

Year 9, B6 Genes 2, Science

Rationale and Context of Unit:	Core curriculum content:	Tier 2 & Tier 3 vocabulary explicitly taught:
<ul style="list-style-type: none"> <i>This unit is the final unit of the Year 9 Biology as it builds on the topics have learnt in Year 8 B5 Genes 1 and is seen again at of GCSE. There are emotionally tricky concepts which is why it is taught towards the end of Year 9 allowing students more time for emotional maturity.</i> <i>This unit links to the GCSE Genetics topics B13 and B14</i> 	<ul style="list-style-type: none"> How competition and adaptations change populations Natural selection Extinction Variation in organisms Cell division Inheritance Genetic diagrams Genetic modifications 	<ul style="list-style-type: none"> <i>Characteristic</i> <i>Environment</i> <i>Offspring</i> <i>Mutation</i> <i>Natural selection</i> <i>Variation</i> <i>Inherited</i> <i>competition</i>
Challenge and Support:	World wide learning/ links to 21 st century:	Cultural capital/ Industry/ Enrichment:
<p><i>Each lesson plan has activities broken down for the ability of the students. Most activities have a LPA, MPA, HPA and some have a HPA.</i></p> <p><i>Example includes "Show the criteria on the board for how to lay out the Punnett squares. Pupils draw Punnett squares for each inherited characteristic following the criteria."</i></p>	<ul style="list-style-type: none"> Extinction and the need for conservation of wildlife. (L4) "doomsday" vault (L4) 	<ul style="list-style-type: none"> Doctors/Nurses Biologist Palaeontologist Geneticist
Historical, Social, Moral, Spiritual, Cultural context:	Cross curricular links/ literacy/numeracy:	Common misconceptions:
<ul style="list-style-type: none"> Conservation charities (L4) Genetic modification (L10) Testing people for genetic disorders (L12) 	<ul style="list-style-type: none"> <i>Numeracy: Algebraic approach to punnet squares for probability of genetic disorders.</i> <i>Literacy: extended writing piece – Would you eat genetically modified food. What killed the dinosaurs.</i> 	<ul style="list-style-type: none"> <i>Living things are constantly adapting and evolving.</i> <i>Extinctions are still occurring</i> <i>There are still many theories about what caused the dinosaurs to go extinct</i>

Assessment timeline:

- *Practical skills monitored by teacher when conducting experiments.*
- *Assessed practical skill: 'Testing theories and giving advice' (lesson 6/12).*
- *End of topic exam to assess pupil progress at the end of test.*
- *All lessons have success criteria presented to pupils at the start of the lesson.*
- *Assessed tasks (highlighted above) will have feedback to help improve pupils understanding after they have completed the assessment.*

Home learning

- *Seneca online learning or Year 8 homework booklet – 2 pages.*
- *Scholarly reading <https://advances.sciencemag.org/content/6/1/eaaw4486?intcmp=trendmd-adv>*

Feedback

- *Students will have feedback on their skills assessment midway through this unit.*
 - *Students will self-assess their home learning page of the homework booklet.*
 - *Students will have feedback on their end of topic text which will be teacher assessed also*
 - *Students will self-assess their home learning page of the homework booklet.*
- Students will generate self-feedback on their skills assessment at the end of this unit this unit.*

Length of unit (duration indicated in lessons)

1	2	3	4	5	6	7	8	9	10	11	12
Unit: B6 Genes 2											