Activity Outline

Invitations

- “Would you like to use Duplos to make an antibody?”
- “Would you like to learn how your immune system works?”

Model the activity

1. **Introduce the virus model.** “Viruses have shapes on their surface, and this is a model of a small part of a virus surface.”

2. **Introduce the antibody model.** “Our bodies fight viruses by making antibodies that match the shapes on the virus surface. This is a model of an antibody.”

3. **Demonstrate the shapes matching.** “What do you notice?”

Introduce the activity materials

- Show the model viruses and the materials to make model antibodies.

Challenges

- Try making antibodies for each virus; some are more complex than others.
- Create your own vaccine (or virus) and challenge someone to create a matching antibody.
Antibody Builder

Experience Goals

- Design an antibody to match a model virus surface.
- Test the antibody and make careful observations to see how well it fits.
- Iterate if necessary, to design an improved antibody that fits even better.

Setup

Antibody Parts

Model Viruses