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
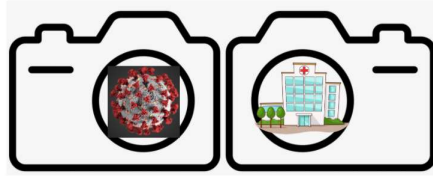
Segment Four Facilitation Guide
Care and the World

Overview

In this segment, learners will explore even bigger questions than in previous segments. Here they ask: How can I help protect society or the world from COVID? How are pathogens, the human body, communities, and different groups of people across the world connected in helping protect against disease? How can access to virus protection for all communities be increased? To engage in and explore these big questions, learners will explore pre-existing photographic narratives of community members' COVID stories and create their own narrative using sketches, videos, and photographs. Beginning with sketches, learners craft imagined or real stories related to protecting the world from disease. Using their sketches as a guide, next they have the option to record a video of them telling their stories. Following, they take at least five photographs that assist in telling the story they have crafted. This segment focuses on large systemic connections by exploring virus protection through stories and narratives.

Note: This segment includes the option for learners to record their stories as videos that accompany their sketches and photos. Videos are optional if camera equipment does not capture video.

Big Ideas and Questions
- How do different communities of people and their careers help protect against viruses and disease?
- How are viruses, the human body, and different communities connected in helping protect against viruses and disease?
- How can access to protection for all communities of people be increased?

Grade Level/Age
3rd – 5th grade (approx. ages 8 - 11)

Objectives and Assessment (Science and Art)

Objective	Assessment
Learners make observations and claims, and provide and identify evidence supporting claims.	*Learners will produce a photo narrative that communicates visually and orally someone's COVID story, and summarizes ways to increase or continue health access.*
Learners demonstrate understanding of basic	*Learners produce a final photo narrative that*

photographic principles of rule of thirds and vantage point.	*includes images with these elements.*
Learners define a simple design problem reflecting a need or a want and generate possible solutions.	*Learners produce a photo narrative that communicates a problem with societal protection from COVID and identifies possible solutions.*
Learners present their work and interpret others' artistic work, and convey meaning and interpret the intent of their artistic work.	*Learners produce a final photo narrative that communicates visually and orally their real or imagined COVID story that highlights their personal knowledge and considerations of societal protection from COVID.*

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.

Time
2 hours

Materials
- Projector, computer, and screen to display slide decks and photos (alternatively print these out)
- [Segment 4 slide deck](#)
- Space for gathering and sharing photos, sketches, and videos created by learners. Options include:
  - Large screen and projector for whole-group sharing
    and/or
  - Printed photos or small screens (e.g., tablets or phones) for small groups/individuals
- Cameras
- Community Agreement poster about using/sharing cameras
- Community Agreement poster for discussing each other's photos
- Drawing materials for learners to sketch out their stories (e.g. colored pencils, markers, large, blank paper or poster board, storyboards, etc.)

Background Information for Facilitators

Art Background Information
COVID has changed many peoples' lives, including how we live in our homes, interact with one another, and how we work and learn. Many people and artists are documenting these changes by taking photos. These photos also help other people visually see stories of COVID experiences, which may be similar or different to their own stories. When we compare and contrast these stories, they can help us understand the differences in health access across communities, too. We can answer questions, such as:

- How do different communities of people and their careers help protect against viruses?
- How can protection for all communities of people be increased?
- How are viruses, the human body, and different communities connected in helping protect against viruses?

By now, learners will better understand how COVID is spread and ways to prevent infection on both individual and community scales. They have used theater-arts and close-up photography to consider ways to protect their precious health and bodies from pathogens. They have also explored how protective measures, such as social distancing, vaccines, and wearing masks, help protect their community from COVID. Refer back to the Care and Self segment, and the Care and Community segment to revisit these activities. Learners by now are also aware that photography is an art, and that photographers often use specific techniques to help share their visual stories. So far we have covered two areas of photographic literacy: vantage point (e.g. scaling a photo and subject from different perspectives) and composition, or how the elements

of a photograph are arranged (e.g. framing the subject and adhering to the rule of thirds). Refer back to the [Introduction to Photography segment](#) to revisit these ideas.

More can be found about how learners might interpret and make meaning from their and others' works by checking out these [visual literacy resources](#).

Science Background Information
The first case of COVID-19 was detected in December of 2019. It quickly spread throughout Asia, until it found its way to other continents, including North America. This pathogen was able to spread so quickly all over the world due to our ability to travel across far distances (using trains, airplanes, or cars) and be in contact with lots of new people in a short amount of time. People traveling around the world can catch and spread pathogens to uninfected populations, whether they know they are sick or not.

Globally, COVID does not affect people the same way. There is variation in the amount of cases, severeness of symptoms, and even death rates. This is because of a number of reasons - differences in how people interact with each other, differences in access to protective supplies, and differences in general health. Around one third of people with the virus do not show any symptoms of the disease. This is called being asymptomatic. Asymptomatic people can still spread the virus to other people! These differences in disease severity, understanding about the pathogen and disease, and access to healthcare and protective supplies result in a lot of confusion about the disease. This is why it is important that scientists take into consideration the people and resources that different communities have in order to understand how a pathogen might spread there!

When the COVID pandemic first started, there was understandable fear. It is scary to hear that a new disease is spreading fast with painful symptoms. At the time, many people did not know very much about the disease. Even now, there are still many questions about the disease and scientists are constantly learning new things about it. The global panic that occurred is a common trend when new pathogens and viruses appear in humans. Due to our ability to interact with people and move all over the world, we are a connected society that makes not only these disease risks emerge and spread globally, but also the fear that they cause. Learning more about your community and your risks around COVID and other diseases can help alleviate that fear!

Preparation
- Make sure all cameras are charged and ready for use.
- Set up a computer and projector to display slide deck and photos. (Or prepare printouts).
- 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 B of this segment has learners share and discuss their photo narratives with one another. How this is organized and facilitated is largely dependent on the facilitator's preferences and the learning environment. Learners' photo and

videos can be projected to a screen or posted around the room and presented as a gallery.
- It may be helpful to write out some questions for learners to think about while they are watching the pre-made photo narratives, such as: What was the main point or issue in the story? What did you notice?
- Similarly, when learners are making their own photo narratives, we have provided a "recipe" or guidelines to follow to create their photo narrative. It might be helpful to write these out or post them prior to the session beginning.
  - The "Recipe":
    - Make a COVID story, real or imaginary, that connects in some way to one of the stories you heard/read from the community story book.
    - Make a sketch of your story. This could be in a comic form or just one drawing.
    - Record yourself telling your COVID story (optional).
    - Use at least 5 photos you have already taken in our time together, or take 5 new photos that help tell your story.
    - Put these photos together to create a story.
    - Label the photo with captions, or add text to help us understand and know your story better!
    - Be creative (your story doesn't need to look like the storybook) and be prepared to show us your story at the end of our time together!
- Will learners be using pre-existing photos they have taken for their own photo narratives? Or will they be going out on mini-excursions during this activity to take more? This is facilitator dependent, but if learners are going out, think of areas where they can do this, and with whom. This also will likely take more time.

Facilitation Guide

Part A (approx. 1 hour)
- Introduction (15 minutes)
  - Until this point we have been exploring how to protect both ourselves and our communities from pathogens, such as COVID. Today we are going to look at different experiences people have protecting themselves and others from pathogens.
  - Let's take a look at our "Big Picture" activity again using the slide deck. Tell learners that we are going to ask ourselves how we can protect the world from diseases like COVID. Last time we were asked how we could protect our community, now we are going to expand this even more. Review some of the ways learners depicted community protection in their self portraits. This time we are moving farther out from the center. What do you think should go there? How can we protect society and the world from COVID? *(Possible responses include access to healthcare resources like medicine, hospitals, and doctors, but also see where the learners take it and what's coming up for them. They might think there are other important connections!)* Tell us why you are adding that?

- Introduce the concept of a photo narrative (10 minutes)
  - Using the slide deck, explain that we are going to be creating photo narratives. Break down the words photo and narrative for learners.
    - Photos – pictures that we take
    - Narrative – a story
    - Photo narratives, then, will use pictures that we take to tell a story.
  - Have a conversation with learners about stories using the questions in the slide deck. Ultimately, they will use their own experience in the pandemic or their imagination to tell a story about protecting society or the world from COVID. Have them brainstorm about what makes a good story using the following questions:
    - What is your favorite story? Favorite movie? Favorite book?
    - Why do you like that story?
    - What makes a story a story? What do all stories have? What are the different possible parts of a story?
    - Are stories always real?
- Storybook Explorations (30 minutes)
  - We're now going to take a look at two stories of people during and since the COVID-19 pandemic. Use the slide deck to show the videos and photos of each photo narrative.
  - We are going to watch these stories together. Each story is available in the slide deck in English and Spanish. Select the option that is best for your learner group or watch both!
    - First, let's all just watch and look and listen. Really explore the story. Pay attention to wherever your attention takes you.
    - Now, let's look back at the story and try to answer some questions together.
      - *What's going on in this story? What do you see that makes you say that?*
      - *Was there a problem in this story? If so, how was it solved?*
      - *How did this story make you feel?*
      - *What more do you want to know or find?*
      - *How do the photos selected relate to the stories told by Jessica and Johana? (Ask learners to connect what they are seeing in the images to the stories told.)*
  - We noticed some really cool things. Thank you for sharing! I'm so excited because now we are going to use these cool stories from the storybook as examples to help us make our OWN photo narratives and stories!

Part B (approx. 1 hour)
- Create Your COVID Photo Narrative (Individual or in Photo Narrative Groups) (40 minutes)
  - We are going to create our own/joint photo narratives now. *(See the preparation section above for tips on how learners could make joint narratives.)*

- We all have examples from our community storybook, and we can also use whatever strategies we think would work best to tell our story. There are so many different ways to tell a story. But, we may want to follow this recipe *(think about posting/writing out this recipe prior to the session)*:
  - Make a COVID story, real or imaginary, that connects in some way to one of the stories you heard/read from the community story book.
  - Make a sketch of your story. This could be in a comic form or just one drawing.
  - Record yourself telling your COVID story (optional).
  - Use at least 5 photos you have already taken in our time together, or take 5 new photos that help tell your story.
  - Put these photos together to create a story.
  - Label the photo with captions, or add text to help us understand and know your story better!
  - Be creative (your story doesn't need to look like the storybook) and be prepared to show us your story at the end of our time together!
- Let's start storytelling!
  - While learners work on their narratives facilitators should circulate and ask questions:
    - What story are you trying to tell? What do you want viewers to know? What feels important for you to say about COVID-19 and what artistic choices can you make to help you communicate your story?
    - Why are you using the photos you are using?
    - What are things you want to highlight from previous units we have done or previous experiences/stories?
  - There are three main components to photo narratives: a sketch, a video (optional), and photos that help tell the story. Some learners may focus more on one component more than others. For example, some learners may want to focus most of their time on a comic or drawing that depicts their story and may opt not to record it. Others may make a sketch quickly and then dedicate most of their time to taking pictures. We encourage flexibility however learners want to tell their story and spend their time. The main goal is that they practice crafting a story, imagined or real, about protection from COVID and that they assign visual cues (through illustration or photography) to help tell their story.
- Sharing Our Photo Narratives (Whole Group - see alternative sharing formats in Tips for Group Participation below) (15 minutes)
  - If you'd like, we'd all love to see your photo narrative. You can show us your sketch, photos, and video and tell us what you were trying to do as an artist. *(It may be helpful to time learners during this, and make it a fun game or trick to be able to say what you were trying to do as an artist in a quick sound bite.)*

- - Learners present narratives. After each one, there should be a small celebration, like hand claps or snaps to support the artist. One audience member can say what they noticed or how it made them feel, too.
    - Thank you all. You are artists and storytellers. What are things you noticed from our stories? How did they make you feel?
- Conclusion Wrap-Up and Final Game (Whole Group) (5 minutes)
    - Let's take a final look at our "Big Picture" framing. What did we learn? What would we change?
    - What are some different ways characters in our stories helped protect the world from COVID?

Tips for Group Participation
- Facilitator might want to demonstrate activities by modeling the process. For example, in Part B, step 2: starting by journaling, drawing, cartooning, or going through your photos to see what story you want to tell may be necessary to show youth how to brainstorm a real or imagined COVID story.
- If learners are sharing cameras throughout the lesson, use pre-existing groups, or build groups around learners that would best create a photo narrative together. Joint narratives may prove to be a management challenge, but having learners take turns in photo submission can be helpful (e.g. one learner goes first and the other learner then chooses a photo based on the first photo to help create a story. They then keep taking turns until they feel their narrative is complete.)
- Photo narrative 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 narrative 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
- Here are some extension questions for learners who finish early:
    - What is the experience and, or problem in your story?

- What things did you include in your photographs to show this experience or problem? Are there certain ways you framed the photographs? Are there certain subjects you focused on? Why?
  - What do you think a solution might be?
  - Who would be a part of this solution?
  - How do you think you could share this story to other people? What would you do?
  - What advice would you give to others in creating a photo narrative?
- Learners can interview members of their own community to get a unique COVID story about medicine or medical facilities, career or home changes, and/or justice and access during COVID-19. This might be someone they know, or even someone they don't.

Extended Science Background
Coronaviruses: history repeats itself

COVID-19 is a disease caused by a virus called a coronavirus. Coronaviruses are all respiratory viruses, infect many types of animals, and have been the cause of several modern human pandemics in the past couple of decades. A pandemic is a disease that can spread to multiple countries, or world-wide. In 2003, Severe Acute Respiratory Syndrome (SARS) coronavirus was first discovered in Asia and began to spread to several other continents. Its spread was contained in 2003 and there have not been any recorded SARS cases since 2004. In 2012, Middle East Respiratory Syndrome (MERS) coronavirus was diagnosed in Saudi Arabia and spread to several countries, with a case fatality rate of 34%. Today, cases of MERS still occur globally, but are rare. In 2019, Coronavirus disease 2019 (COVID-19) was detected and quickly spread worldwide, infecting more people than any of the previous coronavirus outbreaks. All of these coronavirus pandemics have been able to spread due to our global society - people traveling around the world can catch and spread pathogens to uninfected populations.

Public Panic: the Swine Flu

In 2009, a new strain of Influenza (the flu virus), similar to one that is common in swine (pigs), was detected in a human. This virus quickly spread globally, becoming a pandemic known as H1N1, the "Swine Flu", or the "2009 pandemic". Due to this being a "novel", or new, virus, it was predicted and presented by news organizations to spread rapidly and have a higher mortality rate than other, already established flus. This caused global concern, but resolved quickly when scientists found the virus to be very similar to the flu viruses that regularly circulate in humans and declared the pandemic over in 2010. Now, the H1N1 virus is one of the regular seasonal flu viruses that occur in humans. It is likely that if you have had the flu recently, it was H1N1! The global panic that occurred in 2009 is a common trend when new pathogens and viruses appear in humans - think back to the panic that arose when COVID-19 first emerged. Due to our ability to interact with people and move all over the world, we are a connected society that makes not only these disease risks emerge and spread globally, but also the fear that they cause.
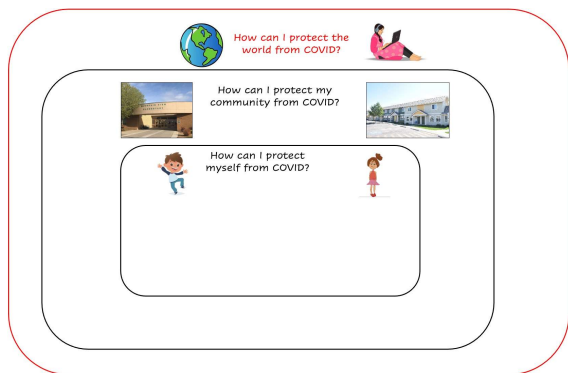
photo narrative

photo: pictures that we take

narrative: a story

we'll be telling a story that uses pictures that we take!

1. what is your favorite story?

   favorite movie?

   favorite book?

2. why do you like that story?

3. what makes a story a story?

   what do all stories have?

   what are the parts of a story?

4. are stories always real?

COVID photo narratives

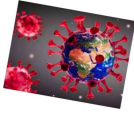tell a story about protecting the world from COVID and take photos to go with your story

Jessica's photo narrative

Johana's photo narrative

Make a COVID Story!

To make your photo narrative:

- Start by drawing out your story. It could be a real story or a made-up story.

- Record a video that (2-5 minutes) of you telling your story about protecting the world from COVID using your sketch.

- Take at least 5 photos that can help tell your story.

Brainstorm these questions to help you!

- What's a cool thing that happened to you or your family?
- How did your daily life change? Why?
- Was there ever a problem? How did you solve it?
- What could we do to protect the whole world from COVID?

gallery: photo narratives

1. watch the video
2. look at the photos and sketch
3. answer the questions on the post-its
4. place on poster

🟦   what is going on in this story?

🟨   was there a problem in this story? how was it solved?

🟩   what more do you want to know about the story?

sketch only

sketch and photos

sketch and video

sketch only
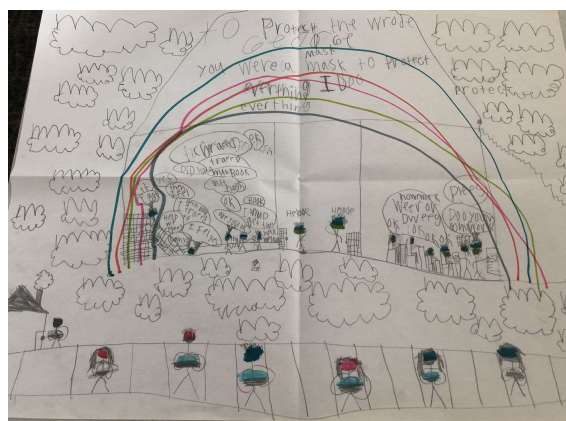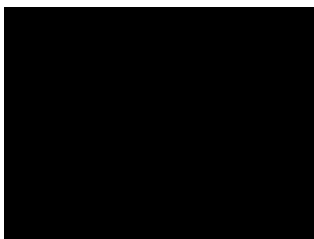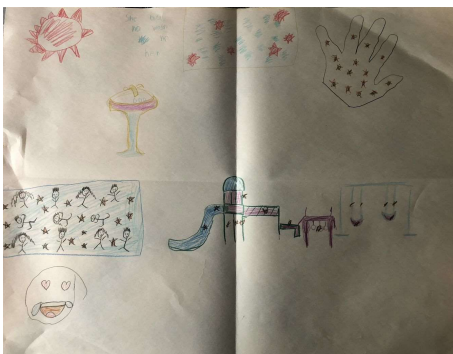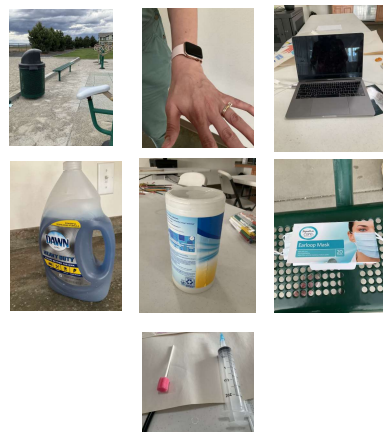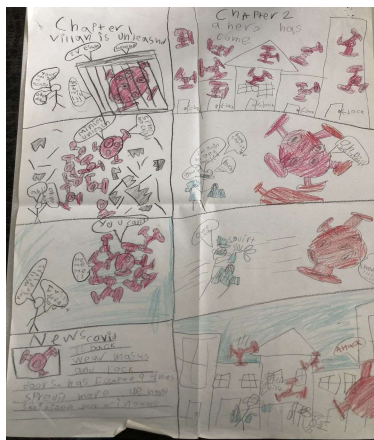
One last step!

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.