Year 10 Curriculum Area – Separate Science - Biology	
What concepts will we be covering this half term?	**Curriculum mapping for students** **Key concepts:** **Biology: Topic B12 - Homeostasis in Action** Controlling Body Temperature Removing Waste Products The Human Kidney Dialysis an Artificial Kidney Kidney Transplants **Biology: Topic B16 – Adaptation, Interdependence and Competition** 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 **Biology: Topic B17 – Organising an Ecosystem** Feeding Relationships Material Cycles The Carbon Cycle Rates of Decomposition
What resources can you use to support your learning?	**BBC website:** **Biology:** https://www.bbc.co.uk/bitesize/examspecs/zpgcbk7 **Oak National Academy:** **Biology** **Biology: Topic B12 – Homeostasis in Action** Controlling Body Temperature https://classroom.thenational.academy/lessons/regulating-body-temperature-68v38e In this lesson we will look at how our body maintains a stable internal temperature. Removing Waste Products https://classroom.thenational.academy/lessons/water-balance-6cu3ec This lesson focuses on osmoregulation. This is how water is gained and lost in the body and how water levels are monitored. The Human Kidney https://classroom.thenational.academy/lessons/the-kidney-6ww3ct This lesson looks at the structure of the kidney, how these structures are involved in osmoregulation and the role of ADH in urine production.

Kidney Transplants
https://classroom.thenational.academy/lessons/kidney-failure-69gpct
This lesson looks at the potential treatments for kidney failure - dialysis and a kidney transplant.

Biology: Topic B16 – 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.

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Competition in Animals
Competition in Plants
Adapt to Survive
Adaptations in Animals
Adaptations in Plants
https://classroom.thenational.academy/lessons/adaptations-6gt64r
This lesson looks at competition and how organisms are adapted to survive in certain conditions.

Biology: Topic B17 – Organising an Ecosystem
Feeding Relationships
Material Cycles
The Carbon Cycle
Rates of Decomposition

	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.
Tasks to complete so we can assess your understanding/ Key Performance Indicator tasks	• 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?	If you need help please email your teacher – 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