11th January 2024

→ Gene density in bacteria is much higher than in higher organism ⇒ We have more non coding regions.

→ Genes are regions in DNA that code for protein or RNA.

→ mRNA is complementary to non-coding strand of DNA. (template strand) – identical to coding strand

→ Promoter sequence is present only on non-coding strand — that is where DNA polymerase binds.

→ In one continuous DNA, the coding strand / non-coding strand are not fixed, it is only fixed for one gene.

→ There are several other proteins that act in transcription, which bind to promoter / 5'UTR region, and the enhancer / silencer if present. (↳ upstream regulatory)

↳ Maybe ~~bfo~~ before or after ORF (Open reading frame)

→ RNA made from 5'UTR, ORF and some region after stop codon.

→ pseudogene → Missing promoter.

→ 1.5% of DNA is made of exons.

→ Transposons regulate gene expression by jumping to a promoter region and ~~p~~ breaking its sequence.