Part A

Using the DNA sequence boxes provided, create a DNA template strand 12 bases long that starts with the code to initiate amino acid addition during translation. Write the DNA sequence placing one letter in each box.

Where is the promoter relative to the start of your strand?

Why do you have to know where the start codon is?

Make up what the protein your gene encodes does (what is its function?) - have fun with it

Draw your mutation type from your group leader.
Create a version of this strand with the mutation you drew.

How did this mutation structurally change the DNA strand?

What is this called?

Transcribe both the original and mutated strands.

In which direction does RNApol move relative to the DNA template strand?

Translate both the original and mutated mRNA.

In which direction does the ribosome move relative to the mRNA strand?

When the new mature mRNA is translated, will anything change about which amino acids are used to make the polypeptide?

What is this called?

Recall the function you assigned to this protein

Has this mutation changed the function of the protein?

What is this called?