

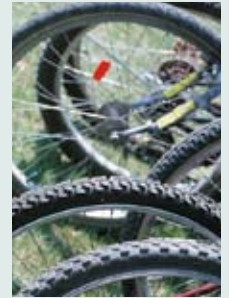
Learning Objectives

To understand that Maths is used in everyday life. To learn about carrying out surveys and displaying the results. To learn about finding the right money to pay for a bus ticket and how to check change. To solve basic maths problems that might be useful to them when travelling to school.

Activity - Travel Survey

Explain that different people travel to school in different ways. Some may walk, others may cycle, some will come as a passenger in a car and yet others will come by bus. Explain that they will be doing a survey to find out how pupils in their school actually get there. Pupils will need to decide the best way of getting this information; perhaps one pupil could be sent to each class in a particular year group to find out about that class. Results could be recorded quickly and simply using a tally chart.

Pupils will then need to work out how they are going to compile and display their findings; they could use a pictogram. Pupils should decide how many units (pupils) will be represented by each symbol. (E.g pupils could use one car to represent 10 pupils who travel to school by car). Alternatively pupils might decide to use a bar chart or other method of displaying results.



Activity - 'Understanding Bus Fares' Worksheet

Equipment: A selection of coins (real or plastic), wax crayons, the 'Understanding Bus Fares' worksheet.

Explain that when you catch a bus you need to buy a ticket and that understanding money properly will make this a lot easier. Hand pupils the 'Understanding Bus Fares' worksheet and explain the activities to them, some pupils may need some extra practice with money before attempting this sheet.

Activity - Travelling Times - Teacher Lead

This teacher lead activity, allows children to learn about the importance of maths in getting to school on time. Work through a selection of problems with pupils on the board. Below are some suggested problems:

Q. Jamie is starting at a new school; his Dad will be taking him in the car and has looked up how long the journey will take on the Internet. The journey will take 20 minutes, Jamie has to be at school by 8.50 am, what time does he need to leave?

A. Jamie needs to leave at 8.30 am.

Q. Hadeeqa is worried about the environment and rather than travelling by car has decided to walk to school on sunny days and catch the bus on rainy days. Today is a sunny day; Hadeeqa needs to be at school for 9.00 am. She leaves her house at 8.45 am, the walk takes her 25 minutes. Will she get there on time?

A. No, Hadeeqa will be 10 minutes late.

Q. Kennedy catches the bus from outside her house everyday. The bus stops outside her house at 8.23 am, she arrives at school at 8.54 am. How long does the journey take?

A. Kennedy takes 31 minutes to get to school by bus.



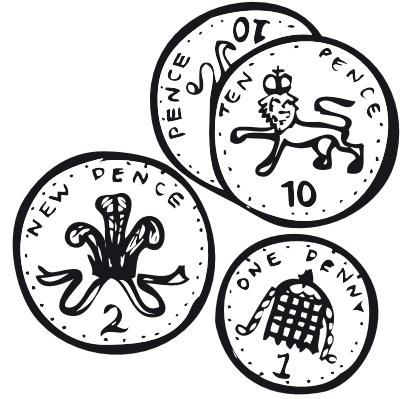
Extension Activities

Year 6 pupils could find out how pupils at their next school get there and compare the results with those at their current school.

You might like to set pupils some 'Travelling Times' problems that they can work on by themselves, or perhaps pupils could suggest some problems for other pupils to solve.

Understanding Bus Fares

Answer the following questions about coins, by taking wax crayon rubbings of the coins that you think you will need.



a) Habib's bus fare to school is £0.50. He has to use the exact change. What coins will Habib need? Could he pay with different coins (give your other answer on the back of this sheet)?

Answer

b) Can you put the following bus fares in order, from the cheapest to the most expensive? (Try numbering them. Put a number 1 next to the cheapest and a number 10 next to the most expensive).

£1.01	£0.71
£0.45	£0.63
£1.20	£1.10
£0.50	£0.99
£0.74	£0.89

c) The bus Deon travels on gives change. His bus fare is £0.62. He pays with a pound coin. What change should he get? Could the bus driver do it another way?

Answer

d) Laura travels to school by bus, it costs her £0.74. What coins will she need, if she is to provide the driver with the exact change? Could she do it another way?

Answer

Learning Objectives

To identify different risks and learn about sensible road use.

Activity - Looking at Different Ways of Getting to School - Discussion

Remind pupils that there are a variety of different ways that people get to school. Discuss the advantages and disadvantages of using each of the different methods; this should include discussion on the different types of risk that might be identified and how pupils can minimise risks to themselves and others. This is also a useful opportunity to discuss peer pressure to take risks or be irresponsible.

Walking:

When there is a pavement make sure that you use it

When there is no pavement walk on the right hand side of the road, with the traffic coming towards you. Take care on hills and bends.

Watch out for cycle lanes, bicycles are very quiet!

If you are with someone younger than you, hold his or her hand when near the road.

Use a crossing e.g. Pelican Crossing, Pedestrian Crossing, Zebra Crossing or Crossing Patrol where possible.

If there are no crossings available choose a safe place to cross. Use the Green Cross Code.



Cycling:

Before setting out make sure that the front and rear lights work and that the back reflector is clean (remember it against the law to cycle at night without these).

Check that your brakes work and that the tyres are in good condition.

Wear a cycle helmet.

Make sure other road users can see you – wear bright clothing by day and reflective clothing at night.

Do not carry a passenger unless your bicycle is specifically designed to do so.

Never lead an animal whilst cycling.

Don't use personal stereos, MP3 players or mobile phones whilst cycling.

Think about taking the National Cycling Proficiency Test; your school may already run this. Contact your local authority for more information.

Travelling as a passenger in a car:

Always wear a seatbelt; it's the law.

The law also states that in most cases you should sit in a booster seat. If you are over 3 years old and under 12 years old or 135 cm you should be using a booster seat.

Do not distract the driver.

Keep your hands away from door handles whilst the car is moving.

When you get out of the car use the door on the pavement side. Only get out when you are sure that it is safe to do so.

Riding in Buses:

When waiting for the bus stand on the pavement, well back from the traffic.

Be polite, wait for people to get off before you get on.

Do not distract the driver.

Always do what the driver tells you; she/he is responsible for keeping everyone on the bus safe.

Wait for the bus to leave if you need to cross the road after getting off.



Activity - 'Sensible Road Use'

Use the 'Sensible Road Use' worksheet to reinforce discussion work.

Sensible Road Use

Take a look at the irresponsible actions below. Jot down the risks involved in each situation. Write down what you think would be the responsible thing to do.



Irresponsible Action	Risks Being Taken	Responsible Thing To Do
Travelling in a car without a seat belt.		
Distracting the driver whilst travelling on a bus.		
Cycling without wearing a helmet.		
Crossing the road without waiting for the green man.		
Running across the road.	<p><i>If I haven't looked for cars properly I would risk being run over. If I am running I also risk tripping over in the middle of the road and being hit by a car.</i></p>	<p><i>To stop, look and listen for cars. To cross the road in a safe place, walking carefully across, looking and listening all the time.</i></p>
Crossing the road after getting off the bus, without waiting for the bus to pull away first.		
Riding a bicycle whilst listening to an MP3 player.		

Learning Objectives

To learn to interpret a simplified bus timetable. To learn how to catch a bus.

Activity - 'Bus Timetables' Worksheet

Equipment: OHP or enlarged copy of the exemplar, simplified Loughborough bus timetable taken from Exemplar Material 6, copies of the 'Bus Timetables' worksheet.

Using the enlarged, simplified bus timetable explain to pupils how to find out what time the bus runs and at what time it should arrive at each stop. Once you have done this pupils should attempt to work through the questions on the 'Bus Timetable' worksheet. (The 'Bus Timetables' worksheet shows a different, simplified timetable, based on another part of the 127 route.)



Worksheet 3 – Answers:

- 1) Holly will arrive at 8.40 am.
- 2) Delbert should be at the bus stop by 8.11 am.
- 3) Yes, she can. Pria will arrive at 8.15 am.
- 4) No, Louis will be 2 minutes late.
- 5) Wai Yee will be 15 minutes early.
- 6) Alex caught the bus at 9.02 am, he should have caught the 8.42 am bus.

Activity - Catching a Bus - Role Play

Clear a space and set up a series of rows of chairs, just like on a bus. Select a pupil to be the Bus Driver (alternatively you could play the Bus Driver); other pupils can be passengers.

Decide where the bus stop is going to be and place a number of pupils at the stop to 'wait' for the bus. The Driver should then pretend to drive the bus towards the stop. Pupils can then act-out catching a bus. Things you could include in the role-play:

All bus services have a route number and a final destination of where the bus is going on the front. As the bus approaches, check that it is the right one by looking at the details on the front, and raise your arm to indicate that you want to catch the bus.

When you get on, tell the driver where you want to go.

If you already know the fare, have it ready, so as not to hold other passengers up. On some buses you might need the exact change, so make sure you have plenty with you.

Check that the driver gives you the right ticket and check that you have the correct change. The Driver won't be able to correct this once you have gone to sit down.

Once you have your ticket, choose a seat and enjoy the ride!

Keep your ticket with you until you have completed your journey, just in case it needs to be checked.

Just before the bus gets to the stop where you wish to get off, press the bell once. This is so that the driver knows you want to get off. Remain seated until the bus stops.

Make sure you take all your belongings and any rubbish with you.

Pupils could also pretend to be older or disabled passengers, and look at the extra challenges they face when travelling by bus. Perhaps you could pretend to be a difficult passenger, and look at how the Driver would need to handle the situation.

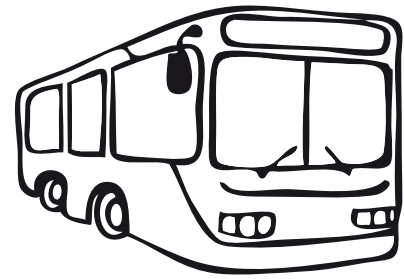
Extension Activities

Why not find out about different sorts of timetable e.g. Braille, large print or audio? Find out who needs them.

Perhaps you could have a go at making your own audio timetable or bus information leaflet?



Bus Timetables



Use the bus timetable below to answer the following questions:

a.m	The Loughborough Bus No. 127 leaves at:					
High Street	8.07	8.22	8.32	8.42	8.52	9.02
Epinal Way/Ashby Road	8.11	8.26	8.36	8.46	8.56	9.06
Schofield Road	8.15	8.30	8.40	8.50	9.00	9.10
Pitsford Drive	8.18	8.33	8.43	8.53	9.03	9.13

1) Holly goes to a school very close to Schofield Road. If she catches the 127 from the High Street at 8.32 am, what time will she get there?

Answer:

2) Delbert lives quite close to the Epinal Way/Ashby Road junction. If he has to get to school Thorpe Hill (which is very close to Schofield Road) for 8.30 am, what time should he be at the bus stop by?

Answer:

3) Pria has to be at school early as everyone is going on a school trip. She usually catches the bus from the High Street to Schofield Road. She has to be there before 8.20 am, can she catch the 8.07 am bus and get there on time?

Answer:

4) Louis has to be at school for 9.00 am. He usually catches the 8.42 am bus from the High Street to Schofield Road, but he is running late today and has missed it. It then takes him 2 minutes to walk from the bus stop to school. If he catches the next bus will he still get to school on time?

Answer:

5) Wai Yee has to get to school, on Schofield Road, by 8.45 am. If she catches the 8.26 am bus from the Epinal Way/Ashby Road junction how many minutes early will she be?

Answer:

6) Alex is late for school, he arrives on Schofield Road at 9.10 am. He caught the bus from the High Street, but at what time? Bearing in mind that it takes him 2 minutes to walk to school from the bus stop, which bus should he have caught to get there for 9.00 am?

Answer:

Learning Objectives

To look at bus journeys in different areas, looking at familiar landmarks, contrasts between urban and rural areas, evidence of how the areas have changed and what places are like. To look at how things have been changed to accommodate buses, and improve transport, road safety and pollution levels.

Activity - Looking at Bus Routes - Discussion

Introduce looking at taking a bus journey by talking about the different sorts of bus journeys you can take and what you might expect to see on the way. E.g. a bus journey through a village, a bus journey through a town or city, a sight seeing tour of London or a trip on a local Park and Ride. You can use the 'Bus Journeys' poster to look at features that you might see on the way. Alternatively you could take photographs along a local route that pupils are familiar with and examine those.



Pupils could consider the following questions:

- 1) How has this environment changed to accommodate buses, improve transport, road safety and pollution levels? This could include looking at the reasons for bus lanes, park and ride, pedestrian crossings and traffic calming.
- 2) How is the land here used? E.g. rural (farming), shops and services, accommodation etc.
- 3) What shops and services are likely to be in these areas? Why? E.g. there are less shops and services in villages, than towns.
- 4) What is this place like and why?
- 5) How is this area still changing?
- 6) What was the area like in the past? (Try searching for some old photographs on the Internet.)

This would also be a good opportunity to look in more detail at the differences between towns and villages. Why is transport so important to people in rural communities? Why are many local villages losing banks and post offices? (E.g. the push/pull effect, people from rural areas leaving villages to find employment in towns and cities).

In remote areas villages are de-populating as the 'push' factors of the disadvantages of country living including fewer amenities and declines in agricultural employment due to mechanisation and current farming issues, such as cheap imports from abroad. The 'pull' factors of the town or city include better amenities and better employment prospects. As more people leave village communities this can force amenities to close, driving more people to leave.

Extension Activities

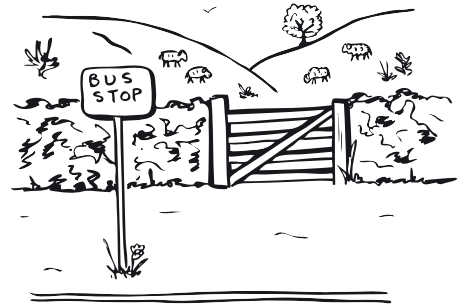
Pupils could look at how transport and bus travel has changed in their locality over the years by interviewing local people and looking at old photographs.

Due to take a school trip on a bus or coach? You could use the opportunity to examine the route on the way! Alternatively you might be able to organise a bus trip specially for pupils along a recognised local bus route.



What is my Opinion on this Environment?

Take a look at some of the images on the posters or the photographs that your teacher has provided. Look at the different areas shown in the images and write down what you think about them in the spaces provided. Alternatively, if you are taking a coach trip or bus journey soon, you could use this sheet to examine the areas you see on the way. Write the name of the area you are looking at underneath where it says 'Area:'.



Question	Area:	Area:	Area:	Area:
Why is the area like this?				
What is the area used for? What is the main land use?				
How clean is the area? Do you think that the air is clean?				
How do you think this area has changed in the past?				
How do you think this area could be improved in the future?				

Learning Objectives

To understand that different skills are required for different jobs.

Activity - Looking at Different Jobs - Discussion

Introduce the topic by discussing jobs that the pupils are familiar with (jobs that adults do within school may well be a good starting point). Discuss what things each of the different people has to do as part of their job and the different kinds of skills and qualities that are required to do different jobs e.g.

Teacher – be good with people, be patient, responsible and prepared to mark and prepare lessons after school, have a degree and/or teaching qualification.
Caretaker – understand health and safety, have a good knowledge of how to maintain a building, be responsible.
School Cook – be good with people, have a good knowledge of what makes a healthy meal, understand health and safety, have a catering qualification and food hygiene certificate.



Activity - Looking at the Role of a Bus Driver - Discussion

Discuss the role of a Bus Driver e.g. the driver has to:

Drive the bus safely, along set routes, stopping at scheduled stops to drop off and pick up passengers
Take fares.
Issue tickets.
Check Passes.
Provide information about the bus services available.
Occasionally provide help to anyone needing help getting on or off the bus.
Make basic checks to ensure that the bus is safe before starting work.

Discuss the personal skills and qualities that a bus driver would need e.g.:

Excellent driving skills and knowledge of driving laws.
Be patient and responsible.
Understand health and safety.
Be able to understand road signs.
Have good numerical skills.
Be good with people.
Be confident and polite when dealing with difficult passengers.
Passenger Carrying Vehicle Licence (PCV) (from September 10th 2008 a Certificate of Professional Competence (CPC) will also be needed. (The bus company you apply to for a job may train you for any relevant qualifications that you need).



Activity - 'Job Adverts' Worksheet

Equipment: Some local newspapers containing job adverts, copies of the 'Job Adverts' worksheet.

Ask pupils to take a look at the job adverts in the local papers, paying particular attention to their design, layout and content. Then, using the 'Job Adverts' worksheet, ask pupils to write/design an advert for an Arriva bus driver. Pupils will need to consider the role of a bus driver and the skills and qualities that would be needed.

Extension Activities

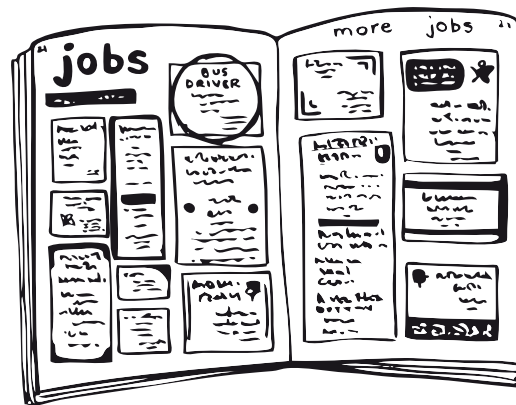
Why not try writing letters to apply for the jobs in the adverts that you have designed?

You could even set up a pretend job interview or invite a local bus driver in to talk to the class!

Job Adverts

Take a look at job adverts in your local paper, to see how they are designed and written.

Now have a go at writing your own advert for an Arriva bus driver, you'll need to think about the sorts of skills and qualifications necessary to do the job.

A large, empty rectangular box with a double-line border, tilted slightly to the right. This box is intended for the student to write their own job advertisement for an Arriva bus driver.

Learning Objectives

To identify safe, sustainable and healthy routes to school. This could also be extended for Year 6 pupils by planning a route to their new secondary school.

Activity - Different Ways of Getting to School - Recap

Build on the work completed previously by re-capping the different methods that people use to get to school and the advantages and disadvantages of the different methods (e.g. weather, pollution, traffic jams, safety). Year 6 pupils could discuss how and why their method of getting to school might change when they move to secondary school. (Many pupils will have further to walk, they may walk or cycle to school on their own or choose to catch the bus; which they might not do now).



Activity - Looking at the Local Area

Equipment: A map of the local area, large enough to be viewed clearly by the whole class (perhaps an OHP or map suitable for viewing on an interactive whiteboard) and/or copies of maps for each pupil. You could try <http://maps.google.co.uk/maps>.

Looking at the local area map (focusing on areas pupils will typically travel through in order to get to school), ask pupils to identify areas where they might encounter potential hazards e.g. one-way streets, the brow of a hill, sharp bends in the road, roads with no pavements, roads with no crossings. Not all sorts of map will show all of these features, so some local knowledge may necessary to identify them (photographs taken locally could also be used to support this activity).

Looking at the map again ask pupils to identify safer areas e.g. pedestrian crossings, traffic calming, quieter roads etc.

Activity - Drawing a Sketch Map of a Route to School

Equipment: A large street map of the local area suitable for whole class viewing, paper, pencils, pencil crayons, a simplified local bus timetable and/or route map (timetables and route maps for Arriva Buses are available at <http://www.arrivabus.co.uk>). Exemplar material for this activity (based on a Leicester bus route) is shown overleaf.

Introduce a teacher lead activity, looking at using the bus to get to school by providing pupils with details of an imaginary pupil (e.g. where he/she lives). Work with pupils to help them plan out a bus route to school for this pupil, using the large street map. You will need to look at simplified bus timetables and/or route maps (see exemplar material) and help pupils to interpret these so that the relevant route can be marked on the map. (You should also consider how the pupil is going to get to the bus stop etc).

Now ask pupils to draw their own sketch map of the imaginary pupil's route to school, using a different mode of transport (they might want him/her to walk, cycle or arrive as a passenger in a car). Pupils will also need to consider the safest route to school, avoiding busy roads if possible and making sure they use pedestrian crossings etc.

If pupils are not already familiar with creating sketch maps, they could practice first by making a sketch map of a part of the school grounds.



Activity - Comparing Routes to School

Ask pupils to look at the different routes that have been marked out. Which do they think might be the safest? Healthiest? Most environmentally friendly? Best in bad weather?

Exemplar Material

Below is some exemplar material, showing the sort of thing that would be required to complete the 'Planning a Route to School' activities highlighted in the teachers' notes.

Leicester - Birstall - Rothley - Mountsorrel - Quorn - Loughborough - Shepshed

127

Monday to Friday

Route Number	127	127	127	127	127	127	127	127	127	127	127	127	127	127	127	
Day Code	Sch															
Leicester, St. Margaret's Bus Stn	0525	0545	0605	0625	0645	0700	0715	0725	0735	0740	0745	0755	0810	0825	0835	
Belgrave Flyover, opp Sainsbury's	0528	0548	0608	0628	0648	0703	0718	0728	0738	0743	0748	0758	0813	0828	0838	
Birstall, Sibson Road Corner	0537	0557	0617	0637	0657	0715	0730	0740	0750	0755	0800	0810	0825	0840	0850	
Rothley, The Green	0542	0602	0622	0642	0702	0722	0737	0747	0757	0802	0807	0817	0832	0847	0857	
Mountsorrel, The Green	0547	0607	0627	0647	0707	0727	0742	0757	0807	0812	0817	0827	0842	0852	0902	
Quorn, Quorndon Fox	0554	0614	0634	0654	0714	0734	0749	0804	0814	0819	0824	0834	0849	0859	0909	
Loughborough, High Street	arr	0604	0624	0644	0704	0724	0744	0804	0819	0829	0834	0839	0849	0900	0910	0920
Loughborough, High Street	dep	---	0627	0647	0707	0727	0747	0807	0822	0832	---	0842	0852	0902	0912	0922
Epinal Way/Ashby Road	---	0631	0651	0711	0731	0751	0811	0826	0836	---	0846	0856	0906	0916	0926	
Schofield Road	---	0635	0655	0715	0735	0755	0815	0830	0840	---	0850	0900	0910	0920	0930	
Loughborough, Pitsford Drive	---	0638	0658	0718	0738	0758	0818	0833	0843	---	0853	0903	0913	0923	0933	
Shepshed, Bull Ring	---	0645	0705	0725	0745	0805	0825	---	0850	---	---	0910	---	0930	---	
Shepshed, The Ox-Lea	---	0652	0712	0732	0752	0812	0832	---	0857	---	---	0917	---	0937	---	

Note:

Sch - schooldays only

Create a simplified bus timetable like this one, based on a real bus timetable (like the one above) of your local area. More able pupils could try working with a real bus timetable.

a.m	The Leicester Bus No. 127 leaves at:					
Leicester, St Margaret's Bus Stn.	7.40	7.45	7.55	8.10	8.25	8.35
Belgrave Flyover, opp Sainsbuy's	7.43	7.48	7.58	8.13	8.28	8.38
Birstall, Sibson Road Corner	7.55	8.00	8.10	8.25	8.40	8.50
Rothley, The Green	8.02	8.07	8.17	8.32	8.47	8.57



Use a route map in conjunction with the simplified timetable to help pupils plot the route that the bus takes on a local area map.