**Chapter Summaries:**

**Chapter 9: Habitats, environment and survival**

**Remember that this is just a guide. Also use ‘quick check’, ‘key ideas’ and ‘key words’ as guides.**

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| **Page** | **Title** | **Summary/ key ideas** |
| 257-258 | Giant monsters of the deep | Read only |
| 258-260 | Habitat: where an organism lives | Medium (habitat V microhabitat) |
| 260-263 | Range: the distribution of habitats | Medium (range V distribution) |
| 263-267 | Technology as a tool in biology | Read and choose 2 techniques to summarise |
| 267-270 | Who lives in a habitat | Long- be very clear on the term ‘niche’ |
| 270- 278 | Environment: what’s it like there? | Long-  -Differences between aquatic (fresh and marine and terrestrial environments).  -micro-environments (how is temperature and humidity different in shelters?)  -tolerance range  -limiting factors |
| 278-282 | The Australian environment | Long-  -what climatic trends do we see?  -how does La nina/ El nino affect climate?  - how do soil trends affect habitat types? |
| 283- 288 | Surviving the Australian environment | Med-Long: what adaptations/ plant types do we see in arid environments? |
| 289- 291 | Australian Fauna: what survives where? | Med-Long: adaptations to survive arid environments |

Glossary:

Biotic

Abiotic

Adaptation

Niche

Niche overlap

Migration

La Nina

El nino

Range

Limiting factor

Stomata

Water tapper

Micro habitat

Micro-environment

Leaching

Desiccation

Diapause

Dormancy

Competition

Stomata

Filter feeder

Closed forest

Open forest

Hummock grassland

Ephemeral

Qualitative

Quantitative

Photic zone

Distribution

Terrestrial

Aquatic

Arboreal

Marine

Fossorial

Herbivorous

Frugivorous

Carnivorous

Insectivorous

Omnivorous

Diurnal

Nocturnal

Crepuscular

**Chapter 10: Physiological adaptations for survival**

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| --- | --- | --- |
| **Page no.** | **Title** | **Summary/ main concepts** |
| 298-299 | Water balance in the tarrkawarra | Med.- You should be able to read about any species and break down their adaptations in this way |
| 299-301 | External and internal environments | Med- Homeostasis is a major concept to understand in this unit |
| 301- 308 | Nerves and hormones: detecting and responding to change | Long: I expect that you supplement this with material covered in class.  Learn the systems . Label a nerve cell (fig. 10.5). how are touch receptors distributed? How does nervous system and endocrine system work together?  Negative feedback systems |
| 309 | Detecting temperature change | Long |
| 310-313 | Maintaining core temperature | Long-  - conduction, convection, radiation, evaporation  -ways of gaining and loosing heat  -negative feedback system |
| 313-317 | Behavioural activities | Long:  -Ectothermic V endothermic  -SA:V  -predict animal size in different environments |
| 317-320 | Animals surviving on land | Med- adaptations for hot/ cold environments |
| 321-322 | Animals surviving in water | Med- adaptations of marine animals for cold (include zoo info here) |
| 322-325 | Plant responses to temperature change | Med-  Adaptations of plant/ leaf shape, stomata, root system, transpiration, movement |
| 325- 330 | Water balance in living organisms | Long- include work from in class here- negative feedback of endocrine system, kidney function, comparison between types of organisms |
| 330-335 | Water balance in plants | Long- main concepts are transpiration and adaptations to reduce transpiration (leaf orientation, sunken stomata) |

Glossary:

Radiation

Convection

Conduction

Evaporation

Transpiration

Hormone

Endocrine system

Nervous system

Negative feedback system

Loop of Henley

Piloerection

SA:V

Vasodilation

Vasoconstriction

Endotherm

Ectotherm

Cloaca

Salt gland

Renin

Vasopressin

Aldosterone

Hypothalamus

Neuron

Effector

Affector

Motor neuron

Sensory neuron

Counter current system

Insulating layer

Structural adaptation

Behavioural adaptation

Physiological adaptation

Urea

Uric acid

Ammonia

Pituitary gland

Metabolism

Homeostasis

Reflex arc

Dendrite

Axon

Myelin sheath

Synapse

Neurotransmitter

Metabolic water

Free water

Osmosis

Active transport

Cuticle

Stomata

Guard cell

Olfactory

Auditory

**Chapter 11: Behaviours for survival**

|  |  |  |
| --- | --- | --- |
| Page | Title | Summary/key concepts |
| 342 | Welcome to my bower | Short- you should be able to summarise behaviour for other organisms in this way |
| 342-362 | Behaviour in animals | Long |
|  | * Innate v learned | Med- must be able to identify when given an example |
|  | * Rhythmic behaviour | Why are behaviours rhythmic?  Why do animals migrate?  How can animals migrate? |
|  | * Communication | What are the components of communication?  What does communication achieve?  How do things communicate?- visual, auditory, touch, olfactory  Understand social communication- competition, cooperation, organisation, |
|  | * Learned behaviours | Long- be able to identify 4 main types |
| 362-367 | Plant behaviour | Long- make sure you understand plant tropisms!!!! And Rhythmic behaviour!!!!! |

Glossary:

Tropism

Geotropism

Phototropism

Thigmotropism

Auxin

Heliotropism

Phototracking

Nastic movement

Circadian rhythm

Photoperiod

Short day plant

Long day plant

Day neutral plant

Leaf orientation

Imprinting

Insight

Habituation

Comditioning

Classical conditioning

Operant conditioning

Play behaviour

Innate behaviour

Learned behaviour

Competition

Intraspecific competition

Interspecific competition

Territorial behaviour

Hierarchy

Courtship behaviour

Caste system

Pheromones

Echolocation

Stimulus

Sender

Receiver

Migration

NOTE: See 11.4 for a list of behaviour types and learn these!!!!!!

**Chapter 12: Reproductive strategies for survival**

|  |  |  |
| --- | --- | --- |
| Page | Title | Summary/Main concepts |
| 374-376 | Sex at sea | Med- |
| 377 | A range of reproductive strategies | Long- learn all of this!!! |
| 377-381 | Mating systems | Med-long  -different systems  - how do they in reproductive success? |
| 381- 383 | Offspring: How many? How often? | Med-long   * Different strategies * Hoe do they lead to reproductive success? |
| 383-387 | Eggs or liveborn young? | Med-  -what are the strategies?  -how do they lead to reproductive success? |
| 388-390 | Parental care or not | Med-   * What are the strategies? * How do they lead to reproductive success? |
| 391-393 | Reproductive strategies: Australian marsupials | Med-  Apply what you have read so far here |
| 393-395 | How often do matings occur?  Patterns and times of breeding | Med-  How do other reproductive strategies apply here? |
| 395-400 | Plant reproduction | Med-   * What strategies are used? * How is reproductive success increased? * Which are R/K selected? |

Glossary:

Broadcast spawning

Zooplankton

Asexual

Sexual

Hermaphrodite

Parthenogenesis

External/ internal fertilisation

Monogamy

Polygamy

Polyandry

Promiscuity

r-selection

K-selection

Oviparity

Viviparity

Parental investment

Extra pair copulation

Lekking

Fecundity

Sperm competition

Mate guarding

Copulation

Amniote eggs

Placenta

Plancental mammal

Marsupial

Oestrous cycle

Pollination

Vectors

Dispersal