



<http://www.regentscanalheritage.org.uk/learning-pack/>

Regent's Canal

Hackney – Islington - Tower Hamlets

Curriculum Notes



CURRICULUM NOTES: HISTORY AND GEOGRAPHY

Why was it built?

- Before trains and cars, the way goods were moved around was by people carrying them, by horse or teams of horses or by horse/s and cart.
- Roads, where they existed, were often muddy tracks.
- As big factories and the industrial revolution developed all over the country, transportation of materials in bulk to factories became essential.
- As housing developed around the factories for the workers, heavy building materials were needed in towns in ever increasing amounts.
- Canals were built privately by Canal Companies. They made profits by charging each boat a fee, or toll, to use the canal.
- A person can carry about 50 lbs, a horse and cart can carry one ton (which would take 45 people to carry), but a horse pulling a boat can carry 30+ tons, equal to 30 horse and carts. Canals, therefore, were a cost-effective way to transport goods.

When was it built?

- The Regent's Canal that goes from King's Cross to Limehouse was built from 1812-1820. It was one of the last canals to be built in Britain.

How was it built?

- The land was farmland, market gardening and countryside when the canal was built, with very few buildings.
- hand-dug by teams of men called 'navvies', from the word 'navigator, using picks and shovels, and wheelbarrows.
- lined with 'puddling' to keep water in (sand clay water mixture stamped into ground by workers' boots), later sides lined with stone.
- they dug out the actual canal (some local people still call it 'The Cut') as well as deep cuttings or tunnels (e.g. Islington) when the canal went through a hill.
- They built bridges over the canal for existing roads.
- Water from rivers, sometimes dammed, was used to fill the canal

How did they operate?

Ships brought goods from all over the world. The Regent's Canal enabled goods to be off loaded from ships directly onto canal boats. The Regent's Canal links the River Thames at Limehouse Dock via the London canal network all the way to Birmingham and the Midlands.

Warehouses were built along the canal through Islington to store goods to be distributed throughout London by horse and cart.

The Canal enabled industries to develop alongside. Locally, this was notably gas works, timber, iron works, manure, carriage and cart making, marble wharves, breweries, ice making, electricity stations and the coal yards they relied on. Boats brought raw materials to the factories, and then carried manufactured items away to the point of sale both home and abroad.

How were the boats propelled?

- horses walked along the towpath pulling the boat with long tow-ropes.
- later, steam engines on tugs and boats
- diesel engines
- canal tractors
- large poles were used to manoeuvre boats.

Who worked the boats?

It was a hard way to make a living, involving long journeys (a week to go to Birmingham). Often boats had a tiny cabin and the whole family lived on the boat and helped work it. Canal workers became a separate community of people - boat decorations, design of cabins, their clothes, care of horses. (Tie in with 'Victorian Life'). In London, particularly in C20, people who lived locally worked on the boats travelling between the docks and Hackney factories and warehouse.

- LOCKS to deal with changes in levels (lock gates, beam, cill, windlass, winding mechanism and paddles, weir) but do slow down the journey.
- TOWPATH - for horses (note towpath under bridges).
- HORSE RAMPS (to help horse get out if fell in the canal)
- BRIDGES - the original brick arch bridges. Note grooves in bridges caused by towrope
- OLD WAREHOUSES - loading doors, hoists.
- ISLINGTON TUNNEL which is 960 yards/878 metres long.
- WHARVES - where boats moor up for unloading/loading ('WHARF' comes from 'WareHouse At River Front')
- BASINS: water area off the canal, for unloading and loading into warehouses/factories and mooring boats. Islington Basins are City Road Basin and Battlebridge Basin. Wenlock Basin in Hackney is next to City Road and Hackney also has Kingsland Basin. In Tower Hamlets, a tiny basin remains next to Old Ford Road bridge and The Regent's Canal Dock is now called Limehouse Basin.
- bollards, mooring rings and wooden 'fenders' to stop boat rubbing against stone.

So what were the goods carried?

Almost everything from cattle to guns was carried by narrowboat and barge. Main cargoes were:

COAL: the most important item as the industrial revolution depended on it.

- to factories (steam for machinery and heat for industrial processes)
- for gas works - gas comes from burning coal with other materials. Piped gas supplied street, home and workplace lighting. Ash from gasworks would be carried back out into the country as fertiliser for farms.
- for fires to heat homes, workshops, offices etc.
- later, coal for steam trains.

TIMBER/WOOD:

- for making furniture, carts, carriages;
- for construction - buildings and other structures.
- For firewood for heating and cooking.

BUILDING MATERIALS:

- sand, cement, whiting, lime, bricks, roof slates.
- marble for buildings, furniture, gravestones.

AGRICULTURAL PRODUCE from the farms outside London

- Flour for bread, or wheat to make flour
- Hops and barley for breweries
- fruit and vegetables
- Forage - hay and straw - for the horses who pulled carriages, carts, as well as the boats.

WASTE

- Manure - horse droppings collected from the streets and stables, mixed with straw, and then carried back by boat and cart to the farms for fertiliser
- Rubbish taken to rubbish heaps

DECLINE OF COMMERCIAL USE OF REGENTS CANAL

- competition from railways from 1850 and road freight from 1950s meant fewer goods transported by canal. What advantages did these methods have?
- Slow decline, despite brief resurgence in World War Two.
- Canal fell into neglect and disrepair from 1950s-80s

REGENTS CANAL TODAY

Regeneration of the Islington stretch of the canal started in the 1970s.

How do you see and use the canal today?

CURRICULUM NOTES: MATHS & SCIENCE

Measurements

- 8 years to build 8.5 miles from the Thames at Limehouse to Paddington
- The canal speed limit is 4mph to protect the banks from erosion.
- The locks (entry to exit) slow journeys down making them uncompetitive with railways and road transport. Narrowboats take a week to travel between London and Birmingham.
- Dimensions – the Canal is 3.5-5' deep and 40'-60' wide. The maximum width in the locks and bridges is 14.5'. The Tunnel is 760 yards long.
- The maximum length of a canal boat is 72' – the length of the locks.
- A person can carry about 50 lbs, a horse and cart can carry one ton (which would take 45 people to carry), but a horse pulling a boat can carry 30+ tons, equal to 30 horse and carts. Canals, therefore, were a cost-effective way to transport goods.

Forces

See 'How the Locks Work' in the Learning Pack. How the lock fills – water pressure forced through small gate opened with winding mechanism. Consider forces on lock gate`

- why gates stay shut when lock not full, and cannot be opened
- how opened - use of beam: where is the best place to pull/push
- Locks were twin locks, now weir instead of chamber on one side prevent flooding.

Classroom activities: with water, use of levers (lock gate/ law of moments), use of pulleys (loading unloading boats)

Bridges

- brick arch (principle of the arch using bricks) – often 1820 construction e.g. Frog Lane, Wharf Road, Haggerston, Mile End and Sole Bay bridges.
- suspension bridge
- reinforced concrete bridge
- utility bridge (sewer/water pipe, arch principle; bridge for cables)

Water

- canal water usually comes from rivers where same level.
- Or fed from reservoirs built as part of canal system. Regent's Canal water comes from the dammed River Brent Reservoir.
- When first built, water had to be pumped up from the Thames using huge steam-driven pumps based at locks.
- Canals can freeze over, preventing boats moving. In Victorian times, the ice was harvested and stored in ice wells on the canal banks including Battlebridge Basin and Haggerston Basin.

Environmental Science

Observe wildlife and habitats - birds, insects, fish (notice fishermen), water plants, plants along the bank. Birds include ducks, geese, swans, cormorant, heron, coots (black with white beak), moorhen (black with red beak).

How did the canal look when commercial use ended, maintenance reduced and nature took over?

How has bio-diversity been encouraged in last 20 years? - water plants, floating rafts, nesting boxes, planting boxes, wildflowers, trees, bushes.