health and social care

Click here to start

START

1

Keep in the green area. Do not go into the blue area.

6

5

8

Att	Penalty	Time (sec)	Finished?
1			
2			
3			
4			
5			

⊙ Reset table

Copy results

7

10

9

12

4

FINISH

11

14

3

2

13

15

16

Penalty	Time (sec)	Completed sections
0	0	0

cre8ate maths

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Health and Social Care : Hand eye co-ordination

Description

Health professionals often have to assess a wide variety of attributes including hand eye co-ordination. This topic provides a fun way to understand the concept and to undertake some data handling and analysis.
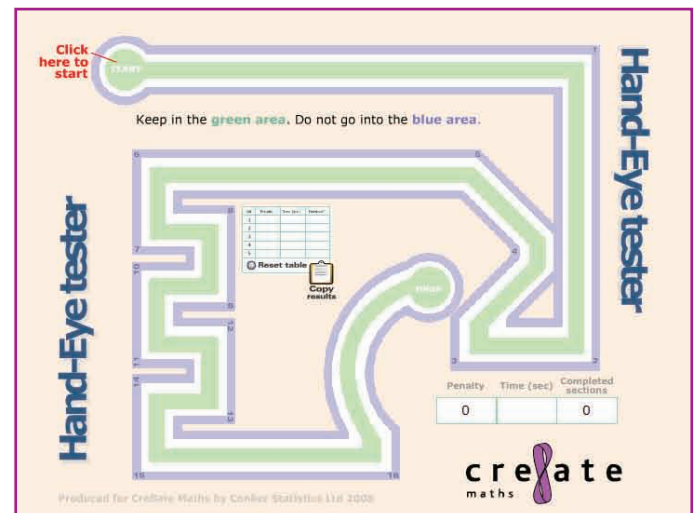
Activity 1: Hand eye co-ordination

The first aim of Hand eye co-ordination is to test the hypothesis that the faster you are the more mistakes you make. Working in groups of five, pupils are timed in guiding the cursor around the track on the Hand eye tester from start to finish as fast as possible whilst taking care not to deviate from the green path. Coordination and speed are required to successfully complete the track as quickly as possible.

Each pupil has five attempts and these are then copied into a spreadsheet. When all the trials are complete, the group selects the successful attempts and plots a scatter graph of the results of penalty points against time taken.

Pupils should then discuss how they might incorporate the failed attempts. For example, the number of corners taken before crashing might be used to provide a multiplier for the penalty points incurred. These new points can then be plotted on the scatter graph using a different colour or shape. Deciding whether or not these results fit the general pattern can be used to provoke discussion about the validity of the multiplier used and hence to reflect on approximations and proxies in data handling.

Further investigations are possible:

- Do you get better with practice?
- Are girls quicker than boys?

Encourage pupils to phrase the further investigations as hypotheses before interrogating the data – some can be tested on the existing data, some may need supplementary data to be collected.

The Mathematics

Hand eye co-ordination involves the collection of real data, hypothesis testing and scatter graphs. The extensions may also include the use of a variety of averages.