

UNIT 15 *Vehicle Registration*

Marks

Teacher Resource Material

Key Stage: 3 (or 4)

Target: Years 8/9 or coursework at KS4

Teaching Notes

This is a topic that can be extended way past the method of coding used on number plates. It could, for example, be used as a basis for statistical coursework at GCSE. The DVLA website at

http://www.dvla.gov.uk/vehicles/regmarks/reg_marks.htm

is a particularly useful source of information; detailed data on the actual registrations each year and on current registrations is available. Other topics concerning environmental issues, traffic congestion and accident statistics, etc. can follow on from this work.

Note that the Lesson Plan given is based on the *current* vehicle registration system.

Solutions and Notes

Exercise 1 a) $23 \times 23 = 529$ possible local memory tags

Exercise 2 a) March 2005 - August 2005: age identifier '05'
b) Age identifier '69' from September 2019 - February 2020

Exercise 3 $24 \times 24 \times 24 = 13824$ combinations

Exercise 4 $23 \times 23 = 529$ possible local Centre identities (as before)

Exercise 5 Numbers 21 to 999 gives 979 possibilities for the numbers, so with 23 different letters we have $23 \times 979 = 22517$ possibilities.

Exercise 6 Total number is
 $529 \times 22517 = 11911493 \approx 12$ million

Activity 1 Under the system in use prior to September 2001, the main problem related to the rush, in August, for cars to be registered with the new age identifier. The current system has two changes of identifier per year. This has helped to ease the pressure in the Autumn, although, as can be seen from the figures opposite, there is still an large increase in the numbers of vehicles registered during the first month of each new identifier.

Activity 2 b) The first two rows refer to cars only; the final total includes other vehicles, e.g. lorries, buses, vans, etc.

Exercise 7 For each 6 months
 $529 \times 13824 = 7312896$
vehicles could be registered. So for each year the total is
 $14\,625\,792 \approx 15$ million vehicles.

Registrations, 2003 (in thousands)

January	193.4
February	92.2
March	452.0
April	196.3
May	202.6
June	243.8
July	201.1
August	94.2
September	447.5
October	186.6
November	175.7
December	160.8