

B16 Adaptations, Interdependence and Competition – Science Faculty

Rationale and Context of Unit:	Core curriculum content:	Tier 2 & Tier 3 vocabulary explicitly taught:
<p><i>This unit provides the basis for all the moral, and cultural issues in the next unit. Having a strong understanding of how stable communities develop will add explanation to why they cannot be easily replaced.</i></p> <p><i>7B2 ecosystems provides a base of knowledge for this unit however many of the key terms are forgotten and need refreshing.</i></p> <p><i>Students have varied experience of field work from scout groups and primary school.</i></p> <p><i>Students often find adaptations very logical but can rely on the easy ones and avoid SA:Vol</i></p>	<ul style="list-style-type: none"> • How to investigate and measure the distribution and abundance of species in a system • About competition between organisms for scarce resources • Adaptations of organisms that result from natural selection (both animals and plants) • Link these adaptations with competition • About biotic and abiotic factors and their effects on communities • How to sample habitat comparatively and along a transect • How extremophiles live and are adapted 	<ul style="list-style-type: none"> • <i>Biotic</i> • <i>Abiotic</i> • <i>Ecosystem</i> • <i>Habitat</i> • <i>Intraspecific</i> • <i>Interspecific</i> • <i>Distribution</i> • <i>Organism</i> • <i>Adaptation</i> • <i>Quadrat</i>
Challenge and Support:	World wide learning/ links to 21 st century:	Cultural capital/ Industry/ Enrichment:
<ul style="list-style-type: none"> • SA:Vol is hard is counterintuitive, breaking this down with a demo using blocks or playdoh helps. • Students struggle with the many steps in ecology maths such as calculating species density from sampling data. 	<ul style="list-style-type: none"> • Learning about different habitats globally. • The work on stable communities links sets up the next unit on preservation of our planet. 	<ul style="list-style-type: none"> • <i>Career focus ecologist</i> • <i>Field work is an excellent source of enrichment</i>
Historical, Social, Moral, Spiritual, Cultural context:	Cross curricular links/ literacy/numeracy:	Common misconceptions:
<ul style="list-style-type: none"> • ? Issues related to this area are picked out and focused on in B18. 	<ul style="list-style-type: none"> • Maths, calculating area of shapes is required, means, median, mode. • Geography field work has a lot of overlapping with sampling techniques. • Literacy/ food tech stepped method writing. 	<ul style="list-style-type: none"> • <i>Students give adaptations of heat rather than competition and visa versa.</i> •
Assessment timeline:		

- *regular EPPQs*
- *end of unit test (With B9)*
- *EPPQ homework task*
- *in lesson questioning and other progress checks*

Home learning

- *EPPQ homework booklet*

Feedback

- *Students self/peer mark homework booklets and set revision goals based on understanding.*
- *Feedback four based on the end of the unit test. (Units B8&9)*

Length of unit (duration indicated in lessons)

For combined science and separate science this unit is the same, 9 lessons (8 content and 1 assessment)

Unit: