



Make a Microbe

Microbes are tiny organisms that live in, on, and around our bodies. In fact, your body is home to millions of microbes right now! The most common types of microbes are bacteria, viruses, and fungi.

Most microbes do not affect the human body and many microbes are beneficial. For example, penicillin is a type of fungi that is used to make a common antibiotic medicine. One example is lactic acid, a bacteria that helps humans digest their food.

Some microbes, however, can cause us to get sick. While some do cause disease, most fungi and bacteria are not responsible for human illnesses. Many viruses, on the other hand, cause disease. Since it is difficult to fight viral infections with medications, vaccines are important tools that help teach our immune system how to fight viruses before we get sick.

Materials needed:

- Play-Doh
- Microbe image sheet (attached)
- 4 cups flour
- 4 cups warm water
- 2 cups salt
- 4 tablespoons vegetable oil
- 2 tablespoons cream of tartar
- Large spoon, pot, and bowl
- Food coloring, 3 to 7 drops per color

Step-by-step instructions:

1. Make or purchase Play-Doh.
2. Look at or print out the microbe image sheet.
3. Construct several microbes out of playdough.

To Make Playdough:

1. Combine flour, warm water, salt, vegetable oil, and cream of tartar in a pot over low heat. Stir constantly with a large spoon.
2. When the dough pulls away from the sides of the pot and clumps in the middle, it's finished.
3. Remove the dough from the pot and place in the large bowl. Allow to cool for about 20 minutes.
4. Add a few drops of food coloring to the dough and mix the color into the dough using a spoon. Store the playdough in the airtight container.

Additional explorations:

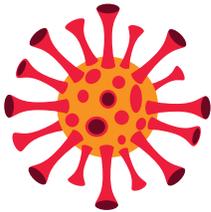
- Invent your own microbe! Is it a bacteria, virus, or fungi? Would it be helpful or harmful to humans?

Make a Microbe (continued)

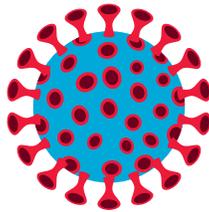
Discussion questions:

- Which microbe has the simplest shape? Which is the most complicated?
- Do you recognize any of the microbe shapes?
- Which microbe do you think is most infectious to the human body? Why?

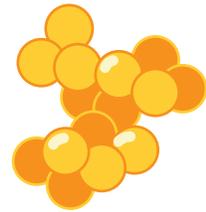
Addition resources: Microbe image sheet



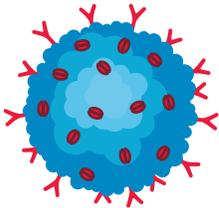
Human immunodeficiency virus



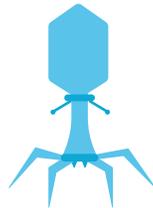
Coronaviridae



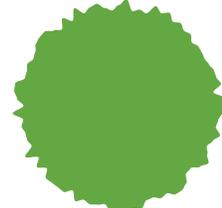
Staphylococcus aureus



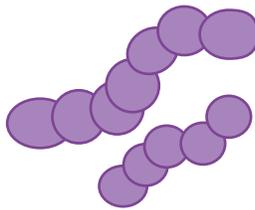
Measles virus



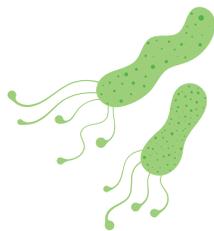
Bacteriophage



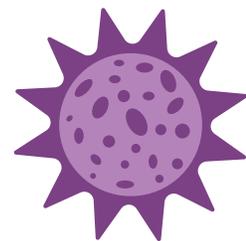
West Nile virus



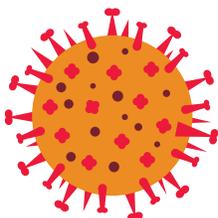
Pneumococcus



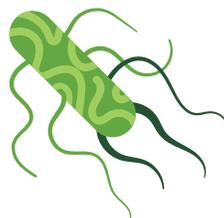
Helicobacter pylori



Varicella-zoster virus



Influenzavirus



Salmonella



Zika virus