

## Care and COVID Tech Considerations

### Tablet:

- Pros:
  - High engagement
  - High versatility – can take different types of photos (e.g., panoramic, portrait) and videos (e.g., slow motion)
  - Can hold many photos
  - Can add applications for editing photos (e.g., Lightroom, Photoshop)
  - Can add applications for sharing photos (e.g., Google Drive, Dropbox)
  - Compatible with most macro lenses (see Segment 3)
- Cons:
  - Price (wide range considering quality and brand)
  - Fragile (adding cases creates additional expense)
  - Storing may be more difficult
  - Youth may have challenges in sharing tablets with one another (if one per youth not an option)
    - *Could supplement with other type of camera (½ tablets, ½ alternative)*
  - Can be distracting – may need to monitor youth for using tablets for other purposes (e.g., games, social media)
  - May require wifi – large number of tablets transferring photos can be difficult on bandwidth
- Printing:
  - Can connect wirelessly or directly to most modern printers
  - May require on-the-stop troubleshooting
  - May require high quality wifi
  - Relatively easy to send in for printing (i.e., 1-hour photo) because files are already electronic
- Sharing:
  - Electronic photos can be projected onto screen
  - Photos can be printed for sharing
  - Sharing can occur directly from the tablet itself
  - May require high quality wifi

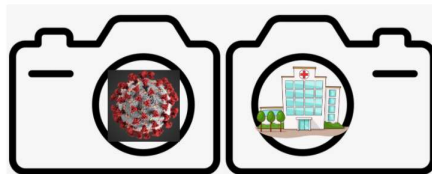
### Digital Camera:

- Pros:
  - Less expensive than tablets
  - Potentially more durable than tablets
  - Cases (or additional protective hardware) not usually required
  - Can take a few different types of photos (e.g., zoom in and out, video)
  - Maybe less distracting than tablets
  - Less need to monitor or limit functionality
  - Can hold many photos

- Does not require wifi
- Cons:
  - May be less engaging – although [the old digital camera is coming back into style](#)
  - Need to connect to a computer to upload photos
  - Less versatility with types of photos and videos
- Printing:
  - May need to upload photos to computer or printer manually before printing
  - A little more difficult to send in (i.e., 1-hour photo) because of need to upload photos off camera
- Sharing:
  - Extra step to upload photos in order to project them on big screen
  - Photos can be printed for sharing
  - Sharing may not be easy to share directly from the camera itself

### **Polaroid Camera (or similar):**

- Pros:
  - Nostalgic for the adults
  - Novel to youth
  - Relatively affordable (compared to tablets)
  - May be less distracting than tablets
  - Less need to monitor or limit functionality
  - Do not have to purchase or manage printers
  - Does not require wifi
  - No need to upload anything – it's an all-in-one (although a limited all-in-one)
- Cons:
  - Less versatile than any other option – only takes photos
  - Limited number of photos taken (youth will not be able to take pictures endlessly)
  - Photo paper is expensive
  - Photos are relatively small
  - Cannot have electronic version of photos for later uses (e.g., reprinting for art show) – need to save physical copies
- Printing:
  - Printing is all taken care of
- Sharing:
  - Youth share printed photos physically rather than electronically



## Segment Three Facilitation Guide

### Care and Community

#### Overview

In this segment, we expand the lens through which we view protection from COVID – from thinking about protection on an individual level to thinking about protection on a community level. Learners will be introduced to how pathogens spread. Learners will explore the question: how can we protect our community from COVID? Learners will engage with three common ways to protect their community from COVID: wearing masks, social distancing, and getting vaccinated. After learning about some ways to protect others in their community from COVID, learners will produce self-portraits depicting themselves as community protectors.

#### Big Ideas/Questions

- How does a pathogen spread between individuals?
- What protects a community from COVID (transmittable pathogenic disease)?
  - What can individuals do to protect their community from pathogens?
- Why should we protect our community from COVID?

#### Grade Level/Age

3rd - 5th grade (approx. ages 8 - 11)

#### Objectives and Assessment (Science and Art)

Objective	Assessment
<i>Learners describe how a pathogen spreads through a community.</i>	<i>Learners identify patterns in Community Pathogen Tag that describe how a pathogen moves through a community, including how quickly it can be transmitted to many people.</i>
<i>Learners describe three common methods for reducing pathogen spread through communities.</i>	<i>Learners interpret mini-activity results to conclude how each of the three methods helps stop the spread of COVID19.</i>
<i>Learners interpret key ideas and details of self-portraits using visual thinking strategies.</i>	<i>Learners identify specific attributes of photographs using language like “I see” or “I think” and “because” during discussion.</i>
<i>Learners use understanding of composition, framing to take meaningful self-portraits.</i>	<i>Elements of composition, framing and perspective are apparent in photographs.</i>

<i>Learners make connections between protecting small systems (such as the human body) and larger systems (such as communities).</i>	<i>In discussing how to protect a community system from COVID, learners move across individual systems and community systems, explaining cause and effect on different levels.</i>
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## **National Core Arts Standards**

Anchor Standard #1: Generate and conceptualize artistic ideas and work.

Anchor Standard #2: Organize and develop artistic ideas and work.

Anchor Standard #7: Perceive and analyze artistic work.

Anchor Standard #8: Interpret intent and meaning in artistic work.

## **Next Generation Science Standards**

### **Disciplinary Core Ideas**

- ESS3.B Natural Hazards: A variety of natural hazards result from natural processes. Humans cannot eliminate natural hazards but can take steps to reduce their impacts.
- LS2.D Social Interactions and Group Behavior: Being part of a group helps animals obtain food, protect themselves, and cope with changes.

### **Science and Engineering Practices**

- Asking Questions and Defining Problems
- Developing and Using Models
- Planning and Carrying Out Investigations
- Constructing Explanations and Designing Solutions
- Obtaining, Evaluating, and Communicating Information

### **Crosscutting Concepts**

- Cause and Effect: Cause and effect relationships are routinely identified.
- Systems and Systems Models: A system can be described in terms of its components and their interactions.
- Scale, Proportion, and Quantity: Natural objects exist from the very small to the immensely large.
- Patterns: learners identify similarities and differences in order to sort and classify natural objects and design products.
- Structure and Function: Different materials have different substructures and substructures have shapes and parts that serve functions.

## **Time**

2 hours

## **Materials**

- Projector and screen to display slide decks and photos
- Computer to display slide decks and photos
- [Segment 3 slide deck](#)
- Space for gathering and sharing photos taken by learners
  - Large screen for whole-group sharing?
  - Printed photos for small groups/individuals?
- Cameras
- Community Agreement poster about using/sharing cameras
- Community Agreement poster for discussing each other's photos
- Notecards
- Pencils
- Pencil sharpeners (optional)
- Dice (1 die for every six learners; e.g., 18 learners requires 3 dice, 32 learners requires 6 dice)
- Bubble machines with bubble liquid
- Spray bottles (1 per pair of youth) pre-filled with water and baking soda in a ratio of 3 teaspoons baking soda to 1 cup water
- Coloring-changing (goldenrod) paper (one per youth)
- Tape
- Masks (one per youth)
- Butcher paper with target (circle) drawn in center (3)
- 4 differently colored puffball packs (at least 5 puffballs per color per person)
- Measuring tape
- Bleach (at least 3 cups)
- Red food coloring
- Plastic cups (6)
- Water (at least 3 cups)
- Sketching paper
- Assorted self-portrait props (can use the same props as Segment two; we have found it helpful to have a prop box with a variety of items for learners to utilize). Fun props could include:
  - Dress up clothes (coats, gloves, hats, bodysuits, dresses, etc.)
  - Masks
  - Hand sanitizer
  - Sponges
  - Jewelry
  - Stickers
- Optional: Materials for makeshift backdrop for self-portraits (e.g., black sheet to hang as backdrop)
- Post-it notes
- Poster paper titled "Care and Community" for placing post-it notes at the end of the segment

## **Background Information for Facilitators**

### *Art Background Information*

Self-portraits are works an artist makes that represents their own likeness in some way. These can be photographs, sculptures, paintings, or any other type of medium that the artist wants to use. Often, the objects in the portrait give more details of the artist's life, like their likes, hobbies, and special interests. Colors and themes can also evoke a certain mood the artist is trying to portray about themselves. This helps the artist tell a story about themselves. When doing self-portrait photographs, the composition of the self-portrait can tell a story of the individual in the photo, too! Often, self-portraits are a snapshot of an artist and their story completely from their perspective.

We also again use **Visual Thinking Strategies** in this segment. These are inquiry-based teaching methods that improve a learner's ability to describe, analyze, and interpret imagery and information through observing and discussing visual art. It has been proven that using the following phrases get the best results from learners/observers. Learn more at [www.vtshome.org](http://www.vtshome.org).

- "Take a moment to look at this photograph"
- (Q1) What's going on in this picture?
- (Q2) What do you see that makes you say that?
- (Q3) What more can we find?
- (Q4) What could be going on beyond the frame of this photo?

### *Science Background Information*

Pathogens can be passed from one individual to another in a community, causing a disease to spread rapidly. COVID spreads through water droplets from a sick person from when they sneeze, cough, or touch their nose or eyes. If someone else accidentally swallows those water droplets they can also become sick with COVID. There are actions individuals can take to protect their community from COVID. This includes wearing a mask, washing your hands, not touching your eyes/mouth/nose in public, social distancing, staying home if you feel sick, and getting vaccinated! Protecting yourself will help protect your community!! [See [Module 2 - Care and Self](#) for a more detailed list of different self-protective actions you can take]

Our communities are important - they are our families, our neighbors, our friends. The people in our communities can be very different from one another. We have differences in jobs, ages, resources, and health. Being part of a community is important for our happiness, but can increase the risk of human-to-human pathogen transmission. Sharing space with other people puts us at potential risk for unintentionally spreading pathogens to one another. Sometimes we do not know we are sick, and sometimes when we are sick we aren't able to stay home or get better. That is why if you are able to protect yourself, you will protect others in your community from getting sick too.

### **Preparation**

- Make sure all cameras are charged and ready for use.
- Set up a computer and projector to display slide deck and photos.

- Decide how to project or share photos for discussion – physically or electronically?
- Decide how to gather and share learner's photos – Designated on-line application? Google folder? Airdrop? Printing physical copies?
  - Part A and B of this segment both have learners share and discuss their photographs with one another. How this is organized and facilitated is largely dependent on the facilitator's preferences and the learning environment. Learners' photos can be projected to a screen, printed and passed around, or posted around the room and presented as a gallery.
- Part A Preparation:
  - Prepare an open space for learners to play the games associated with direct and indirect pathogen transmission. The space should be large enough for your learners to walk freely but be close enough to make contact with one another.
  - Fill bubble machines with bubble liquid and make sure there are batteries.
  - Set up mini-activity stations with materials needed for each:
    - Mask mini-activity
    - Social distancing mini-activity
    - Vaccine demonstration
- Part B Preparation:
  - Set up an area for learners to take their self-portraits. This could include:
    - Backdrop for photos (a sheet hanging on the wall)
    - A stool
    - Assorted props for learners to choose from

## Facilitation Guide

**Part A (approx. 1 hour):** *How are pathogens passed in a community? What actions can prevent pathogens from spreading in a community?*

- Big Picture Framing: community (5 minutes)
  - Using the “Big Picture” slide for the whole group, frame the part of the system this activity is focusing on: community.
  - Explain that today we are going to focus not only on how we can protect ourselves from COVID through taking actions that protect our bodies from infection, but also how we can protect others around us from COVID.
  - Ask learners what they think we mean by “community.” Who makes up their community? Have learners share aloud or do a pair and share.
  - Ask learners why they think it is important to help protect their community from COVID.
  - Looking at the “Big Picture,” ask learners to make predictions about how they think a pathogen could spread through a community. Ask them how they think they could help stop it from spreading.
  - Today we are going to explore how a pathogen spreads across a community from individual to individual and ways that we can stop that spread.
- Whole group introduction activity to how pathogens spread (20 minutes)

- Explain that we are going to explore two ways that pathogens can be spread – each through a game. The first way is through direct, or contact, transmission. Use the slide in [Segment 3 slide deck](#) to explain.
  - Contact transmission is when a pathogen is passed through skin-to-skin contact, such as high fives.
- Direct contact transmission – learners play a game to explore how pathogens can be spread directly.
  - Have each learner count off and tell them to remember their numbers.
  - Give each learner a notecard and a pencil.
  - Have learners spread out around the room and begin walking around the room with their notecard and their pencil.
  - When learners are close enough to another learner to give them a high five, they need to stop and write the other person's number on their card. Writing the other person's number on their card means they “came into contact” with that person.
  - Have learners do this long enough that they have approximately 3-5 numbers on their cards.
  - Once learners sit down, roll the dice (one die for 6 or fewer learners, two dice for 7-12 learners, 3 dice for 13-18 learners, and so on). The total number after the dice are rolled is the number that was “infected.” For example, if there are 24 learners total, roll four dice. If the four dice, for example, total 17 then learner number 17 was “infected.”
  - Tell learners that anyone who came into contact with that learner is also sick through direct contact transmission.
  - Ask learners to raise their hand if they came into contact with our infected community member.
- Debrief the game
  - Ask learners if they were surprised by how quickly the pathogen spread. What would have happened if two people, rather than one, were infected with the pathogen? What are some ways that you think could help stop the spread of the pathogen?
    - You could even roll the dice again and pretend that two people in our community were infected. How does that change the spread through the community?
  - Ask learners to imagine a pathogen that doesn't even require direct contact to be passed along. How could that pathogen be spread?  
*Through the air.*
  - *Have learners wash or sanitize their hands after this activity if they actually gave each other high fives.*
- The second way that pathogens can be transmitted is through droplet or air transmission. Use the slide in Segment 3 slide deck to explain.
  - Droplet transmission is when a pathogen is passed between humans through droplets that people sneeze, cough, drip or exhale.



- Indirect, droplet, or air transmission – learners play another game to explore how pathogens can be spread indirectly.
  - Explain that some pathogens can be transmitted through direct contact *and* also through the air when someone breathes, sneezes, or coughs.
  - In this game, learners pretend that you, the facilitator, is sick from a pathogen. While you promise not to touch anybody, you can still pass your pathogen through the air.
  - Have learners wander around the room. While they are wandering, use the bubble gun to blow bubbles into the air. If a bubble lands on a learner, they become sick. This is similar to a droplet landing on someone and passing along the pathogen.
  - After about 30 seconds, sort learners by those who became sick (had a bubble land on them) and those who did not become sick (did not have a bubble land on them).
- Debrief the game – Ask learners to compare how a pathogen spreads directly versus indirectly.
  - How could we help stop the spread of these kinds of pathogens?
  - Do you think COVID is a pathogen that spreads directly, indirectly, or both? Why?
  - Explain that the pathogen that causes COVID-19 can be passed both directly, through contact, and indirectly, through droplets, making it a pathogen that very easily spreads throughout a community.
- Introduce different ways that individuals can protect communities from pathogens spreading. For each approach, learners will do a **mini-activity**. (10 minutes per activity, 30 minutes total)
  - For these activities, facilitators should break the large group into three smaller groups. (See Tips for Group Participation for alternatives). Have each group rotate through all three mini-activities, spending approximately 10 minutes at each. There should be one facilitator at each mini-activity to introduce and support learners through the activity. *Reminder: the vaccine mini-activity is a demonstration that should be completed by a facilitator while learners observe.*
  - **Mini Activity: Wearing Masks** – This activity is best done in groups of 3 with each learner playing a different role:
    - Learner 1: Uninfected - holds the color-changing paper up
    - Learner 2: Infected - uses the spray bottle pre-filled with water and baking soda
    - Learner 3: Protector - holds the mask

Using the spray bottles pre-filled with water and baking soda, have learners spray onto two separate sheets of color-changing (goldenrod) paper from approx. 12 inches away. One paper should be sprayed without a mask and one paper sprayed through a mask. One student should hold the mask to the spray bottle while the other holds the bottle. It is helpful to keep the mask taut and the nozzle of the spray bottle pressed firmly against the mask - it should be difficult to

- get water to spray through the mask, which demonstrates its protective effect. As a group, discuss the results of the spray patterns with and without the mask.
- **Mini Activity: Social distancing** – Have learners stand in a circle around a target/circle drawn onto a large piece of butcher paper. Starting as close as possible, learners should try to toss in their ColorA puffballs. Then, move to 3 feet away from the center, and toss in the ColorB puffballs. Move to 6 feet away from the center, and toss in the ColorC puffballs. Move to 12 feet away from the center, and toss in the ColorD puffballs. Make sure that all of the puffballs are left alone once they are tossed. It is ok if they don't go in the box! Have learners pick up their puffballs after discussion. Prompt learners to think about the relationship between distance and the amount of puffballs that made it to the center target.
    - When we were close, was it easy or hard to get the puffball into the box? What about when we were far away? What do the colors of puffballs we see on the floor tell us about where they came from?
    - How is this related to COVID transmission? If we compare the puffballs to a virus, how does distance change the way they travel? Have we talked about any ways to protect ourselves against viruses that relate to this activity?
  - **Vaccines: *This is a demonstration rather than a hands-on activity.*** Begin with two cups, one filled with bleach and one filled with water. Explain that one cup (water) represents someone who does not have a vaccination against COVID. The other cup (bleach) represents someone who does have a vaccination against COVID.
    - Use food coloring to represent the pathogen. Explain that if you have a vaccine or not, you can still come into contact with the pathogen. But! What happens to your body when you come into contact with COVID is different depending on whether or not you are vaccinated.
    - Have learners make predictions about what they think will happen when food coloring (COVID pathogen) is dropped into water and when it is dropped into bleach.
    - Drop a few drops of food coloring into water. Have learners observe what happens. Where does the pathogen go? Does it move throughout? Based on the color of the water now, do you think this person is sick or not?
    - Drop a few drops of food coloring into the bleach. Have learners observe what happens. Does the pathogen spread? How does the color (infection) compare to the water?
    - Explain that this is a model representing how a vaccination works. Even though someone can come into contact with the COVID pathogen, people with the vaccine (bleach) are less likely to get seriously sick and also less likely to pass it along to others. ***Emphasize that this is a model (an example illustration). Bleach should never be consumed to protect from pathogens.***
  - Review and discuss the three forms of protection and relate them back to the community spread of pathogens (10 minutes).

- Ask learners to look back at their pictures from the mask activity where they sprayed a piece of color-changing paper both with and without a mask to block the spray. What do they notice in their pictures? How can masks reduce the spread of a pathogen through a community?
- Ask learners to look back at their pictures from the social distancing activity where they threw puffballs at the target from different distances. How can social distancing protect communities from COVID? How does it affect a pathogen moving through a community?
- Ask learners to recall the food coloring and bleach demonstration. How did the pathogen spread when it was placed into the vaccinated cup (bleach) compared to the non-vaccinated cup (water)? How does getting vaccinated protect communities from COVID? How does getting a vaccine influence the spread of a pathogen through a community?

**Part B (approx. 1 hour):** *Self-portraits can tell the story of an individual. We are going to create self-portraits of each of us as “community protectors.”*

- Explain that today we are going to tell stories of how to protect communities from the spread of COVID. We are going to do this through self-portraits – a style of photography. Each learner will have an opportunity to take a self-portrait of themselves dressing up and acting out what it looks like to be a community COVID protector.
  - Begin by showing examples of self-portraits using the [slide deck](#) (10 minutes). With each photo, ask visual thinking strategic questions:
    - (Q1) What’s going on in this picture?
    - (Q2) What do you see that makes you say that?
    - (Q3) What more can we find?
    - (Q4) What could be going on beyond the frame of this photo?
  - Explain that self-portraits can be used to tell a story about a person and the time and place they live.
  - Explain that learners can pull from the prop box and dress up as a community COVID protector. They can use masks, physical distancing, and other objects (that could, for example, represent vaccines, etc.) to show themselves as a community protector.
- Have learners plan and take their own self-portraits: (25 minutes)
  - Have learners sketch some ideas for their self-portrait before selecting props and taking photos.
  - Give learners some time to select objects that they would like to use in their self-portrait, to plan out how they want to show themselves as a community protector.
  - Once learners have planned out their self-portrait, have them come to the self-portrait station to take their photo.
  - At least one facilitator will need to be at the self-portrait station to take the self-portraits.
- After learners have taken their self-portraits, have them share and discuss each other’s photos (15 minutes). A gallery walk may be a useful way to conduct this discussion. If time allows, hang each learners’ self-portrait on the wall displaying them around the

room. Give learners different color post-it notes that correspond to different VTS questions and have them walk around the room looking at other learners' self-portraits. Have learners respond to each other's self-portraits by writing comments on post-it notes. See [slide deck](#) for example questions.

- Encourage learners to use the visual thinking strategy questions:
  - (Q1) What's going on in this picture?
  - (Q2) What do you see that makes you say that?
  - (Q3) What more can we find?
  - (Q4) What could be going on beyond the frame of this photo?
- Big Picture Segment follow-up (10 minutes)
  - Ask learners to reflect on three ways they think they can help protect their community from COVID. Have learners write these individually on post-it notes and display them on the "Care and Community" group poster. Discuss commonalities across learners responses and commonalities/differences between the protecting self (Segment 2) and protecting community (this segment) posters.

### **Tips for Group Participation**

- In Part A we have suggested breaking into three smaller groups when doing the mini-activities (Wearing Masks, Social Distancing, and Vaccines). Depending on the number of facilitators and students you may choose to organize this differently. For example, you could do Vaccines as a whole-class demonstration and then split the students into two groups for Wearing Masks and Social Distancing. This is a good option if you have only two facilitators. If you have a relatively smaller number of students and one facilitator you could simply do the activities as a whole group one at a time.
- Photo sharing and discussion can be facilitated in many different ways depending on your learners and learning environment. Discussions can occur as a whole group with one photo projected for all to see, in small groups, or as a gallery walk with learners walking around the room where some/all of the photos are on display.
  - For small groups and gallery walks, consider posting the VTS questions in written form in the classroom to remind learners of the discussion prompts.
  - For small groups, you could ask small groups to work together to create a poster (using words and/or drawings) that shares some responses to the VTS questions.
  - Gallery walks can be especially helpful if you have a large number of learners and/or your learners need to "get some wiggles out." You can make a gallery walk "interactive" by giving learners small post-it notes and pens/pencils where they can write and post by each displayed photo short responses to one or more of the VTS strategies.
  - If you are working with a large group of learners, you may need to select a subset of learners to share their photos. If this is the case, pay attention to making sure that, over the course of the curriculum, all learners eventually have an opportunity to share.

## Extension Activities

The following extension activity can be used as a model for learners to experience, through an embodied game, how pathogens can spread through a community. Part A introduces learners to pathogen spread without protection. Part B adapts the game to include elements of protection (i.e., wearing masks) in the game to model how pathogen spread is impacted by protective measures.

- **Part A – Community Pathogen Tag:** Learners are given a necklace with a card hanging from it. The card has two sides, a green side and a red side. The green side means “uninfected” and the red side means “infected.”
  - The game begins with just 1-2 learners that are “infected” with a pathogen and the rest are “uninfected.”
  - Infected (red tag) players are “it” and are trying to tag uninfected players. If tagged by an infected player, the pathogen is passed along and the uninfected player must turn their sign to the red (infected) side. Once they are red, they try to tag other uninfected (green) players. Run the game for a couple of minutes.
  - After the first round of the game, discuss what happened as a group. Did the pathogen spread quickly or slowly? Ask learners what they think could have slowed the spread of the pathogen?
  - Mention that it is recommended that people who are infected (those with red tags) rest and stay away from others so as not to infect them. But with COVID, some people who are infected do not even know they are infected and can still pass on the pathogen. They can move from green to red and not even know it.
- **Part B – Revisit Tag Game with Protection.** Revisit the tag game again, but this time, include some of the elements of protection that learners explored in the mini-activities. Depending on time, facilitators can choose to implement any of the “protective measures” into the game below.
  - **Masks as protection:** As before, start with 1-2 learners as “infected” with the pathogen. Of the remaining “uninfected” learners, give half of them a “mask” or “shield.” Explain that the people with the shield can only be tagged (infected) if they let their shield down. If a learner is tagged by someone “infected” then they must turn their card to red and begin tagging. Run the game for a couple of minutes.
    - Debrief what happened with learners. Who became infected more? Those who were “wearing masks” or those who weren’t?
    - Ask learners what they think would happen if the initial “infected” learners themselves were wearing a mask? Would that have changed the outcome?
  - **Social distancing as protection.** Start with 1-2 learners “infected.” This time, instead of shields to represent masks, learners will use hula hoops to represent social distancing. Learners can imagine the hula hoop is like a bubble surrounding them and protecting them. If someone who is “infected” bumps into the hula hoop

while trying to tag them, then they are not able to infect them. If they are able to tag them without making contact with the hula hoop, then they infect that person. Start with 1-2 infected and half of the remaining learners with hula hoops, and the remaining half without hula hoops. Run a round of game play for a couple of minutes.

- Discuss what happened during game play: Who was infected more, people with a protective space bubble? Or people without it? Why do you think that is?
- **Alternative social distancing tag:** Have learners spread out but stay within 3 feet from each other, standing in place. One learner (or facilitator) is the "pathogen". In 30 seconds, the "pathogen" goes and tags as many people as they can. If you get tagged, sit down. Repeat the game but have students spread out more (to resemble social distancing). Can repeat with different numbers of pathogens or change spatial arrangement of the people. Have a discussion of how being far apart physically affected the speed of the pathogen/the amount of people infected.
- **Vaccines as protection.** In this adaptation, rather than half the learners with masks or social distance bubbles, half the learners will have blue stickers on their shirts. This means that they have "been vaccinated." learners with blue dots, even if tagged, do not become "infected," they keep their card on green for "uninfected" and do not go on to infect others. Beginning with 1-2 infected learners, have them play the game as usual. Run a round of the game for a couple of minutes.
  - Discuss the game: How did being vaccinated help protect the community in the game? Did a lot of people become infected or only a few people?
- **Discuss the game as a whole.**
  - How do you think masks help protect the community? Think about our spray art and the shields in the game.
  - How do you think social distancing helps protect the community? Think about our spray art and the game with the hula hoops.
  - How do you think vaccines help protect the community? Think about our activity and the game where some people were unable to be infected.
  - What would happen if we had a game where shields, hula hoops, and unaffected people were all involved? How do you think the pathogen would spread through that community?
  - Which of these things are easy to do? Which are harder?

Some activities included in this segment were adapted from the following:

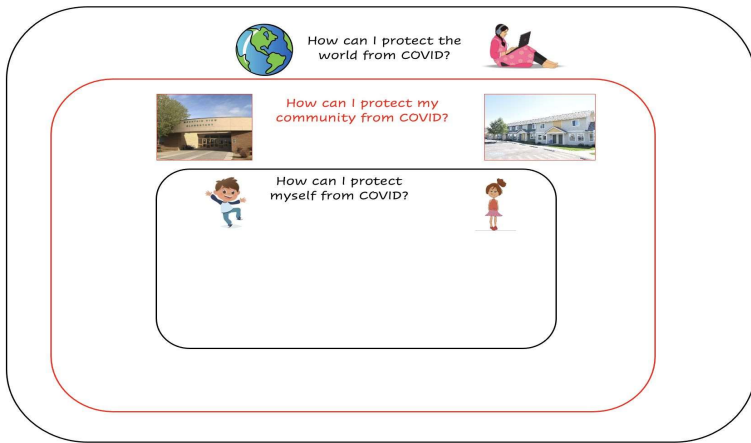
<https://www.nationalgeographic.org/lesson/theres-outbreak/print/>

### **Extended Science Background**

*Protect your friends from chickenpox!*

The Varicella- zoster virus (VZV) is a respiratory virus that causes Chickenpox and Shingles. Chickenpox infection causes common respiratory symptoms, but is more famously associated with an itchy, blister-like rash. For people who had Chickenpox as children, the virus remains inside their body and can become active when they are much older, causing Shingles. VZV has a high infection rate - up to 90% of people close to an infected person will also become infected if they are unvaccinated.

In recent years, some parents have been using “Pox Parties” as a substitute for vaccination - intentionally exposing their children to a chickenpox-infected child. However, this infection puts the children at risk for future development of Shingles. Also, this means that VZV remains active in the population, potentially spreading to vulnerable people who do not have the choice to get vaccinated. While the people attending Pox Parties might be acting out of care for their child, their actions can put others in their community at risk. Understanding how viruses spread and are prevented can help us feel confident in making safe medical decisions for ourselves and help protect those around us!

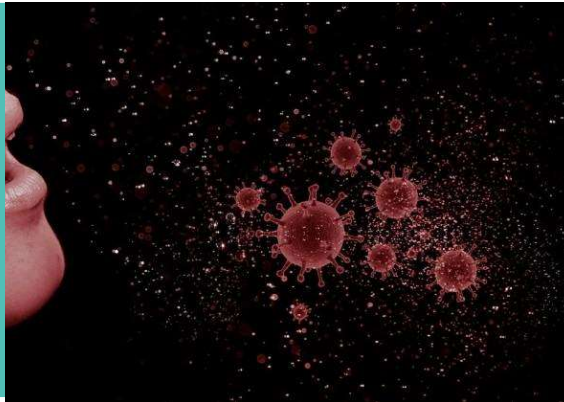


what is **community**?

who is part of your **community**?

**contact transmission:** a **pathogen** is passed between humans from **skin-to-skin** contact, such as high fives!

- Write your number on the front of notecard
- Spread out around room
- When I say "Go!" start walking around the room
- When close enough to high five someone, write their # down on the back of your notecard
- Keep going until I say "Stop!"



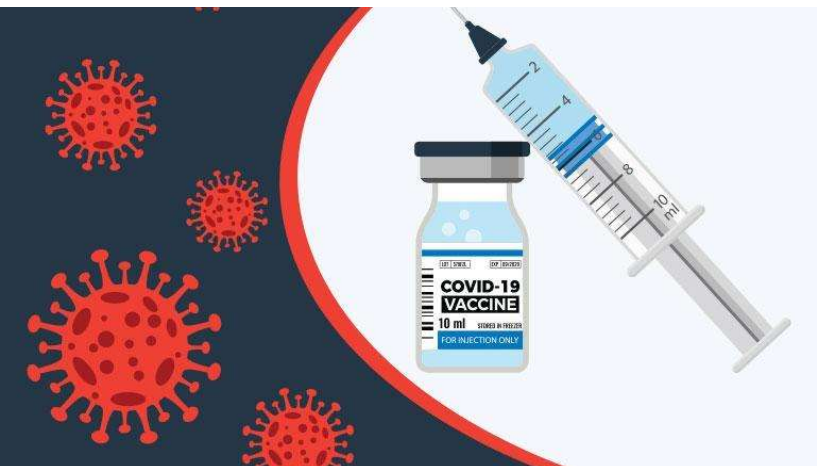
**droplet transmission:** a **pathogen** is passed between humans through **droplets** that people sneeze, cough, drip, or exhale

- Pretend that your teacher is sick.
- I promise not to touch anybody, but I am sneezing A LOT!
- I am sneezing BUBBLES!
- Spread out around room.
- If a bubble lands on you, you become "sick."

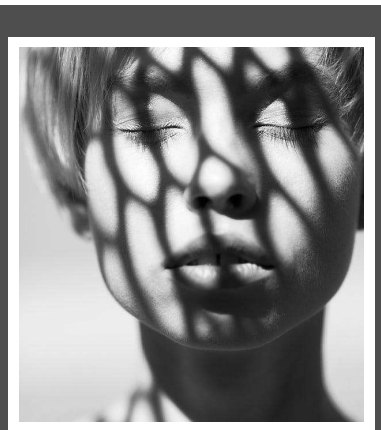
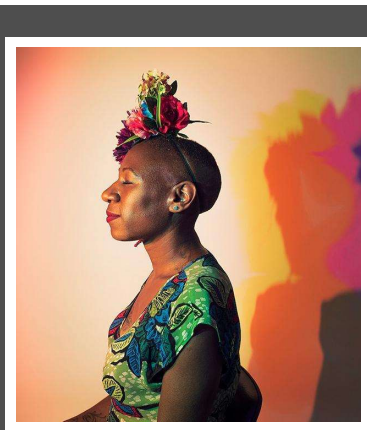
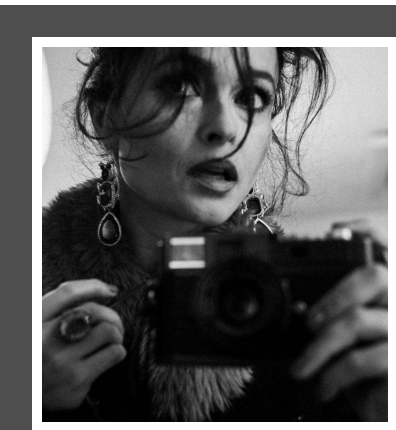
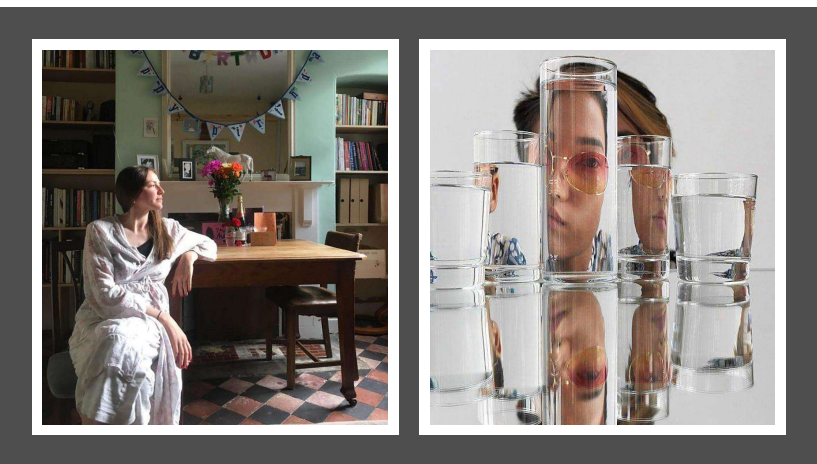
wearing masks







self-portraits





## self-portraits

design and take a self-portrait that shows you as a **community protector**

1. sketch out your self-portrait with pencil on paper
2. show your finished sketch to the facilitator
3. select props from the prop table
4. pose for and take your self-portrait
5. return props to prop table

## gallery walk



what do you notice about this photo?



how is this person protecting their community?



write one word describing how this photo makes you feel.



How can I protect the world from COVID?



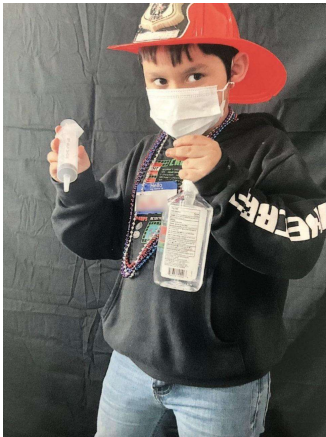
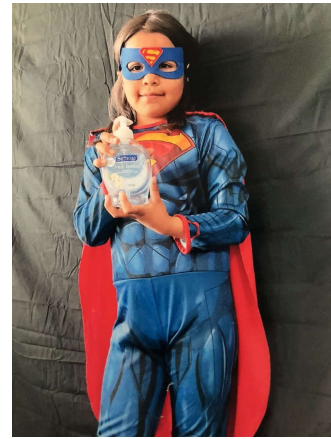
How can I protect my community from COVID?



How can I protect myself from COVID?



## self-portraits



# One last step!

Please answer a few questions about how this segment went. This helps us learn from you about how to improve the activities.

Scan this QR code and fill out this quick survey.

