

AQA Biology

Gene expression

Specification reference	Checklist questions	
3.8.1	Can you describe the types of gene mutation?	<input type="checkbox"/>
3.8.1	Can you explain how the different types of gene mutation result in different amino acid sequences in polypeptides?	<input type="checkbox"/>
3.8.1	Can you explain why some mutations do not result in a changed amino acid sequence?	<input type="checkbox"/>
3.8.1	Can you discuss the causes of gene mutations?	<input type="checkbox"/>
3.8.2.1	Can you state what totipotent cells are?	<input type="checkbox"/>
3.8.2.1	Can you explain how cells lose their totipotency and become specialised?	<input type="checkbox"/>
3.8.2.1	Can you describe cell differentiation and cell specialisation?	<input type="checkbox"/>
3.8.2.1	Can you describe the origins and types of stem cells?	<input type="checkbox"/>
3.8.2.1	Can you explain how pluripotent stem cells can be used to treat human disorders?	<input type="checkbox"/>
3.8.2.2	Can you explain how oestrogen affects gene transcription?	<input type="checkbox"/>
3.8.2.2	Can you state what small interfering RNA is?	<input type="checkbox"/>
3.8.2.2	Can you explain how small interfering RNA affects gene expression?	<input type="checkbox"/>
3.8.2.2	Can you state what is meant by epigenetics?	<input type="checkbox"/>

Specification reference	Checklist questions	
3.8.2.2	Can you describe the nature of the epigenome?	<input type="checkbox"/>
3.8.2.2	Can you explain the effect of epigenetic factors on DNA and histones?	<input type="checkbox"/>
3.8.2.2	Can you explain the effects of decreased acetylation of histones?	<input type="checkbox"/>
3.8.2.2	Can you explain the effects of increased methylation?	<input type="checkbox"/>
3.8.2.3	Can you distinguish between benign and malignant tumours?	<input type="checkbox"/>
3.8.2.3	Can you explain the role of oncogenes and tumour suppressor genes in the development of tumours?	<input type="checkbox"/>
3.8.2.3	Can you explain the effects of abnormal methylation of tumour suppressor genes and oncogenes?	<input type="checkbox"/>
3.8.2.3	Can you explain how increased oestrogen levels can cause breast cancer?	<input type="checkbox"/>
3.8.3	Can you outline the importance of genome sequencing projects?	<input type="checkbox"/>
3.8.3	Can you describe the nature of the proteome?	<input type="checkbox"/>
3.8.3	Can you describe how to determine the genome and proteome of simple organisms?	<input type="checkbox"/>
3.8.3	Can you describe how to determine the genome and proteome of complex organisms?	<input type="checkbox"/>