

**This half term: Skills, Knowledge and Understanding to be developed:**

**Skills (students WILL BE ABLE to by the end of the Learning Programme):** undertake examination of microscope slides of duodenum and ileum to draw tissue plan diagrams and identify tissues; calibrate a microscope and use this calibration to calculate the actual size of measurements and drawing magnification; describe how to assess biodiversity in a habitat e.g. Simpson's Diversity Index; interpret data assessing biodiversity can be assessed within a species a genetic level and a molecular level; apply mathematical skills to biology; evaluate and interpret scientific investigations

• **Knowledge (students WILL KNOW by the end of the Learning Programme):** the adaptations of herbivore guts and dentition, in particular ruminants to a high cellulose diet and the adaptations of carnivore guts and dentition to a high protein diet; the adaptations of parasites and describe them as organisms that obtain their nutrition at the expense of a host organism;

• **Understanding (students WILL DEMONSTRATE THEIR UNDERSTANDING by the end of the Learning Programme):** the mechanism of final digestion and absorption of dipeptides, disaccharides, fatty acids and glycerol; biodiversity as the number and variety of organisms found within a specified geographic region;

**Key Terms / Words:**

- Duodenum
- Ileum
- Calibrate
- Magnification
- Biodiversity
- Herbivore
- Dentition
- Ruminants
- Parasites

**LP 4 – Week 1 & 2 Learning Outcomes:**

- Students will be able to distinguish between the various modes of nutrition of organisms and be able to describe the process of nutrition in unicellular organisms, e.g. Amoeba
- Students will know the adaptations of the human gut to a mixed, omnivorous diet that includes both plant and animal material
- Students will be able to undertake examination of microscope slides of duodenum and ileum to draw tissue plan diagrams and identify tissues.
- Students will be able to describe the mechanism of final digestion and absorption of dipeptides, disaccharides, fatty acids and glycerol .

**Success criteria:**

Drawing and measurement of tissue plan diagrams of the ileum and duodenum

Correct answering of examination questions on digestion and absorption

**Homework LP 4**

**Homework 1**  
Examination questions on digestive adaptations

**Prepare for next lesson**  
Read the relevant section in your A Level Biology Text Book to develop your skills, knowledge and understanding of digestion and absorption in humans

**LP 4 – Week 3 & 4 Learning Outcomes:**

- Students will be able to explain the adaptations of herbivore guts and dentition, in particular ruminants to a high cellulose diet and the adaptations of carnivore guts and dentition to a high protein diet
- Students will be able to describe and compare the adaptations of parasites and describe them as organisms that obtain their nutrition at the expense of a host organism e.g. Taenia and Pediculus

**Students will apply and demonstrate new knowledge and skills in a CDG Assessment**



**CDG**

**Grade**

**Success criteria:**

Correct answering of examination questions on ruminants and parasites

**CDG assessment**

**Homework LP 4**

**Prepare for next lesson**  
Read the relevant section in your A Level Biology Text Book to develop your skills, knowledge and understanding of ruminant and parasitic modes of nutrition

**LP 4 – Week 5 & 6 Learning Outcomes:**

- Students will undertake foundational learning on one more more key themes in preparation for their A2 learning in year 13.

**Success criteria:**

**Homework LP 4**