

B13 Reproduction– Science Faculty

Rationale and Context of Unit:	Core curriculum content:	Tier 2 & Tier 3 vocabulary explicitly taught:
<p><i>Understanding malaria and its effects from unit 6 feeds into the lifecycle in this unit.</i></p> <p><i>Stem cell research and its pros and cons are taught in unit 2, this feeds into evaluation and ethical argument around scientific development.</i></p> <p><i>Genetic diseases are taught in B13 as is reproduction.</i></p> <p><i>7B7 reproduction provides normal reproduction that can then be adapted to screening.</i></p> <p><i>8B5 genes, covers the organisation of DNA</i></p> <p><i>Genes 2 focuses on genetic diagrams and inheritance of genes.</i></p>	<ul style="list-style-type: none"> • Types of reproduction and their differences • The process of meiosis and how it does/does not vary from mitosis • Reproduction and lifecycle in fungi and malaria • DNA and the structure of the genome and its organisation within the cell • Higher only protein synthesis from DNA • Higher only gene expression and mutation • How we inherit characteristics from two parents • Genetic cross diagrams and family trees • Sex determination and predicting genetic features • E.g. of disorders and their possible cures • Embryonic screening and the ethics 	<ul style="list-style-type: none"> • <i>Species</i> • <i>Sexual</i> • <i>Asexual</i> • <i>Meiosis</i> • <i>Genome</i> • <i>Gene</i> • <i>Nucleotide</i> • <i>Heterozygous</i> • <i>Homozygous</i> • <i>Genotype</i> • <i>Phenotype</i>
Challenge and Support:	World wide learning/ links to 21 st century:	Cultural capital/ Industry/ Enrichment:
<ul style="list-style-type: none"> • The language of genetics is plentiful and students struggle to learn all the terms. Quiz quizzes and repetition helps as well as breaking down the entomology. • Confusion between the e.g. of diseases often occurs. Clear notes and images can help with context, before the genetic understanding is put into place. 	<ul style="list-style-type: none"> • Can we cure/ design your genetics? • How designer babies and the law varies in different countries. 	<ul style="list-style-type: none"> • <i>Medical advancement</i> • <i>Career focus reproductive scientist.</i>
Historical, Social, Moral, Spiritual, Cultural context:	Cross curricular links/ literacy/numeracy:	Common misconceptions:

<ul style="list-style-type: none"> • Moral social and ethical issues behind embryo screening, including disabled culture. • How can our morality guide/limit scientific advancement? 	<ul style="list-style-type: none"> • Maths understanding ratios and probability • CC/PD saviour siblings and reproduction • History, reading family trees. • Literacy/ cc/ re writing an argument. 	<ul style="list-style-type: none"> • <i>Mixing up all the language.</i> • <i>Most of your characteristics are controlled by one gene</i> • <i>Genes only control physical things not personality or behaviour.</i>
Assessment timeline:		
<ul style="list-style-type: none"> • <i>regular EPPQs</i> • <i>end of unit test (With B9)</i> • <i>EPPQ homework task</i> • <i>in lesson questioning and other progress checks</i> 		
Home learning		
<ul style="list-style-type: none"> • <i>EPPQ homework booklet</i> 		
Feedback		
<ul style="list-style-type: none"> • <i>Students self/peer mark homework booklets and set revision goals based on understanding.</i> • <i>Feedback four based on the end of the unit test. (Units B8&9)</i> 		

Length of unit (duration indicated in lessons)

This unit is 8 lessons for combined science (7 content and 1 assessment) or 11 lessons for separate science (10 content and 1 assessment)

Unit:B13