Habitat loss

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Teacher's pack

Topic: Habitat loss

Introduction:

Over time species become adapted to the environment they live in. The natural home of a species is called a habitat. Habitat is lost when the environmental conditions no longer support the species that were adapted to it. This can happen due to a number of factors including pollution, climate change, deforestation, development and intensification of agriculture.

Changes to conditions or complete loss of a habitat mean that species lose their niche and they will then have to compete with species they would not normally compete with for food and shelter. They may have to deal with predators that they would not normally encounter. These new stresses mean that populations are likely to decline.

Habitat loss in one area can put extra pressure on habitats in other areas. Each habitat can only support a certain number of individuals. If populations move from one area to another they still might not thrive because the existing population will be using all of the resources.

A healthy environment consists of a mosaic of habitats, where animals can move freely between them. This stops populations becoming isolated and inbreeding. As habitats become more fragmented these 'green' corridors become increasingly important. They allow species to move between areas of appropriate habitat and enable them to fulfil all of their survival needs.

Interesting facts:

- Around half of the world's original forests have disappeared. They are still being removed at a rate 10x higher than any possible level of regrowth.
- Habitat loss poses the greatest threat to species worldwide.
- In the UK farmland birds have declined by 56% between 1970 and 2015.
- Only 12% of woodland in Wales is ancient and semi-natural, and much of it is degraded and fragmented.
- Wales has lost 30% of its sand dunes since 1900.

Further research keywords:
State of Nature report, extinction vortex, wildlife corridor, toad crossing, green bridges, habitat mapping

30 mins

Safe place game

Activity guide:

Equipment required:

- Hula hoops or floor mats
- Whistle

Before the game:

1. Spread hula hoops or mats around the game area to represent the animal habitats.

To play the game:

1. Explain that animals use their habitats as a refuge to keep them safe from predators.

2. The class runs around the game area acting as if they are feeding.

3. Whistle blows - this means danger. All the children must get to the safe habitat before the whistle stops.

4. Anyone who hasn't made it into the safe areas are out and have to sit on the side.

5. In every round, mats / hula hoops are removed, making fewer safe places and further apart.

6. The effects of habitat loss can then be talked about and children can discuss how much harder it was to get to safety as the habitat disappeared.

Habitat match

Activity guide:

Equipment required:

- Print the 'Habitat match' worksheet for all pupils

Answers - Habitat match

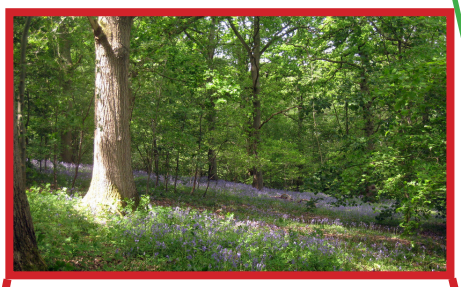
Farmland

Coastal

Heathland

Woodland

Freshwater



- Grey seal
- Shore crab
- Otter

- Kingfisher
- Otter
- Trout

- Barn owl
- Brown hare
- Yellowhammer

- Chough
- Heather
- Gorse

- Badgers
- Tawny owl
- Jay

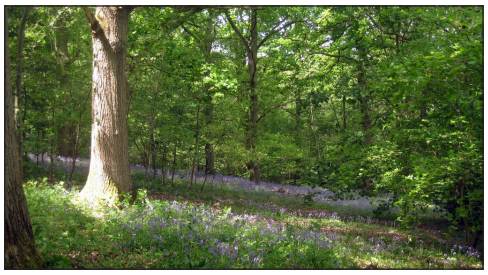
Habitat match

Game rules: Match the habitat name to the photo and some of the species that live there by drawing a line between them.

Farmland

- Grey seal
- Shore crab
- Otter

Coastal



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Heathland

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Woodland

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Freshwater

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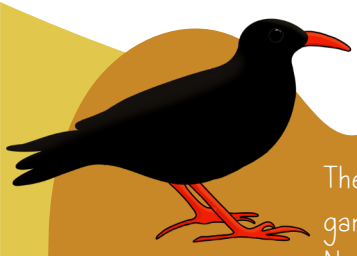


The total size of all the UK's gardens is bigger than all our National Nature Reserves.

1 hr

Corridors

Activity guide:

Equipment required:

- Print the two 'Corridors' worksheet for all pupils
- Coloured pencils or pens
- Scrap paper

To complete the sheet:

1. Explain that animals use their habitats for different things and being able to move between different areas is very important.

2. Each pupil begins work on the worksheet, trying to find a way to fit different land uses in whilst still allowing travel between habitat areas.

3. Pupils invent and draw ways for the animals to cross any features that block their route.

Corridors

Wildlife corridors: Wildlife corridors are a way of keeping areas of habitat connected even when development cuts off areas that were previously linked. They allow animals to move safely across large areas. They can take many forms including; hedgerows, road verges, field margins and urban gardens.

Game rules: The grid already contains roads and rivers. You must add 30 green habitat squares and 30 red town squares to the grid. You need to make sure there is a green path from the start to the end that animals can follow safely. They can only move between squares that are next to each other, not diagonally.

Whenever your route has to cross a road or a river you must invent a safe way for the animals to cross it. Draw and describe your invention below:

Loss of forests causes more CO^2 emissions than all the world's transport.

Corridor game board

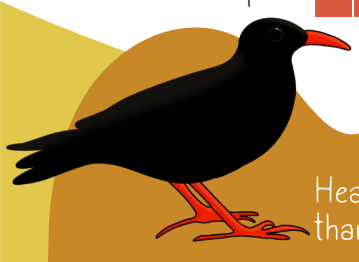
End

Start

30 habitat squares

30 town squares

* Tick off each square as you add it to the grid



Heathland is a rarer habitat than rainforests.