

## Introducing the Lancaster Canal and Lune Aqueduct.

This guided walk begins at the Water Witch Pub situated alongside the Lancaster Canal. The canal was built in the 18th century, linking Lancaster to Preston and Kendal, and was used to transport passengers and goods. The walk ends at the Lune Aqueduct; designed by engineer John Rennie. Described as one of the Wonders of the Waterways, it carries the canal 16 metres above the River Lune.

### This guided walk aims to:

- Provide a range of engaging activities to support learning in the classroom and National Curriculum key skills in history, geography, science, art and design, citizenship and PSHE.
- Enable children to imagine life in the past by learning about people and their working and living conditions along the canal.
- Encourage children to explore Lancaster's historic buildings, canal wildlife and the changes that have taken place along the towpath.

### Pre-visit Planning

To make the best of this route we recommend a drop off point on Aldcliffe Road, adjacent to the footbridge leading to the Water Witch Pub. This provides a drop off and access point onto the canal towpath. The footbridge takes you across the canal to the Water Witch Pub where the trail begins.

This is a linear route and as such we advise that you organise a coach to collect your group from the Lune Aqueduct car park approximately two hours later. This is the end of the trail. The walk along the towpath would also complement a visit to the Lancaster Maritime Museum, which has canal exhibits and displays.

### Water Safety

Waterside Safety guidelines must be shared prior to a visit to the canal to prepare children for a walk along the towpath. We also recommend you undertake a risk assessment of coach drop off and collection points and the canal route prior to organising a visit. For advice on planning a visit and for water safety activities and resources go to [canalriverexplorers.org.uk](http://canalriverexplorers.org.uk). Please note that teachers should manage visiting parties and also ensure the adult to child ratio is sufficient.

### Contact

Before a visit to the canal please complete the online form at [canalrivertrust.org.uk/explorers/school-and-group-visits](http://canalrivertrust.org.uk/explorers/school-and-group-visits) Before a visit to the Maritime Museum please contact the Museum Manager on 01524 382264

### Resources

- Camera
- School Trail worksheets (optional)
- Clipboard and pencil
- Binoculars

# Lancaster Canal and Lune Aqueduct Trail Curriculum Plan

KS2 History	<b>Chronological understanding</b>	<b>Knowledge &amp; understanding of events</b>	<b>Historical interpretation</b>	<b>Historical enquiry</b>	<b>Organisation &amp; communication</b>
Pupils will...	use dates and vocabulary relating to the passing of time	learn about the experiences of people in the past	learn that the past is interpreted in different ways	find out about the past using different sources of information	communicate knowledge and understanding through discussion
KS2 Geography	<b>Geographical enquiry &amp; skills</b>	<b>Places</b>	<b>Patterns &amp; Processes</b>	<b>Environmental change &amp; development</b>	
Pupils will...	ask geographical questions & use appropriate geographical vocabulary	identify how and why places change	explain patterns made by human features in the environment	recognise how people can improve/damage an area & recognise how and why people manage areas	
KS2 Science Sc2	<b>Life processes</b>	<b>Green plants</b>	<b>Variation &amp; classification</b>	<b>Living things in their environment</b>	
Pupils will...	make links between plants and animals found along the canal		identify locally occurring plants and animals	learn that the environment needs protection & will see different animals/plants in their habitat	
KS2 PSHE/Citizenship	<b>Confidence &amp; responsibilities</b>	<b>Active roles as citizens</b>	<b>Healthy, safer lifestyle</b>	<b>Respecting differences between people</b>	
Pupils will...	talk about their opinions and explain their views	discuss topical issues and rules, look at their responsibilities in the community & recognise the role of voluntary and community groups	recognise different risks in different situations and then decide how to behave responsibly, also learn rules about water safety	to think about the lives of people living in other places and times	
KS2 Art & Design	<b>Exploring &amp; developing ideas</b>	<b>Investigating &amp; making</b>	<b>Evaluating &amp; developing</b>	<b>Knowledge &amp; understanding</b>	
Pupils will...	record from experience/ imagination, develop first-hand observations & collect images to help them develop ideas			Explore the roles of artists/craftspeople/ designers working in the past	
KS2 Literacy	<b>Speaking &amp; listening</b>	<b>Reading</b>	<b>Writing</b>		
Pupils will...	talk effectively as a member of a group making contributions relevant to the topic		collect and develop ideas for writing to suit a variety of purposes		

# Lancaster & Lune School Trail Map



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## Introduction

The walk begins at the Water Witch Pub and ends at the Lune Aqueduct, a distance of approximately two miles. Whilst leading a group of children we recommend you allow two hours to complete the walk and the activities. There are twelve stops at points of interest along the route and these notes provide you with information and activities for each stop and for key features along the route. Many of the suggested activities use the resources from the 'Story Sack' as evidence, encouraging children to handle the objects, discuss them and reveal stories from the canal. Groups may be completing this walk before or after a visit to the Lancaster Maritime Museum.

## Health and Safety

Prior to a walk along the towpath group organisers will have planned their visit using advice from the Explorers website. The Explorer Waterside Safety activities will also have been undertaken beforehand, to ensure that the children are aware of the importance of **SAFE (Stay Away From the Edge)**. However, before embarking on the trail, recap with the children water safety rules. The towpath is wide enough for children to walk in pairs and we recommend this, as many of the activities require engaging with a partner.

## Motorways of the Past

### Stop 1: Water Witch Pub

Congregate in a safe place outside the pub and introduce the children to the Water Witch Pub and the start of the trail. Encourage the children to look carefully at the building and ask them whether they think this building was always used as a pub.



#### Story Sack:

Packet boat image,  
parcel, posters, tickets,  
& horseshoe

#### Think about:

What could this building have been used for in the past? Tell your partner.

Provide a clue. Pass the horseshoe from the story sack around the group and allow the children to feel it, and explain that you may have found one these here in the past.

#### Stop 1 Information

The hustle and bustle of industry would have been felt here in the early 1800s and this area would have been very busy in the canal's heyday. Warehouses, offices and workshops would have surrounded us, as cargo was unloaded from the boats here to supply Lancaster.

The Water Witch Pub was once a stable and was often used for the horses that pulled the fast packet boats along the canal. The packet boats carried passengers from Preston to Kendal.

The best-known packet boat, the 'Water Witch', carried 120 passengers, and took seven hours fifteen minutes to make the journey between Preston and Kendal. This sounds a long time, but in its day travelling by road in a stagecoach would have taken twice as long. The packet boat service was very popular, in the first six months of operation 14,000 people used it. The boats were pulled at a gallop by two horses, which were changed every four or five miles at stables along the route. This ensured that the same pace could be kept along the entire route and also gave the exhausted horses a rest. Some of the stables still exist today. Share the story sack items with the children.

The fast packet boats ruled the canal and any other boat had to get out of their way. A boy always rode one of the horses, sounding a horn to warn other boats that they were coming.

### What to look for:

Can you spot where the doors to the stable used to be?

### Can you imagine:

Canals have been described as the motorways of the past because the roads at the time were just bumpy dirt tracks. Imagine what the journey along the canal in one of the packet boats would have been like. What do you think you would have seen along the route?

## The Black and White Canal

### Stop 2: White Cross Mill (George Street Bridge)

Stop outside the White Cross Mill on the cobbles and tell the children that this is the first of many mills along the route, the oldest mill in Lancaster and that we are outside the main access point onto the canal. We would have been in the way of the unloading of coal and the loading of cotton.



**Think about.** Why do you think mills were built along the canal? This stretch of canal would have had cobbles laid all along it. Can you think why? [Cobbles were laid in areas of heavy use, so areas could be used all year round. Cobbles prevented mud and deep ruts building up.]

The canal was a popular way to travel but large barges also used the canal to transport heavy cargo such as coal from the south and limestone from the north. Before canals, goods had to be transported by horse and cart along muddy, pot-holed roads. Difficult, slow and expensive. Boats could move much larger loads, and became cheaper and quicker forms of transport. Mills sprang up alongside the canal in many towns and cities across the country because of this.

Pass the coal and limestone around and ask the children to describe it. Explain here that the Lancaster Canal became known as the Black and White Canal. Ask the children why they think that was? The coal was used as fuel at many canalside mills including this one. The limestone was used for building houses and bridges and for farming. It was very heavy.

## Stop 2 Information

White Cross was the town's first cotton mill, built in 1802 and powered by steam. The Storey brothers bought the mill in 1861. They were wealthy industrialists and owned huge factories which employed many of the people in Lancaster. They were also very forward thinking. To speed up the unloading of cargo here they installed a gantry crane with a bucket on the end. Imagine the labourers filling the bucket with coal to be winched onto dry land ready to be taken to the mill's boilers. The coal produced the steam to work the mill.

Walk a little further down to White Cross Pub, which was originally used as a warehouse for the mill.

**What to look for.** Search for evidence of the past. Can you spot old iron brackets and hinges on the side of the mill warehouse? What were they used for?

**Can you imagine:** Those of you who have handled the coal may notice your dirty hands. Imagine unloading the dirty cargoes from the boats. The air is thick with smoke, loud noises come from the mills, and the buildings around you are rattling and shaking.

**Point of interest:**  
Friarage Bridge (A turnover bridge)

We are about to cross over the canal as the towpath swops sides. Look at the bridge and the way the entrance spirals onto the canal. The bridge we are crossing is called a turnover bridge one of only three on the Lancaster Canal. It was called this because it allowed the horse towing the boat to change sides of the canal, without unhitching.

## Groovy Towpath

### Stop 3: Nelson Street Bridge

Congregate before the bridge with Joseph Clayton's name. He was a Lancaster iron founder. When the original stone bridge was extended, Joseph Clayton provided the cast iron supports. His name on the side was a way to advertise himself and his business.



**Think About:**  
We are standing on the towpath. Why do you think it was called a towpath? The path was created for the horses to walk along. They were attached to a towrope to pull the boat's heavy cargo.

**What to look for:**  
Can you see evidence of towlines? Spot the deep grooves on the edge of the bridge. How were they formed? Discuss ideas.

Reference the rope from the story sack and compare the grooves with the rope. Role-play. Feel the grooves, feel the rope and discuss the weight of the cargo. Get two children to carefully pull either end of the rope to show how it would have rubbed and pulled. What could be done to prevent the damage? What would happen to the rope?

### Stop 3: Information

Rope was essential to people living and working along the Lancaster Canal. It was used in many ways; as a towline for the horses to pull the boats, to knot into fenders, to tie up the boats and to secure the cargo. Rope that could stretch was popular because it would take the strain of the heavy cargo as the horses pulled the boats along the towpath. New rope was always needed for towing as a result. Show the children the fender and allow them to feel it.

Show the children evidence along the edge of the towpath of gaps for the 'stop planks'. Ask the children what they think they are? Planks of wood would have been stored at the side of the canal ready to be secured between the grooves to stop the water reaching the other side of the planks. This meant that repairs to the canal bed could be carried out. It would also prevent flooding in this part of Lancaster if there was a breach further along the canal.

#### Can you imagine:

You have a problem. Your rope has been stolen. What do you do? Tell your partner and share with the group your solution.

## Rattle and Shake

### Stop 4: Moor Lane (South) Mill

Stop outside Moor Lane South Mill, an old cotton mill. It was once linked to Moor Lane North Mill by a tunnel under the road. Both were bought by Mr Storey. This part of the mill with the many windows and floors was used for spinning the raw cotton. The spun cotton would then have been sent to the weaving sheds further along. The three sheds attached were the weaving sheds, which housed the looms.



#### Think about:

What do you think was made here? Share with the children the cotton fabric from the story sack, pass it around the group. What was it like for mill workers making this fabric?

Conditions in the mills were tough for workers. There was little ventilation despite all the windows, as the air had to be kept hot and humid to stop the cotton threads from breaking. The air was thick with cotton dust and this could lead to lung disease. The machines were very dangerous and the noise from them was deafening. Accidents were common, especially amongst the child workers as they often had the most dangerous jobs, squeezing inside the machines to gather cotton fluff and unblock mechanisms.

### What to look for:

Ask the children if they can see how the workers accessed the canal from the mill? How would the boat cargo have been unloaded? The raw cotton would have been unloaded from the boats by hand and the finished woven cotton would have been loaded back onto the boats ready for transportation. Share the raw cotton samples from the story sack with the children and the shuttle and pen, demonstrating how it worked.

### Imagine:

Use all your senses. If you stood on this spot in 1850 what would you have seen, heard and smelt?

### Point of interest: Castle View

As you look to the left, a view of the castle will appear. Lancaster Castle dates back to the 12th century and has been seen from many parts of the city for almost 1000 years. Lancaster Castle was long used as a prison – but some convicts never made it out. Instead they found their way to 'Hanging Corner'. Lancaster Castle is still used today as a crown court. It is open to visitors and you can take a tour around the dungeons.

### Can you imagine:

If a boating family moored along the side of the canal at this point they would have seen a very similar view.

### What to look for:

What can you spot that would have been there then? Church, mills, roof tops, factories, chimneys.

## Living Landscape

### Stop 5: Shaw Street Bridge Mill workers cottages/Dry Dock Footbridge

Stop at the entrance to the canal from Shaw Street and explain to the children that the rows of stone built terraces were originally for mill workers.

### Think about:

When do you think this bridge was built? Is it old or modern?

### Stop 5 Information

The cast iron foot bridge over the canal was built in 1882 to improve access for workers. With the rise of the mills in Lancaster came the need to build housing for its workers. This footbridge linked the workers' houses on one side of the canal with Bath Mill on the other side. Bath Mill no longer exists; it was demolished and is now a housing estate. In the 1880s, Lancaster mill workers worked long hours and were paid around 18/6d (92p) per week. Show the children the Victorian money from the story sack. How far would their weekly wage go? What would it have bought you at the time? What would it buy you today?

People had no leisure time as they were at work for up to 13 hours each day. Children worked the same hours as adults so they rarely had time to play and the money earned could only afford them very basic living conditions.



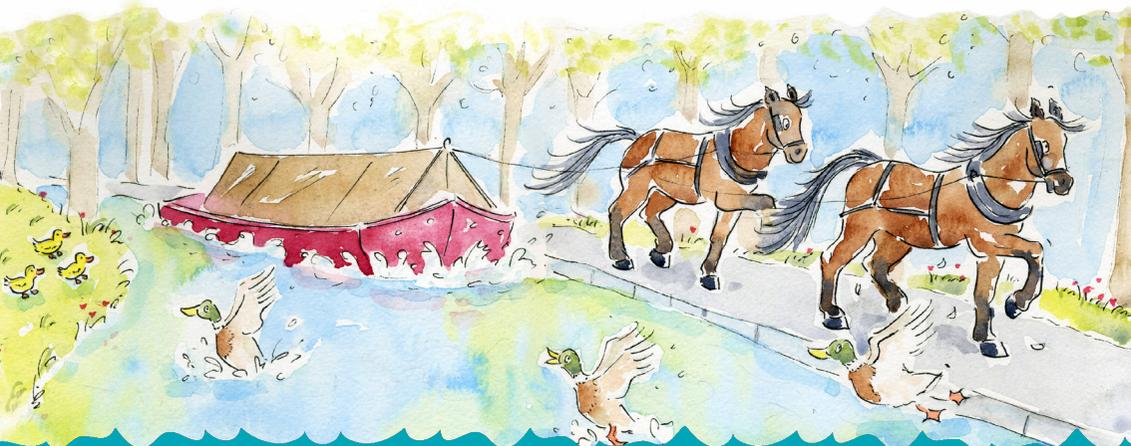
## Imagine:

If you were standing here in the 1880s think about who you might meet. What might they say to you? What would you ask them?

## Point of interest: Dry Dock

On the other side of the canal is a now derelict dry dock. The boats would be carefully steered into the dock, the water in the dock would then be drained and the boat would come to rest on a dry platform. The boat could now be maintained or repaired. It is not used as a dry dock today and swans like to nest here.

What to look for: Ask the children to see if they can spot the steps leading to the bottom? There is also an example of 'stop planks' in use. Can you spot them? Keep an eye out for the swans too.



## Canal Conservation

### Stop 6: Ridge Lane Bridge

As you walk through the Ridge Lane Bridge ask the children to think about how people affect the canal and our enjoyment of it. Congregate in a safe place on the other side of the bridge.

#### Think about:

How do you feel about the graffiti and vandalism you have just seen? Encourage the children to share their thoughts with the group. What impact does it have on the surroundings? How would they encourage people to look after the canal, the towpath and the bridges along it?

The canal itself and the towpath is owned by The Canal & River Trust. They take responsibility for clearing the litter and mess that people leave behind in order to protect the wildlife and increase our enjoyment of this special landscape.

#### Think about:

Who else is responsible? What can we do? Voluntary groups help to maintain a safe and clean environment along the canal by collecting litter and clearing the canal of debris. Local Scouts and Guides, the Canal Society, the Lancaster Canal Trust and local residents often spend time clearing up the rubbish. If you were responsible for creating rules to persuade people to look after and protect their special surroundings what would they be? In pairs create three rules to persuade people to take care of the canal.

## Rest Stop

### Stop 7: Dolphinlee Bridge

There is the opportunity to rest here, play a game and learn about canal safety.

#### Game:

Preston to Kendal Packet Boat

#### Rules

Preston is located at one end of the field, Kendal on the other end with Lancaster in the middle. Children run around in spaces on the field. Call out commands below in random order; the children react to the commands called.

Giddy up = Trot or gallop  
Tunnel Ahead = Run with head ducked  
Navy = Digging action  
Packet Boat = Run faster  
Cargo = Mime shifting boxes  
Preston = Run to the Preston end of the field  
Kendal = Run to the Kendal end of the field  
Lancaster = Run to the middle of the field

#### Look for:

During the walk did you see evidence of how people use the canal today?

#### Stop 7 Information

In the 1800s, people lived along the canal because it was near their workplace and the canal was used for industry and travel. However with the arrival of the quicker and cheaper railways and the building of better roads, the Lancaster Canal was used less and less for transporting cargo. Parts of the canal fell into disrepair and were no longer used. But by the 1960s people were becoming interested in using the canals again. This time it was for leisure activities such as boating, angling, fishing or simply walking and enjoying the wildlife. It is more important than ever that people using the canal do so safely.

How do people stay safe along the canal towpath? Can you spot any hazards? Ask the children to share with the group how the canal can be dangerous. Encourage the children to think about hazards at different times of the year.

#### Water safety activity - Rescue Stations:

Download the water safety activities from [canalrivertrust.org.uk/explorers/water-safety](https://canalrivertrust.org.uk/explorers/water-safety). Use the 'Rescue Station' resources for activities and ideas here.

It will now take about 30 minutes to walk to the end of the trail and the Lune Aqueduct.

#### What to look for.

The Aqueduct. Who can see it first?

## A Way of Life

### Stop 8: Waymarker

Stop at the waymarker and ask the children what they think it is. Explain to the children that waymarkers or milestones were used to show distance between places and to help guide boating families along the route. Thirty five mile posts have been found along the Lancaster Canal and they would have had numerals inscribed into them.



#### Think about:

What would it have been like living aboard one of the boats?

#### Stop 8 Information

In the 1800s, many of the working boats on the Lancaster Canal were worked by families who lived on board in separate living areas. This saved them money, as they didn't have to pay for a house on the land. Life on the canal was hard and families could work for 15 hours each day, maybe more. Coal boats were difficult to keep clean, and families were often large so overcrowding was common. They would have become very good at packing away their belongings at the beginning of each day. Everything in the cabin would have had a use, with little or no decoration e.g. a stove, kettle, pots, beds.

The Canal Act of 1877 saw many new rules for boating families including schooling for children. Girls under 12 and boys under 14 now had to go to school in the town and this had a huge impact on families in Lancaster. Children would now have to live at lodgings or with family in the town during the week to attend school. At weekends they would meet with their families at designated bridges along the canal. On a Friday evening, many children would be seen waiting for their families' boats to collect them for the weekend. Sometimes a message would be left under a rock at the chosen bridge to say that they could not be met. Children saw families when they could, but sometimes months would pass before they could meet.

Show the children the objects from the story sack and ask them to think about what the objects tell them about the people who lived on the boats and what their lives were like.

#### Imagine:

Challenge. You spot the waymarker and can see that you are going to be late. If you don't get to the mill in time with your coal cargo you won't get paid and you won't be able to feed your family or the horse this week. What could you do? Tell your partner and share your solution with the rest of the group.

## Wildlife Watch

### Stop 9

Stop where the canal narrows. This is where an original 'safety lock gate' or 'flood gate' would have been positioned. You can see evidence of this on the edge of the towpath. When the canal was built it was feared that the aqueduct may breach and water would flood into Lancaster. If this were to happen, the force of the water would push a gate closed, so stopping the flow. It was never put to the test as the aqueduct never flooded. The gate is no longer here.

Explain to the children that canals support a range of habitat types including open water, grassland, hedgerows, woodlands and scrub. Establish with the children what a habitat is and explain that we will be undertaking a Wildlife Watch over the next stretch of canal. Canals are green corridors through busy urban areas and great places to spot wildlife.

#### Think about:

What plants and animals would you expect to find along the canal? Predict where an animal might be found. Why might they be found there?

What are the rules for wildlife watching? Quiet and observant. Walk quietly along this next stretch, listen and look. What can you see?

#### Look for:

If we are lucky we may see: perch, roach, pike, frogs, dragonflies, water voles, moorhens, coots, herons, mallard and swans.

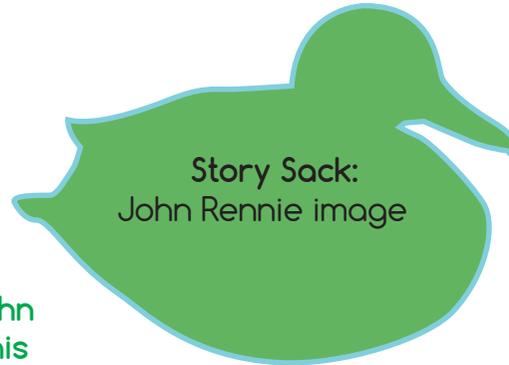
Record or share the species seen.



## Canal Mania

### Stop 10. Lune Aqueduct

Stop and enjoy the view over the River Lune. Share with the children information about the Lune Aqueduct and introduce John Rennie to them, passing around his image as you do.



The Lancaster Canal was needed to connect the limestone quarries in the north with the coalfields in the south and to speed up its transportation. The River Lune below was an obstacle and needed a very clever solution. John Rennie was the man for the job. He was a Scottish engineer and was given the task of designing a structure to carry the canal over the river. He created the Lune Aqueduct which carries the canal 16m above the River Lune. It was completed in 1797 at a total cost of just over £48,000. It is a Grade I listed bridge, which puts it amongst the most important structures in England. As the aqueduct was being built, special volcanic powder was brought from Italy to be used as cement. This allowed the concrete to set under water.

Continue walking over the bridge towards Halton Road Bridge.

#### Look for:

Can you see evidence of the aqueduct's restoration? Look for the old and the new?

## Muscle Power

### Stop 11. Halton Road Bridge

Stop at the bridge and explain to the children that this basin or wharf was dug to serve the village of Halton. It would have been a busy area where boats unloaded supplies for the village such as food, animal feed and coal.

Encourage the children to read the interpretation panel as they look around and talk about the images and information. Read to the children the poem 'To Public Prosperity' on the John Rennie plaque.

#### To Public Prosperity

I've been here over 200 years now.

Year One. Men made my feet. 60 tree trunks under the riverbed.

Year Two. My structure's built. Stacking beautiful stones by hand.

Year Three. Looking good. More like an aqueduct

Year Four. Almost finished. My balustrades are carved.

Year Five. I'm done and boats ride along me carrying lime and coal.

Written by students from Central High School

### Think about:

Who is the 'I' in the poem? What do you think when you hear that tree trunks support this structure under the riverbed? Share children's thoughts. The phrase 'To Public Prosperity' can be found inscribed on the side of the aqueduct.

The other image on the panel shows a navvy. They navvies dug out the Lancaster Canal with pick axes, shovels, gunpowder and pure muscle. They were a rowdy bunch working long hours and moving from place to place as other canals were built. It was a dangerous job, and injuries and death were common. The navvies were not always popular with local people and the temporary base for the navvies working on the Lancaster Canal became known as 'Botany Bay'. It was named after the area in Australia used for homing criminals transported from Britain during this period.

### Imagine:

What would a day in the life of a navvy be like?

Walk back over the Lune Aqueduct enjoying the views as you do and head to the ramp that leads to the River Lune and the stunning view of the Lune Aqueduct.



## Wonder of the Waterways

### Stop 12. Lune Aqueduct

Walk down the ramp and stand beneath the Aqueduct.

### Think about:

Why do you think people called the Lune aqueduct one of the Wonders of the Waterways? Explore the aqueduct's shape and structure.

It is amazing to think that the aqueduct carries the Lancaster Canal 16 m above the River Lune.

### What to look for:

Can you spot the stalactites under the aqueduct arches?

The Lune Aqueduct has inspired a great number of artists and has been the subject of a large number of art works. Share the artwork from the story sack with the children. Spend some time here making a selection of observational drawings of the aqueduct from various angles and positions. Working in pairs, encourage the children to focus on different parts of the bridge in detail.

To get to the Lune Car Park walk back the way you came, up the ramp and along the towpath to the Bulk Aqueduct. Walk down the steps, turn left, and walk along the pavement for about 15 metres.

