

SALMON FISHING ON THE TAY



INTRODUCTION

The Tay is Britain's longest and biggest river, so it is perhaps not surprising that it is one of the country's best fishing rivers. From earliest times people have exploited the annual migration patterns of the salmon to catch this mighty fish on the Tay. Pupils in Perthshire are likely to have seen anglers standing in the river and this topic offers good opportunities to learn about life cycles and issues around sustainability and to investigate an important aspect of local heritage.

Below, we suggest some approaches for an investigation of the topic of salmon and salmon fishing.

Following these, we provide background information, further resources and a link to the content for pupils shown on the website.

SUGGESTIONS FOR TEACHING AND LEARNING ACTIVITIES

INTRODUCTORY ACTIVITIES

If possible get a local fishmonger to come in with a real (dead) salmon to show to pupils.
Where did the fish come from?

Look at a video of salmon leaping on YouTube, e.g. BBC footage on the River Shin
<https://www.youtube.com/watch?v=r2IVzESZ5aQ>

Or amateur footage on River Braan at Hermitage, Dunkeld
https://www.youtube.com/watch?v=f9SXWQ00_Dw



Discuss

- What kind of fish are they?
- What are they trying to do?
- Why?

Introduce the subject of salmon. Look at the pupil material on this website.

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SUGGESTIONS FOR TEACHING AND LEARNING ACTIVITIES

CURRICULAR AREA

Science
Biological Systems:
Inheritance

Social Studies:
People, Place
and Environment

EXPERIENCES & OUTCOMES

By investigating the lifecycles of plants and animals, I can recognise the different stages of their development.
SCN 2-14a

To extend my mental map and sense of place, I can interpret information from different types of maps and am beginning to locate key features within Scotland, UK, Europe or the wider world.
SOC 2-14a

KEY LEARNING ACTIVITIES

Get pupils to research the life cycle of the salmon.
These materials may be of use:
[www.snh.org.uk/
Salmonintheclassroom/
index.shtml](http://www.snh.org.uk/Salmonintheclassroom/index.shtml)

This animated song is a humorous take on the salmon lifecycle:
[https://www.youtube.com/
watch?v=qV30UZ9aF04](https://www.youtube.com/watch?v=qV30UZ9aF04)

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KEY LEARNING ACTIVITIES

What hazards can face salmon at each stage of their life cycle?

Use Google maps or similar to plot the route of the salmon on a map. Trace it from breeding grounds upstream on the Tay out to the Atlantic.

Some pupils may have visited the fish ladder in Pitlochry, which enables salmon to make their way past the hydro dam.

https://en.wikipedia.org/wiki/Pitlochry_fish_ladder

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SUGGESTIONS FOR TEACHING AND LEARNING ACTIVITIES

CURRICULAR AREA

Science
Planet Earth:
Biodiversity
and Interdependence

EXPERIENCES & OUTCOMES

I can identify and classify examples of living things, past and present, to help me appreciate their diversity.
I can relate physical and behavioural characteristics to their survival or extinction.
SCN 2-01a

KEY LEARNING ACTIVITIES

What features of the salmon make them ideally suited to their environment?

What features of their lives or behaviour put them at risk?

Pupils could design a 'snakes and ladders'-type game showing the challenges facing salmon as they swim upstream to their breeding grounds.

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SUGGESTIONS FOR TEACHING AND LEARNING ACTIVITIES

CURRICULAR AREA

Expressive Arts:
Dance

Expressive Arts:
Music

EXPERIENCES & OUTCOMES

I can explore and choose movements to create and present dance, developing my skills and techniques.
EXA 2-08a

Inspired by a range of stimuli, I can express my ideas, thoughts and feelings through creative work in dance.
EXA 2-09a

Inspired by a range of stimuli, and working on my own and/or with others, I can express and communicate my ideas, thoughts and feelings through musical activities.
EXA 2-18a

KEY LEARNING ACTIVITIES

Discuss ways of presenting the life cycle of the salmon. Drawing an illustrated diagram is the obvious choice. But challenge pupils to find another way of showing how salmon live.

Could they show the life cycle through dance? Look at videos of salmon moving. Can they represent these movements in dance?

Could they compose music to illustrate each stage?

What hazards might the fish encounter? How could they show these, in dance or through music?

Let pupils choose if they want to develop a dance to show how salmon live, and others to compose music which could either stand alone or accompany the dance.

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SUGGESTIONS FOR TEACHING AND LEARNING ACTIVITIES

CURRICULAR AREA

Social Studies: People, Past Events and Societies

EXPERIENCES & OUTCOMES

I can compare and contrast a society in the past with my own and contribute to a discussion of the similarities and differences.
SOC 2-04a

KEY LEARNING ACTIVITIES

Look at some of the material relating to fishing in the past (e.g. fishing with cobbles, making nets). Are there any buildings in your local environment relating to fishing in the past (e.g. a fishing bothy, an ice house).

How was salmon fished in the past? Pupils carry out research on a range of methods through the ages: spearing, traps, nets, rods and lines, salmon farming. Pupils could download images from SCRAN (www.scran.ac.uk) and create an illustrated timeline.

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SOC 2-04a

KEY LEARNING ACTIVITIES

You could try making nets; there are numerous videos showing how to do this on YouTube.

Is there anyone in the local community who used to work for the Tay Salmon Fisheries Company? If so, invite them in to talk to pupils about their experiences. If not, look at some of the accounts in Tay Salmon: Net Fishing Memories.

This website may also be of use: <http://www.tdsfb.org/tayhistory.html>

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SUGGESTIONS FOR TEACHING AND LEARNING ACTIVITIES

CURRICULAR AREA

Social Studies: People, Place and Environment

Literacy:
Listening and Talking

Literacy: Writing

EXPERIENCES & OUTCOMES

I can discuss the environmental impact of human activity and suggest ways in which we can live in a more environmentally responsible way.
SOC 2-08a

When listening and talking with others for different purposes, I can:

- share information, experiences and opinions
- explain processes and ideas
- identify issues raised and summarise main points or findings
- clarify points by asking questions or by asking others to say more.

LIT 2-09a

I can persuade, argue, explore issues or express an opinion using relevant supporting detail and/or evidence.
LIT 2-29a

KEY LEARNING ACTIVITIES

Farmed salmon can be controversial too. Carry out research into the pros and cons of salmon farming. This website explains the main issue simply, albeit in a North American context:
<http://healthresearchfunding.org/pros-cons-fish-farming/>

Propose a class debate on the following motion:
This house believes that salmon farming in Scotland should be banned.

Pupils can write speeches either supporting or opposing the motion. Volunteers could make their speeches in a debate. After listening, pupils can take a vote.

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BACKGROUND INFORMATION

- Salmon hatch in freshwater rivers. When they are 2-3 years old, they migrate out to sea. After 2-4 years in seawater, they return to the freshwater rivers of their birth. This is when they are caught, as they migrate swimming upstream to 'spawn' (lay their eggs). Female salmon are known as 'hens' and survive spawning to return to the sea. Male fish, or 'cocks' usually die after they have spawned.
- In early times salmon were caught using spears, wicker baskets and nets. By the 1700s fish were caught using a 'sweep net' towed out into the river by a wooden boat or 'coble'. The net was released to surround fish and then drawn ashore onto a beach. This method continued until 1996.
- In the fishing season, men, boys and occasionally women came from across Scotland to work on the Tay. Many came regularly from the Highlands and the Hebrides. They worked in shifts and lived in basic bothies along the Tay.
- Another method used in coastal areas was the 'stake net'. These were nets supported by wooden stakes which were set into sandbanks close to the shore.
- Up to the 18th century fish were caught and packed into barrels of salt and exported across Europe. From 1786 fish were packed into barrels of ice and sent fresh across Britain. The ice came from the river in winter, or was sometimes imported from Norway, and was kept in specially-constructed 'ice houses' some of which can still be seen today.
- Net fishing continued until 1996. Under the management of the Tay Salmon Fisheries company, the river was netted at numerous points from Newburgh upstream to above Stanley. In some years up to 40,000 salmon or grilse were netted – an estimated 50% of all fish travelling upstream in the summer months.
- In the 1980s hobby anglers raised concerns about the decline in salmon numbers and the sustainability of netted salmon. Around this time salmon farming began to increase, reducing the profitability of netted salmon. These factors led to the buyout of the Tay Salmon Fisheries in 1996 by the Tay Foundation. Since then there has been almost no net fishing on the Tay.
- Fishing or angling has always been popular as a hobby. The biggest salmon ever caught in Britain was caught in 1922 by Miss Georgina Ballantine. It weighed 64 pounds – nearly 30 kg, about the weight of a 9-year old child!
- Today nearly all the salmon caught on the Tay are caught using a rod and line.

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FURTHER RESOURCES

SCRAN - www.scran.ac.uk

This website contains background information and historic images of salmon fishing through the ages.

Seafood Scotland - www.seafoodinschools.org

Downloadable resources and background information about a range of seafood, including salmon. Includes a useful wall chart showing how farmed salmon is processed.

Salmon in the Classroom - www.snh.org.uk/SalmonintheClassroom/index.shtml

Originally set up to support a project where pupils raise salmon in the classroom this website has lots of interesting images and information.

The Tay District Salmon Fisheries Board - www.tdsfb.org

the website of the body set up to protect and improve salmon fishing on the Tay. A good section on the history of salmon fishing.

Tay Salmon: Net Fishing Memories
Fife Rural Partnership (2009)

A booklet with photographs and oral histories of the Tay Salmon Fishing industry. To obtain a copy, contact Jim Findlay at jimfindlay7@outlook.com or through the Trust web site www.tayandearntrust.org

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FURTHER RESOURCES

Salmon Life Cycle Song - <https://www.youtube.com/watch?v=qV30UZ9aF04>

A parody of the song 'I will survive', this song with film and images illustrates the life cycle of the salmon in a humorous way.

Movies of leaping salmon

https://www.youtube.com/watch?v=f9SXWQ00_Dw

Salmon leaping up the Black Linn waterfall on the River Braan at the Hermitage, Dunkeld. These salmon will have swum up the Tay to reach this point.

<https://www.youtube.com/watch?v=r2IVzESZ5aQ>

Professional BBC footage of salmon leaping the Falls of Shin, near Bonar Bridge.

Fish and Kids - <https://fishandkids.msc.org/en/teachers/teachers-pack-1>

An education pack from the Marine Stewardship Council relating to issues of sustainability in the fishing industry.





PARR - become **SMOLTS** in the Spring of their 2nd, 3rd or 4th year and migrate to sea.

PARR - remain in fresh water for one to four years feeding on insects.

SALMON - travel great distances in the sea and feed on sandeels, holl and herring.

FRY - start feeding on tiny water organisms and grow quickly during their first Summer.

SALMON - return to the river of their birth to spawn after 1 - 4 years at sea. Once in fresh water the salmon does not feed.

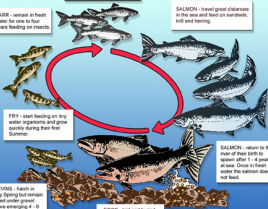
ALEVINS - hatch in early Spring but remain buried under gravel before emerging 4 - 6 weeks later.

EGGS - laid and buried in gravel in late Autumn.

GRILSE - are mature salmon which return to their native river after only one winter at sea.

Female salmon or 'hen' fish can survive spawning and return to sea as **KELT**.

Male salmon or 'cock' fish usually die when spawning is over.







The Fisherman's Studio
1894

Net making days are captured

A number of historic photos came to light at the Memories Day in Newburgh.

The more unusual examples, which appear on this page, show net making by Newburgh women.

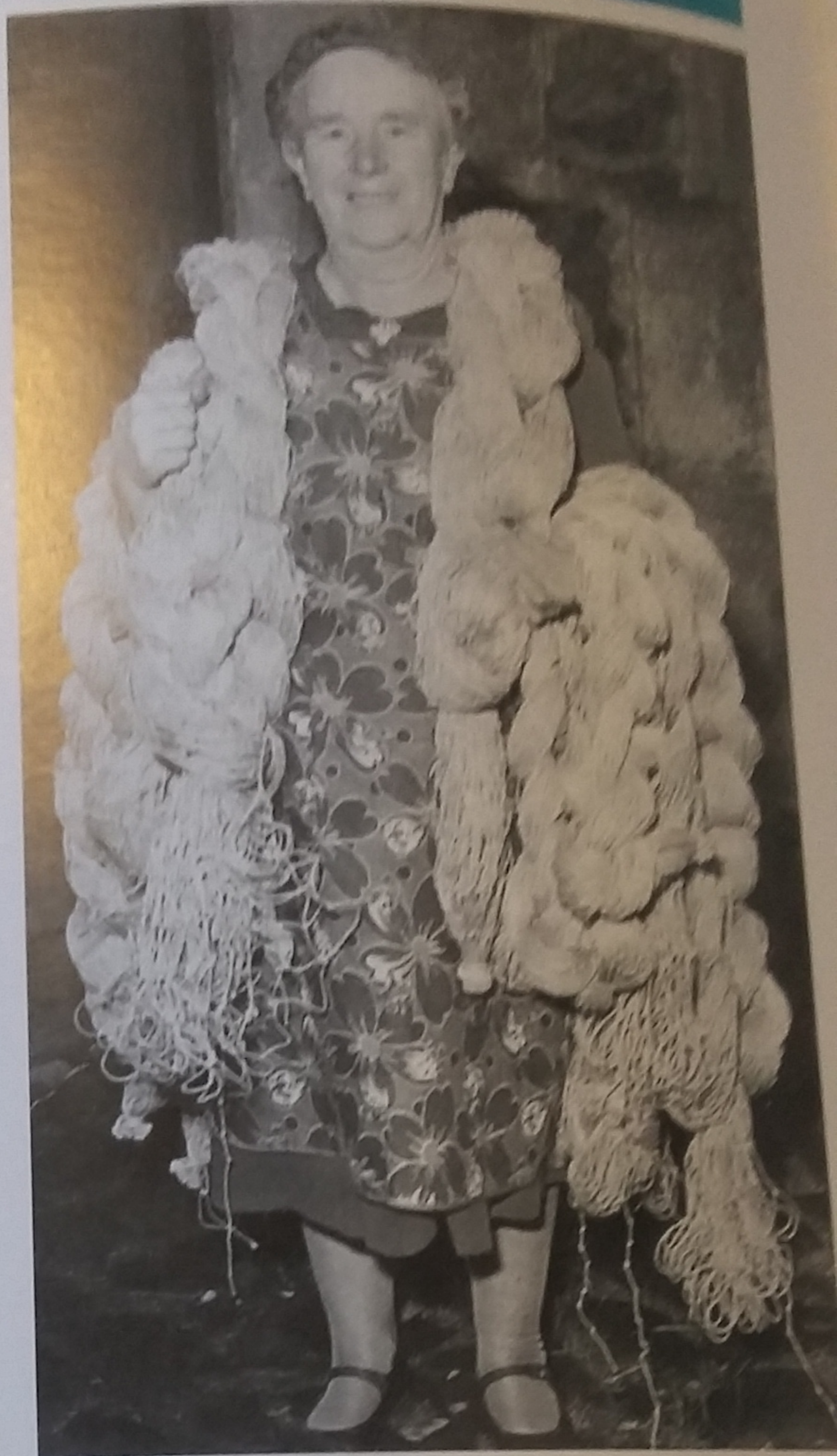
One of the best known characters was Mrs Elizabeth Meville, who carried out the craft from the 1920s until the 1960s when she was in her 80s. Some of the photos show her being assisted by her daughter, Elizabeth, and Kate Davidson.

Her grandson, Andrew Melville, recalls that his father, George, also helped her in her work.

The completed nets were supplied to camping and outdoor specialists Banks of Perth, who in turn sold them to Tay Salmon Fisheries.



● Mrs Elizabeth Meville (right) with Kate Davidson



● Mrs Elizabeth Meville draped in one of her nets



● Mrs Elizabeth Meville and daughter Elizabeth, at work in Square Close, Newburgh

