

Create a habitat – Lesson Plan KS3/4

Learning objectives:

By the end of this lesson;



All students will be able to understand the relationship between organisms in an ecosystem



Most students will be able to create a food web



Some students will be able to design a habitat map



Curriculum links at KS3 & 4

<p>GCSE Geography WJEC</p> <p>Unit 2: Environmental & Development Issues</p> <ul style="list-style-type: none"> • Ecosystems • Environmental challenges – impacts on environment, ecological footprint <p>Unit 3: Fieldwork Enquiry</p> <ul style="list-style-type: none"> • Geographical skills – map skills 	<p>GCSE Biology WJEC</p> <p>Unit 1: Ecosystems</p> <ul style="list-style-type: none"> • Ecosystems – trophic structure, ecological pyramids • Pollution & nutrient cycling <p>Unit 2: Variation</p> <ul style="list-style-type: none"> • Classification & biodiversity
<p>KS3 Geography</p> <ul style="list-style-type: none"> • The sustainable Earth • Interdependence of organisms 	<p>KS3 Biology</p> <ul style="list-style-type: none"> • Ecosystems & habitats – food chains, classification, biodiversity & adaptations • Humans & the environment

Checklist of learning: Pupils complete this checklist of terms at the start and end of the lesson to monitor learning and progress

Background: Wild Landfill – Creating habitats in the post-industrial landscape
The legacy of industry and waste disposal is one of loss of nature and pollution of the natural environment. It has seen the degradation of land and soils and reduced biodiversity. Led by NRW in Partnership with Gwynedd and Ynys Mon County Councils, Wild Landfill is the Welsh Government's Challenge Fund rewilding initiative restoring North Wales landfill sites into thriving, biodiverse, natural

habitats. The project aims to begin the reversal of this trend incorporating all aspects of sustainable management of natural resources into its brief. Among the major themes of this project are to; increase biodiversity, provide water storage and flood protection, create wetlands, ponds, wildflower meadows and woodland. Four brownfield waste landfill sites across Gwynedd and Ynys Mon will be regenerated into a mosaic of wildlife habitats which will not only be new homes for nature but will begin to store carbon. Initiatives include the planting of more than 45,000 new trees and creating over 100 acres of new wildflower meadow.

Starter activity:

Matched pairs – Also acts as a list of keywords with definitions

Activity:

- Step 1: Create a habitat key for the landfill site. Label the zones on the map.
- Step 2: Match plant and animal species to each habitat
- Step 3: Add the arrows to the energy flow diagram
- Step 4: Create one food chain of 3 or 4 species for one habitat
- Step 5: Add a top predator (tertiary consumer) to the food chain
- Step 6: Create a food web for the site as a whole

Resources:

- Species cards
- Habitat cards
- Blank landfill site habitat map for Llwyn isaf
- Blank landfill site habitat map for Penhesgyn
- Background maps and images for habitat creation activity – Llwyn Isaf
- Background maps and images for habitat creation activity – Penhesgyn
- Ecosystems and habitats background information sheet

Presentation: watch the pre-recorded talk which accompanies this lesson plan
Or use the presentation to deliver it yourself.

Plenary activity:

Bingo cards. Print out and distribute the bingo cards (9 different combinations).
Print out and cut up the keywords. Draw from a hat! Call out each word and students aim to get a line or full house. Develop their knowledge and understanding by asking for definitions or examples when a keyword is drawn out.

Pledge:

Create a promise to put into action. Students write these on a postcard and these will be kept and returned after 3 months. They are designed to inspire, empower and reward young people. Share via social media. <https://www.instagram.com/wildlandfill/>

Plenary: Watch the story How wolves change rivers. This is a plenary activity where the pupils can engage with a real ecological and rewilding project

<https://www.youtube.com/watch?v=ysa5OBhXz-Q>

