

The aim of road safety is to improve the quality of life by attempting to reduce the personal and social consequences, costs and incidence of road accidents.

However, although it is attractive to hypothesise it is less easy to obtain rigorous proof that the road accident problem can be improved by road safety education. For this approach to have prospects of success it is necessary to know what constitutes safe behaviour and how it may best be taught.

Several attempts have been made to conceptualise what is meant by road safety education, but all they seem to prove is that ensuring safe behaviour involves an extremely complex process and the consideration of numerous factors. They do not clarify the content or methods necessary to ensure safe behaviour or the intermediate aims of road safety education such as awareness-raising.

### Guideline

The box contains a recommendation that appeared in a UNESCO report. This seems to me to be a valuable guideline (1).

Road safety education, therefore,

*Road safety instruction should not be treated separately, but should be an integral part of a child's education, so that it continues to have the maximum educational impact instead of remaining at the level of purely formal teaching of the rules of the highway code.*

must offer each child the opportunity for learning basic concepts and safety skills. Behaviour is the result of knowledge and attitudes. A child's positive attitude to safety derives from its belief in the importance of safety.

Such development is only possible when that child is able to understand how to make decisions about its own or other people's safety. It also needs to be provided with opportunities for practising these skills in a safe environment — these could include questionnaires about routes and road use,

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# Road user education *is* health education!

role play, discussions based on stories or videos, and practical training in the playground.

This learning must take place at an appropriate level compatible with personal development. The problem is in deciding what is appropriate to different age groups and levels of development.

The kind of framework within which such decisions may be made is outlined in much of the work on personal, social and moral development.

For this purpose a table may prove most useful in tracing the development stages. The National Curriculum key stages require yet more precise attainment targets to be specified for each age group.

### *A practical model*

In an attempt to fulfil this need I have constructed a practical model which could be used as a checklist for those intending to teach road safety. The model begins with the research questions:

- *What constitutes a safe adult road user?*
- *How may these attributes be developed in children?*

In answer to the first question, an adult road user should be able to:

1. Understand and assess the implications of choosing a means of transport including training requirements, legal documentation, financial commitment, and the relative risk involved in the use of vehicles. (Maths/PSHE)

2. Appreciate and conform to traffic regulations as an integral part of the historical development of a reliable and safe highway system. (Geography/History/PSHE)

3. Understand the main causes of road accidents and the problems of road users, including the individual's age and health, weather conditions, etc. (Maths/Science/PSHE)

4. Deal with emergencies and call for help at the scene of an accident.

5. Understand the effects of substances such as alcohol and conditions such as fatigue on the ability of road users and how to avoid the problem. (Biology/Science/PSHE)

6. Understand the development of road sense and be able to assess the road safety needs of other road users. (PSHE)

These attributes were arrived at by consulting various documents such as those produced by RoSPA (2).

In order to consider the stages of development in a responsible road user it was necessary to divide the concept of the 'safe attitude' into four components which could then be related to each practical stage of road usage from pedestrian to driver and could also link into the key stages of assessment as prescribed by the National Curriculum.

Key stage	1(5-7)	2(7-11)	3(11-14)	4(14-16)
(a) Pedestrian	✓	✓	✓	✓
(b) Passenger	✓	✓	✓	✓
(c) Cyclist		✓	✓	✓
(d) Driver/rider				✓

The model may then be presented as a diagram showing the stages of development of a responsible road user.

A. Knowledge and understanding of the implications of being each of these four forms of road user:

B. Assessment of relative risk involved in being each of these users (a)-(d).

C. Ability to relate these implications and risks to oneself (egocentric).

D. Ability to relate these implications and risks to others (altruistic).

### Concepts

The concept components A-D may be seen as contributing to curriculum subjects as well as to PSHE. The understanding of terms, for example, as part of A would involve English, and assessing relative risk (B) might well necessitate the mathematical examination of road accident statistics.

By using such a model it is possible to produce a simple check-

list for teaching road safety with objectives in each key stage. The simplified model is shown at the bottom of the page.

The model may be used to describe in detail the elements which should be taught to children at different stages in their development.

The logical conclusion to such a framework is to match attainment targets in the National Curriculum to the road safety objectives. For example, in Key stage 3, objective D

requires the ability to relate a cyclist's needs and accident risk to other people as well as oneself, and would involve a consideration of

accident rates for all types and ages of cyclists. Such statistical work fulfils mathematical criteria in the National Curriculum and the use of databases in Information Technology.

Some practical examples of how road user education could be incorporated into the Key Stages are shown in the box on the opposite page.

In turn, the objectives may be matched with appropriate teaching materials, and help teachers to develop interesting ways of incorporating road safety within the curriculum.

Nevertheless, one of the most depressing aspects of working in road safety is the fact that few documents relating to PSHE refer to road safety as a likely topic for consideration. Consequently there is a constant need to ensure that those educators entrusted with the personal and social education of young people are alerted to the existence of road safety

*This model shows how teaching about the different forms of road use may be referred to the pupils' cognitive level A-D and the Key Stage within the National Curriculum.*

	As pedestrian				As passenger				As cyclist				As driver/rider			
	A	B	C	D	A	B	C	D	A	B	C	D	A	B	C	D
Key stage 1	✓	✓	✓		✓	✓	✓									
Key stage 2	✓	✓	✓		✓	✓	✓		✓	✓	✓					
Key stage 3	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓				
Key stage 4	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓

education teaching materials and expertise.

### Priorities

This is a difficult task because very often priorities have been established without consideration of road safety, so it is a question of struggling for existence in an already over-subscribed timetable instead of competing, on equal terms, with other worthy but less vital topics.

It is difficult, in view of the road accident statistics for young people, and the many attributes of this wide-ranging topic, to understand this omission and why road safety rarely features in discussions about personal, social or moral education.

Indeed, this is reflected throughout the education service; educational planners and teacher trainers are often reluctant to give road safety a permanent place in courses of study. Consequently, road safety professionals, often helped by the police, spend a disproportionate amount of time trying to make a persuasive case for the inclusion of road safety education.

### Local

Where progress has been made it has often been dependent upon locally-produced materials and initiatives. Activities in schools still tend to develop around talks, cycle proficiency training and testing, and visiting entertainers. Teachers continue to see road safety as a good topic for a short project rather than an essential element of continuous personal development.

Yet, as a concept, road safety is versatile and flexible. The teaching pack, Road User Education in Practice, promotes this notion (3). It was produced as the result of a Working

Party set up in Devon in 1980 to make recommendations for how road safety education may be integrated into the curriculum.

It can, in fact, be shown to enrich many subject areas. One example would be the suggested use of real computerised raw data about road accidents to help children ask relevant road safety (as well as mathematical) questions.

Road safety education is dependent upon this road accident information for its accuracy of 'targeting', and for many years in Devon it has been possible for teachers to send for and examine data as part of a school-based environmental project. Through the Achilles Database Project, all Devon schools have now been offered current road accident data relating to their own area and accessible in Quest database form on their school computer for the pupils to interrogate for themselves.

In future, it may be possible for other Authorities to benefit from this resource. For further details contact Adrian Trim (0392 383216).

### Probing

By asking probing questions of the data, young people are able to decide for themselves why accidents happen, who is vulnerable, and when and where most accidents occur. The very process of discovering these details will enable pupils to modify behaviour through accurate local knowledge of the risks involved in their actions.

This breakthrough in information technology, the ability to transfer mainframe data into a school computer, has marked the beginning of an exciting new initiative in road safety education. Accessing and interrogating real database information about the environment not only fulfils many National Curriculum criteria and objectives, but also guides young people, through the lively and sophisticated medium of the computer, to reach conclusions about personal, social, health and safety issues.

### Some practical examples of how road user education can be incorporated into the Key Stages of the National Curriculum...

#### KEY STAGE 1 (5-7)

##### As a pedestrian

- Level A Relevant vocabulary; skills (stop, look, listen)
- Level B Hazards; judgment
- Level C Personal route to school; personal behaviour; adult assistance; environmental assistance (safe places)

##### As a passenger

- Level A Relevant vocabulary; skills and behaviour
- Level B Hazards; judgment
- Level C Personal means of transport; personal behaviour; adult assistance (e.g. bus driver); environmental assistance (e.g. seatbelts)

#### KEY STAGE 2 (7-11)

##### As a cyclist

- Level A Relevant vocabulary; skills; rules; vehicle care
- Level B Hazards; judgment; main causes of cycling accidents; relationship to other traffic
- Level C Self-assessment of skills; own safe route (on or off the road); personal behaviour; adult assistance (e.g. parental consent or involvement); environmental assistance (e.g. cycle routes); training requirement

#### KEY STAGE 3 (11-14)

##### As a pedestrian

- Level D Highway Code regulations for pedestrians; consideration of problems of vulnerable pedestrians; remedial measures in alleviating pedestrian vulnerability

##### As a passenger

- Level D Responsibilities of passengers of all types; consideration of accident rate of all types of passengers; remedial measures for passengers (e.g. seatbelts, not accepting lifts from drinkers)

##### As a cyclist

- Level D Responsibilities of cyclists (Highway Code); consideration of accident rates of cyclists of all types and ages; and main causes of problems; remedial measures for cyclists including training; cycle routes; conspicuousness

#### KEY STAGE 4 (14-16)

##### As a motorcycle rider or car driver

- Level A Legal and training requirements; financial considerations
- Level B Accident rates and main causes; hazards and problems (e.g. weather, alcohol); training and experience
- Level C Assessment of own transport needs and abilities; consideration of relative risk for self
- Level D Assessment of attributes of a safe and responsible road user; consideration of vulnerability of others (e.g. old age, impaired faculties, youth and inexperience); remedial measures for all road users; appropriate behaviour for situations involving other road users; assessment of stages in development of road sense as a faculty

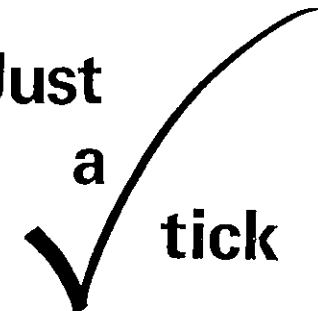
Contact Patsy Hollins, Devon Road Safety Unit, Engineering & Planning Dept., County Hall, Exeter EX2 4QW (0392 382130).

#### References

1. UNESCO, *Economic Commission for Europe Inland Transport Committee: groups of experts on traffic safety*. Geneva, 1975.
2. RoSPA, *Handbook for Road Safety Officers*, 1984.
3. Devon County Council, *Guidelines for Teachers — Road User Education in Practice*. Devon: Engineering and Planning Dept., 1982.

*Primary version*

**Just a tick**



A set of questionnaires for pupils, parents, school staff, governors and health-care professionals, designed for use by primary schools wishing to promote Personal Development and Health Education in their curricula.