425217757.
- Defoe, Daniel. *A Journal of the Plague Year*. Penguin Classics. 2003. 978-0140437850.
- Kelly, John. *The Great Mortality: An Intimate History of the Black Death, the Most Devastating Plague of All Time*. Harper Perennial. 2006. 978-0060006938.

Fiction

- Roberts, Nora. *Year One*. St. Martin's Press. 2017. 978-1250122957.
- King, Stephen. *The Stand*. Anchor. 2011. 978-0307743688.
- Crichton, Michael. *The Andromeda Strain*. Vintage. 2017. 978-1101974490.
- Mandel, Emily St. John. *Station Eleven*. Vintage. 2011. 978-0804172448.
- Serpell, Namwali. *The Old Drift*. Hogarth. 2019. 978-1101907146.
- Wright, Lawrence. *The End of October*. Knopf. 2020. 978-0525658658.
- Brooks, Max. *World War Z: An Oral History of the Zombie War*. Three Rivers Press. 2007. 978-0307346612.

Websites

- [Resources for Public Libraries](#) from the NNLM includes health information and programming resources, webinars, and funding opportunities.
- [NNLM Reading Club on Infectious Diseases](#)
- [SciStarter Library Resources](#)
- [Library and Community Guide to Citizen Science](#)
- [CDC One Health Website](#)
- [CDC One Health Graphics and Flyers](#)
- [CDC National Center for Emerging and Zoonotic Infectious Disease](#)
- [CDC Healthy Pets, Healthy People Resources](#)

Films/TV

- American Experience: *The Forgotten Plague*. PBS. 2015.
- American Experience: *Rachel Carson*. PBS. 2017.
- *Contagion*. 2011.
- *Nova: Surviving Ebola*. PBS. 2014
- *World War Z*. 2013.
- *The Virus Hunters*. National Geographic. 2015.
- *Race Against the Killer Flu*. National Geographic. 2010.

EVALUATION

[Project Outcome](#) is a free toolkit from the Public Library Association designed to help public libraries understand and share the impact of essential library services and programs by providing simple surveys and an easy-to-use process for measuring and analyzing outcomes.

An exit ticket with 2-3 follow up questions is an easy way to gain feedback following the program. It might be a poll included in a webinar, a ¼ sheet survey in the display area or a tablet on an easel for an in-person program.

Suggested questions:

Do you know more about zoonosis as a result of attending this program?

Do you plan to participate in one of the citizen science programs presented?

Did you learn one way you can help address disease spread?