

What environment did we just sequence?

A group of scientists just sequenced some bacteria from 4 environments (Hyena Scent Glands, Adult Human Guts, Infant Human Guts, and Pre-Term Infant Guts). Unfortunately, someone didn't write down which barcode was used for any of the environments!! Now we must figure out which environment was which by looking at the unique bacterial community in each bag. Also, we only have the sequence for the **reverse complement** and our database is in the forward direction. So, we also need to figure out the sequence of the forward direction before we proceed.

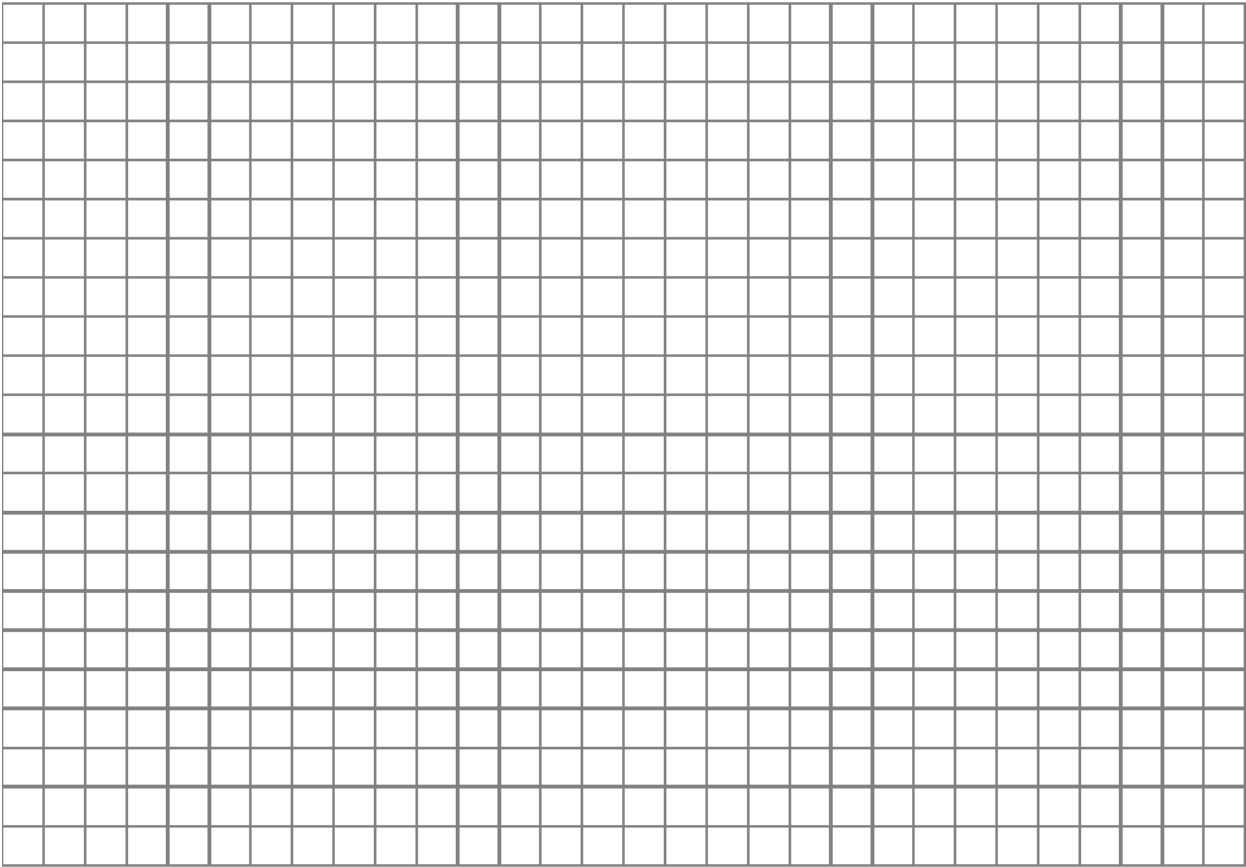
You will have a total of 6 bags. One bag has all the information you need about each environment. In another bag, you have the sequence for the bacteria IDs. In 4 different bags labeled 1-4, you have the bacterial communities. Let's start figuring out which environment we sequenced!

First let's figure out the reverse complement for each bacterium and assign each one a different color:

Reverse Complement	DNA	Bacteria	Color
GCTAAT			
TCATAT			
ACAGTC			
CGTAGC			
CGATCC			
ACGTAG			
GCTATG			
TGACGG			

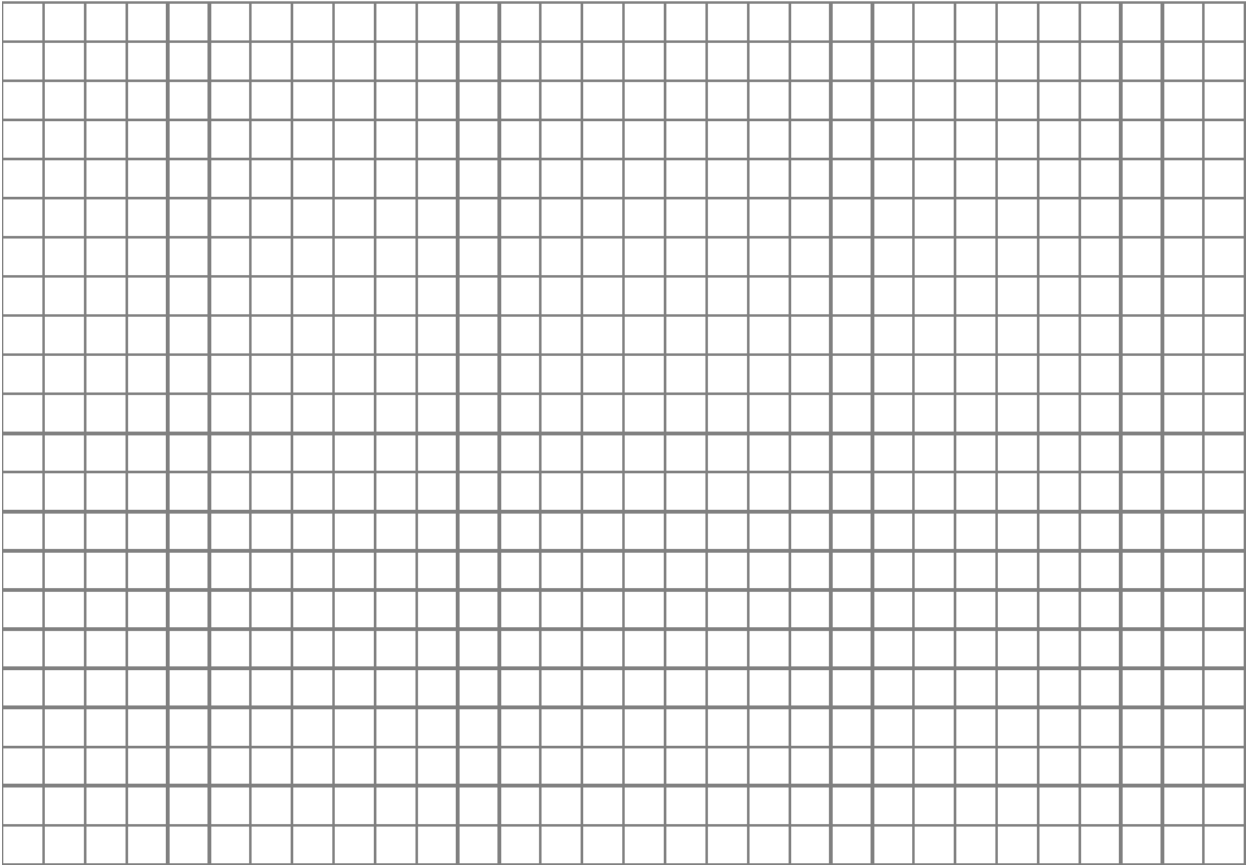
Environment 1 is: _____

DNA	Bacteria	How many?	Relative Abundance?



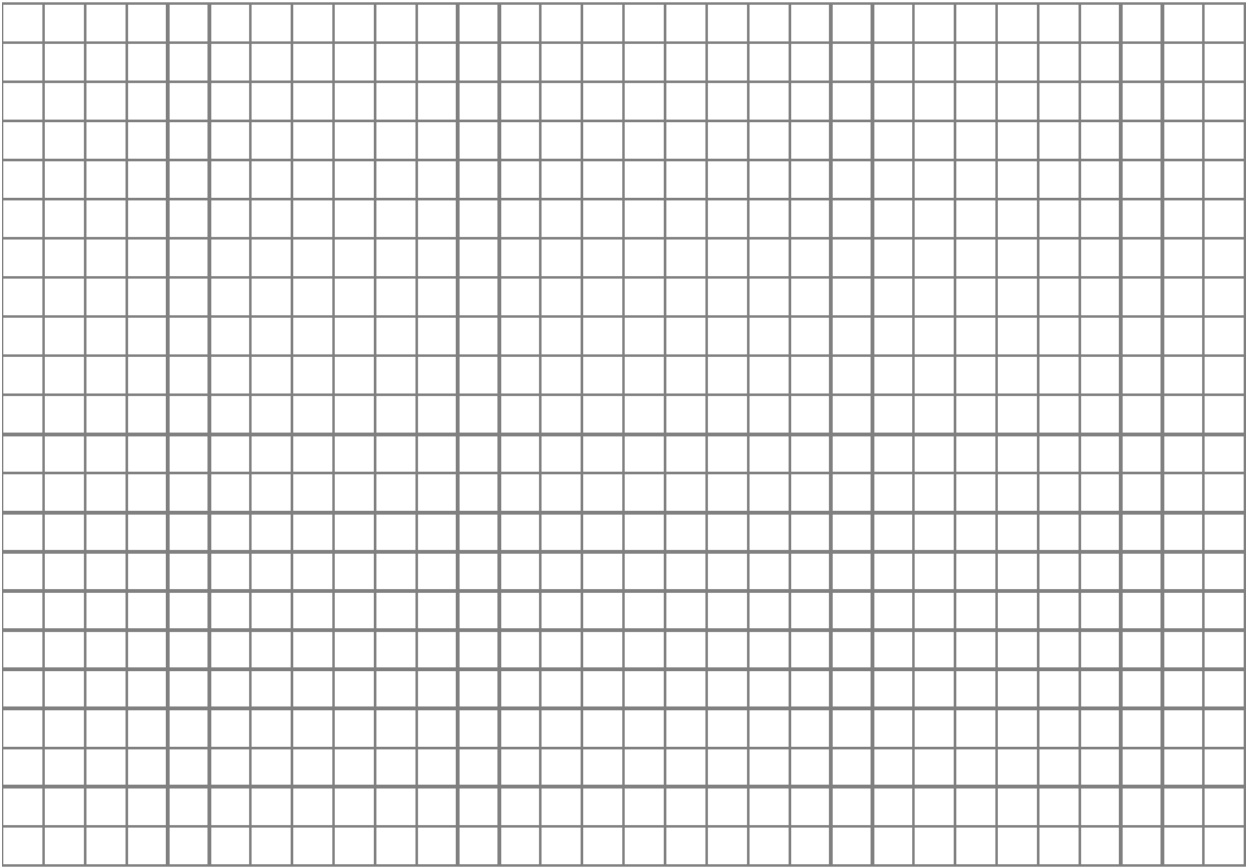
Environment 2 is: _____

DNA	Bacteria	How many?	Relative Abundance?



Environment 3 is: _____

DNA	Bacteria	How many?	Relative Abundance?



Environment 4 is: _____

DNA	Bacteria	How many?	Relative Abundance?

