

A Special Place: Rocks and Soils Pre-Visit Activity – What’s the Connection?

Teachers’ Notes

Background information:

The area of the Peak District you are going to visit has a special character where the landscape, plant life and animals have a particular connection. This module aims to allow children to explore that connection. Basic background information on how the Peak District rocks were formed can be found in the Teachers’ Notes for ‘What’s so special about rocks and soils?’ on the [Rocks and Soils](#) page.

We often take for granted the habitats and landscape we see without thinking about why it looks like it does and why the animals and plants live there. The main aim of this module is to show that the type of rocks in a particular location determine what lives there.

The Dark Peak

The Dark Peak consists mainly of gritstone (sometimes referred to as ‘millstone grit’), a sedimentary rock that produces a sandy, **acidic** soil. This means that only few plants will grow on it such as heather. This in turn determines the type of animals that use the plants either for food or shelter and the predators of those animals. As well as the sandy acidic soils there is also blanket bog consisting of peat which is very acidic, retains water and is a habitat for mosses. The areas around the [Moorland Discovery Centre](#), [Longdendale](#) and [Macclesfield Forest](#) are good examples of the Dark Peak landscape.

Dark Peak plants

Heather: Common Heather is a low-growing shrub that has tiny leaves which stops it losing too much water, essential in the windy conditions of the moors. It is pollinated by wind, bees and flies.

Bilberry: Another low-growing deciduous shrub that produces edible berries. It is also pollinated by bees and flies.

Cotton grass: Actually a member of the sedge family, found in blanket bog areas and can survive in peat, a very acidic soil.

Dark Peak Animals

Red Grouse: A game bird that eats heather seeds and nests in heather 'scrapes', a shallow depression in the ground.

Short-eared Owl: A moorland bird of prey that can be seen hunting voles by day. It nests on the ground.

Water voles: A small, mouse-like mammal that lives in ditches and waterways on the moors.

Bilberry bumble bee: A cool-loving species that feeds on bilberry plants and nests at the base of bilberry and heather plants.

Mountain Hare: As it lives above 300m its colour changes to white to blend in with the snow. They graze on heather and live in heather 'forms', a shallow depression in the ground.

The White Peak

The White Peak consists of calcium-rich limestone, a sedimentary rock that produces a poor, shallow **alkaline** soil where water drains away quickly. However, although this means that grasses find it difficult to grow this allows other plants to dominate. The White Peak has more biodiversity compared to the Dark Peak. The areas around [Hope Valley](#) and [Tideswell](#) are good examples of the White Peak landscape.

White Peak plants include:

Ash: A tall, tough, fast-growing tree that allows light to reach the ground, meaning plants can grow around its base.

Early purple orchid: A flower that grows in non-acidic soil.

Dog's Mercury: A poisonous plant that spreads under trees and grows in alkaline soils.

White Peak animals include:

Nuthatch: A small, woodland bird that nests in holes in trees which it climbs in search of insects to eat.

White clawed crayfish: Britain's only fresh-water crayfish, it lives in clear limestone streams.

Peregrine falcon: Our fastest bird of prey that sometimes nests in limestone quarries and will eat small birds.

Dipper: A small bird that lives near fast flowing clear streams. It searches for insects under water

Useful links* for teachers

Information on the [character](#) of the Peak.

www.moorsforthefuture.org.uk/

www.wildlifetrusts.org/wildlife/species-explorer

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