

Year 10 Curriculum Area – Combined Science – Biology

<p>What concepts will we be covering this half term?</p>	<p>Curriculum mapping for students</p> <p>Key concepts:</p> <p>Biology: Topic B11 – Hormonal Coordination</p> <p>Principles of Hormonal Control The control of Blood Glucose Levels Treating Diabetes The Role of Negative Feedback Human Reproduction Hormones and the Menstrual Cycle The Artificial control of Fertility Infertility Treatment</p> <p>Biology: Topic B15 – Adaptation, Interdependence and Competition</p> <p>Importance of Communities Organisms in their Environment Distribution and Abundance Competition in Animals Competition in Plants Adapt to Survive Adaptations in Animals Adaptations in Plants</p> <p>Biology: Topic B16 – Organising an Ecosystem</p> <p>Feeding Relationships Material Cycles The Carbon Cycle</p>
<p>What resources can you use to support your learning?</p>	<p>BBC website:</p> <p>Biology: https://www.bbc.co.uk/bitesize/examspecs/zpgcbk7</p> <p>Oak National Academy:</p> <p>Biology</p> <p>Biology: Topic B11 – Hormonal Coordination</p> <p>Principles of hormonal Control https://classroom.thenational.academy/lessons/hormonal-responses-cgr3ed This lesson looks at the endocrine system and compares hormonal and nervous responses.</p> <p>The Control of Blood Sugar Levels https://classroom.thenational.academy/lessons/controlling-blood-sugar-levels-higher-71k32c This lesson looks at how blood glucose concentrations increase and decrease throughout the day. It also looks into the roles that insulin and glucagon play in controlling blood glucose concentrations.</p> <p>Treating Diabetes https://classroom.thenational.academy/lessons/diabetes-chj6ad</p>

This lesson looks at Type 1 and Type 2 diabetes, specifically at their causes and how they are controlled. This lesson also applies this knowledge to graph based questions.

The Role of Negative Feedback

<https://classroom.thenational.academy/lessons/negative-feedback-higher-6dh62r>

This lesson focuses on negative feedback loops, specifically of thyroxine.

Human Reproduction

Hormones and the Menstrual Cycle

<https://classroom.thenational.academy/lessons/hormones-in-reproduction-higher-cdhket>

This lesson looks at the roles of each of the reproductive hormones in the development of secondary sexual characteristics and their involvement in the menstrual cycle.

Artificial Control of Fertility

<https://classroom.thenational.academy/lessons/contraception-chh3ct>

This lesson covers the topic of contraception. If this is a sensitive topic to you, we recommend checking with a trusted adult before starting or doing the lesson with a trusted adult nearby.

Infertility Treatments

<https://classroom.thenational.academy/lessons/artificial-control-of-fertility-higher-cgu6ac>

This lesson covers the topic of IVF treatment. If this is a sensitive topic to you, we recommend checking with a trusted adult before starting or doing the lesson with a trusted adult nearby.

Biology: Topic B15 – Adaptation, Interdependence and Competition

Importance of Communities

<https://classroom.thenational.academy/lessons/communities-64vkcc>

This lesson introduces the topic of ecology and looks at communities and how organisms interact.

Organisms in their Environment

<https://classroom.thenational.academy/lessons/biotic-and-abiotic-factors-6cw3jc>

This lesson identifies biotic and abiotic factors and looks at how changes in them can affect communities.

Distribution and Abundance

<https://classroom.thenational.academy/lessons/sampling-required-practical-1-6rwkjc>

This lesson introduces the first sampling required practical and describes how a quadrat should be used to estimate population size.

<https://classroom.thenational.academy/lessons/plant-diseases-and-deficiencies-part-2-71h32t>

This lesson looks at the second sampling required practical and describes how transect lines can be used to test a hypothesis.

	<p>Competition in Animals Competition in Plants Adapt to Survive Adaptations in Animals Adaptations in Plants</p> <p>https://classroom.thenational.academy/lessons/adaptations-6gt64r</p> <p>This lesson looks at competition and how organisms are adapted to survive in certain conditions.</p> <p>Biology: Topic B16 – Organising an Ecosystem Feeding Relationships Material Cycles The Carbon Cycle https://classroom.thenational.academy/lessons/cycles-c8rkat This lesson looks at the importance of cycles for living organisms with a particular focus on the water and carbon cycles.</p>
Tasks to complete so we can assess your understanding/ Key Performance Indicator tasks	<ul style="list-style-type: none"> • Complete any of the revision tasks, watch the videos and do the tests on the BBC bitesize page. • Complete the lessons on the oak national academy website – follow the lesson to watch the video and complete the activities and the quiz.
What can you do if you need help/ support?	<p>If you need help please email your teacher –</p> <p>sfox2@netherthorpe.derbyshire.sch.uk gwatkins@netherthorpe.derbyshire.sch.uk mraybold@netherthorpe.derbyshire.sch.uk sparry@netherthorpe.derbyshire.sch.uk jmccammon@netherthorpe.derbyshire.sch.uk shutton@netherthorpe.derbyshire.sch.uk jcarr@netherthorpe.derbyshire.sch.uk pgreenwood@netherthorpe.derbyshire.sch.uk bchristmas@netherthorpe.derbyshire.sch.uk nconnolly@netherthorpe.derbyshire.sch.uk jroberts@netherthorpe.derbyshire.sch.uk</p>