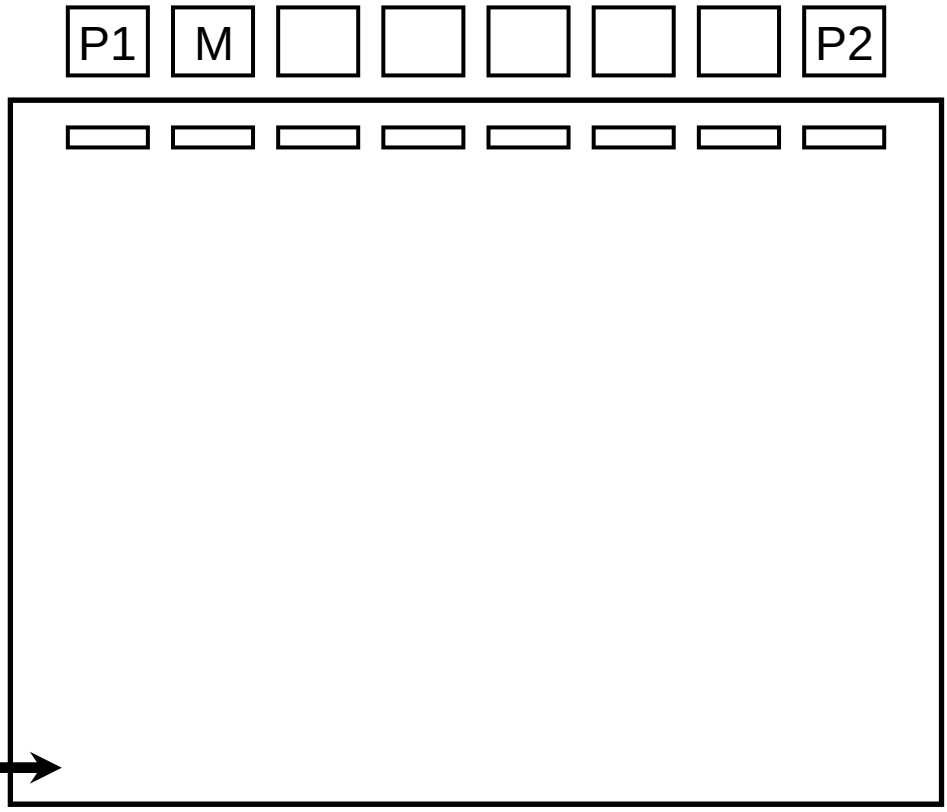
Hands-on DNA: *Bacterial Evolution*

Name:

Loading your gel

Record how you will load your gel.
Mark which sample will be loaded into which lane.

Do not use the lanes marked P1or P2 – these are practice lanes, or M – this is for the DNA marker which will be loaded by your demonstrator.



Once you have run your gel sketch the results here.

Does your outbreak sample match either reference sample A or B?

Yes / No

If Yes, which one does it match?

If No, how is it different?

Restriction Digest Exercise

Once you have found all of the EcoRI restriction sites in your DNA sequence, record the number of sites in the table below.

Once you have cut your DNA at these sites, count the total number of DNA fragments and the number of base pairs (bp) in the top strand of each fragment and record it below.

DNA sequence	Number of EcoRI sites	Number of fragments	Fragment sizes (bp)
1			
2			
3			
4			

Do the four DNA sequences your group has been given have the same number of EcoRI sites?

Do they give the same number of fragments?

Are these fragments the same size?

Why is this?

Can you think of any uses for this technique (digesting DNA with restriction enzymes)?