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|------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| What will I study?                       | <p><b>Biology is the scientific study of life and living organisms.</b></p> <p>You will be studying the AQA A Level Biology Specification which can be found here:</p> <p><a href="https://www.aqa.org.uk/subjects/biology/a-level/biology-7402/specification/specification-at-a-glance">https://www.aqa.org.uk/subjects/biology/a-level/biology-7402/specification/specification-at-a-glance</a></p>                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| Who teaches this course?                 | You will be taught by our team of experienced specialist biology teachers                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| What resources or equipment will I need? | <p>You will be provided with information booklets and access to a digital textbook.</p> <p>To each lesson you will need to bring:</p> <ul style="list-style-type: none"> <li>▪ a pen</li> <li>▪ a pencil</li> <li>▪ lined paper</li> <li>▪ a ruler</li> <li>▪ highlighters</li> <li>▪ a scientific calculator</li> <li>▪ a folder to keep your notes and resources organised</li> </ul> <p>A curious mind!</p>                                                                                                                                                                                                                                                                                                                                                                                                                          |
| Reading List                             | <p><u>Books</u></p> <p>AQA Biology, A Level Year 1 and AS textbook, ISBN 9780198351764</p> <p>CGP A Level Biology Revision Guide, ISBN 9781789080261</p> <p><u>Online</u></p> <p>A Level Biology Past exam questions:<br/><a href="https://www.physicsandmathstutor.com/biology-revision/a-level-aqa/">https://www.physicsandmathstutor.com/biology-revision/a-level-aqa/</a></p> <p>A level Biology topic videos: Miss Estruch:<br/><a href="https://www.youtube.com/playlist?list=PLOfYYgIrtVMg4UyubG_0xhjUztmh3Dysy">https://www.youtube.com/playlist?list=PLOfYYgIrtVMg4UyubG_0xhjUztmh3Dysy</a></p> <p>A level Biology topic videos: Free Science Lessons:<br/><a href="https://www.youtube.com/playlist?list=PL9louNCPbCxVF0IVlwiLLW-TmAMYX5OO7">https://www.youtube.com/playlist?list=PL9louNCPbCxVF0IVlwiLLW-TmAMYX5OO7</a></p> |

How can I extend my learning?

Your first topics when you start the course will be about biological molecules and cells. Therefore complete some advanced learning on these two topics using the guidance in the AQA specification linked above.

### Induction Activity: To be completed and brought to your first lesson

Resources needed to complete the activity:

Internet access

Estimated time to complete the activity:

2 hours

#### Task 1:

Draw diagrams of plant and animal cells and label each of them using all the structures that are listed in the A-level specification above.

#### Task 2:

Use this table, or draw your own, to briefly describe the structure and function of each organelle from the A-level specification

| Organelle             | Structure                                                                                                                | Function                                                                                                                                                                                             |
|-----------------------|--------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Cell surface membrane | It consists mainly of a phospholipid bilayer containing proteins. It also has cholesterol, glycoproteins and glycolipids | Partially permeable to control entry and exit of substances. Glycoproteins and glycolipids are involved in cell recognition and communication and cholesterol controls the stability of the membrane |
| Nucleus               |                                                                                                                          |                                                                                                                                                                                                      |
| Mitochondria          |                                                                                                                          |                                                                                                                                                                                                      |
| Chloroplast (plant)   |                                                                                                                          |                                                                                                                                                                                                      |
| Golgi apparatus       |                                                                                                                          |                                                                                                                                                                                                      |
| Golgi vesicles        |                                                                                                                          |                                                                                                                                                                                                      |

|                                    |  |  |
|------------------------------------|--|--|
|                                    |  |  |
| Lysosomes                          |  |  |
| Ribosomes                          |  |  |
| Rough<br>Endoplasmic<br>Reticulum  |  |  |
| Smooth<br>Endoplasmic<br>Reticulum |  |  |
| Cell Wall                          |  |  |
| Cell Vacuole                       |  |  |