

# PUPILS ATTITUDES TO STEM STUDY AND CAREERS

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The National Careers Show  
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Nicki Moore and  
Jo Hutchinson  
iCeGS



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# The Timeline project

## - key elements

- 28 pilot schools across 9 English regions (various contexts)
- Mentor support for pilot schools
- School self-review and action planning
- Pupil attitude survey (Key Stage 3)
- Adopting a research approach

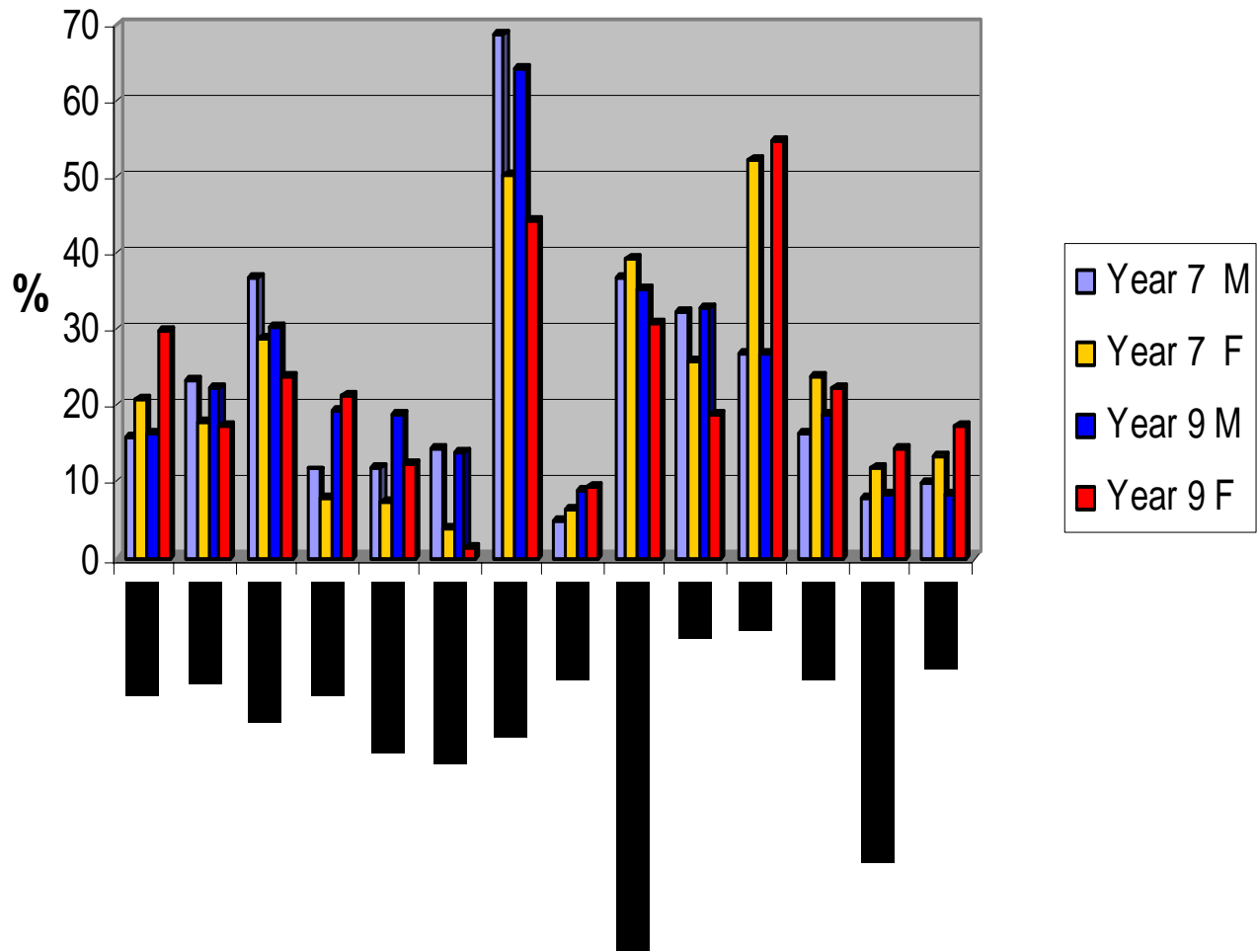
# The attitude survey

	Year 7	Year 9	Total
Males	1029	920	1949
Female	1142	982	2124
Total	2171	1902	4073

## The responses

- Over 4000 responses from 26 schools
- Similar response rate for gender & age
- Wide range of school types by size, situation, pupil characteristics and attainment
- Results may not be representative, but are typical

# Subjects enjoyed the best



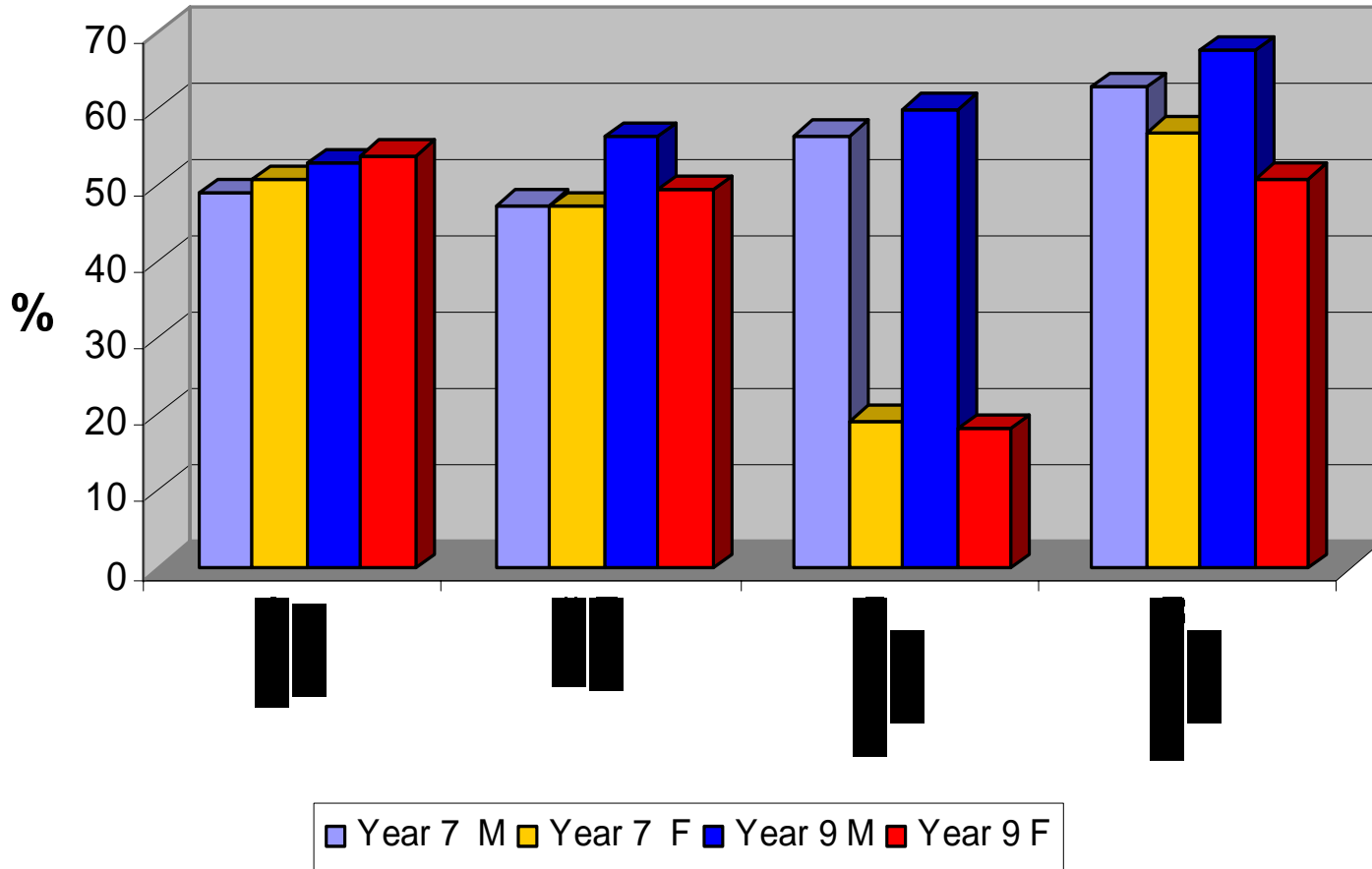
# Subjects enjoyed best and least

- PE / Sport most popular especially for boys and Art most popular especially for girls
- D&T (3<sup>rd</sup>) Science (4<sup>th</sup>) maths (5<sup>th</sup>) popular.
- Polarity with maths – while 1 in 5 say its most popular, for 1 in 3 its least popular. Similar with science for 1 in 3 is most popular, for 1 in 4 is least popular.

# The link with careers

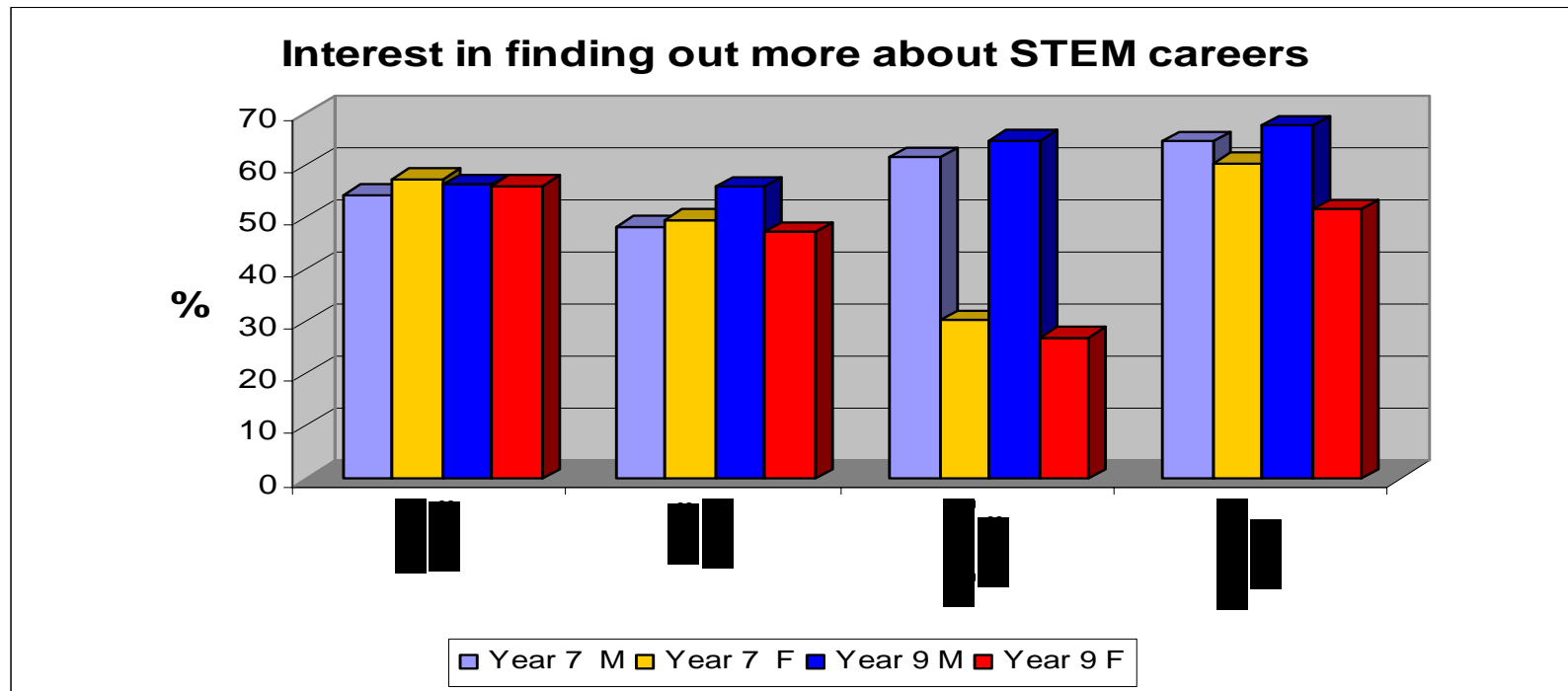
- Respondents asked about interest in careers and future employment sectors
- Sectors taken from Jobs4U careers database: Connexions Direct
- Clear gender link and link between sector and subjects enjoyed
- Query: how well informed are KS3 pupils about careers?

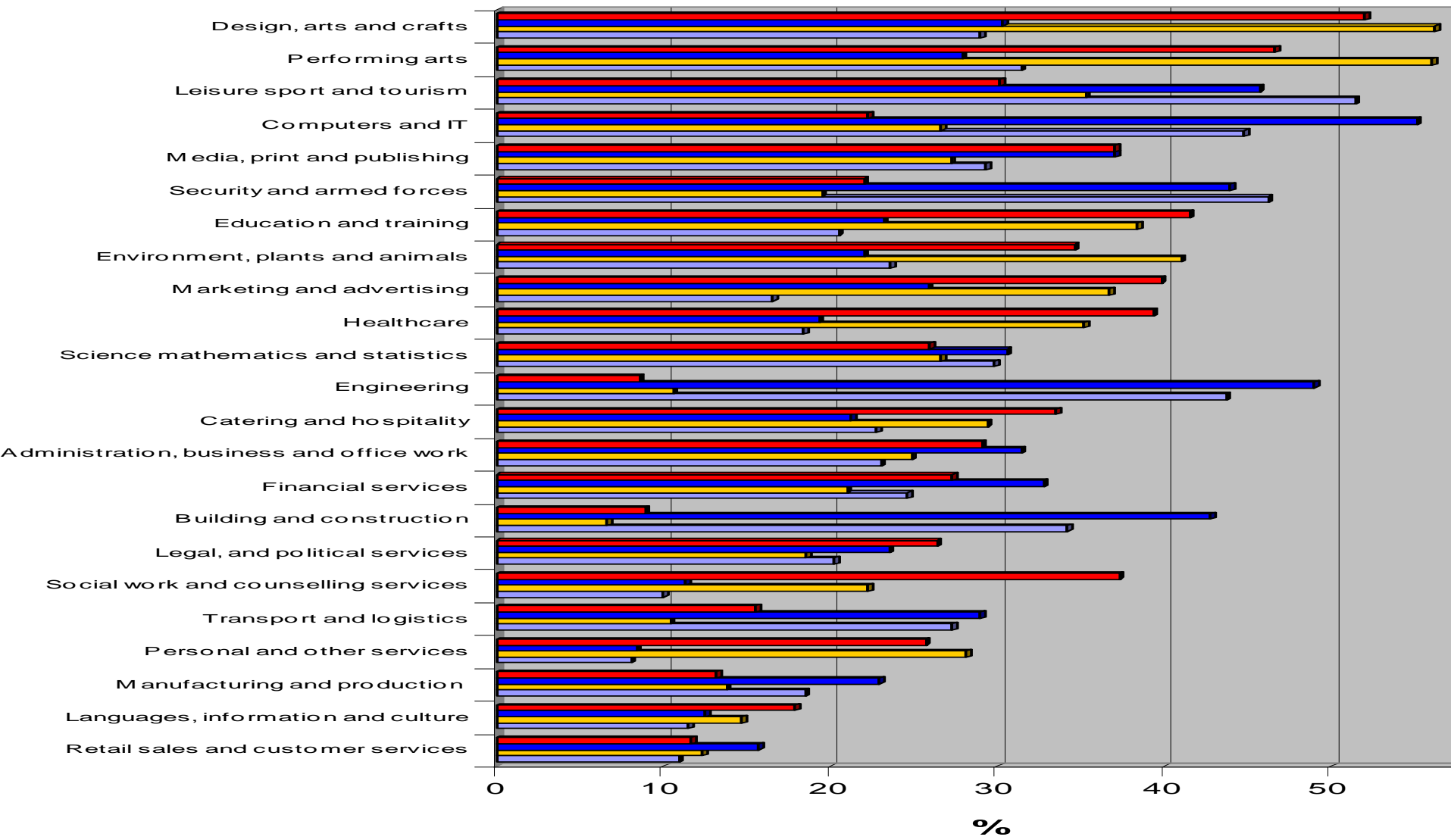
## Consideration of STEM careers



# The link with careers

- 78% of KS3 pupils want to know more about at least one of the STEM careers.



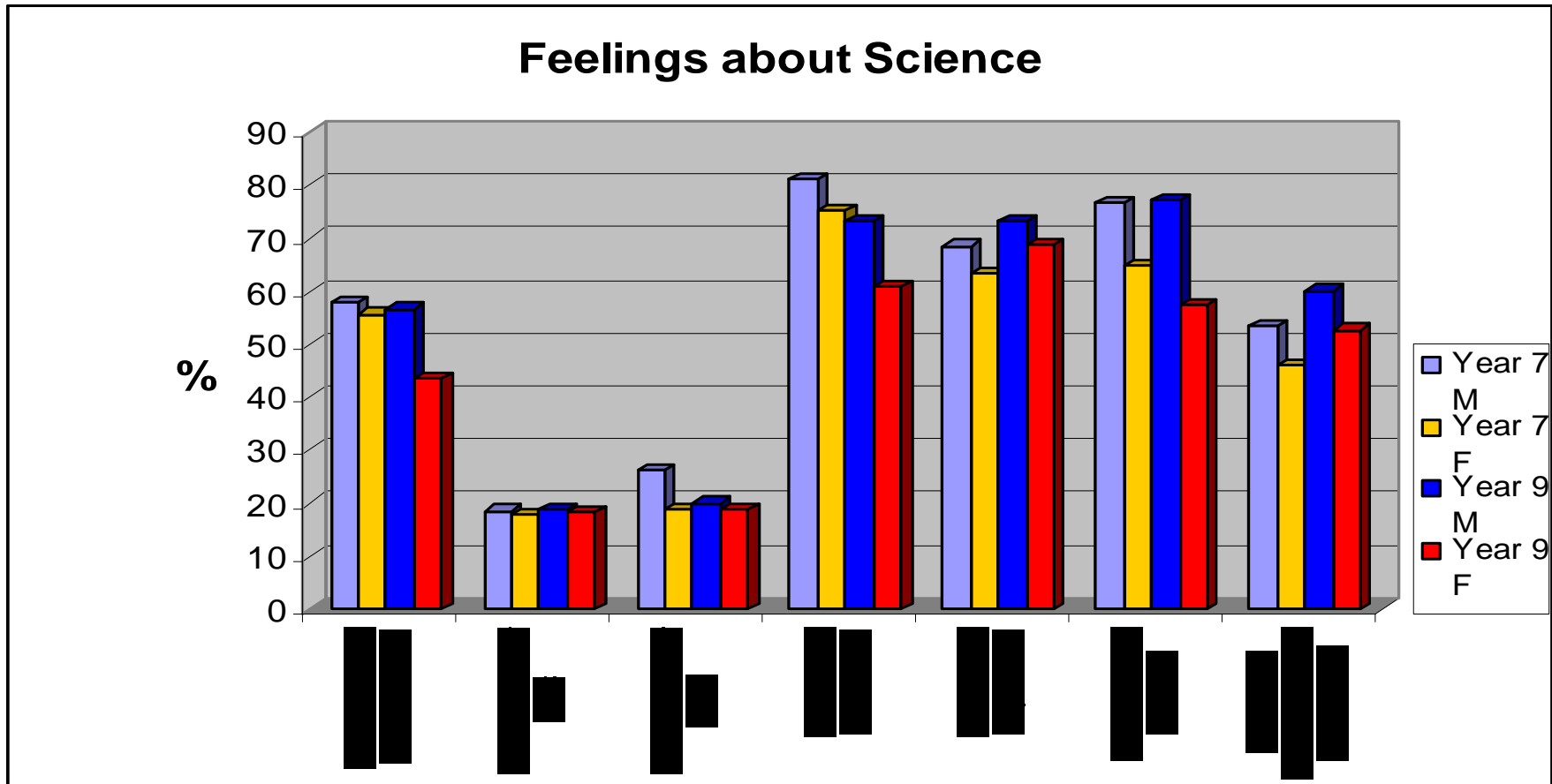


Legend: Year 7 M (light blue), Year 7 F (yellow), Year 9 M (dark blue), Year 9 F (red)

# The link with careers

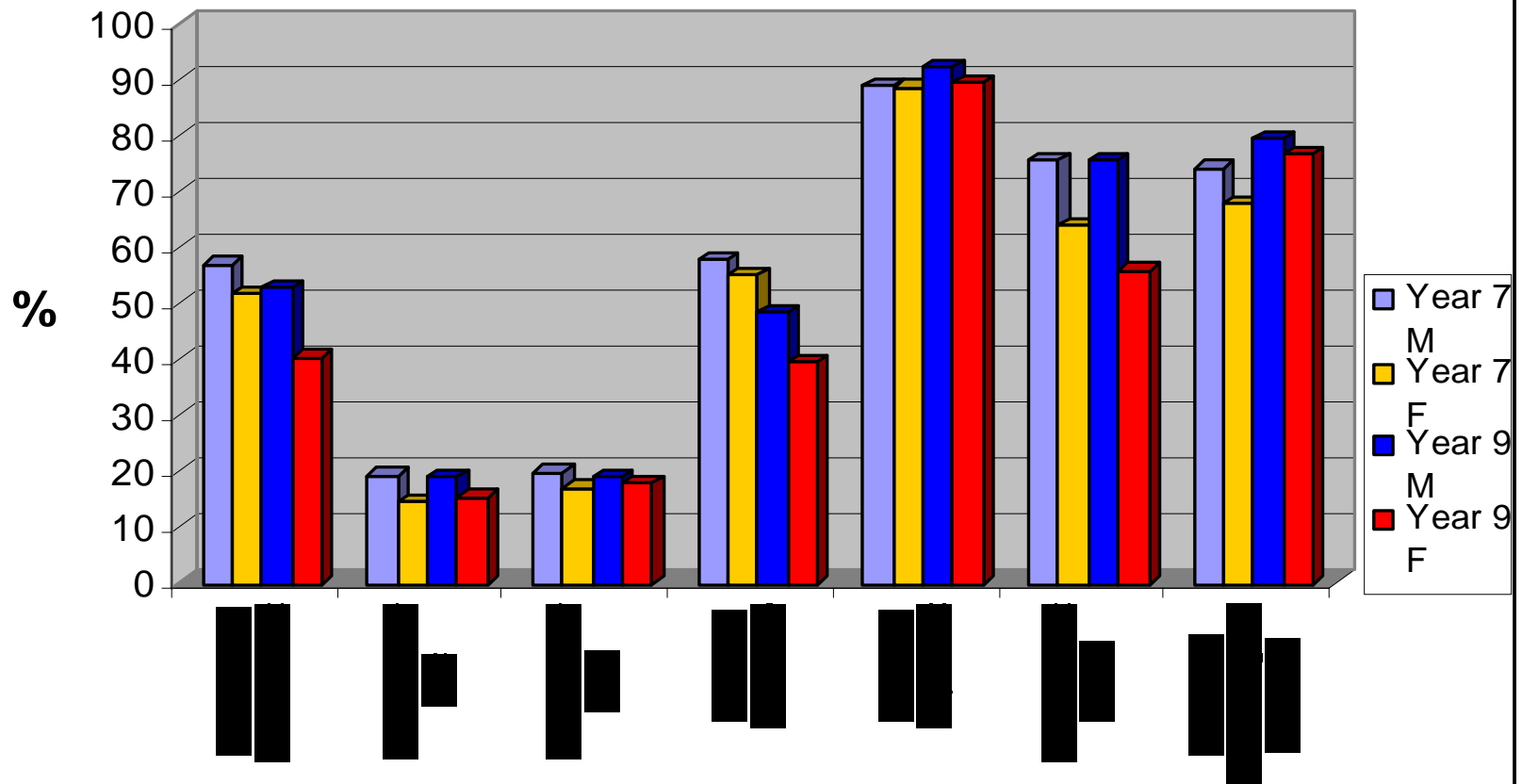
- Pupils do recognise the link between the subjects they study and their “importance”
- E.g. Science, most thought it was enjoyable and important but fewer thought it was necessary for a good job.
- E.g. Maths, fewer thought it enjoyable, but most thought it enjoyable and necessary for a good job.

# What do you think about science as a subject?



# What do you think about maths as a subject

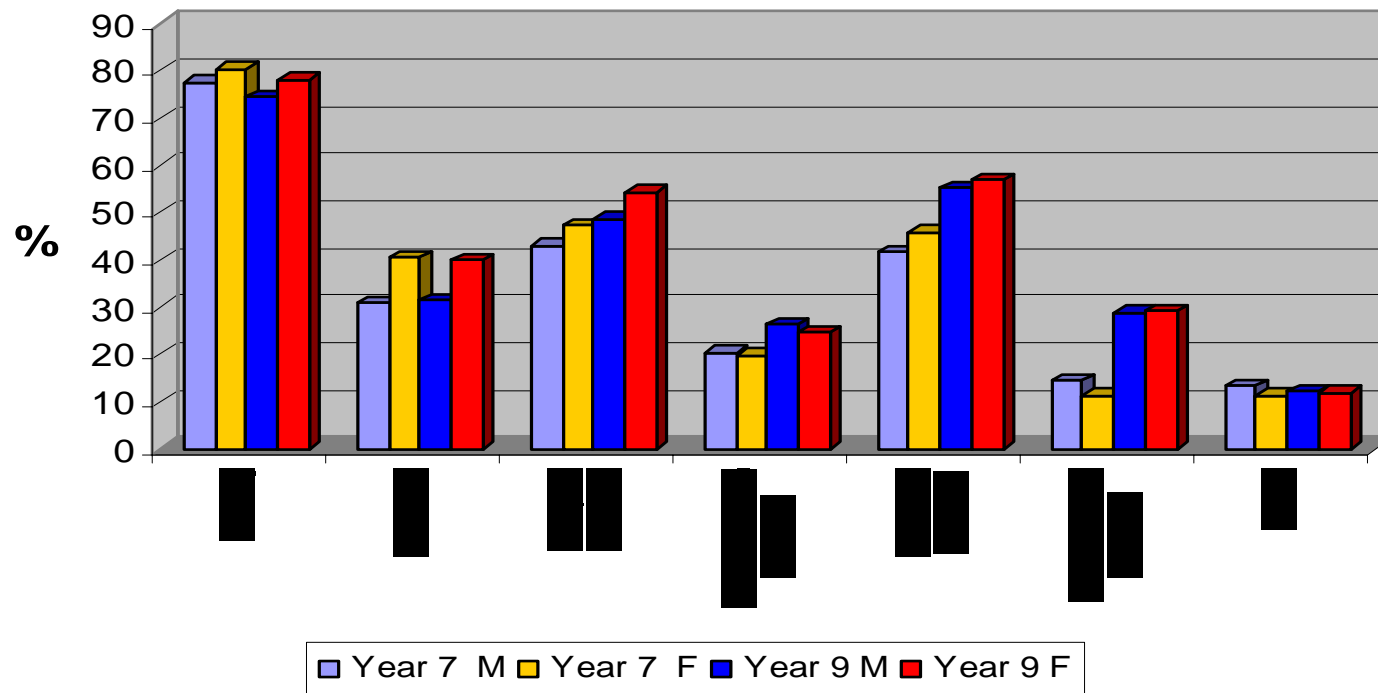
## Feelings about Maths



# Sources of information & advice

- Pupils most likely to ask adults who may feel they know least about careers.

People asked for information about jobs or careers



# Gender differences

- Boys significantly more likely than girls to:
  - choose engineering, ICT, maths and science in their top 3 subjects
  - think that both engineering and D&T are important for adult life and to get a job
  - want to find out about careers related to maths, engineering, and technology
- Equal interest in finding out about a career related to science

# Gender differences

Top 4 career choices	1 <sup>st</sup>	2 <sup>nd</sup>	3 <sup>rd</sup>	4 <sup>th</sup>
Males	Computers & IT (50%)	Leisure, sport & tourism (49%)	Engineering (46%)	Security and armed forces (45%)
Females	Design, arts & crafts (54%)	Performing arts (52%)	Education & training (40%)	Marketing & advertising (38%)

# Socio-economic differences

- Caution: analysis based on characteristic of school (FSM as proxy), not of respondents.
- Pupils from lower socio-economic schools were significantly more likely to:
  - Agree that you need maths, engineering, D&T to get a good job.
  - Consider an engineering related career
  - Want to find out more about maths and engineering related careers
- But they were less likely to say they would ask for information about jobs or careers

# Some challenges...

- How can pupils learn more about industry and employment in a way that challenges:
  - their understanding e.g. engineering and link with D&T
  - stereotypical thinking.
- How can teachers be supported to assist pupils with subject choice and career destination?

## CONTACT

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Jo Hutchinson

01332 591267

[j.hutchinson@derby.ac.uk](mailto:j.hutchinson@derby.ac.uk)

Nicki Moore

01332 591267

[n.moore@derby.ac.uk](mailto:n.moore@derby.ac.uk)

