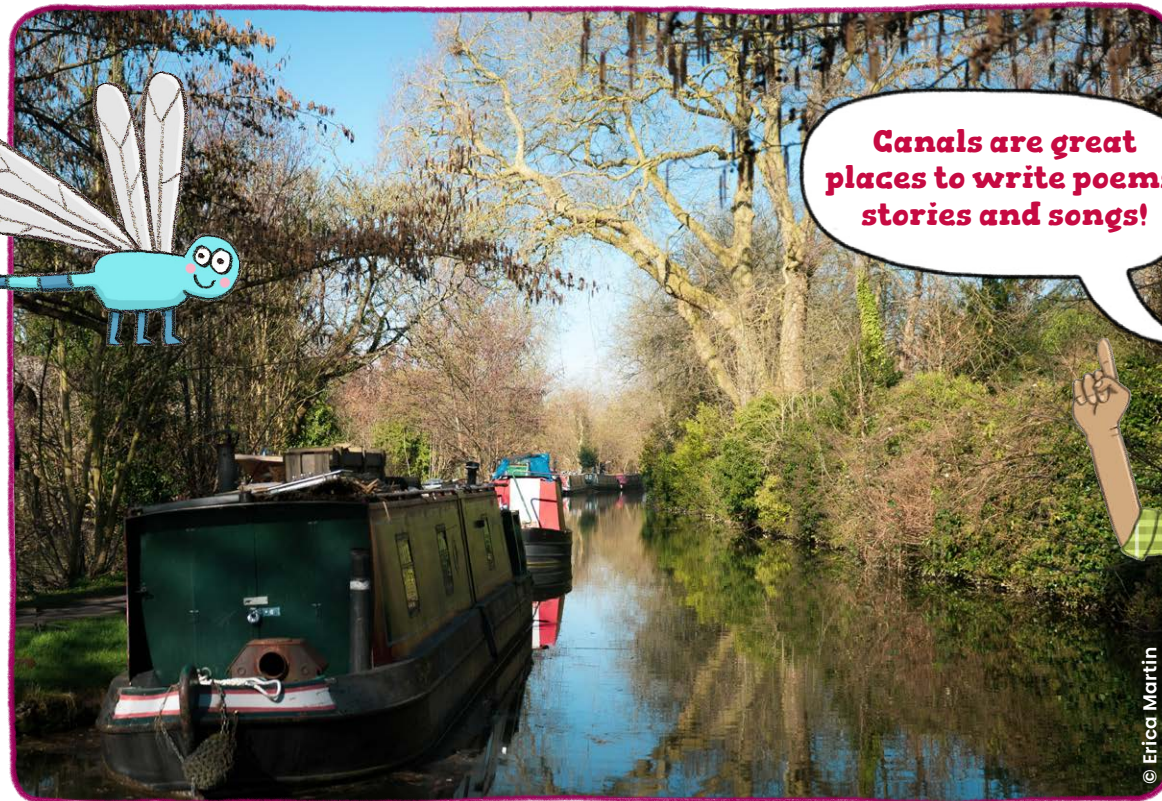


Build a Canal

A Literacy Resource



Canals are great places to write poems, stories and songs!

© Erica Martin

The Oxford Canal

 Canal & River Trust—Explorers

 @CRTEsplorers

canalrivertrust.org.uk/explorers

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This downloadable self-directed resource has been developed for teachers and home-schoolers to support the **Build a Canal Learning Bundle and Workshop** through **Literacy**.

(canalrivertrust.org.uk/explorers/learning-bundles/build-a-canal).

It is aimed at Key Stage 1 & Key Stage 2 pupils.

There are six stand-alone topics. Each one includes a lesson plan and an activity for pupils to use as you wish.

Teachers and home-schoolers can use the **certificate** on canalrivertrust.org.uk/explorers/learning-bundles/build-a-canal to give to pupils on completing the activities.



Main links to Literacy

Key Stages 1 & 2

This resource provides opportunities to:

- articulate and communicate ideas clearly for a range of audiences, styles, contexts and purposes
- improvise, devise and script drama, narrative and composition
- engage with wordplay, including alliteration, rhyme, phonics and onomatopoeia
- facilitate spelling, vocabulary, grammar and punctuation.



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Who wants to be a millionaire?



This activity looks at the process of planning and building a canal. Pupils write a letter, advert or speech to persuade people to invest money in a new canal.

Learning objectives

- **Know** that the great age of canal building began in the mid 1700s
- **Understand** that canals needed investment to be built
- **Discover** that canals made some people very wealthy

Main links to Literacy Key Stages 1 & 2

- Articulate and communicate ideas clearly for a range of audiences, styles, contexts and purposes
- Facilitate spelling, vocabulary, grammar and punctuation



Lesson plan

Before undertaking this activity pupils are likely to have played the **Build a Canal Online Game** (canalrivertrust.org.uk/explorers/games/build-a-canal) and found out that entrepreneurs wanted to invest in more efficient ways to receive and deliver goods.

Discussion points

- Talk about how money might be raised for a big project today, e.g. for restoring an old canal (charities, grants, local people supporting campaigns).
- Explain that people who invested in the first canals were wealthy landowners and businesspeople who wanted more efficient ways to deliver materials to their factories, and the finished goods to markets in Britain and the wider world.
- Talk about how some canals—but not all—made investors very rich. The Duke of Bridgewater, who invested in one of the first canals, the Bridgewater Canal, was said to be the richest man in Britain when he died in 1803.
- Great engineers were attracted to solving the problems involved in building canals. They included James Brindley (1716-1772), who built the Bridgewater Canal.



The Duke of Bridgewater

To do

- 1 Explain to pupils that they must try to find investors for a new canal and write a letter to people who might be interested. Alternatives could be writing a speech to raise awareness at a meeting, or a poster for the meeting.
- 2 Remind them that however the message is delivered it must grab people's attention with powerful words (and images if it's a poster).

Key terms

Invest • Investment • Engineer Profit • Markets • Entrepreneur

National Curriculum links

Key Stages 1 & 2

- **History:** Events beyond living memory; significant historical events in the locality (building of canals)

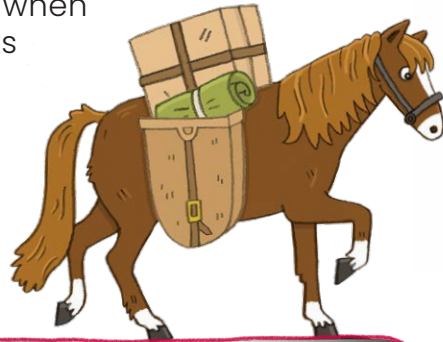
Key Stage 2

- **Geography:** Human geography (land use, economic activity, trade links)

Who wants to be a millionaire?

The story so far...

It's 1765... Josiah Wedgwood is a potter who wants to make new white pots like the ones being imported from China. To do this he needs white clay from Devon and Cornwall. But the packhorses used to transport the materials will take too long. And the bumpy roads will break the delicate white pots when they are sent to markets to be sold.



Josiah needs a canal!

Canals cost a lot of money. Josiah must find out who will invest money to build one in return for profits.

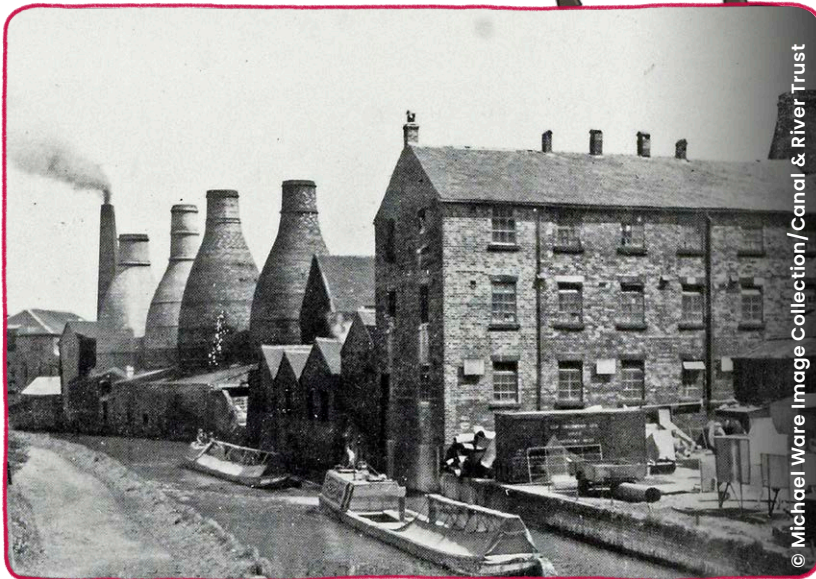
I'd like you to write a letter to people who might be interested in investing in a new canal.



Josiah wanted a canal to link the factories in Stoke-on-Trent to the port of Liverpool. From there his pots could be delivered all over the world.

Josiah Wedgwood

The new teapots I make for Mr Wedgwood are popular.



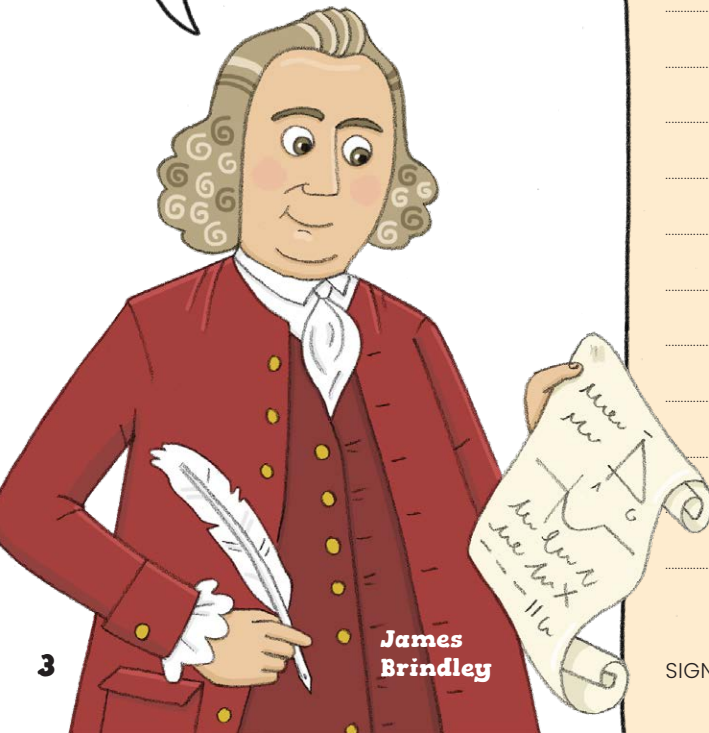
© Michael Ware Image Collection/Canal & River Trust

Josiah invested in the Trent & Mersey Canal.

Words that you may find useful:

Advance Spend
Success Invest
Gain Profit
Winnings Percentage
Benefit Value

This new canal will be a challenge. I'll have to tunnel through hills.



James Brindley

To whom it may concern ...



Dear

Lined writing area for the letter.

Whatever you write or draw must attract people's attention.



Remember to say that everyone will make loads of money!



SIGNED:



Horses for courses

This activity looks at the role horses played in the development of canals. Pupils are asked to write a story, a diary or a script for a play from a canal horse's point of view.

Learning objectives

- **Know** that horses towed canal boats
- **Understand** that horsepower was important in the development of canals
- **Discover** that canal horses were well looked after

Main links to Literacy Key Stages 1 & 2

- Articulate and communicate ideas clearly for a range of audiences, styles, contexts and purposes
- Improvise, devise and script drama, narrative and composition
- Facilitate skills in spelling, vocabulary, grammar and punctuation

Children often led the horse towing the boat.



Lesson plan

Before undertaking this activity pupils are likely to have explored the [Build a Canal Online Game](http://canalrivertrust.org.uk/explorers/games/build-a-canal) (canalrivertrust.org.uk/explorers/games/build-a-canal) and learnt that horses towed canal boats. [All About Canals](http://canalrivertrust.org.uk/explorers/resources?keyword=all+about+canals) (canalrivertrust.org.uk/explorers/resources?keyword=all+about+canals) is useful for explanations about broad and narrow canals and river navigations.

Notes for pupils on page 6 provide some facts; various Canal & River Trust Fact Files will provide more.

Discussion points

- A horse's working day
- How horses were looked after
- Accidents with horses.

To do

- 1 Discuss different forms of narrative, e.g. diaries, stories, scripts for videos, role plays or cartoon strips.
- 2 Talk about the structure of a narrative, e.g. as in a children's twelve-page picture book (see page 5). The same formula would work for all forms of creative writing.

Key terms

Narrow canals • Broad canals
Narrative • Structure • River navigation

National Curriculum links

Key Stages 1 & 2

- **History:** Events beyond living memory; significant historical events in the locality (building of canals)
- **Science:** The basic needs of animals



One way to write a story...



<p>1 Set up 1 Introduce character/s, scenario or problem</p>	<p>2 Set up 2 Plan of action. Characters enter scenario, consider problem, have an idea</p>	<p>3 Set up 3 Fun, adventure, journey or quest begins</p>
<p>4 Moving forward Main character/s go through a variety of situations...</p>	<p>5 Moving forward Adventures and/or...</p>	<p>6 Moving forward Comic or tragic episodes until...</p>
<p>7 Turning point Something happens to alter the course of events. Time to rethink, escape, panic or bring in new character</p>	<p>8 Onwards and upwards Time to think about Plan B</p>	<p>9 Onwards and upwards Working out Plan B</p>
<p>10 Triumph or disaster The end is in sight. Or is it?</p>	<p>11 Twist Something unexpected happens, e.g. baddies meet their comeuppance, heroes have one last wobble</p>	<p>12 Resolution The end of the adventure. Everything comes to a satisfactory conclusion. Or one last twist for the very end?</p>



Horses for courses

Your job is to write a story from a canal horse's point of view.

Things to think about

Decide whether you want to write:

- a day in the life of a canal horse

or

- a story about a canal horse for a friend or a younger brother or sister

or

- a short play for your school.

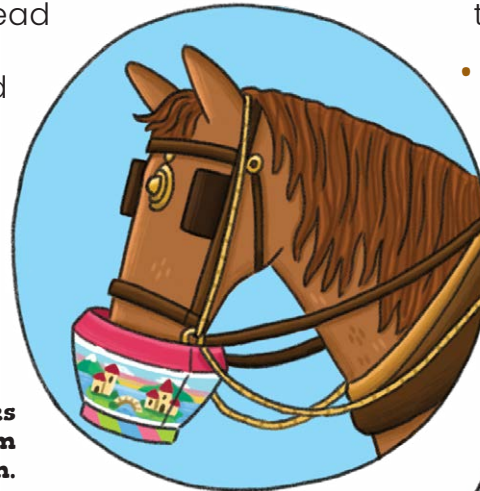


Horsey facts

- Canal boats were towed by horses until about 100 years ago.
- All types of horses worked on canals – cart horses, delivery van horses and old carriage horses as well as donkeys and mules.
- Smaller animals were used on the narrow canals because of the low bridges. Large horses towed big barges on broad canals and fast flowing river navigations.

Hardworking horses

- Canal horses worked from dawn to dusk.
- Horses were fed while 'on the move' from a nose can attached with a strap around the horse's head and neck. They were fed on a mixture of hay, straw, bran, peas, oats and chaff (husks of grain).



Horses ate from a nose can.

Accidents

- Horses sometimes fell in the water, by slipping or bolting when frightened.
- Canals are shallow but the banks are steep. If a horse fell in, the boater had to find a shallow spot to lead it out.

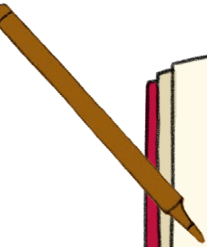
Looking after canal horses

- The animals were rested overnight in stables. These were usually near the pubs where the boaters rested too.
- Horses needed re-shoeing by blacksmiths every two weeks because they needed to grip the towpath.
- Boaters often used canalside plants to heal sores and grazes on animals.
- Boatwomen crocheted caps for horses to wear over their ears to prevent them from being bitten by flies.



Horses wore ear caps.

Now write your masterpiece!



TITLE:

BY:

Give it a title and don't forget to add your name as author in **LARGE LETTERS!**



What was it like to be a navvy?



This activity uses contemporary photographs to find out more about navvies. Pupils adopt the role of 'health and safety inspector' and fill in a report based on their observations.

Learning objectives

- **Know** that navvies built the canals
- **Understand** that navvies were skilled men (and some women) who worked in harsh and often dangerous conditions
- **Consider** the roles men and women played in the past and how this was different to today

Main links to Literacy Key Stages 1 & 2

- Articulate and communicate ideas clearly for a range of audiences, styles, contexts and purposes

Discussion points

- The work was rough and hard, and the pay was poor.
- Navvies built canals with picks, spades, barrows and muscle power.
- Navvies were looked down upon by most people and blamed for causing trouble, e.g. fights and riots.
- There were few rules about health and safety.
- Women played an important role in building canals and carried out physical tasks. Their work was rarely photographed, probably because the work was thought to be unfit for women.

To do

- 1 Pupils assume the role of a 'health and safety inspector' and fill out their reports based on their observations.
- 2 Provide magnifying glasses if possible—not essential but a fun way to look at photographs.

Key terms

Health and safety • Foreman Barrow run



Women sold food and drink to navvies.

Lesson plan

Before undertaking this activity, pupils are likely to have played the **Build a Canal Online Game** (canalrivertrust.org.uk/explorers/games/build-a-canal) and to have found out that navvies supplied the labour.

These photographs are of the Manchester Ship Canal taken between 1887 and 1894. Photographs of navvies are rare before the invention of photographic journalism in 1840s.

Use the photographs to talk about:

- 1 Navvies were split into gangs of fifty, each with a foreman.
- 2 Young boys were employed as navvies.
- 3 Some canals were too deep to throw the spoil up to the surface so it was taken up in barrows on a barrow run.
- 4 This navvy lost a hand in an accident, but he kept his job.

National Curriculum links

Key Stages 1 & 2

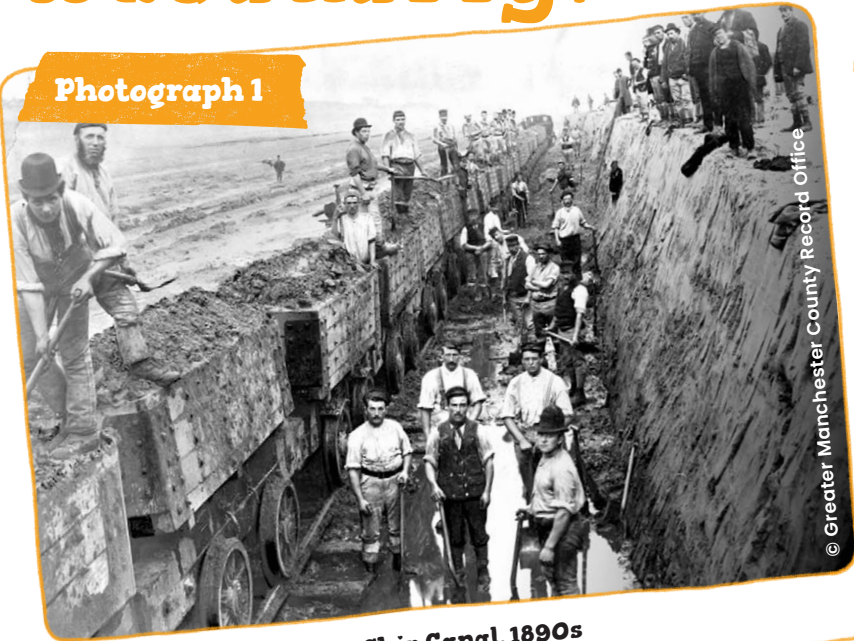
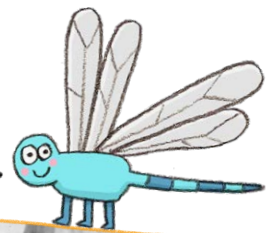
- **History:** Significant historical events in the locality (building of canals)
- **Science:** Use of everyday materials (clay, rock, water)

Key Stage 2

- **History:** Events beyond living memory (building of canals)
- **Geography:** Human geography (land use, economic activity, trade links)

What was it like to be a navvy?

Look carefully at these photographs.



Photograph 1

© Greater Manchester County Record Office

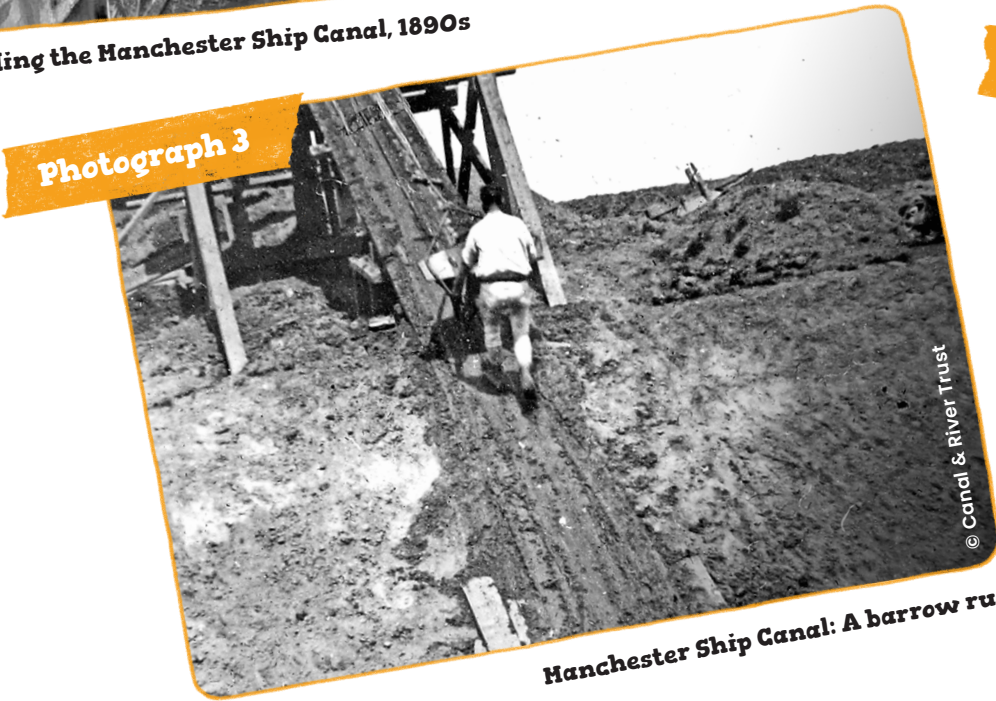


Photograph 2

© Canal & River Trust

Manchester Ship Canal: Navvy boys c.1891

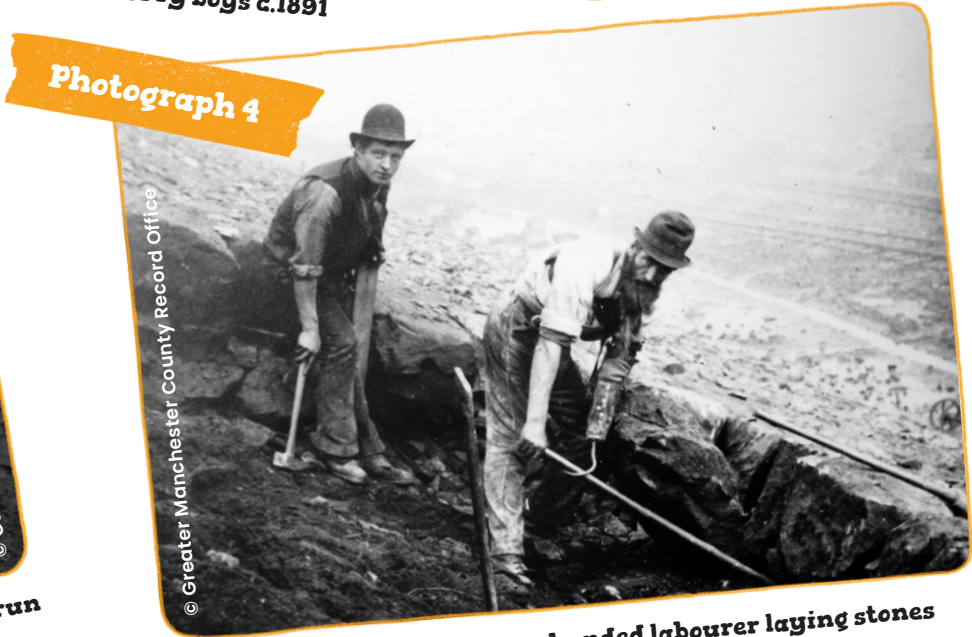
Building the Manchester Ship Canal, 1890s



Photograph 3

© Canal & River Trust

Manchester Ship Canal: A barrow run



Photograph 4

© Greater Manchester County Record Office

Manchester Ship Canal: A one-handed labourer laying stones

OFFICIAL REPORT



Imagine you are a health and safety inspector. Your job is to find out about the working conditions of navvies and fill in a report.

NAME: _____ DATE: _____



Photograph 1

1 Navvies worked in gangs of fifty. Each gang had a foreman.

Put a circle around the man you think might be a foreman.

2 What clothes are the navvies wearing? Do you think they are suitable for working in?

I think _____

3 How deep is the canal the navvies are digging?

Clue: the men are about 1.5 metres tall.

- 1.5 metres?
- 2.5 metres?
- 3.5 metres?

Photograph 2

4 How old do you think these young navvies are?

I think they are _____ years old

Photograph 3

5 Navvies had to push heavy loaded barrows up planks (barrow runs). It was exhausting work.

What do you think would happen if the barrow run was slippery?

I think _____

6 Can you see any safety precautions such as danger signs and first aid posts?

Photograph 4

7 This navvy lost his hand in an accident but he kept his job. What is he using to help him move stones?

He is using _____

8 What other tools are the navvies using?

They are using _____



MY CONCLUSIONS

How do you rate the working conditions for navvies?

Mark it on this scale.



A navy shanty

In this activity, pupils write the lyrics for a 'puddling' shanty for navvies.

Learning objectives

- **Know** that shanties are a type of song
- **Understand** that songs and music can be used to make hard physical tasks easier
- **Discover** that navvies puddled clay to make canals watertight

Main links to Literacy Key Stages 1 & 2

- Engage with wordplay, including alliteration, rhyme, phonics and onomatopoeia



Lesson plan

Before undertaking this activity, pupils are likely to have played the [Build a Canal Online Game](http://canalrivertrust.org.uk/explorers/games/build-a-canal) (canalrivertrust.org.uk/explorers/games/build-a-canal) and found that navvies puddled clay to make canals watertight.

Discussion points

- Explain the term 'puddling', i.e. how navvies mixed clay with water to make a thick liquid and plastered it on to the bottom and sides of the canal in layers to make it watertight.
- Point out that cattle were sometimes driven along the channel to puddle the clay (see [Build a Canal Online Game canalrivertrust.org.uk/explorers/games/build-a-canal](http://canalrivertrust.org.uk/explorers/games/build-a-canal)).
- Talk about shanties—songs that help people to work in a team to carry out hard physical tasks. For example, sea shanties helped sailors to raise anchors and hoist sails ready for departure.
- Play examples of well-known shanties (See *Useful resources, page 18*) and discuss how the words and the rhythm describe the action.
- Encourage pupils to act out shanties and other working songs, e.g. marches, moving in time to the music.

To do

- 1 Using an existing shanty (See *Useful resources, page 18*), ask pupils to write rhyming couplets for a clay-puddling shanty.
- 2 Talk about wordplay and the use of alliteration (words that have the same sound at the beginning, e.g. 'claggy clay'); rhyming couplets; words that have two meanings, e.g. 'trunk'; making up words to imitate sounds, e.g. 'squiggy', 'slippy', 'slurpy' (onomatopoeia).

Key terms

Puddling • Shanty • Lyrics

National Curriculum links

Key Stage 1

- **Music:** Use voices expressively and creatively by singing songs and speaking chants and rhymes
- **History:** Events beyond living memory
- **Science:** Use of everyday materials (clay, rock, water)

Key Stage 2

- **Music:** Appreciate and understand recorded music drawn from different traditions
- **History:** Significant historical events in the locality (building of canals)

A navy shanty

Shanties are songs that help people to do hard physical tasks. The strong rhythm and rhyming words make sure everyone lifts, heaves, stamps or pulls together.

1 Think about which words describe a stamping action.

You might find these words useful:

Beat Crush Trample
 Pound Batter Break
 Stamp Bang Thump
 Bish Ground Mush
 Bash Bosh Splatter
 Slippy Sloppy



Write the words to your puddling shanty here...

2 Why not make up some words of your own, for example to describe the sound of slapping on sloppy clay?

3 Or you could make up a 'call and response song' where people sing back to you exactly the line you sang to them:

You: 'I've got boots, big and strong'

Them: 'I've got boots, big and strong'

4 Sailors were once only allowed to complain about their working conditions through their shanties. You could include a complaint about digging canals!



Handwriting practice lines consisting of a solid top line, a dashed middle line, and a solid bottom line. A blue pencil is positioned at the top left of the lines, and a black musical note is at the bottom right.

A box of memories

In this activity, pupils imagine that a navvy they know well is going away to work on a canal and won't be back for a long time. Pupils make a 'memory box' to remind him/her of home.

Learning objectives

- **Know** that navvies built the canals
- **Understand** that navvies were skilled men who worked in harsh and often dangerous conditions
- **Discover** that navvies worked on canals all over the country

Main links to Literacy Key Stages 1 & 2

- Spelling, vocabulary, grammar and punctuation

Lesson plan

Before undertaking this activity pupils are likely to have played the [Build a Canal Online Game](http://canalrivertrust.org.uk/explorers/games/build-a-canal) (canalrivertrust.org.uk/explorers/games/build-a-canal), become familiar with the term 'navvy', and learnt that navvies built the canals.

Discussion points

- Explain that tens of thousands of navvies built the canals. They were first known as 'navigators' because they built canal 'navigations'.
- Talk about how the first navvies were local workers, e.g. farmers and miners. Later canal work attracted men and women particularly from Ireland and Scotland.
- As navvies became experienced and used to the gruelling work, they found they could earn more money by moving around the country from canal to canal.
- Discuss when it might be important for pupils to have reminders of home, e.g. a stay in hospital, a week away on a school trip.



To do

Ask pupils to:

- consider what materials would be suitable for a container and to select a small box or other container to put items in
- choose two or three things to remind a navvy of his/her family
- write a simple message to keep his/her spirits up. Explain that most navvies were illiterate so the message should be easy to read and understand
- draw a picture of something or someone to remind him/her of family life.

Key terms

Navigator • **Illiterate** • **Gruelling**

National Curriculum links

Key Stages Key 1 & 2

- **History:** Events beyond living memory; significant historical events in the locality (building of canals)

Key Stage 2

- **Design & Technology:** Select materials according to their characteristics

A box of memories

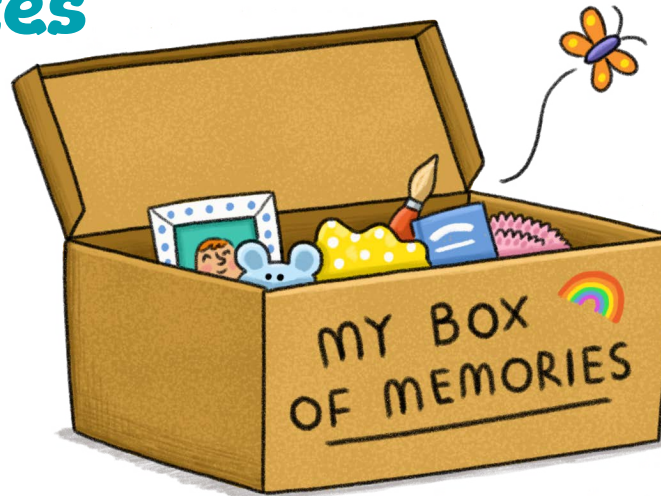
Canals were built by navvies who travelled all over the country to work on one canal after the next.

Imagine you know a navvy who is going away and won't be back for five years.

Your job is to make them a box of memories to remind them of their home and family, and to keep their spirits up.

What to do

- 1 Find a small container to fit in a navvy's pocket.
- 2 Choose three things to remind your navvy of home, for example a photograph, a small toy, a tiny favourite object.
- 3 Write a message to keep his/her spirits up.
- 4 Draw a picture of someone or a pet to remind the navvy of family life.



I am going to put these things in my box:

- 1
- 2
- 3

My message is:

Dear

.....

.....

.....

.....

.....



Love from

Hazards and rewards

In this activity, pupils design a board game to make them aware of the hazards and rewards in building canals.

Learning objectives

- **Know** that there were many hazards involved in building canals
- **Understand** that there were also many rewards to be gained in building canals
- **Discover** that many canals were very successful but some failed

Main links to Literacy

Key Stages 1 & 2

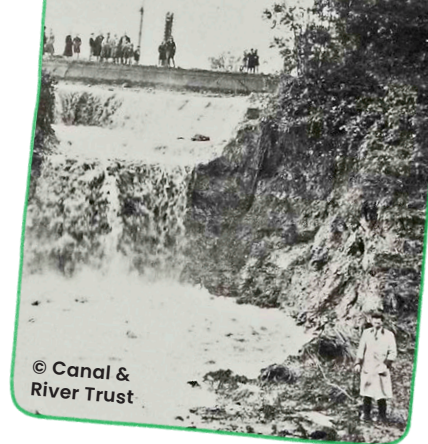
- Articulate and communicate ideas clearly for a range of audiences, styles, contexts and purposes



An icebreaker

© Mary Evans Picture Library

A bank collapses.



Lesson plan

Before undertaking this activity pupils are likely to have played the **Build a Canal Online Game** (canalrivertrust.org.uk/explorers/games/build-a-canal) and discovered some of the hazards and rewards in building a canal.

- Look at a map of your local canal (see *Useful resources, page 18*) and note features such as locks and bridges.
- Discuss when and why your local canal was built, and where it starts and ends.
- Talk about hazards in building a canal such as bad weather, difficult landscape, shortages of materials, equipment, and labour, and accidents.
- Rewards could include good weather, plenty of labour, features such as locks and bridges, and the canal being completed on time.

To do

Ask pupils to:

- draw the outline of your local canal. (Use the website to find a simple map of your local canal.)
- mark on where it starts and finishes
- add features such as rivers, villages
- mark on where hazards and rewards will fall
- colour in the counters and cut them out.

Key terms

Hazards • **Rewards**
Labour • **Locks** • **Bridges**

National Curriculum links

Key Stages 1 & 2

- **History:** Events beyond living memory; significant historical events in the locality (building of canals)
- **Design & Technology:** Acquire knowledge, understanding and skills needed to engage in an iterative process of designing and making

Hazards and rewards

Your task is to design a board game. The aim of the game is to build a canal as quickly as possible and avoid hazards.

Things to think about

- Penalties if you land on 'snakes'
- Rewards if you land on 'ladders'



Hazards

Hazards could include:

- ice and snow,
- no local clay for puddling
- navvies fall sick
- banks collapse

LOSER!

.....

.....

.....

BACK TO THE START

LOSER!

.....

.....

.....

BACK 1 SQUARE

LOSER!

.....

.....

.....

HISS A GO

LOSER!

.....

.....

.....

HISS A GO

Rewards

Rewards could include:

- good weather
- plenty of navvies
- major locks completed on time
- canal makes lots of money

WINNER!

.....

.....

.....

FORWARD 1 SQUARE

WINNER!

.....

.....

.....

FORWARD 1 SQUARE

WINNER!

.....

.....

.....

HAVE ANOTHER GO

WINNER!

.....

.....

.....

FORWARD 2 SQUARES

WINNER!

.....

.....

.....

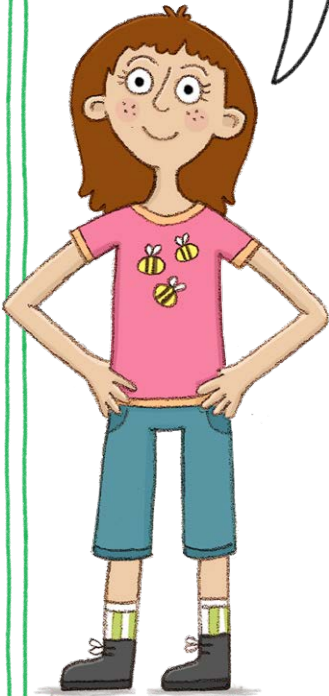
FORWARD 3 SQUARES





**Draw an outline of
your local canal.**

**Decide where your
hazards and rewards
will fall and mark
them in.**



Places to visit

Use the website canalrivertrust.org.uk/explorers to:

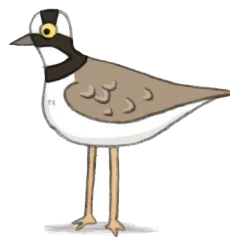
- [find out about your local canal or river](http://canalrivertrust.org.uk/places-to-visit?bounds=50.064192%2C-4.26218%2C55.50375%2C1.537571&tags=489&radius=20) (canalrivertrust.org.uk/places-to-visit?bounds=50.064192%2C-4.26218%2C55.50375%2C1.537571&tags=489&radius=20)
- [discover where our volunteers lead school and group visits](http://canalrivertrust.org.uk/explorers/educational-sites) (canalrivertrust.org.uk/explorers/educational-sites)
- [find lots of resources to support children's learning](http://canalrivertrust.org.uk/explorers/learning-bundles) (canalrivertrust.org.uk/explorers/learning-bundles).

Build a Canal activities with links to:

- [an online game](http://canalrivertrust.org.uk/explorers/games/build-a-canal) (canalrivertrust.org.uk/explorers/games/build-a-canal)
- [Build a Canal Learning Bundle](http://canalrivertrust.org.uk/explorers/learning-bundles/build-a-canal) (canalrivertrust.org.uk/explorers/learning-bundles/build-a-canal)
- [Build Your Own Canal Video](https://www.youtube.com/watch?v=hYmEoxnJgw8) ([youtube.com/watch?v=hYmEoxnJgw8](https://www.youtube.com/watch?v=hYmEoxnJgw8))
- [book a virtual or classroom workshop](http://canalrivertrust.org.uk/explorers/school-and-group-visits) (canalrivertrust.org.uk/explorers/school-and-group-visits).

Books for children

- ***The Canal Boat Café*** by Cressida McLaughlin
Summer Freeman returns to the waterside village of Willowbeck to rescue the Canal Boat Cafe, her late mother's picturesque narrowboat.
- ***Rescue Rosie's Canal Adventures*** by Andrew Chapman
Climb aboard Rescue Rosie with Skipper Pete and his fluffy, scruffy dog, Henry, as they set off on their travels around the English canal system.
- ***Snowy*** by Berlie Doherty
Rachel loves living on a narrowboat, and she loves Snowy, the boat horse. A fantastic school trip is organised, with Snowy working.
- ***The Gate in the Wall*** by Ellen Howard
In nineteenth-century England, ten-year-old Emma, finds her life completely changed when she inadvertently gets a job on a canal boat carrying cargoes between several northern towns.



- ***Barney the Boat Dog*** by Linda Newbery
Little dog Barney lives on a narrowboat with his owner, Jim. Barney loves his life on the canals but the one thing he's frightened of is tunnels...
- ***Oxford Reading Tree: Level 1+: Floppy's Phonics Non-Fiction: Fun on the Canal*** (Floppy's Phonics – New Edition 2011)
Allow children to practise their decoding and literacy skills in the context of exciting non-fiction books, which include a variety of text types and topics.

Music

- *Soon May the Wellerman Come*, traditional sea shanty
- *Row, row, row the boat*, traditional nursery rhythm

Text Elizabeth Newbery
Design Charles Watkins
Illustration Sophie Foster
Picture research Erica Martin
Production Newbery & England