

2.5.5 Protein Synthesis

Self Assessment

Where is your learning at?

Green: I know it all
 Orange: I have some idea – check the answers
 Red: I need to start studying this section

	Can You	Green 	Orange 	Red 
1	Outline the steps in protein synthesis			
2	Explain that DNA contains the code for protein			
3	Describe how this code is transcribed to mRNA			
4	State where the code is translated			
5	State what must happen in order to synthesise a protein			
6	Say how the protein achieves its functional shape			
7	Explain how genes control cell activities by producing proteins [enzymes]			

DNA Structure, Replication, Profiling

HL Self Assessment

Where is your learning at?

Green: I know it all
 Orange: I have some idea – check the answers
 Red: I need to start studying this section

	Can You	Green 	Orange 	Red 
1	Describe the structure of DNA			
2	Describe the structure of a Nucleotide			
3	Outline the specific purine and pyrimidine couples – complementary base pairs.			
4	Name the four bases and the base pairs in DNA			
5	Explain Hydrogen bonding			
6	Refer to the double helical structure of DNA			
7	Distinguish between coding and non coding structures.			
8	Explain why RNA is a complementary structure to DNA			
9	Name the bases in RNA			
10	Outline the structure of RNA			
11	Explain the function of mRNA			
12	Describe the triplet base code			
13	Outline Chromosome sequencing of coding and non coding (junk DNA) sequences.			
14	Outline DNA replication			
15	Define the process of DNA profiling			
16	Outline the four stages involved in DNA profiling			
17	Give any two applications of DNA profiling			
18	Define Genetic Screening			
19	Give a use for genetic screening			
20	Describe the steps involved in the isolation of DNA			
21	Draw diagrams to illustrate this activity			

2.5.4 DNA Structure, Replication and Profiling and Screening

www.mrcbiology.com

Self Assessment

Where is your learning at?

Green: I know it all
 Orange: I have some idea – check the answers
 Red: I need to start studying this section

	Can You	Green 	Orange 	Red 
1	Outline the simple structure of DNA			
2	Name the four bases and the complementary base pairs in DNA			
3	Distinguish between coding and non coding structures			
4	Explain why RNA as a complementary structure to DNA.			
5	Name the bases in RNA			
6	Outline the structure of RNA			
7	Explain why DNA is called a double helix			
8	Outline the replication of DNA			
9	Define DNA profiling			
10	Outline the 4 stages involved in DNA profiling			
11	Give two applications of DNA profiling			
12	Explain the need and a use for genetic screening			
13	Describe how to isolate DNA from a plant tissue			
14	Draw diagrams to illustrate this activity			

2.5.5 + 2.5.14.H**Protein Synthesis [HL]****Self Assessment****Where is your learning at?**

Green : I know it all
 Orange : I have some idea – check the answers
 Red : I need to start studying this section

CAN YOU	Green 	Orange 	Red 
Outline the steps in protein synthesis			
Explain how DNA contains the code for protein			
Understand why enzymes unwind the DNA			
Explain how this code is transcribed to mRNA			
Describe the role of RNA polymerase			
Explain what a codon is			
Explain how the mRNA code is translated on the ribosome			
Understand that ribosome is composed of subunits			
Explain how amino acids are assembled in the correct order determined by the codons on mRNA			
Understand a stop codon on mRNA signals the release of the protein			
Understand that the protein folds into its functional shape			
Give the location of protein synthesis			
Explain how genes control cell activities by producing proteins			
Explain the role of enzymes in unwinding DNA			
Describe the role of RNA polymerase			
Describe the molecular involvement of DNA, mRNA, tRNA, rRNA and amino acids in the process of protein synthesis			