Bishop Heber High School

Subject	Year	Term
Biology	13	2

Topic

Module 5 – Homeostasis; Module 6 – Cloning and Biotechnology

Content (Intent)

Prior Learning (Topic) Module 5 Communication, Homeostasis and Energy; Module 6 Genetics

Module 5 Homeostasis. Control of temperature, importance of the liver, structure and function of the kidney in control of water potential of the blood, pancreas and adrenal glands. Plant and animal responses, nervous impulse propagation, brain structure and function and muscle contraction.
Module 6 – Gene therapy, cloning and biotechnology natural and artificial cloning, microbial growth curve, use of immobilised enzymes as biosensors.

Future Learning (Topic) Preparation For The Exam

What Knowledge and Skills will be taught (Implementation)	How will your understanding be assessed & recorded (Impact)
Module 5 Hormonal control and response to internal and external environments – Synapses and muscle structure and function, Principles of homeostasis and negative feedback. Importance of the liver, structure and function of the kidney in control of water potential of the blood, pancreas and adrenal glands. **Practical – reflexes.** **Module 6 – Gene therapy** compare germ line with somatic cell. **Cloning and biotechnology,** natural and artificial cloning, microbial growth curve, use of immobilised enzymes**.** Practical – histology of tissues in homeostatic organs Practical – serial dilution to produce calibration curve to calculate glucose concentration in urine.	End of topic test – A level grading and formative feedback given. Homework – a mark, A level grade and formative feedback provided.
Module 5 – Hormonal responses, Control of blood glucose concentration. Fight or flight response, Plant responses. **Module 6 – Ecosystems** Populations and succession, populations and sustainability, predator prey relationship, conservation and management Revision and exam preparation	End of topic tests – A level grading and formative feedback given. Mock Exam – A level grading and formative feedback given. Homework – mark, A level grade and formative feedback given.

How can parents help at home?

Ensure all class notes are complete and homework submitted on time
Encourage pupils to revise for tests and exams and to create revision resources such as flash cards and posters.
Encourage pupils to actively research future University courses and careers.

Helpful further reading/discussion (including Reading and Vocabulary Lists)

Reading
OCR revision guides
OCR CGP Text book
Essential Maths Skills for AS/A level Biology CGP
Resources on Teams
Websites
https://www.ocr.org.uk/qualifications/as-and-a-level/biology-a-h020-h420-from-2015/specification-at-a-glance/
Mrs Millers Blog

Vocabulary Lists
Impulse
Action Potential
Stimulus Threshold
Sarcolemma
Sarcoplasmic Reticulum
Actin
Myosin
T Tubules
Nodes Of Ranvier
Neurotransmitter
Islets Of Langerhans
Insulin
Glucagon
Phototropism
Geotropism
biotechnology
micropropagation
glucose isomerase