

Name: \_\_\_\_\_

Class: \_\_\_\_\_

**ACTIVITY SHEET**

# Chapter 8 Revision

Use this revision sheet to check your understanding and guide your revision. Identify any concepts, models or other content that require more study, and then plan your study approach.

By the end of this chapter **you should know**:

	Revise	Complete
Detecting signals: types of interoreceptors and exteroceptors		
Parts of the nervous system: central and peripheral		
Types of neuron, structure of a neuron		
The endocrine system as a means of communication		
Feedback mechanisms		
The tolerance range and optimum range for abiotic factors		
Metabolism and metabolic activity		
Thermoregulation in different organisms		
Osmoregulation in different organisms		

By the end of this chapter **you should be able to**:

	Revise	Complete
Define the term 'homeostasis'		
Define the terms 'interoreceptors' and 'exteroceptors'		
Summarise the types of receptors: chemoreceptors, mechanoreceptors, photoreceptors, thermoreceptors, pain receptors; including location and type of stimulus		
List the parts of the nervous system under two headings: central and peripheral; including the autonomic and somatic components		
Compare the types of neuron (sensory, motor, interneuron) with respect to structure and function		
Describe the main parts of a neuron: dendrites, cell body, axon, myelin, axon terminals and Nodes of Ranvier; include a labelled diagram		
Describe how a hormone is used, from its production in a gland to its effect in a target tissue		
List the three reasons that signals are needed		
Create a diagram of the stimulus–response model		
Create a diagram of negative feedback using blood glucose or temperature as an example		
Create a diagram of positive feedback using breastfeeding as an example		
Define the terms 'tolerance range' and 'optimum range'; explain what happens if an organism falls outside of these ranges		
Define the term 'metabolism'		
Define the terms 'ectotherm', 'endotherm', 'homeothermic' and 'poikilothermic'		
Create a table with examples of ectotherms and endotherms that are homeothermic and poikilothermic		

	Revise	Complete
Summarise the physiological and behavioural strategies used by an endotherm that allow it to cope in a hot environment		
Summarise the physiological and behavioural strategies used by an endotherm that allow it to cope in a cold environment, including the use of a countercurrent heat exchange		
Describe different dormancy strategies: hibernation and aestivation		
Describe the role of the kidney in osmoregulation		
Compare the different strategies for the elimination of nitrogenous waste; include the modifications found in the structure of the kidney		
Compare osmoregulators and osmoconformers; include examples of each strategy		
Describe how marine and freshwater fish maintain their water balance		