

Teacher Notes

Introduction

Pupils can work on this problem individually or with others.

- They can discuss what information they will need from the timetable, and how to plan their journey to and from Belfast.
- They can share their responses and compare approaches.

This problem deals with a pupil's ability to use a timetable to best plan a journey according to need and availability.

What I know (think)

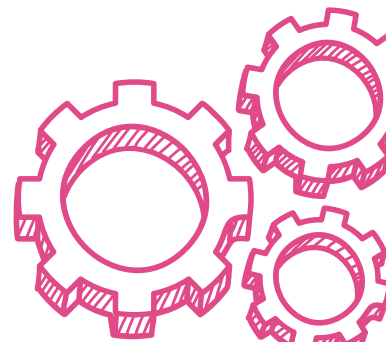
The pupils should know from the given problem:

- the details about the journey that needs to be made, and the times associated with the journey;
- Trish lives a five minute drive from the Maghera Park and Ride and a 15 minute drive from Dungiven Park and Ride;
- Trish needs to travel to Belfast so that she is on time for an interview at 10:00 am, and then needs to travel back from Belfast so that she is home no later than 7:00 pm; and
- there is a bus timetable providing times to and from Belfast.

What I need to know (identify)

Pupils need to identify:

- the important times associated with making the journey (when Trish needs to arrive to be in time for her interview, and when she needs to be home);
- how the times (am/pm) in the information given relate to the time (24 hour notation) provided in the timetable;
- how they will find the total time needed to get to the interview in the morning, depending on which Belfast bus stop they use; and
- how they add on and/or count back durations to identify where they will get the bus from and to when travelling to and from Belfast and make sure they can alight the bus at the required stops.



Bus Timetable (Continued)

What I need to do (employ)

Pupils should use the information provided about Trish's journey to work out the latest time she can arrive for the interview.

To find the latest time she can arrive at the Belfast bus stops, they will add the walking time from each of the bus stops to the 15 minutes that Trish needs in order to arrive at the interview early.

Pupils need to be able to use am/pm and the 24 hour clock.

Pupils can then use the timetable to work out which bus will get Trish to Belfast on time, and which stop she needs to get the bus from.

Some buses the pupils identify may get Trish to Belfast on time, but they might not be the latest bus she can catch. Therefore the pupils need to look at which of the buses is the latest and whether or not getting the bus from a different park and ride stop would be better.

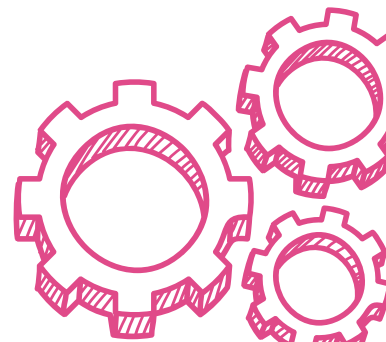
Pupils should disregard the information about going to lunch, the cinema and shopping: this has no effect on what time Trish can go home.

For the journey back from Belfast, pupils need to use the bus stop where Trish would have left her car, in this case Dungiven. Pupils need to take 15 minutes away from 7:00 pm to get the latest time Trish can arrive back at Dungiven, and then use the timetable to see which bus gets to Dungiven before 6:45 pm.

What I did (review)

Pupils will use self-assessment, peer assessment or teacher feedback to decide whether they have approached the problem as intended.

- Did they correctly identify all the important times?
- Did they work out the latest time Trish needs to arrive in Belfast for the interview?
- Did they identify the latest time to get the bus to Belfast, and where to get it from?
- Did they identify the latest time to get the bus from Belfast, and where to get it to?



Bus Timetable (Continued)

Curriculum Objectives

This problem should enable pupils to demonstrate their knowledge, understanding and skills through:

Developing pupils as
Individuals

Demonstrate an ability and willingness to develop logical arguments

- Pupils will effectively use the bus timetable alongside the information provided to correctly identify and communicate the latest time Trish can get a bus to and from Belfast.

Thinking Skills and Personal Capabilities

This problem can provide an opportunity for pupils to demonstrate a variety of the following Thinking Skills and Personal Capabilities:

Managing Information

- Ask focused questions
- Select the most appropriate method for a task
- Plan and set goals and break a task into sub-tasks

Thinking, Problem-Solving and Decision Making

- Examine options and weigh up pros and cons
- Generate possible solutions, try out alternative approaches and evaluate outcomes

Being Creative

- Experiment with ideas and questions
- Learn from and value other people's ideas
- Challenge the routine method
- See opportunities in mistakes and failures

Working with Others

- Listen actively and share opinions
- Suggest ways of improving their approach to working collaboratively
- Respect the views and opinions of others and reach agreements using negotiation and compromise

Self-Management

- Seek advice when necessary
- Review learning and some aspect that might be improved
- Organise and plan how to go about a task

Cross-Curricular Skills

This problem should enable pupils to demonstrate a variety of the following Cross-Curriculum Skills:



Using Mathematics

