



OXGANG PRIMARY SCHOOL



Trout 'n' Trees is a collaboration between the **Clyde River Foundation** (www.clyderiverfoundation.org) and the **Central Scotland Forest Trust** (www.csft.org.uk).

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THE EQUITABLE CHARITABLE TRUST

TROUT 'N' TREES

LOCAL LINKAGES

Pupils from **Oxgang Primary School** spent a day investigating the linkages between river and land ecosystems.

The Allen Paradox

Trout 'n' Trees was inspired by the work of biologist **Kenneth Radway Allen** (1911-2008). He observed that the trout populations in sections of some streams were sometimes larger than could be supported by the amount of fish food produced in the stream itself. This observation has become known as the 'Allen Paradox'. He discovered that additional food items, such as insects falling from overhanging trees and riverside plants, supplement the food naturally found in the river.



Photo: Australian Marine Sciences Association Inc.



The work of Allen and other biologists means that the linkages between rivers and land are becoming much better understood.

LINKING THE ECOLOGY AROUND OXGANG TO THE WORLD

In the **Luggie Water** near **Oxgang Primary School** we find **Atlantic salmon** which migrate to Greenland and the Faroe Islands.



MEET YOUR RIVER

Pupils visited the **Luggie Water** at **Oxgang Bridge** where they were shown how scientists measure river health.

A demonstration of electric fishing was given and they collected invertebrates (trout food!) using kick sampling and hand searching.

KICK SAMPLING



INVERTEBRATE ID



Back in the classroom "laboratory", pupils identified the invertebrates they collected using biological "keys" and recorded the diversity of what they had found.

TREE WORKSHOP



They learned how to identify different species of tree and discovered the roles trees play in river ecosystems by providing food and shelter for non-aquatic animal species which can be blown or fall into the water. Trees also provide leaf litter, roots and wood, which feed and shelter stream-living invertebrates and fish.

RIVER HEALTH SCORE

The pupils calculated a **river health score** from information collected on invertebrates, fish, woodland type, litter, pollution, and invasive non-native species (or "aliens"!). We found 13 families of invertebrates and four species of fish.



Three-spined stickleback



Atlantic salmon



Brown trout



Stone loach

Clyde River Foundation scientists examined a kick sample more closely in our own laboratory. We use the Biological Monitoring Working Party (BMWP) scoring system and a computer program called River Invertebrate Prediction and Classification System 3+ (RIVPACS 3+) to rate river quality.

The **Luggie Water** near **Oxgang Primary School** scored **B = FAIR**.

HOW HEALTHY IS YOUR RIVER?



THE KELVIN VALLEY

Trout'n'Trees linked 16 schools in Banton, Kilsyth, Croy, Twechar, Queenzieburn, Milton of Campsie, Lennoxton and Kirkintilloch.

