

## A history of the canals

### The coming of the canals

By the mid 1700s Britain was becoming an industrial country. As industries grew, manufacturers needed more coal to power machines, mills and furnaces. Businessmen hit on the idea of building canals to deliver coal faster and more efficiently. Building canals meant solving big engineering problems.

### Engineering and inventions

Planning and building canals attracted very clever engineers. New technology and experience meant problems such as moving boats uphill and across valleys could be solved. Solutions included inclined planes, tunnels cut through a hill, embankments, aqueducts, locks and boat lifts.



Anderton Boat Lift, River Weaver



Freight carrying on the Grand Union Canal

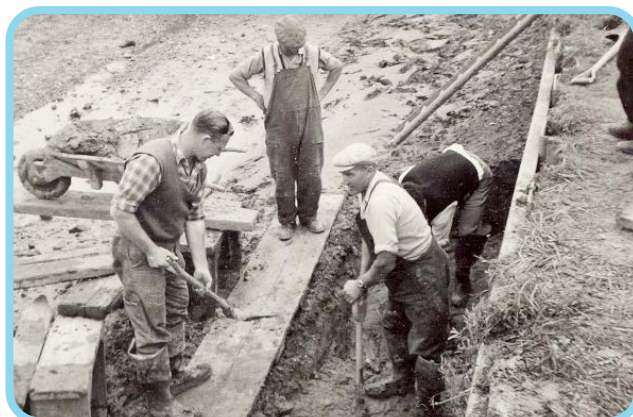
### How a canal was built

Building a canal was a hard job and took many years to complete. Navvies built the canals. The word navy comes from navigator and they were unskilled labourers employed to do manual work.

Most canals were built by first digging out a channel; the sides had to be supported by wooden frames in deeper sections, so they didn't collapse in on the navvies. It was dangerous work and they didn't have the tools and protective clothing available to builders today. They used picks, spades and muscle power to dig the canals.

They made the canals waterproof by lining them with clay and treading it down hard, or by driving cattle along the channel to trample it down. This was called puddling. Puddling clay is still used to repair sections of canals today.

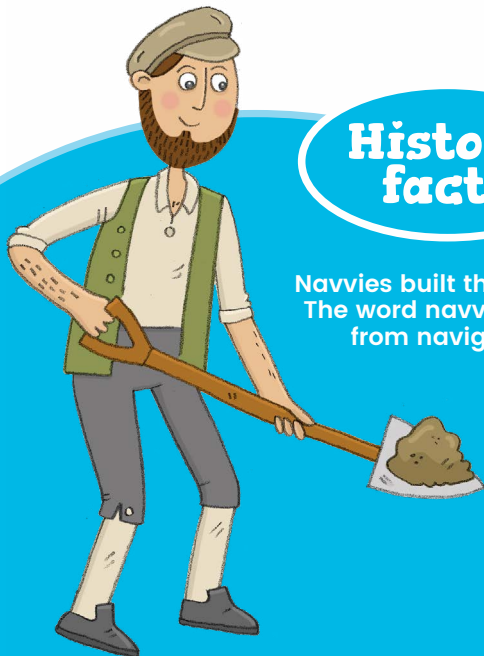
Finally, the canal could be filled with water. They used water from nearby rivers and streams redirected into the canal. In some places, enormous reservoirs were built to store water for the canal.



Men digging at Weedon Embankment

### History facts

Navvies built the canals. The word navy comes from navigator.



## A network of canals

Canals were built to join up the most important places for industry with large towns and ports. The engineer James Brindley had the grand idea of connecting the four main rivers of England (the Mersey, Severn, Thames and Trent) for navigation. He thought a network linking the rivers would bring great prosperity, but funding was hard to come by and the network as he saw it was never formally built. However, over the years more and more individual canals were built and joined together,

eventually connecting the four main rivers of England and allowing boats to travel from the north of England all the way to Bristol or London in the South.



One of the first major canals to be built was the Bridgewater Canal

## Working and living on the waterways

There were once many different jobs associated with canals and rivers. Some people lived on the land and came to work by the canal each day, while others lived and worked on the boats.

People lived on boats for a number of reasons, depending on who they were and what they transported. On some canals, whole families lived aboard the boats. This saved them money as they didn't have to pay for a house on the land. Only the captain of the boat got paid but the whole family helped with the jobs on the boat. The quicker the boat got to the destination, the sooner they were paid for their cargo.

Narrowboats and household items such as water cans, buckets, lamps and boxes were often decorated with bright and cheerful patterned designs including Roses & Castles in the South and East and Brightwork designs in the North. The free-flowing style allowed workers to decorate quickly during breaks in their working week.



A narrowboat cabin



Boaters were very proud of their cabins

Some boaters took great pride in their narrowboats. They decorated the tiny cabins with crochet-edged curtains and pretty plates hung on walls. Rope fenders were made using complicated knots to prevent the boat from banging into the bank and other boats.



## History facts

The average narrowboat could carry around 20 tonnes of cargo.

## Life on the narrowboats

There wasn't a lot of space on board the narrowboats. Families were sometimes large and overcrowding on boats was considered a problem.

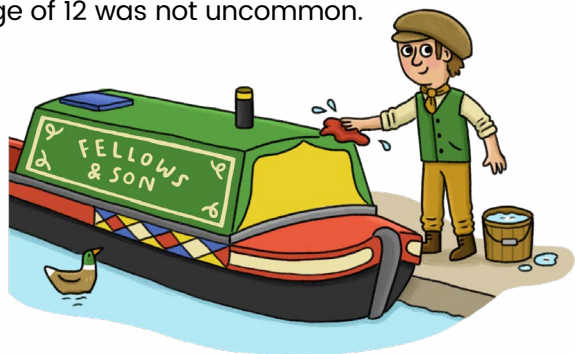
Narrowboat cabins were about 3m x 2m. What little space there was on board had to be used carefully. There were lots of hidden cupboards and spaces that had more than one job.

There was no running water on the boats, so no showers or toilets. Water taps or pumps were provided alongside the canal for drinking and cooking water which was stored on the top of the boat. Water for washing and cleaning was taken from the canal.

## Children

Most children went to school for around three weeks per year. Sometimes they would go for half a day or occasionally up to a week, depending on how long their boats were tied up. Many were illiterate.

Boat children didn't have much time to play. From around 5 years old they began helping to steer the boat. They were leading the horse by about 7 years old and working the locks by the age of 12 was not uncommon.



## The canal network today

People still enjoy taking boats around the canal system for pleasure today. Canal & River Trust looks after over 2,000 miles of waterways across England and Wales. Along these waterways there are 1,569 locks, 53 tunnels, 3,112 bridges, 370 aqueducts and 74 reservoirs!

## The Waterways Archive

All featured photographs are part of our archive, which holds hundreds of artefacts about the history of Britain's canals and inland waterways. You can access this via our website at [www.canalrivertrust.co.uk](http://www.canalrivertrust.co.uk)



A boater's wife uses a mangle on the towpath

## Animals

Horses were an essential part of waterway life before motor boats as they pulled the boats along the canal. They were very well looked after as they needed to be fit to work for 16 hours a day. This meant they needed to be fed regularly through the day, have their feet checked and be groomed at night. The horse would eat as it walked along the towpath from a decorated nose tin or sack.

Pets were popular with boaters, particularly dogs and birds. Dogs were often the only ones living on the boat who could swim.

## More ideas

Our Build a Canal learning bundle has more activities to help young people learn how and why canals were built and how they helped shape Britain. You can download all the resources from our Explorers website: [www.canalrivertrust.org.uk/explorers](http://www.canalrivertrust.org.uk/explorers)



## Life on the Narrowboats

There wasn't a lot of room for families to live on board the narrowboats. The boater's cabin is the small section at the back of the boat. Narrowboat cabins were about 3m x 2m. Space had to be used very carefully. There were lots of hidden cupboards and spaces that had more than one job.

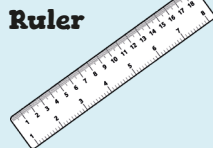
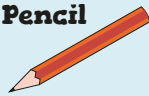
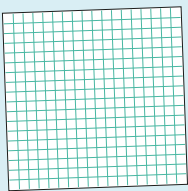


## Design a boater's cabin

### You will need

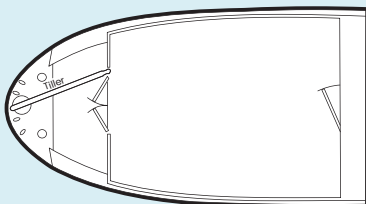
Squared paper

Pencil



Ruler

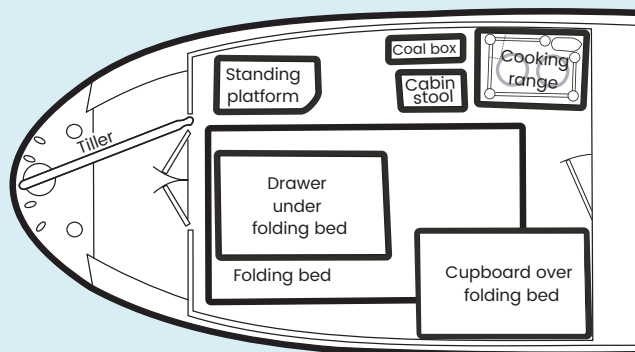
Cabin template



### What to do

- Colour in and cut out all of the objects from the template sheet
- Try different arrangements of furniture until you can fit them in. Imagine a whole family has to live in this space
- Measure out a 3m x 2m space in a room to see how little space you would have to live in on a working boat. This will help you plan

**An example of how the boaters planned their living space**



Top TIP



When planning your boat cabin, things that go underneath another item have to go in first. Make sure you leave room to open the cabin door!

## Next Step → → → →

Design your own boat livery using the template. Think of a name to include as part of your design.



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## Play Hopscotch

Hopscotch was a favourite game with boaters' children because they could play it on the towpath when the boat was tied up for the night.



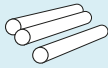
### Did you Know?



The Romans played hopscotch. Today it is played all over the world.

#### You will need

A stick of chalk



A pebble or coin



#### How to play

- Use chalk to mark out a 'court' on the ground as shown
- Player 1 tosses a 'marker' (e.g. pebble) into square 1. It must land in the square without touching a line
- Player 1 hops through the course, jumping over square 1. They must not touch a line or step into another square
- Single squares must be hopped on one foot. Double squares must be straddled - left foot in one square and right foot in the other
- When reaching 'home', turn round and return through the course. Pick up the marker when reaching that square
- If successful, the player tosses the marker into square 2, then 3 etc, completing the course after each throw
- Their turn ends if the pebble does not land in the correct square, or they make a mistake completing the course
- The person who completes the whole course in the quickest time wins

#### Next Step → → → →

Have a look at the other games played by boaters children on the Playtime sheet.



**SAFE** Remember the SAFE message.  
**Stay Away From the Edge**

## Playtime

Boaters' children enjoyed playing in the hold when it was empty. A swing could be hung from the planks above. 'Wild West' was a popular game, possibly because of the horses. They probably only had one toy and this would be homemade, such as a doll made out of odd bits of fabric or soldiers whittled out of a stick with a penknife.



## These games were played by boaters' children

### Ring-a-ring-a-roses

One person stands in the middle and the other children form a ring and dance around. When the song has finished on the final word down, all children in the ring should fall down on the ground. The slowest person is the one who stands in the middle of the circle next.



### Marbles

Boaters could not afford beautiful glass marbles, so they made marbles out of clay. Games often involved knocking other people's marbles out of the way whilst trying to get your marble nearest to the target.



### Skittles

This was the boaters' version of bowling. All the children needed was a round hard ball and some skittles made by hand.

### Jumping Rope

A rope would be swung in a circular motion between two people so that a third person could jump in and over the rope and the motion got faster and faster until it caught the person jumping.



### Follow the Leader

This was a simple game where the children formed a line behind the leader whose job it was to march, run, skip, hop, kick, dance and move in as many ways and around as many obstacles as possible whilst the players behind have to copy.

## Next Step → → →

Try out some of the games. Could your favourite playground game be played on the towpath? If not, how could you change it so that boaters' children could play.

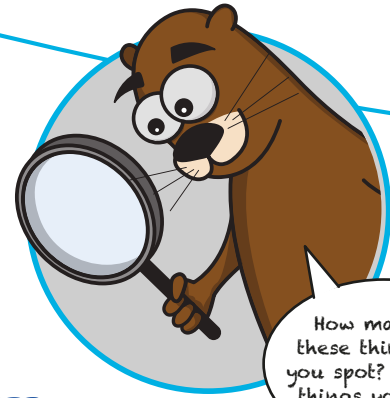


# SAFE

 Remember the SAFE message.  
**Stay Away From the Edge**


## Historical Towpath Trail

Before canals were built, goods were delivered by horse and cart. Journeys were slow, rough and dangerous. When canals were built, boats delivered goods more safely and journeys took days rather than weeks. The boats were towed by horses that walked along the towpaths, often led by the boaters' children.



How many of these things can you spot? Tick the things you find.


### Take a walk along a towpath near you

**1** 


Bollards and rings to tie up boats

**2** 

Grooves worn by towing ropes on tunnel walls or the top of canal bridges

**3** 

Locks which allow boats to go up or down hill

**4** 


Old signposts and milestones at other places along the canals

**5** 


Heel grips to stop horses and people from slipping

**6** 

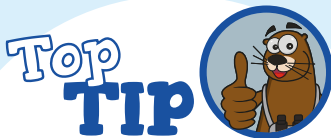
Canal bridges

**7** 

Narrowboats specially designed to travel on canals

**8** 

Canal-side pubs where boaters once met to buy food and drinks and swap gossip

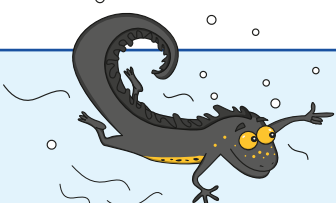


**Top Tip**

Look for dates on pubs, bridges and other structures to find out when they were built. Many of the canals in England and Wales are over 200 years old.

**Next Step** → → → →

Why not make your own trail for you and your friends and family to complete the next time you are on the towpath.



**SAFE** Remember the SAFE message. Stay Away From the Edge

## Roses & Castles

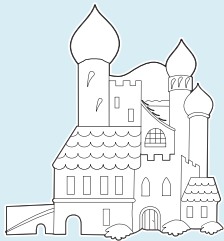
Narrowboats and household items such as stools and watering cans were often decorated with bright, colourful patterns of roses and fairytale castles. For families living on the boats it helped the boat feel more like home. There wasn't much room for decorative items so they often painted images straight onto the walls.



### Design a new Roses & Castles pattern for a narrowboat

#### You will need

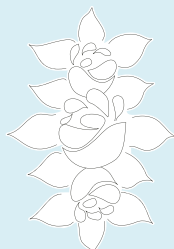
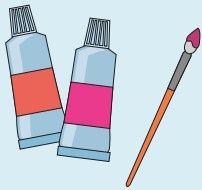
Paper plate, photo frame, wooden spoon or box



Castles template

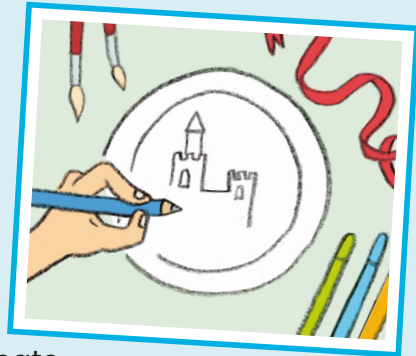
Roses template

Paint and paint brushes



#### What to do

Using pencils, draw a design onto your item using the templates to help. Paint the designs in.



Every boater had their own style. To create your own, think about:

- A bold and simple pattern to make the boat look cheerful
- A pattern that can be painted quickly
- Painting a picture of your home, school or other buildings near you instead of a castle
- Include other flowers or trees in your design



#### Top TIP



Use soft paint brushes that come to a nice point and create the same sort of effect as traditional Roses & Castles.

#### Next Step → → → →

Test out your design by looking at it from several feet away to see if it is visible from a distance just as Roses & Castles would have been on a narrowboat.



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## Cooking Ideas

Food often had to be eaten while travelling along. Cooking aboard a narrowboat was a bit like cooking at camp. Meals had to be nutritious but made with little equipment.



Try making these scrumptious recipes - inspired by the boaters and their lives.

### Chocolate Cornflake Cakes

Cocoa beans were imported into England by ship from the Caribbean and Africa to be made into chocolate crumb. The chocolate crumb was then transported by canal boats to Cadbury's factory in Bourneville to be made into chocolate.



#### You will need

- 75g butter
- 200g dark chocolate, broken into small chunks
- 4 tbsp golden syrup
- 200g cornflakes
- Small saucepan and baking tray

#### What to do

- Melt the butter, chocolate and golden syrup in a small saucepan over a low heat
- Remove and cool for 5 minutes
- Put 24 cupcake cases into muffin tins, or on a baking tray
- Stir the cornflakes into the mixture and spoon into the cupcake cases, allow to set and then serve

### Oatcakes

These could be made on top of the tiny stove in the cabin. They were cheap to make and filling too.



#### You will need

- 1 cup of medium oatmeal
- A large pinch of salt
- 1 tablespoon of melted dripping or lard
- 1 cup of boiling water
- A bowl and a thick frying pan or griddle

#### What to do

- Put the oatmeal in the bowl and add the salt and dipping or lard
- Now add the boiling water, mix everything together and knead into a ball
- Break off pieces the size of an egg
- Flatten with the palm of your hand to about 5mm thick
- Heat the frying pan or griddle and bake slowly on both sides over a low flame until crisp



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## Cooking Ideas

Boaters would use natural resources for food. They would fish for eels from the stern and they collected fruit and vegetables from the hedgerows and fields.



Try making these scrumptious recipes - inspired by the boaters and their lives.

### Blackberry Fool

In autumn, wild blackberries are plentiful along towpaths. You can pick them to make this delicious blackberry fool.



#### You will need

- 400g blackberries
- 3 tbsp icing sugar
- ½ tsp lemon juice
- 250ml whipping cream
- 250ml greek yoghurt

#### What to do

- Put the blackberries, icing sugar, lemon juice and one tbsp of water into a pan over a low heat
- Slowly heat the mixture, stirring a few times, until it begins to simmer and the blackberries start to look soft and juicy
- Remove from the heat and leave to cool
- Whisk the cream in a separate bowl until it forms 'soft peaks', then gently fold in the yoghurt and half of the cooled puree
- Gently ripple through the rest of the puree and spoon into dishes. Top with blackberries and serve
- If you want a really smooth Blackberry Fool, pass the berry mix through a sieve. Push down on the fruit to help as much as possible go through. Squeeze out every last drop of juice

### Top TIP



Take care when cooking and always ask an adult for help.

### Next Step → → → →

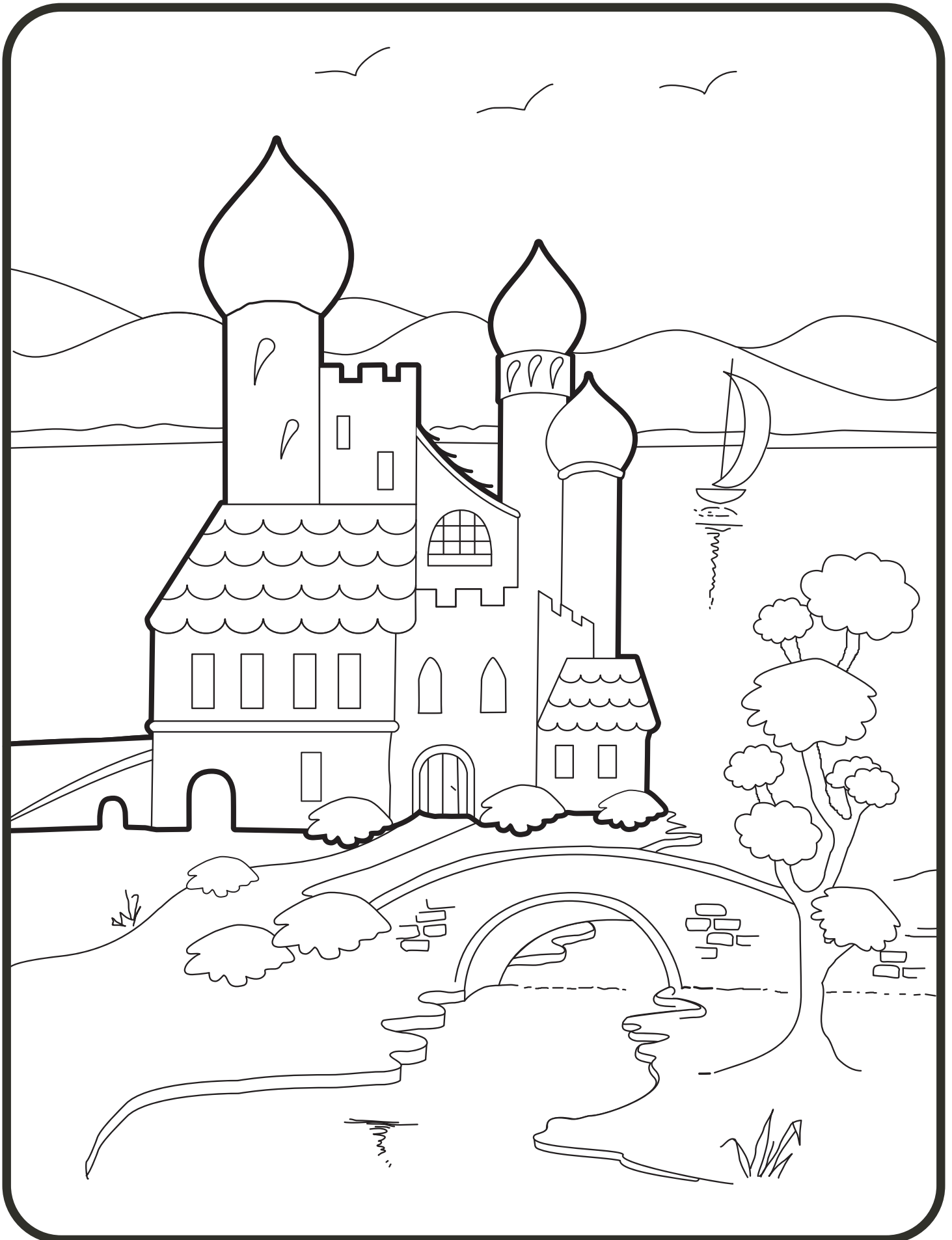
You can freeze Blackberry Fool for up to three months! Use an old ice cream container and design a new label with a blackberry theme.



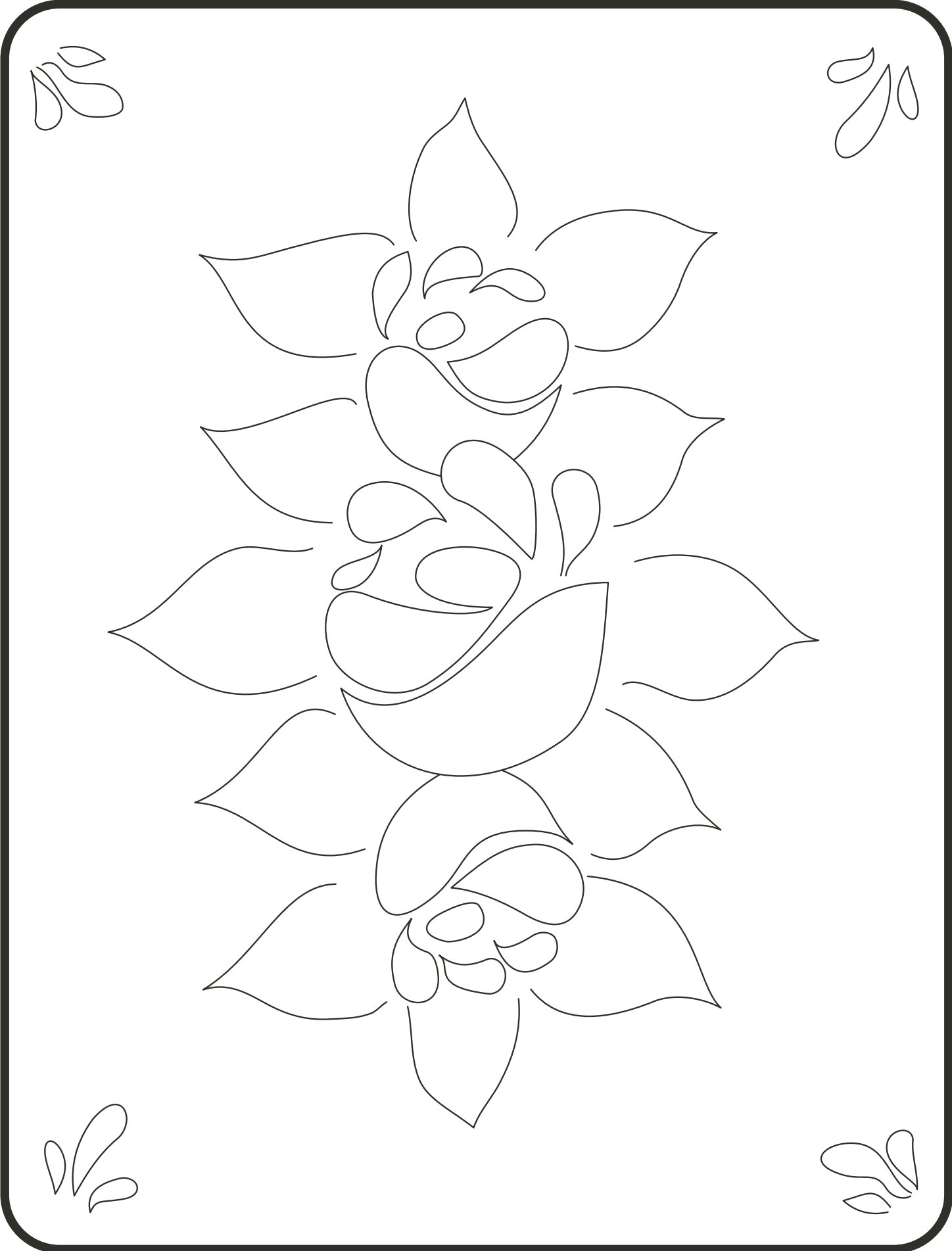
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# Castles template: **History**

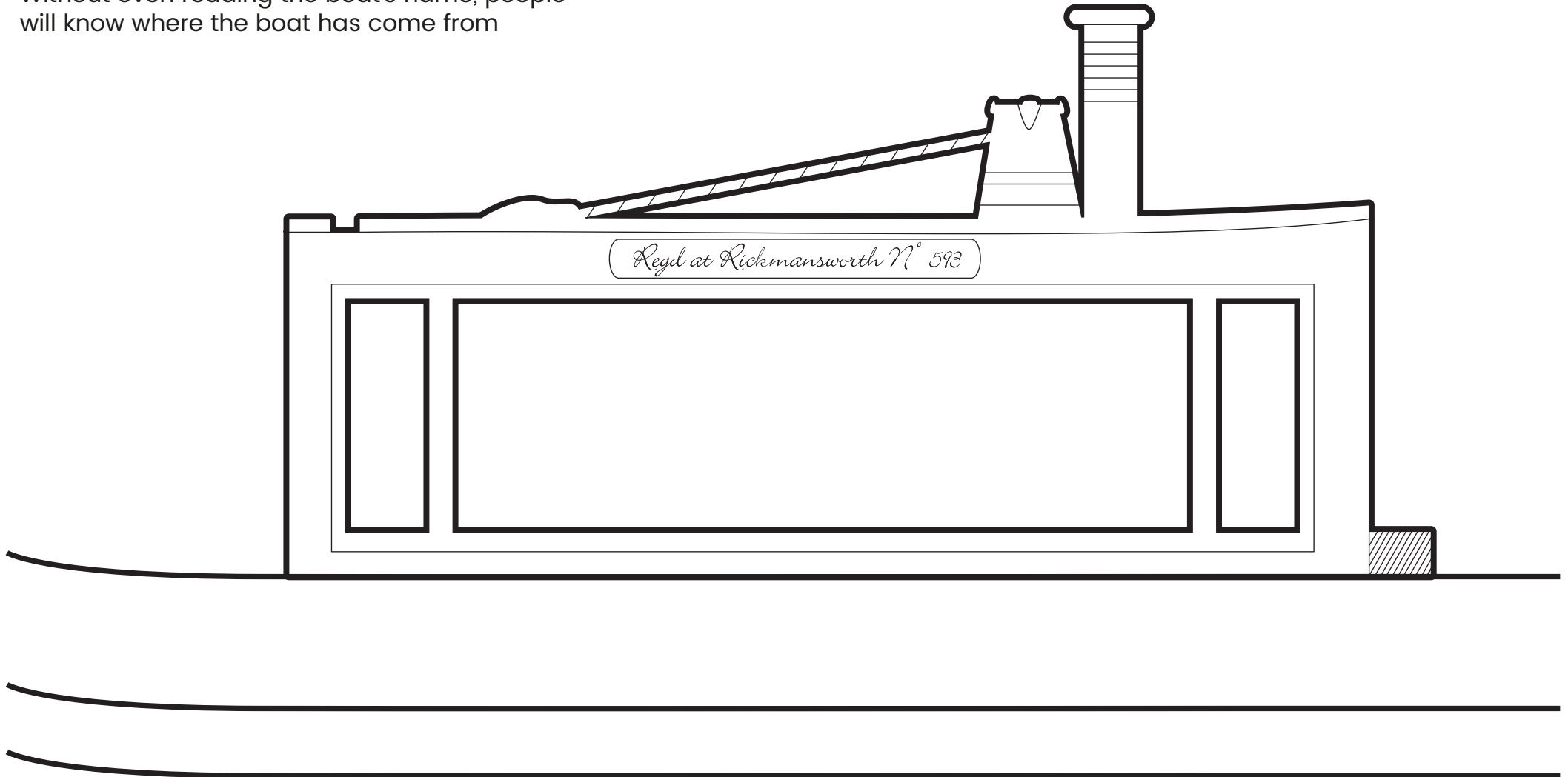


# Roses template: **History**



# Boat livery template: **History**

A livery is a bit like a school uniform for boats.  
Without even reading the boat's name, people  
will know where the boat has come from



# Boater's cabin template: **History**

