SECTION 4

The Planning of the Canal
**Learning intention 1:** To learn how to select and combine information from historical sources.

**Resource: Turnpike road systems**

This is an extract from Samuel Rudders ‘History of Gloucestershire’ published in 1770.

"..... surely there cannot be a more infamous turnpike road... for incredible as it may seem, the writer of this account, in the winter of 1776, saw a chaise mired in it, about half a mile from the Swan Inn (in Wheathurst), and was there told, that a horse had like to have been smothered in the same place two days before, but was luckily saved by some persons coming accidentally to the poor animal's assistance."
The meeting of two roads around Lypiatt Manor
Activities: Children can -

imagine how difficult roads were to use if heavy loads were being carried, especially in the winter.

use the following statements to add to the picture of the road skirting Lypiatt Manor. (Following the line of trees).

<table>
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<tr>
<th>Poor surface</th>
<th>Road splaying across nearby fields</th>
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<td>Ruts and pools</td>
<td>Road changing direction to avoid obstacles</td>
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Activities: Children can -

create a class list of the problems facing commerce in obtaining raw materials and investigate how roads were managed at the time.

in groups, create a list of their own ideas for improving the transport system in the 1750’s, remembering that the mills in Stroud needed heavy coal from the Midlands and the Forest of Dean and also needed to be able to export their cloth to other

The precious dye obtained from cochineal beetles that created the distinctive Stroud Scarlet colour had to be brought from London.

How did water transport help this?
Related Science Activities:

Investigating and measuring up thrust in water. Children can weigh objects in air using Newton Metres and then weigh them in water comparing the two sets of data.

Investigate other floating and sinking activities such as making a floater sink and making a sinker float using plasticine. Can the children sink a container using weights? How much weight will the container take? Does it matter where the weight is placed? Can they make a lump of plasticine float? Draw the forces involved. What happens when the forces become unbalanced?

Investigate the shape of hulls of boats and the effect they have on movement through water.
Design and technology activities:

Textiles: (see www.digitalstroud.co.uk/Wrapping the Globe)

Investigating carding, spinning and weaving during this project along with, investigating vegetable dyes and how they are obtained.

Learning intention 2:

To link sources and work out how conclusions were arrived at.

Activity:
Ask the children to look carefully at ‘The case for the Stroudwater Navigation’, below. Then, make a list of arguments for and against the building of the Navigation.
THE CASE
OF
STROUD WATER NAVIGATION
GLOSTERSHIRE.

The River Stroud Water runs through a populous Country: it is computed that nearly Fifty thousand Land Inhabitants are scattered within a narrow Circle contiguous to its Banks, making Stroud the Center, who are chiefly employed in that Staple Trade, the Woollen Manufacture; the particular Benefit of which Trade is not confined to this Circle only, but is extended to every Town and Village from Twenty to Thirty Miles Distant, where Spinning Work is regularly carried on; in consequence of which the Poor are employed and the Land exalted. It has been computed there are near One hundred Mills, that have been, or still are, more or less employed in this Manufacture; indeed some of them, from the great Decay of the Coarse Trade, are now turned in Part, or wholly, to other Purposes, some lie totally idle, others are little or not half employed; and it is with Regret now mentioned, at a melancholy Truth, that One Third of that Number, fully employed, would be more than sufficient for the whole Clothing Trade of the Country; it is also to be feared they ever shall be sufficient, unless more Hands could be found to be employed in fine Spinning.

Within the Circle before mentioned, the Lands, though well cultivated, are not sufficient to produce One Fourth of the Neceffaries of Life for the Consumption of the Inhabitants in consequence of this want of Quantities of Corn are brought from Gloucester, Herefordshire, the Vale of Evesham, the Cotswold Hills, and other Places: Wheat, Barley, Oats, Beans, Flour, Butter, and Cheese, are all brought from distant Parts by Land Carriage, and the Horses and Wagons return unloaded. Great Quantities of Wool and Yarn from Cornewall, Tisbury, and other Places, without any Back Carriage.

Let it be here remarked, that Corn, upon the general Average through the Year, in the County of Gloucester (and more so in the manufacturing Part) is dearer than in any other Part of England. This evidently appears from the weekly Returns published by Authority: and our Markers being badly supplied, the labouring Manufacturier is driven into Hucksters Hands; he pays a higher Price for his Necceffaries, and consequently he cannot afford to labour so cheap, which is prejudicial to the Manufacture, or he becomes a Burden to the Edders. These Evils our Navigation (which terminates in the very Heart of the manufacturing Country) will at least greatly relieve.

It has been likewise computed from late Enquiries, that within the Circle before described, Twelve thousand Five hundred Tons of Coals are at present annually consumed; but as we need not go to any extreme Calculations, shall fet down only Ten thousand Ton; the supposed Quantities of Coals which might be brought by Navigation, were it now compleated. This Consumption will increafe at Home, by its being brought cheaper and Cornewall, with many other Places on each Side and even beyond it, will get Coals cheaper from W. Bridge (which is the intended Port of Stroud) than for any where else. The empty Coas Wagons will Horses that bring Wool, Yarn, Flour, &c. will go back with Coals, which will greatly increafe the Consumption. And here it will be proper to remark, that the Price of Coals at Wallbridge is now in Summer Nineteen Shillings per Ton, and in Winter Twenty Shillings and Twenty-two Shillings per Ton; the Purveyors purchasing their Quantities thereof at the Rate Twenty-four Shillings and Twenty-five Shillings per Ton; and a sufficient Supply at these high Prices, for the Badness of the Roads in the Winter Season, is often not to be procured. The same Coals, by the Navigation, will be sold at Wallbridge, even to the Poor, at small Quantities, after the Rate of Fifteen Shillings per Ton; considerable Permits in the Coal Trade have already offered to deliver it lower. The Land Carriage from Bristol to Stroud is Forty Shillings per Ton, a round by Gloucester, which is partly by Water and partly by Land, is Twenty Shillings per Ton, upwards. The Freight of Goods from Bristol to W. Bridge by this Navigation (besides the Conveyance much quicker than round by Gloucester) will, at the highest, be no more than Ten Shillings per Ton. The needs no other Inferences to prove the Benefit of the intended Navigation, not only to the Poor, but in the Manufacture in general. Though there is yet a very obvious Circumstance that should not be omitted: A Barge, which will bring up Seventy Tons of Coals, will employ on Four Men, Six or Eight Hours, to navigate it from Bristol to Wallbridge, that being by the Canal little more than Eight Miles; this Barge Load of Coals, to be brought by Land Carriage upon Wagons, will employ Thirty-five Wagons at least, One hundred and Forty Horses Thirty-five Carters, besides Boys. One whole Day, being above Ten Miles. And as most of the Coals brought up in Winter are carried on Horses Backs, Two hundred Weight upon each Horse, this Barge Load will require Seven hundred Horses and One hundred Men, reckoning Seven Hours to a Drift; but if it be, there are seldom more than Five, and often less than that Number, all these will be employed One whole Day to make the like Conveyance. The rapid Decrease of our Woods has raised the Price of the
Activities:

Play the canal game/role play/debate in parliament.
Groups of children working in the classroom from different points of view, investigating the question: Why was the Stroudwater built and why that particular route?

Each group to have a set of cards with reasons for their point of view. Using maps, texts and stories from the time, they need to prepare a case to set before the rest of the class. Some of the debates are set out in the section below.

Can the children write a canal play about the building of the Stroudwater?
1. Factory owners were in dispute with mill owners about how much water was used for power, so they needed more coal to power the machines.

2. Mill owners were afraid that their mills would not be able to function without waterpower.

3. Turnpike roads could not assure factory owners that they would get their coal.

4. Rich landowners wanted to sell their land to the canal company.

5. Boat captains found that Framilode Pill and Frampton-on-Severn Pill were difficult to negotiate, for their cargoes of coal and the River Frome was too shallow in places to take the cargoes further up the valley of the Frome.

6. The canal company thought that by charging tolls to all canal users, they could make a lot of money and also the canal would generate more business.

7. The mine owners of the Forest of Dean wanted to sell their coal and it would be cheaper than the coalfields of Shropshire, and the West Midlands.

8. Ordinary tenants of rich farmers were worried about losing their orchards and fields.

9. The engineers of the canal company wanted to use Framilode Pill as the River Frome already met the River Severn there. They also wanted to use the Frome valley, as there would be little need for locks. Also the river Frome had already been straightened in places to help small boat navigation.