B4.2 Ecological niches

What the Cell · DP Biology · note-taking sheet · SL statements B4.2.1–13

Name _____ **Date** _____

How to use this sheet: go through the slides and videos with it, then close them and write from memory. Use your own words and add page numbers from the book (pp. 363–379) where you want more detail.

Guiding questions. Why does it help organisms to have specialized ways of feeding? How do a species' adaptations relate to its role in an ecosystem?

B4.2.1–2 Niches and oxygen

Define niche. How is it different from a habitat?

Group	Oxygen	Example
Obligate aerobe		
Facultative anaerobe		
Obligate anaerobe		

B4.2.3–7 Nutrition

Mode	How it works	Example
Photosynthetic		
Holozoic		
Mixotrophic		
Saprotrophic		

List the three ways in which archaea obtain nutrition.

B4.2.8 Teeth and diet

What do teeth show about the diet of Homo sapiens and Paranthropus robustus?

B4.2.9–10 Feeding and defence

Give one adaptation each for an insect herbivore and for a plant defence. How can herbivores cope with toxins?

	Predator	Prey
Chemical		
Physical		
Behavioural		

B4.2.11 Light in forests

How do canopy trees, lianas, epiphytes, strangler figs and shade plants each cope with limited light?

B4.2.12–13 Fundamental and realized niches

Distinguish the two. What are the two possible outcomes of competition between species?

Before you finish

Tick the ones you can explain without notes. Circle anything to ask about.

- ☐ Niche
- ☐ Oxygen groups
- ☐ Four modes
- ☐ Archaea
- ☐ Teeth
- ☐ Herbivores
- ☐ Plant defences
- ☐ Predators and prey
- ☐ Forest plants
- ☐ Realized niche
- ☐ Competitive exclusion