

Introduction to Viruses

Objectives

To explain the structures and functions of a virus, such as the 2019 novel coronavirus

Materials and Preparation

- Laptop
- Internet access

Directions

1. Engage students in the Think-Puzzle-Explore thinking routine as they read an article and watch a video about the 2019 novel coronavirus. The Think-Puzzle-Explore thinking routine supports students in inquiry based learning. The “think” portion allows students to collect and organize their thoughts about a topic and build on the ideas of their peers. The “puzzle” portion invites students to personally consider what they are interested in learning about the topic. The last portion, “explore”, gets students thinking about how they can answer their questions and what resources they can use.
2. Students should first draw a chart with three columns. They can label the first column “What do I think I know about this topic?” They can label the second column “What questions or puzzles do I have about this topic?” and they can label the last column “How might I explore the puzzles I have around this topic?”
3. The topic students will be considering today is “viruses”. Ask students to think about “viruses” and write down their thoughts in the first column. Invite them to share their thoughts with the class, if technologically possible. Students can build on each other's ideas.
4. Then, ask students what questions or puzzles they have about “viruses” and note them in the second column of their chart. Again, they can share these puzzles with their classmates and build on each other's ideas.
5. Lastly, ask students to consider how they might answer the puzzles and questions they have about viruses. Their ideas should be noted in the last column of their chart. Students are welcome to share these ideas with their classmates, if possible.
6. Some resources to get them started on their research are listed below.

- “What is a Coronavirus” Brainpop Video:
<https://www.brainpop.com/health/diseasesinjuriesandconditions/coronavirus/>
- NY Times article about how viruses work:
<https://www.nytimes.com/interactive/2020/03/11/science/how-coronavirus-hijacks-your-cells.html>
- “What is a virus? How does a virus work?” video:
<https://www.youtube.com/watch?v=7KXHwhTghWI&t=12s>

7. Students can begin their research or use any of the ideas they have brainstormed for answering their questions. Once their research concludes, you may invite them to share their discoveries with the class.