



## Salmon in the Classroom 2011

This popular educational project consists of three school sessions:

### Day One: Presentation and Salmon aquarium

The project begins with a lesson to the selected primary school class(es) on local rivers, including threats to wildlife such as pollution, habitat loss and over-fishing. The salmon life cycle is covered in detail as well as issues such as migration and food webs. After advice on how to look after salmon eggs, the class is provided with an aquarium containing around 100 salmon eggs. The lesson is designed to be interactive with activities including a board game on salmon migration, similar to snakes and ladders.

The aquaria are now all fitted with automatic coolers as standard, to cope with high classroom temperatures. Ayrshire Rivers Trust has pioneered the use of automatic coolers for Salmon in the Classroom (SITC) in Scotland. The coolers ensure a high survival rate and allow the children to see the development of the fish for longer before they are released. A record sheet is supplied so that the school children can become fully involved with looking after the incubating eggs. The salmon eggs are local wild eggs supplied by hatcheries approved by District Salmon Fishery Boards.



Resources and links to further information is supplied to teachers

This session takes up to two hours.

### **Day Two: Salmon alevins release day**

This day is timed to allow the hatched salmon alevins to develop in the classroom into a stage where they are ready for release into the wild (this is timed so that they are always released into the river before their yolk sac (internal food supply) is absorbed). The children assist with transporting the alevins to the local burn/river where they are released. This trip is normally quite short but it provides an opportunity for the children to link the earlier life stages with the natural habitat of salmon.



*Dundonald pupils releasing their alevins into the River Irvine.*

This session normally lasts about one hour (depending on travel distance to the river).

### **Day Three: Electrofishing and bug hunting**

The final day of the project consists of a trip back to the release site with a demonstration of electrofishing and bug sampling. Hopefully some salmon fry will be found along with a selection of other fish species present. It is quite common to find a variety of fish including trout and eels (often the children's favourite!)

The bug hunting provides an opportunity for the children to assess how healthy their local river is. Simple identification keys and scoring charts allow the children to assess the health of the river, enhancing their awareness of the local environment.

This session normally lasts about 1.5 hours



### **Educational value**

The Salmon in the Classroom project has the potential to fulfil many of the experiences and outcomes detailed in the Curriculum for Excellence including Health and Wellbeing (HWB 2-19a, HWB 2-25a / HWB 3-25a), Sciences (SCN 2-01a, SCN 2-02a, SCN 2-14a, SCN 2-18a, SCN 2-20a), Social Studies (SOC 2-08a, SOC 2-08b, SOC 2-13a)

## **Project staff / volunteers**

The project will be delivered by full time Trust staff or by staff engaged specifically for the project such as retired school teachers. Days two and three will always have a full-time Trust staff member present. All staff will have full Disclosure Scotland clearance for working with children.

## **Ethical issues**

The salmon eggs used are from a local District Salmon Fishery Board (DSFB) approved hatchery. A wild female salmon contains many thousands of eggs and the survival rate in the wild is very low. Eggs reared in a hatchery environment can have a high survival rate, assisting with conservation measures where appropriate. The DSFB hatcheries rear many thousands of eggs taken from local wild stock. These eggs are then released back into the wild in areas identified as having poor or no natural salmon production. The survival rate of the eggs in the classroom environment is usually well over 90%, with any “dead” eggs normally being infertile. During the talk on day one the causes of dead eggs are discussed with the children, as well as actions to be taken to remove them.

Only eggs from wild salmon native to the local river, or from the nearest available and appropriate river, are used for the school project in line with the Trust’s policy on stocking. This prevents disease transfer and changes to the genetic structure of wild fish populations.

The survival rate of the eggs can be over 95% if the aquarium is maintained properly, especially when using automatic cooling systems. Each school is provided with around 100 salmon eggs. This represents a tiny fraction of the many eggs deposited by spawning salmon in Ayrshire Rivers each year. Any of the main Ayrshire Rivers will have a spawning run of several thousand salmon, and each female can lay 4000-10,000 eggs.

## **Funding sources**

Funding for the project comes from a variety of sources including Scottish Natural Heritage, Educational Funds, Landfill Tax credit, local authorities, and sponsorship from private businesses. The Minerals Trust have also helped fund equipment. The funding covers Ayrshire Rivers Trust time and the equipment supplied. We ask for the school to cover any transport costs associated with the field trips.

## **Project support**

Full instructions and contact details are provided for participating schools and Trust staff will attend at short notice to deal with any problems. Feedback sheets will be provided to each participating teacher. The feedback responses are assessed and used to improve the project. The feedback received has generally been very good and the Trust takes great pride in providing a fulfilling project for children and staff alike.

Health and safety issues and risk assessments will be discussed with the school and completed by Ayrshire Rivers Trust staff.

**Gillian Murray**  
**December 2010**