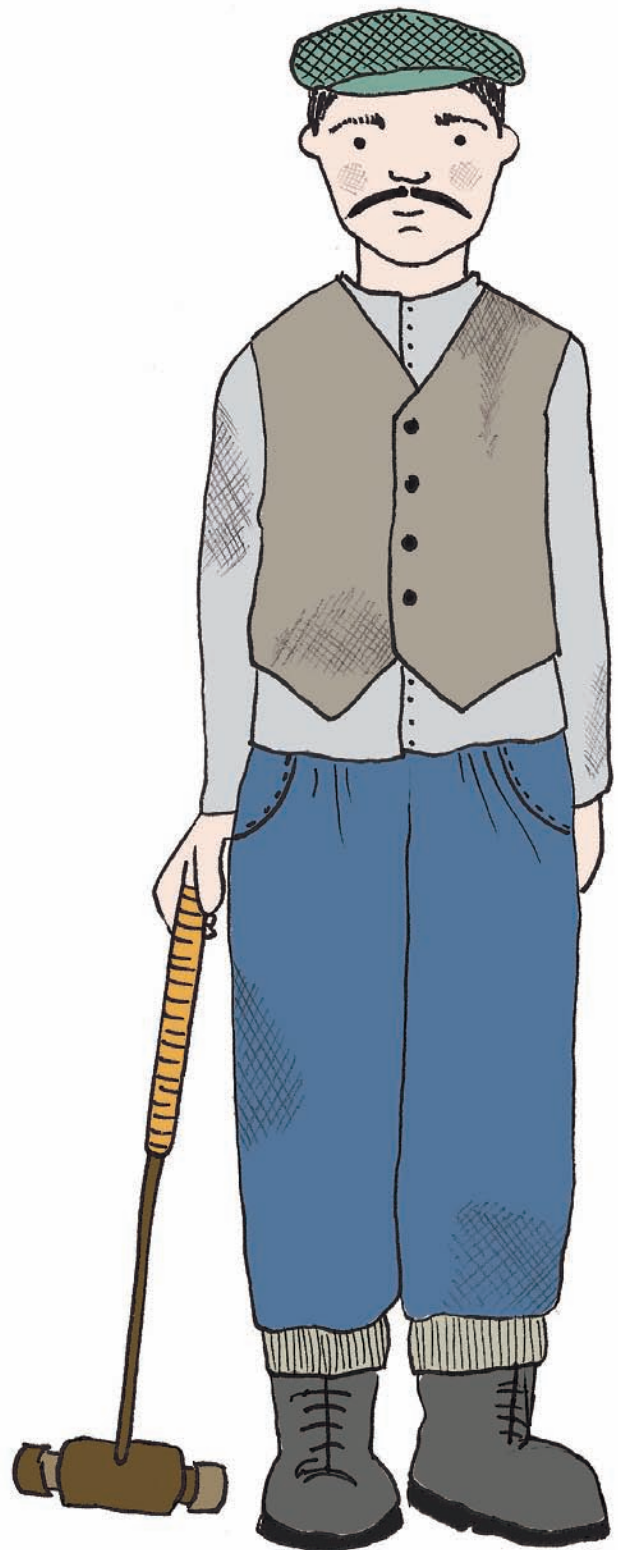


# BOAT *building*

a creative resource for primary schools  
and young people under 12



This project pack explores the topic of boat building and its traditions within Scottish fishing communities.

Students will have the opportunity to learn about the history and construction of fishing boats, explore the tools of the trade and become boat builders themselves.

The project pack is divided into three sections:

- background information
- museum activities
- creative activities

# BOAT *building*

## TEACHING NOTES

### background info

This sheet contains background information which can be discussed with your group and includes a brief history of boatbuilding in and around Scotland. This supports visual and written materials which can be found in the museum's Boat Yard.

Students may wish to discuss the types of materials used for boatbuilding through the centuries, how traditional boat building compares to contemporary methods and what life was like for the boat builders and fishermen during the late 19th century.

### in the museum

Younger groups can explore the museum's boat yard to find the "boat hunt" items on their worksheet. This could inspire conversations about the use of identification numbers on boats, clothes worn by boat builders and the tools used in traditional boat building.

Older groups will first explore the tools of the trade, identifying some traditional tools and collecting research about others. Students can then explore the large collection of model and full-sized boats, make sketches and drawings which will inspire their creative boat building activity.

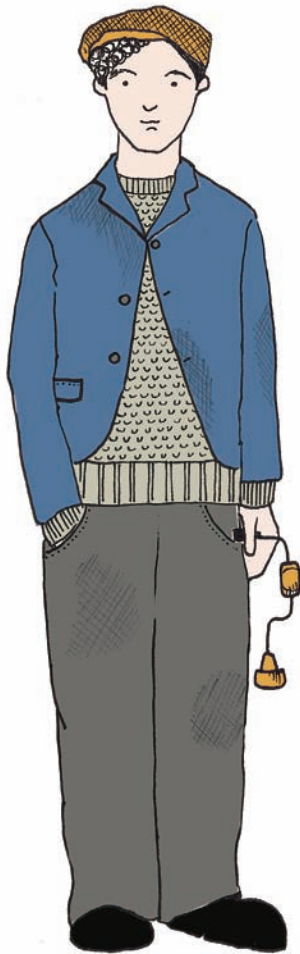
### creative activities

These classroom or education-space activities allow students to explore boat building, and to design and create their own vessel for display or racing!

Younger groups can follow the worksheet to design and create a simple cork sailing boat. A section of the worksheet has been set out to allow students to design a sail before attaching it to their boat. These boats could be raced in a pond or the classroom sink! (a string could also be attached to the boat if you wished to test them at the beach or harbour.)

Older groups will follow origami instructions to create the hull of a fishing boat using a sheet of A4 paper. The paper can be decorated before folding or after the boat has been constructed. Pupils can also be encouraged to design and construct the sail for their boat, drawing on their museum research.

# BOAT *building*



Well! Without a good solid boat, you're not going to catch much fish! Boat building has been a really important part of the Scottish fishing industry for hundreds and hundreds of years...

The seas around Scotland can get pretty wild so we've had to build boats that are strong enough to withstand storms and take a real battering from the waves. All around Scotland and the rest of the world, boats have been built and techniques passed down through the generations. In Scotland we are still using methods used by our great great grandfathers... Why? Because they did it so well!

The earliest Scottish fishermen were crofters who fished for their families and neighbours. There weren't many harbours back then so the wooden fishing boats were pulled up onto the beach after each fishing trip. These fishermen built their own boats and had to keep them pretty small (up to about 6 metres long).

By the late 1800's, fishing commercially (selling your fish for money) became more popular and harbours and boatyards started to appear in most villages so there was space to keep and repair the fishing "fleet"... And the boats started to get much much bigger.

So, if you were a fisherman here in Anstruther or anywhere on the East coast, you would probably sail a Fife or a Zulu - a strong wooden boat with a vertical stem, a long keel, and strong shape which was fast and stable in the rough North Sea waters (you'll find boats from all around Scotland in the boat yard so you can compare the different shapes and styles and our really big Fife, the Reaper can often be found in the harbour.)

But if you fished over on the west coast, you'd probably need a Skiff - a light boat that was easily moved around the shallow and narrow waterways and lochs.

And right up North in Shetland and Orkney, boats were influenced by Scandinavian designs and were strong enough to hold up to some really rough seas.

So how do you start building a boat? Well its not easy... I'll try to explain.

Some very clever craftsmen could build a boat without drawings, plans or other gadgets, but most used ribbands, moulds and models to help create the perfect boat. In our museum boatyard you'll find a few examples of "half models" - these detailed little boats were created by craftsmen to show their customers what a finished boat would look like. When the customer was happy, the boat builders would make an exact copy of the model (but much much bigger).

Clinker Construction...

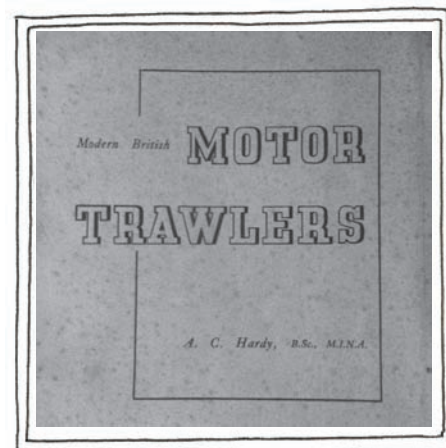
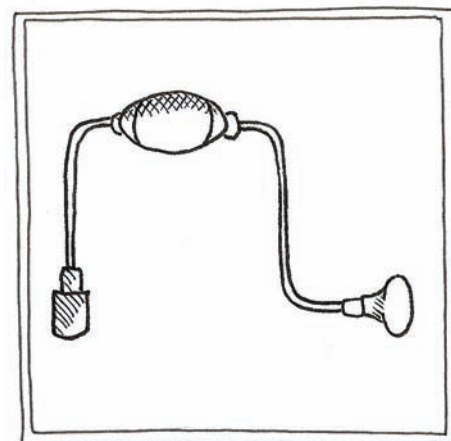
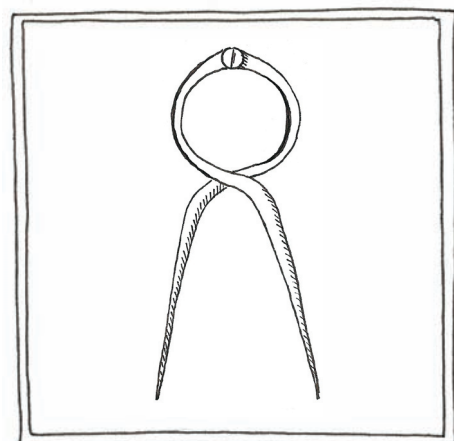
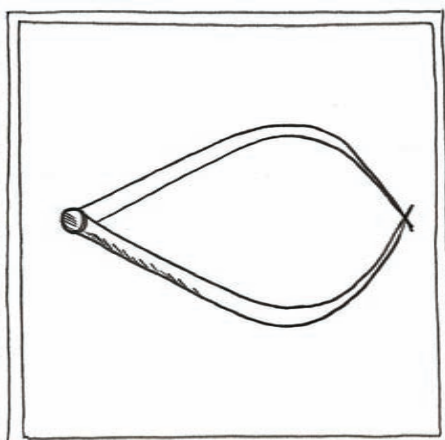
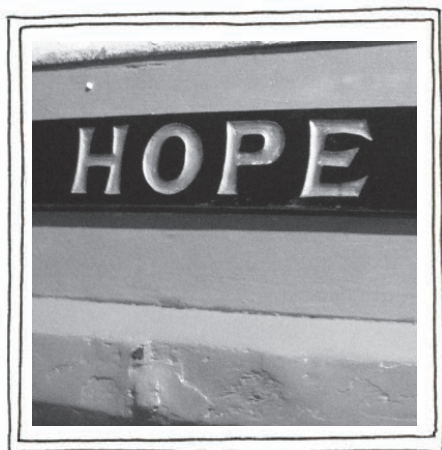
Clinker-built boats have been made and used in Scotland for over 1000 years. They were inspired by Scandinavian boats and have a light wooden frame and a shell of overlapping wooden planks. This method of construction makes a small, light but really strong boat. Some small clinker boats are still made today.

Carvel Construction...

From the late 1800's bigger boats were needed for commercial fishing. These were made using Carvel Construction. A strong wooden skeleton of frames was constructed first and then the planks were laid on without overlapping. These boats were big, solid and really really strong. They even had store rooms for the fish, beds for the fishermen and eventually engines to power the boat too.



## background info

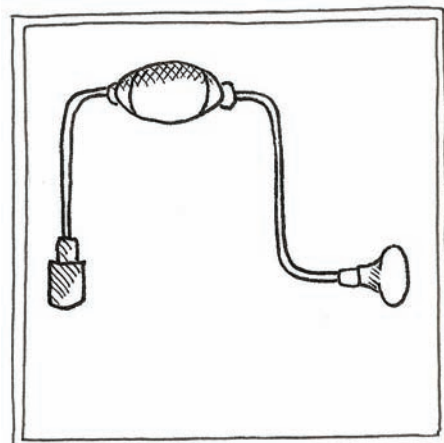
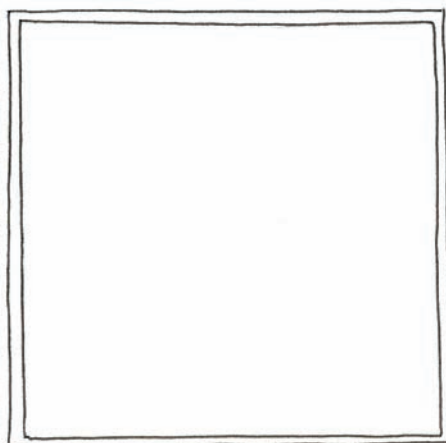
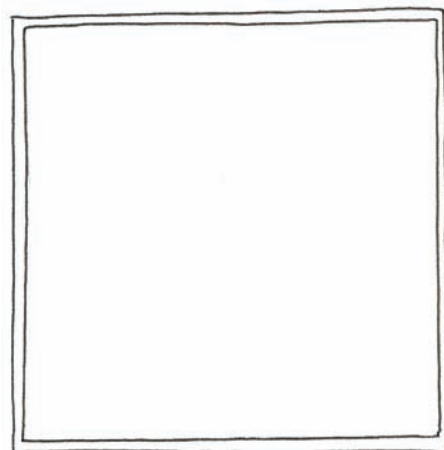
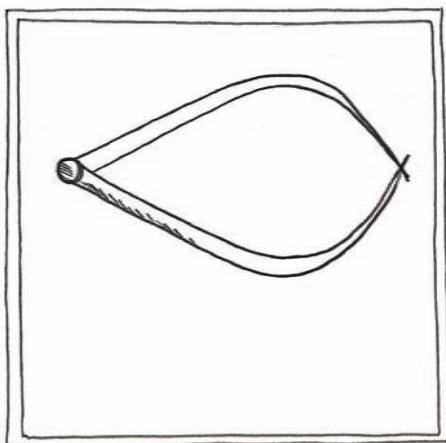
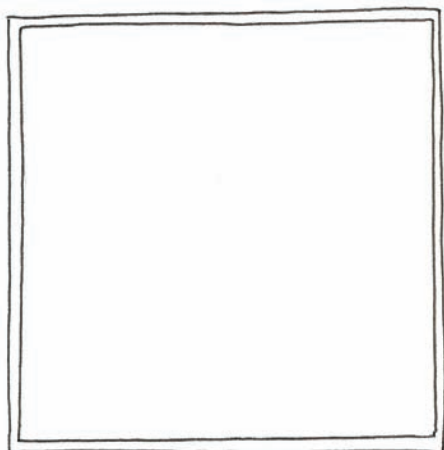


Good Luck  
boat hunters!

Time to explore the Boat Yard!  
LET'S GO!

There are lots of tools and things you'll need to build a boat. Explore the boat yard to find all of these pictures. Colour them in or tick them off when you find them.

in the museum



Right! If you want to build a boat you'll need to find out more about the tools of our trade. Get to the boatyard and learn more... find out the names of the tools above and what they are used for. Then add some of your own.

Now... find your favourite boat in the yard (big or small) and draw it in the space above. Remember to include things like the sails, identification numbers and rigging. Is it a CLINKER or a CARVEL?

# in the museum

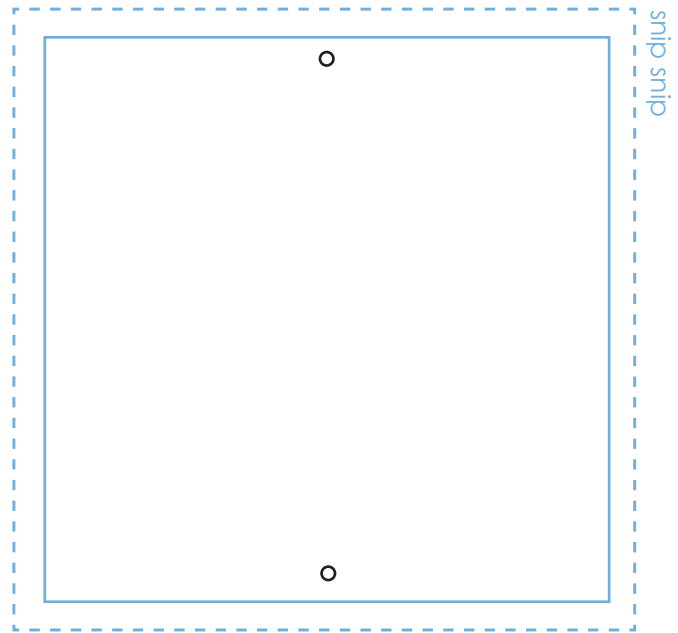
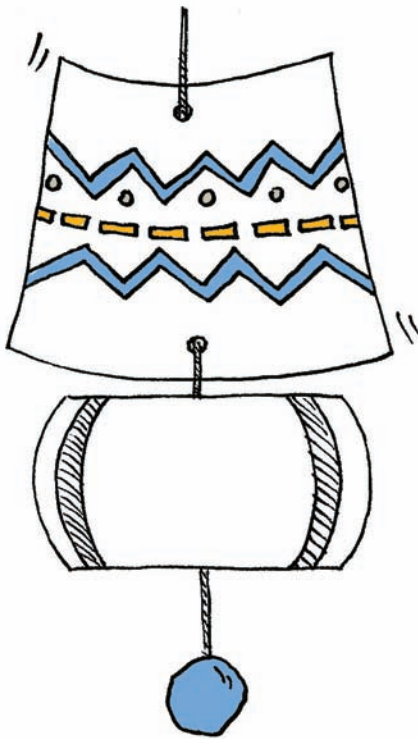
# BOAT building

(younger) 2

For more than 100 years people have raced model fishing boats at Cellardyke Pool . These racing boats are miniature copies of larger Fifies, like The Reaper.

Now its your turn to be a boatbuilder! Construct your boat, design the sail and anchors away!

You might even want to have a class race in a sink or tub of water. Blow hard to get your boat across the pond first...



**You will need:** a cork two cocktail sticks a blob of blue tack your sail

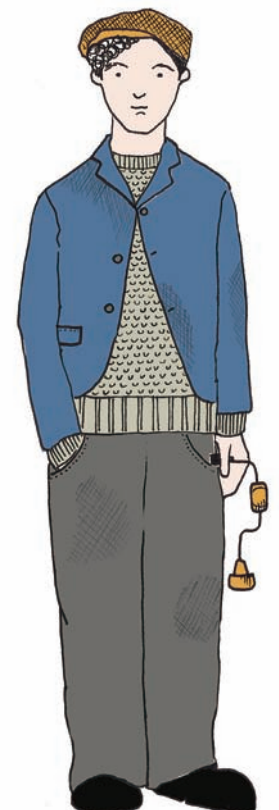
Step 1... Lay the cork lengthways, and carefully put cocktail sticks firmly in on opposite sides, as above.

Step 2... At the end of one of the sticks, gently fasten a blob of blu-tack about the size of your little finger nail. This is the bottom of the boat.

Step 3... Use the square above to neatly design your sail then carefeully cut it out.

Step 4... Fasten the sail to the top cocktail stick by sticking it through twice, as shown. (mind your fingers!)

Step 5... Float your boat!



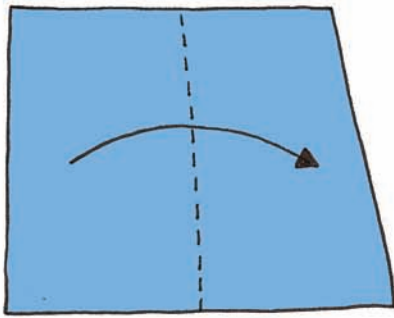
## creative activities

# BOAT building

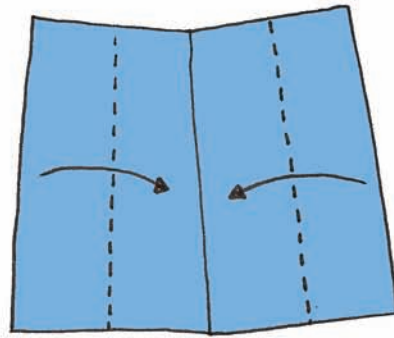
Right... Let's build a boat!

For more than 100 years people have raced model fishing boats at Cellardyke Pool . These racing boats are miniature copies of larger Fifies, like The Reaper. Now it's your turn to construct a model boat.

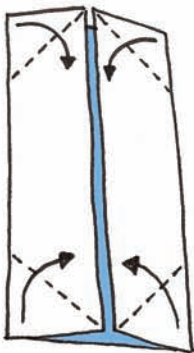
Carefully follow these instructions for an origami boat to make the hull then think about how to construct a sail that will win you the race!



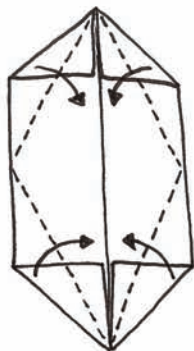
step 1



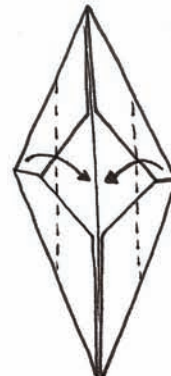
step 2



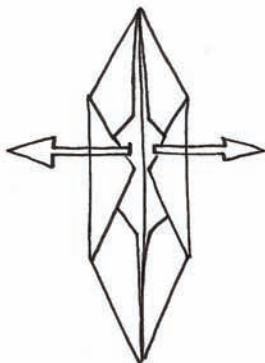
step 3



step 4



step 5



step 6

the tricky bit...carefully turn inside out starting at the centre!

