

Subject Spotlight Lesson Plan

Title of Session	Subject Spotlight: Palaeontology – When Whales Walked
Description:	Did you know that whales used to walk on land? The giants of the sea we know today are all descended from a group of small land mammals that looked like deer. Fossils from these animals are hugely important to palaeontologists, giving us an insight into the lives of species that went extinct nearly 50 million years ago. In this workshop, a palaeontologist takes you through his work reconstructing how these fascinating creatures lived – and gives you a chance to examine some whale fossils yourself!

Duration of session:	~35 mins	Target Audience:	Y8/9
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Regional Progression Framework - Learning Outcomes:
LO1 - Awareness of HE and the different opportunities available. Be able to challenge any myths relating to HE.
LO2 - Identify the link between GCSE attainment and progression opportunities and how these can support life or career goals
LO5 - Learner knows how to research different routes into HE and how to make an application
Gatsby Benchmarks:
7. Encounters with Further and Higher Education - All students should understand the full range of learning opportunities that are available to them. This includes both academic and vocational routes and learning in schools, colleges, universities and in the workplace.

Timings:	Activity/Task/Information:	Instructions for teacher:	Resources needed:
0.00 – 1.36	Introduction <ul style="list-style-type: none"> • My HE pathway 		
1.36 – 3.32	<ul style="list-style-type: none"> • What are whales? • Where did whales come from? Task 1: <ul style="list-style-type: none"> • Discuss what you think early whales looked like. 	Pause video at 3.32. Students to discuss what early whales looked like – did they live in the sea, would they have hair, did they have legs? Give 2 mins for discussion.	
3.32 – 8.37	<ul style="list-style-type: none"> • Indohyus • Predator escape video • How do we know about extinct animals? Task 2: <ul style="list-style-type: none"> • Be a palaeontologist • Answers - <i>Pakicetus</i> 	Pause video at 7.29. Students to cut out tiles on worksheet and reassemble them to see what the animal looked like. Does it look like a modern animal? Give 5 mins or until activity is done.	Worksheet and scissors
8.37 – 18.25	<ul style="list-style-type: none"> • Did Pakicetus live on land or water? • What did a Pakicetus eat? • How would it catch food? 		
18.25 – 20.06	Task 3: <ul style="list-style-type: none"> • Whale evolution drawing task 	Pause video at . Ask students to draw what they think an intermediate whale between the two on video/on worksheet would look like. Think about legs, fins, tail, fur etc. Task to take 5 mins.	Worksheet/piece of plain paper
20.06 - end	Further information		

Overview of all resources:	
Video	
Whale Evolution worksheet	
Further resources to share with students:	<ul style="list-style-type: none"> • Animation summarising whale evolution: https://www.youtube.com/watch?v=L9abwlcfyXk • The Interdisciplinary Centre for Ancient Life (ICAL) is a research centre at the University of Manchester dedicated to improving our understanding of the evolution of life on Earth: http://www.ical.manchester.ac.uk/ • Find out more about studying Earth and Environmental Sciences at UoM: https://www.ees.manchester.ac.uk/study/ • Job Profile of a Palaeontologist: https://www.ucas.com/ucas/after-gcses/find-career-ideas/explore-jobs/job-profile/palaeontologist