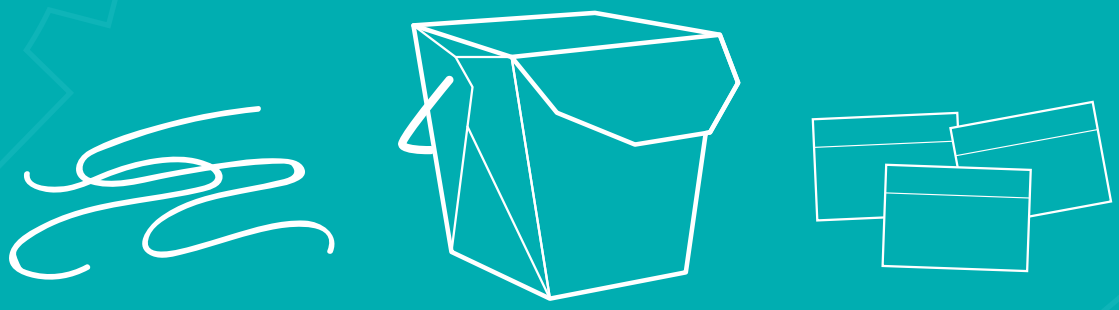
VirEx Delivery

Package a cure inside a virus!



Building with Biology

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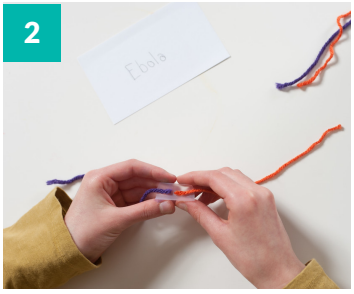

Try this!

1. **Think of a disease that you want to cure and write it on an index card.** You're going to make a model of a virus to help deliver a cure for that disease. To do this, you'll build special instructions *(engineered genetic material)* and insert them into a container *(a viral capsid)*.

2. **Make engineered genetic material using yarn.** Take two pieces of yarn: one purple and one orange. Each piece of yarn represents a strand of DNA that carries a specific set of genetic instructions (or *genes*).

   Use scissors to snip each strand of yarn into two pieces. Then use tape to attach a purple and an orange piece of yarn together. This "engineered genetic material" will provide instuctions for how to cure your disease.

3. **Place the strand of engineered material into a takeout box along with your index card.** The takeout box represents the *capsid*, or exterior shell, of a virus. You're making a model delivery system to help transport your cure.

4. **On a sticky note, write down where in the body this cure should go.** Use more sticky notes to write down specific instructions for your modified virus to follow. Attach them all to the takeout box.

Talk about it...

How did you choose which disease you wanted to cure?

Is it surprising to think about using a virus to treat a disease? How could you test your cure to be sure it was as safe as possible?

Can you imagine other uses for "re-programming" viruses, beyond fighting disease?