Getting to school: love it or loathe it?

A numeracy activity addressing key elements of the National Numeracy Strategy (NNS) while examining how children travel to school and the associated problems

Relevant elements of the Year 4 NNS Teaching Programme (p 18-19)

Suggested focus for this activity:

Calculations

- Know by heart multiplication facts for 2,3,4,5 and 10 times-tables

Handling data

- Solve a problem by collecting quickly, organising, representing and interpreting data in tables, charts, graphs and diagrams, including those generated by a computer, for example: tally charts, pictograms, bar charts and Venn diagrams

Global Citizenship aims of the travel to school survey

- ✓ To find and select evidence and begin to present a reasoned case
- ✓ To provide children with an opportunity to think critically and assess different viewpoints
- ✓ To understand the relationship between people and the environment
- ✓ To understand how an issue such as transport can give rise to conflict and the impacts of such conflict
- ✓ To recognise the consequences of choices on other people and the environment both locally and globally
- ✓ To foster a sense of responsibility for the environment and for the use of resources
- ✓ To equip children with the knowledge and understanding to empower them to take positive actions which ensure greater social justice and protect the environment.

Many of these aims are based on the Oxfam Curriculum for Global Citizenship, available from Oxfam Education, 274 Banbury Road, Oxford, OX2 7DZ

QCA Scheme of Work for Geography

There are clear links between the aims of the activities in this leaflet and the activities identified in the QCA Geography scheme of work for Key Stages 1 and 2. In particular Year 4 Unit 8: *Improving the environment.* This series of global citizenship leaflets provides an opportunity to focus on the contribution of traffic and transport to the quality of the local environment and provides a global perspective to the problems of traffic and transport.

Suggested lesson structure

This activity aims to involve children in meaningful research which could ultimately be used to inform those in positions of influence such as the School Council, governors or the local authority to address the problems and dangers faced by children travelling to school. Children are asked to design a survey questionnaire choosing appropriate format, style and questions; to select and present the information in ways that are clear and meaningful and to interpret the information drawing conclusions which could be used to inform others.

Mental or oral work

In Year 4 handling data calls for representing data in intervals labelled in 2s, 5s, 10s or 20s. The lesson could begin therefore with oral work which reinforces knowledge of multiplication facts. Games such as 'fizz-buzz' can be used where children sit in a circle, going through numbers but saying 'fizz' when they get to a number in the 5 times table, 'buzz' for a number in the 20 times table and 'fizz-buzz' when they get to a number in both.

The main teaching activity

The activity requires preliminary work outside the numeracy lesson. The planning, design and completion of the questionnaire should be discussed and completed before the lesson. Results/totals etc. should be collated so that the numeracy lesson can be used for the 'second challenge': organising, presenting and interpreting the collected data.

It is clear that this activity requires children to have previous knowledge of pictograms, bar charts and Venn diagrams as they will be challenged to select the appropriate means of representing the data. This could be considered in groups or pairs. The main teaching input could therefore focus on recapping the different ways of presenting data and discussing which might be appropriate in context.

Whilst children should be encouraged to think for themselves on how best to present their findings, the following are possible examples:

- Creating 'side by side' bar charts for each mode showing how many children travel to school by that method compared to how many would like to travel that way.
- Categorising problems associated with each mode and showing how many children are affected by each problem through bar charts. Such problems might include traffic congestion, air pollution, danger due to traffic, not being able to meet and talk to friends, no cycle lanes etc.
- Venn diagram showing the number of children using more that one mode of transport

It is clear that this activity allows for differentiation. Less able pupils could use simple pictograms of how many children use each mode while more able pupils could do the comparative 'side by side' bar charts.

Plenary session

During the plenary, children could share their charts and diagrams and consider what conclusions can be drawn from the results. They should also consider who the information could be sent to and how it could be used to influence school or local transport policy. Ultimately the children or a group of children could use IT to draw up a report with charts to be presented to influential bodies within the school or local community.

How do you travel to school?

First challenge

Design a questionnaire to give each child in a group or class in your school which provides the following information:

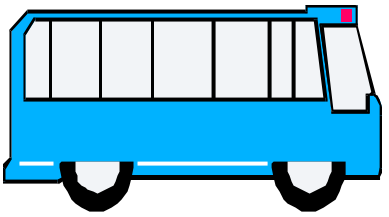
q How do you usually travel to school?

q What do you think are the problems or difficulties with the way you travel to school?

q How would you prefer to travel to school if you had a free choice?

q If you don't travel to school the way you would like to, what stops you from doing so?

Things to think about!



- Will the questionnaire have multiple choice answers, tick box answers or YES or NO answers?
- What will children be asked to write down?
- What should children write if they travel to school by more than one way, e.g. walk in the morning and get a lift in a car at the end of

Second challenge

Decide how you will **organise and present the results of the questionnaires.**

q You could use **pictograms, bar charts** or **Venn diagrams** to display the information you have collected from the questionnaires.

q What are the conclusions of the results?

q Can your results answer these questions:

✪ Do most children travel to school the way they want to?

✪ What are the main reasons for children not travelling to school the way they would like to?

Further resources

The following is a list of titles which will offer information and opportunities for further activities on issues of Transport for KS2. Most should be available through your local Development Education Centre (DEC).

Green Transport Pack (WWF/Environmental Transport Association 1993) A pack full of information on current attitudes to travel, changing travel patterns and ideas for action both within and outside the classroom on how to reduce car dependency

Global Express Edition 23 on Climate Change, produced by Development Education Project, Manchester, Tel: 0161 445 2495 email:depman@gn.apc.org www.dep.org.uk/globalexpress

Primary topic posters: Transport (Oxfam) contains a set of posters and teachers notes with activities aimed at KS1 but some activities and information relevant to KS2

A Safer Journey to School: A guide to school travel plans for parents, teachers and governors available free from DfEE Publications, PO Box 5050, Annesley, Nottingham NG15 0DJ Tel: 0845 602 2260
Fax: 0845 603 3360

On the Road - one of *The Green Detective* series, John Barnes (Wayland 1992). Examines how different forms of transport effect the environment and poses a series of problems and issues for children to investigate

Transport by Polly Goodman, part of the *Earth in Danger!* series (Hodder Wayland 2001). Examines a range of problems caused by transport from the local to the global as well as case studies from around the world and activity ideas.

Feedback on these activity ideas would be much appreciated. Comments can be sent to HEC or your local DEC. or made via the Global Footprints website.

Further ideas, contacts and information

The Walking Bus

Below is a series of calculation puzzles based on the concept of the walking bus. The mathematical questions will provide an opportunity for children to learn about the features and advantages of a walking bus, a concept that is catching on fast in primary schools across the UK.

What is a walking bus?

Put simply, the walking bus is a line of children, walking in pairs to school along a set route with an adult 'driver' at the front and 'conductor' at the back. The bus creates a formal system which allows volunteers to walk larger numbers of children to school safely. Like a bus there are scheduled stops where children are picked up at specific times. So, like a bus, you can miss it! Unlike a bus, it is free, healthy and totally non-polluting! The school run makes up 20% of peak morning urban transport contributing massively to air pollution and congestion, particularly around school gates. So walking buses are one very effective way of reducing congestion and pollution and improving health and safety.

The Walking Bus Challenge

40 children use the Green Lane Primary school walking bus.

1. At the first stop 8 children join the bus. How many remain to be collected?
2. Children walk in pairs on the bus. After the second stop, the bus has 18 children. How many pairs will there be?
3. One adult is needed for every 8 children. At the third stop another 6 children join the bus. How many adults are needed by the time the bus leaves the third bus stop?
4. The final group of children join the bus at the forth stop. How many children will join the bus at the forth stop?
5. How many adults are needed for the final part of the journey to school?
6. How many feet does the walking bus have when it arrives at school? (Don't forget the adults!)

Answers: 1: 38 2: 9 3: 3 4: 16 5: 5 6: 90

Further activities and ideas

- Ask children to map their route to school using a large map of the local area. Using this information plan a walking bus route; identify suitable places to have 'bus stops'
- Try out identified routes as a class and identify any problems with the route
- Design and produce a timetable for the proposed route to and from school
- Design tickets for the walking bus
- Think of a series of rules of behaviour to ensure safety on board the bus
- Design a logo, posters and other promotional material for the walking bus

Further details on the concept of the walking bus and details on how to set one up in your school can be found in *The walking bus - a safe way for children to walk to school*, published by Friends of the Earth

Further information about transport

The following organisations will be able to provide details of their campaigning work on transport or climate change

Oxfam 274 Banbury Road, Oxford OX2 7DZ Tel:01865 313600 Produce a range of global citizenship education packs. Education catalogue contains extensive range of resources across the curriculum. To order phone 01202 712933. Also have a website dedicated to teachers and children which contains information and activities: www.oxfam.org.uk/coolplanet

Friends of the Earth 26-28 Underwood Street, London N1 7JQ Tel: 020 7490 1555 www.foe.co.uk Produce information sheets and other resources suitable for young people on all environmental issues including transport

Transport 2000 The Impact Centre, 12-18 Hoxton Street, London N1 6NG Tel: 020 7613 0743 email: steve@transport2000.demon.co.uk
The national environmental transport campaign working for sustainable transport policies that reduce traffic, promote walking and cycling and improve bus and rail services.

Sustrans 35 King Street, Bristol BS14DZ Tel: 0117 929 0888 email: info@nationalcyclenetwork.org.uk website: www.sustrans.org.uk For information on Safe Routes To School Tel: 0117 915 0100 Sustrans works on practical projects to encourage people to cycle and walk and is behind two flagship projects: the National Cycle Network - 5000 miles of on-road and traffic-free cycle routes - and Safe Routes To School, encouraging schools, parents and local Councils to support the implementation of safe walking and cycling routes to and from school.

Development Education Centres (DECs)

This resource has been produced by the Humanities Education Centre, a DEC in Tower Hamlets, with contributions from other DECs. Your local DEC will be able to provide a range of exciting resource ideas for the teaching of Global Citizenship. To find your nearest DEC contact:
Development Education Association,
29-31 Cowper Street, London, EC2A 4AP
☎ 020 7490 8108 e-mail devedeassoc@gn.apc.org

Your local DEC :