



# Learning Journey Map –Y10 Biology Separates

## Developing scientific skills to be an informed citizen



**OCR**  
Oxford Cambridge and RSA

Move on to Year 11



Next Level



Year 10 Survival Top Tips	
<b>Tip 1</b>	Learn and revise vocabulary weekly, use glossaries given and - Quizlet/Seneca/Educake
<b>Tip 2</b>	Use ' Youtube- e.g. myGCSE, MrExham to help review key skills and concepts
<b>Tip 3</b>	Use GCSE Bitesize/Kerboodle resources/past OCR questions
<b>Tip 4</b>	Use the Pixl Resources on Firefly & therapy questions
<b>Tip 5</b>	Read online science news, watch science documentaries

**B4 Community level systems:**

**B4.1 Ecosystems**

- Biotic & Abiotic factors
- Competition & interdependence
- Trophic levels
- Pyramids of biomass
- Decomposition
- Water, Carbon & Nitrogen cycles

**Differences between Biotic and Abiotic Factors**

**Carbon Cycle**



**B3 Organism level systems:**

**B3.1 Co-ordination & control**

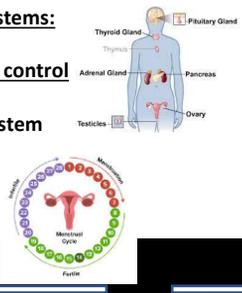
- The nervous system
- Reflexes
- PAG-reaction times
- Structure of the eye & eye defects
- The brain



**B3.2 Co-ordination & control**

**The endocrine system**

- Menstrual cycle
- Contraception
- Fertility
- Plant hormones



**B3 Organism level systems:**

**B3.3 Maintaining internal environments**

- Homeostasis
- Temperature regulation
- Blood glucose control
- Diabetes
- Kidneys & osmoregulation

**B2 Scaling Up:**

**B2.2 The challenges of size**

- Exchange surfaces & transport systems
- Surface area: volume ratio
- Human circulatory system
- Plant transport
- PAG-transpiration experiments

**B2 Scaling Up:**

**B2.1 Supplying the Cell**

- Transport into & out of cells; diffusion, osmosis & active transport
- PAG-investigating osmosis
- Mitosis
- Cell differentiation
- Stem cells



**B1 Cell level systems:**

**B1.3 Respiration**

- Key biomolecules
- PAG- testing for biomolecules
- Aerobic v anaerobic respiration
- PAG-Respiration experiments

**B1 Cell level systems:**

**B1.4 Photosynthesis**

- Photosynthesis
- Limiting factors
- Inverse square law
- PAG-Photosynthesis experiments



**B1 Cell level systems:**

**B1.2 What happens in cells**

- DNA
- Protein synthesis
- Enzymes
- PAG- Enzyme reactions

**B1 Cell level systems:**

**B1.1 Cell structure**

- Eukaryotic v prokaryotic cells
- Microscopy
- PAG-Making slides
- Magnification



**How do Enzymes Work**

**Review of prior knowledge**

**B1 Cell level systems:**

**Microscopy**

**Review of prior knowledge**

**B1 Cell level systems:**

**CURRICULUM OVERVIEW**

**Development of key scientific skills: planning valid experiments, carrying out practicals safely, displaying & processing data, as well as analysing & evaluating results**

**Possible careers**

Research scientist, Biologist, Doctor, Nurse, Forensic scientist, Ecologist, Farmer, Athlete, Nutritionist, Sports scientist, Personal trainer, Biochemical engineer, Civil Engineer, Paramedic, CSI, Police officer and many more!!

**CURRICULUM OVERVIEW**