STEM 101
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Name: _____
Period: _____

TRACKING A VIRUS

UNIT: MEDICAL TECHNOLOGIES_LEVEL 2

ENGAGE: *What do students need to know about viruses?*

Viruses are infective agents that consist of a nucleic acid molecule and a protein coat. They're too small to be seen by light microscopy and are able to multiply only within the living cells of a host. Viral infections are when the virus has a detrimental effect, and is reproducing faster than your body can kill them off. Viruses can be spread through saliva, coughing, sneezing, or other fluid contact. Some viruses are spread through insects like mosquitoes.

EXPLORE: *How well do students understand the spread of viruses?*

What are some other ways a virus could be spread? Make a list.

EXTEND: *Can students predict the effects of poor sanitation on the chances of infection?*

This activity involves a simulated virus being spread via liquid contact. You will be given a cup with a number on it and colorless liquid inside. DO NOT DRINK THE LIQUID. You will then receive a notecard. Write down your name and the number on your cup.

You will then be instructed to share liquids with 3 people. To share liquids with someone, you will pour your liquids into their cup, and then the other person will pour your combined liquids back into your cup. Both partners should have the same amount of liquid that they started with. Write down the number of the cup you've shared with, it will be used later on.

Repeat the exchanging fluids process with 2 other people.

Procedures to follow:

1. Preparing for the challenge:
    a. Take your cup and notecard.
    b. Do not drink the fluid.
    c. Write down the number of the person you exchange fluids with and the number of the exchange.
    d. Participate in the review of the data at the end.

2. Materials
   - Cup
   - Fluid
   - Notecard

3. Interpreting Results

   Your teacher will put sodium carbonate into each of your cups at the end and you will see who became infected with our virus. Who had the original infected cups?