Revision summary

Use the following summary of syllabus dot points and key knowledge within Module 6 to ensure that you have thoroughly reviewed the content. Provide a brief definition or comment for each item to demonstrate your understanding or code them using the traffic light system – green (all good), amber (needs some review), red (priority area to review). Alternatively, write a follow-up strategy.

How does mutation introduce new alleles into a population?	
Types of physical, chemical and natural mutagens and how they operate	
Causes, processes and effects of point mutations	
Causes, processes and effects of chromosomal mutations	
Distinguish between germ-line and somatic mutations and their effects on an organism	
The significance of coding and non-coding DNA in the process of mutation	
Causes of genetic variation in mutation, meiosis and fertilisation	
The effect of mutation, gene flow and genetic drift on the gene pool of populations	
How do genetic techniques affect Earth's biodiversity?	
The social implications and ethical uses of biotechnology with plants and animals	
Future directions of the use of biotechnology	
The potential benefits for society of research using genetic technologies	
Changes to Earth's biodiversity due to genetic techniques	

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››	**Does artificial manipulation of DNA have the potential to change populations forever?**	
	Uses and advantages of current genetic technologies that induce genetic change	
	The processes and outcomes of artificial insemination, artificial pollination and *in vitro* fertilisation.	
	The effectiveness of gene cloning, whole-animal cloning and therapeutic cloning.	
	Techniques and applications used in recombinant DNA technology in medicine and agriculture	
	The benefits of using genetic technologies in agricultural, medical and industrial applications	
	The effect on biodiversity of using biotechnology in agriculture	
	The influence of social, economic and cultural contexts on a range of biotechnologies	

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