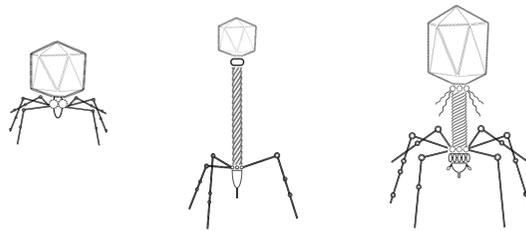


## THE RISE OF ANTIBIOTIC RESISTANT BACTERIA

More and more pathogens are becoming **resistant to antibiotics** used in the clinic.

The UK Health Security Agency reported 148 severe antibiotic resistant infections a day in 2021

### WHAT ARE PHAGES?



Bacteriophages or **phages** are viruses that infect and kill bacteria. There are around  $10^{31}$  phages on the planet, many of which in water sources.

Phages are very specific - they only bind to receptors present on the surface of specific bacteria allowing them to invade the cell.

Afterwards they exploit the bacterial cell to make copies of themselves and eventually burst out of the cell, killing it during the process.

## OUR VISION

Because phages kill the bacterial cell, they can be used to treat bacterial infections, in what is known as **PHAGE THERAPY**.

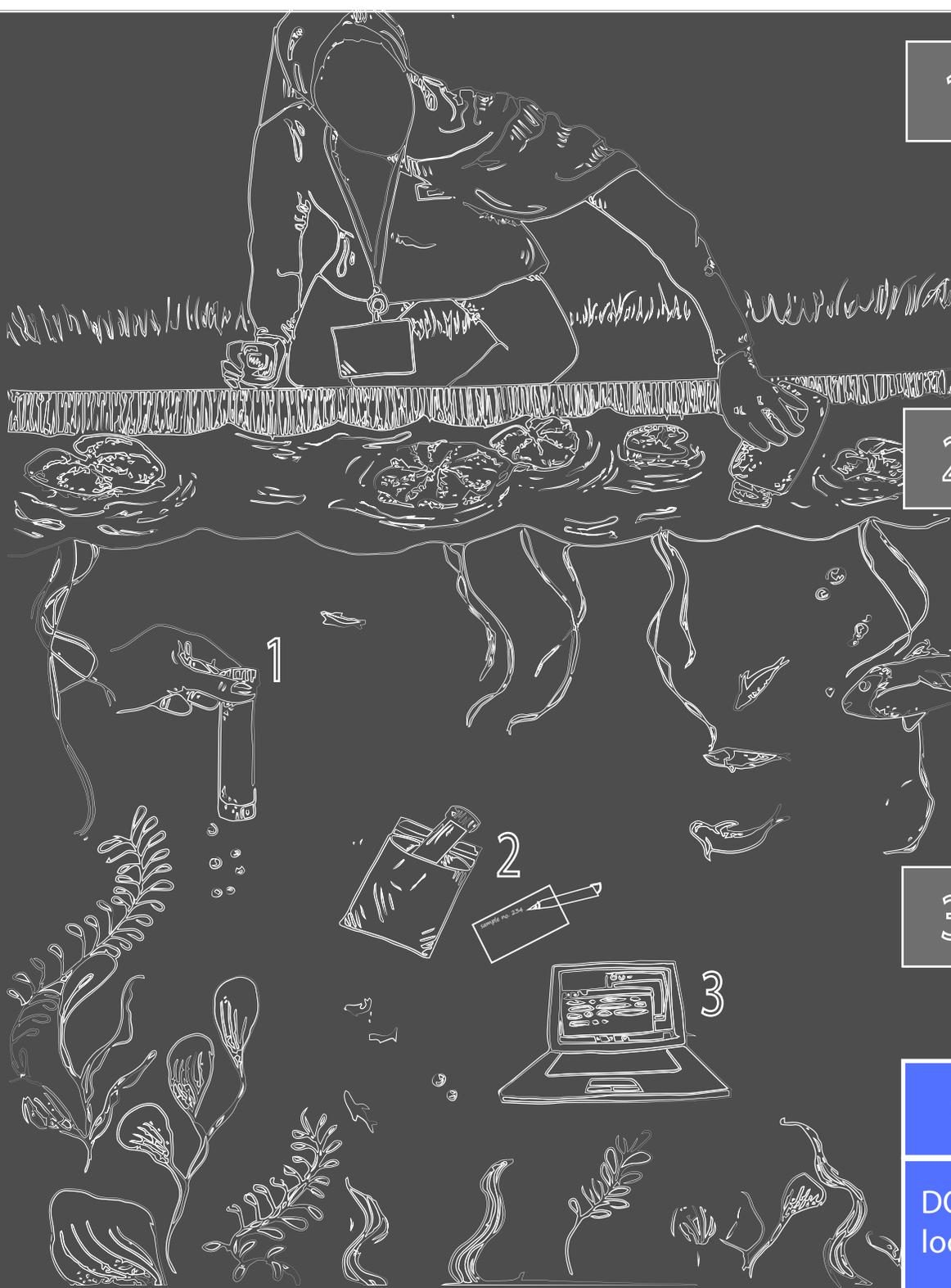
Phages are very specific, so they will only infect the target bacteria, and leave the good bacteria living in our gut unaffected (contrary to antibiotics). Importantly, phages can be used to treat bacteria that are resistant to antibiotics.

With your help, we aim to isolate phages from water samples to see if they can be used in phage therapy.



Scan the QR Code for a direct link to our website so you can submit your sample information

# METHODS



1

Put the gloves on and use the collection tube to collect a sample of **water** from your **local environment**. Close the lid tightly. Clean your hands and the tube using the wipe provided. Place the gloves and the wipe in the waste bag and discard in a normal waste bin.

2

Write the name of your sample on the **sticker** provided and paste the sticker on your tube. Roll the sheet around the tube and secure it with the rubber band. Take the sample to the drop-off point at your school. You can also send an empty sampling tube to a **friend or family member** and tell them about phage therapy using the **postcard** provided.

3

Fill out your **sampling information sheet** or use the QR code to fill it online. Wait for **updates!**

## GROUND RULE

DO NOT collect your sample in a dangerous location