

GCSE Biology Revision : Unit 1

= not revised

= getting there

= nailed it.

Diet and metabolic rate

(p.12–14)

- What is found in a balanced diet?
- Why do people's energy needs vary?
- What are the problems of obesity?
- What are the problems of eating too little?
- How does lack of exercise affect someone?
- What inherited factors contribute to your weight?
- What should you look for in evaluating claims that aren't scientifically proven?

Fighting Disease

(p.13– 18)

- What are the differences between bacteria and viruses?
- Describe the body's defence system.
- Three ways that white blood cells stop infection?
- How does vaccination work?
- The pros and cons of vaccination?
- Differences between painkillers and antibiotics?
- How do bacteria become resistant to antibiotics?
- How are bacteria grown in a lab?
- What did we learn from Semmelweis?
- Why is antibiotic resistance becoming more common?
- What dangers are posed by mutating bacteria and viruses?

Control

(p. 19–24)

- Receptors, sensory neurones, relay neurones, motor neurones, effectors.
- What are synapses / how do they work?
- What are the functions of reflexes?
- What are the stages of a reflex arc?
- What are hormones?
- Three comparisons between hormones and nerves?
- What are the four stages of the menstrual cycle?
- What are the roles of FSH / oestrogen / LH?
- How are hormones used to reduce / increase fertility?
- How does IVF work? Pros and cons?
- Explain how auxins change the direction of growth of plants.
- What are the applications of hormones to agriculture?

Homeostasis

(p.25—28)

- What factors need to be kept constant in the body?
- How are ions regulated?
- How is water lost from the body?
- How is body temperature controlled?
- How is blood sugar level controlled?
- What are the arguments for / against performance enhancing drugs?
- Why aspects of statins / cannabis need to be taken into account?
- What are the main stages of testing drugs?
- What went wrong with thalidomide?
- What terms link cannabis to hard drugs?
- How do legal drugs compare in terms of impact?

Adaptations

(p. 30—32)

- Describe adaptations to deserts / the Arctic.
- What do animals and plants compete for?
- How do environmental changes affect populations?
- How are lichens / water invertebrates used as pollution indicators?

Energy Flows

(p. 33—35)

- How do you construct / interpret a pyramid of biomass?
- Why can't a food chain go on for very many trophic levels?
- How does decay work?
- Label / explain the stages in the carbon cycle.

Variation

(p. 36—42)

- How are characteristics influenced by genes / the environment?
- What are chromosomes / genes?
- What are the differences between sexual / asexual reproduction?
- How are plants cloned?
- How does embryo cloning differ from adult cell cloning?
- What are the issues relating to cloning?
- How is genetic engineering done?
- How have plants and animals been genetically modified?
- What are the pros and cons of GM crops?
- How are evolutionary trees drawn up?
- How do mutations contribute to natural selection?
- How did Lamarck's theory differ from Darwin's?