

Year 12 Biology: Summer Term Curriculum Plan

Year 12 students will move on to content from Year 2 of the course, starting with the Ecology topic (Topic 10). Lessons will be set by both teachers in accordance with normal lessons, but will be sequential initially, rather than a different topic from each as normal. We are hoping to make online versions of the textbook available to students as soon as possible and students will be contacted directly regarding this.

If there are any questions regarding the work set for Year 12 students, please do not hesitate to contact Miss Clayton at kay.clayton@jmhs.hereford.sch.uk or Miss Raggett at abigail.raggett@jmhs.hereford.sch.uk.

Overview for Topic 10: Ecosystems

To understand the structure of an ecosystem and interactions within it, how nutrients are cycled within ecosystems and the effect that humans have on the environment in terms of measuring and sampling organisms and climate change.

Key Content
<ul style="list-style-type: none">• Recap food webs and food chains and the structure of ecosystems, including the transfer of energy between organisms• Describe the process of succession and how pioneer species lead to the development of more complex communities• Explain the impact of biotic and abiotic factors on organisms• Understand techniques that are used to determine abundance and distribution of organisms (including ACFOR, types of quadrat, transects, percentage cover and individual counts) and be able to critically evaluate methodologies in other studies.• Use statistical tests to analyse data generated by sampling studies
<ul style="list-style-type: none">• Describe the ways that carbon and nitrogen are cycled through the ecosystem with emphasis on the role of microorganisms• Explain how humans and human activities have impacted global conservation and biodiversity including in terms of depletion of resources, greenhouse emissions and fish stocks• Explain how the impact of human activities has been managed and the effectiveness of strategies• Explain the importance of the role of peer reviewed science in validating data related to global conservation and climate change

In addition to Topic 10 content, there will also be some Year 13 transition work completed by students towards the end of the summer term, to prepare them for the remaining content on the course. Students will be given more detail about this in due course.