Arriving at School

Before using this excellent game, it is a good idea to revise time, distance and speed problems, especially finding times in minutes for distances in kilometres at speeds in km/hr. It is also worth reminding the class of the fractions of an hour in minutes, Calculators might be allowed the first time you try this game, although the arithmetic required is not very demanding. It is much more a problem of listing and sorting and it would not be wise to choose it as the first game for a new class. It might be wise to suggest the column headings shown below.

Topics: Distance
Speed
Time

Ages: 12 to 14

SOLUTION:

Name	Transport method	Distance	Speed	Time taken	Start time	Arrival time
Jenny	Walk	1 km	4 km/hr	15 mins	8.15	8.30
Una	Car	10 km	60 km/hr	10 mins	8.29	8.39
Sam	Bike	5 km	15 km/hr	20 mins	8.23	8.43
Tina	Car	10 km	50 km/hr	12 mins	8.38	8.50
Isobel	Walk	------	------	5 mins	8.29	------
------	Train	20 km	80 km/hr	15 mins	------	------
------	Walk	------	------	5 mins	------	8.54
Noreen	Walk	2 km	5 km/hr	24 mins	8.01	------
------	Bus	20 km	40 km/hr	30 mins	------	8.55
Terry	Car	15 km	60 km/hr	15 mins	8.41	8.56
Ivan	Bike	4 km	16 km/hr	15 mins	8.42	8.57
Meenal	Walk	2 km	5 km/hr	24 mins	8.34	8.58
Ella	Walk	1 km	5 km/hr	12 mins	8.38	------
------	Bus	10 km	40 km/hr	15 mins	------	9.05

The message is 'Just in time'.

Tina arrived at 8.50 and Noreen and Isobel both arrived after her so it was not possible for Noreen to talk to Isobel before Tina arrived.

Noreen and Ella did not arrive at school at the same time and were not therefore on the same bus.

Ella was the only person who was late.

1

Arriving at School

Una and Isobel both leave home at 8.29am.

Sam and Ivan both go to school by bike

Noreen leaves home first, 41 minutes earlier than Ivan who leaves home last.

2

Arriving at School

Tina and Ella both leave home at 8.38am.

Jenny and Meenal both walk to school and Meenal leaves home at 8.34am.

Una goes by car at 60 km/hr.

3

Arriving at School

Sam cycles 5km at 1 km/hr slower than Ivan and Sam leaves home at 8.23am.

Jenny walks 1 km/hr slower than Meenal.

Una lives 10 km away from school.

4

Arriving at School

Noreen and Ella both go to school by bus.

Terry travels by car at the same speed as Una.

5

Arriving at School

On the morning in question, is it possible for Noreen to talk to Isobel before Tina arrives?

Noreen and Ella usually travel on the same bus, but do they do so this time?

6

Arriving at School

Meenal lives twice as far from school as Jenny and Meenal walks at 5 km/hr.

Ella lives 1 km further from school than Una.

Terry lives 15 km away from school.

7

Arriving at School

Ivan cycles 1km less than Sam at a speed of 16 km/hr.

The buses go at an average speed of 40 km/hr and Noreen travels twice as far as Ella does on the bus.

8

Arriving at School

The bus-stop is right outside the school.

Terry leaves home 1 minute before Ivan and 3 minutes after Tina.

Isobel has two 5 minute walks, one before and one after her train journey.

9

Arriving at School

Jenny lives 1 km from school and she leaves home 14 minutes earlier than Una.

Isobel's train journey is 20 km at 80 km/hr.

Noreen and Ella both walk at 5 km/hr from home to their bus stops.

10

Arriving at School

Noreen lives 2 km from her bus-stop and Ella lives 1 km from her stop.

Tina travels by car at 10 km/hr slower than Terry and lives the same distance from school as Una.

11

Arriving at School

School starts at 9am. Find out if anyone is late on the morning in question.

12

Arriving at School

Arrange the names in the order in which they arrive and the first letters of the names spell out a message.

Also work out the answers to the questions on cards 5 and 11.