



Scheme of Learning	The Environment Year 8 Science
Learning outcomes	<ol style="list-style-type: none"> 1. Recall that variation between living things is caused by differences in their genes and their environment to classify organisms into groups according to common features 2. To state examples of how living things, vary over time. 3. Suggest reasons why Darwin's theory of natural selection was only gradually accepted 4. Identify the differences between Darwin's theory of evolution and conflicting theories e.g. Lamarck's 5. To evaluate the evidence for different theories about the extinction of the dinosaurs 6. Describe the effects of land and water pollution on the environment 7. Discuss the problems caused by increased human population size 8. Explain why modern species are becoming extinct 9. Explain the purpose of conservation 10. Explain how to measure the distribution of animals in an area 11. Calculate estimated population size using samples 12. Describe the main methods for sampling animals 13. Choose appropriate apparatus and techniques to measure and observe the population in a habitat.
Key Question	What variation exists between and within species, in terms of their genetics, population size and distribution?
Knowledge	<ul style="list-style-type: none"> • Variation between species and how said species are grouped • Evolution and extinction of species over time and the theories associated with evolution • Human impact on the conservation and extinction of a species • Using sampling equipment techniques to determine the distribution of a species
Ongoing Assessment	<ul style="list-style-type: none"> • Retrieval questions at the start of every lesson. • Worksheets for all major concepts to be used for self and peer assessment. • Revision checklist at beginning of handout pack and retrieval questions at the end.
Key Assessment	<ul style="list-style-type: none"> • Conservation case study research • End of topic test, 30 marks in 35 minutes. Including a mixture of multiple choice, short answer and long answer questions.
Clear sequencing of content	<ul style="list-style-type: none"> • This is the last topic taught in Year 8 and thus the last topic taught in KS3. It builds on knowledge of inheritance, which was the previous Biology topic taught in Year 8. This is also the introduction of key classification and evolution terminology and concepts, as well as sampling which is one of the practical skills that students will be required to learn about again in GCSEs. • These key concepts are also revisited during GCSE in Year 11 and therefore learning the concepts now gives them prior exposure to aid the transition to KS4.
Careers	Botanist, taxonomist, geneticist, conservationist
Diversity and Inclusion	Conservation debate - Why do you think different cultures have varied levels of empathy towards the protection of different species? What practical barriers may there be to the conservation, repopulation and reintroduction of a species? Is environmental heritage just as important as religious and cultural heritage?

NHSG Key Stage 3 Unit Overview for The Environment



	Biodiversity/inclusion discussion – Discuss variation in the human species in terms of physical characteristics, language, sexuality, fitness, behaviours, etc
Additional support	Handout packs including learning checklist provided for every student. Online textbook providing further application, challenge and quizzes.
Challenge	<ul style="list-style-type: none">• Stretch challenge question on end of topic test.• Stretch and challenge question sheet.