



DCBEAGLE CHALLENGES

BEYOND THE TEXTBOOK

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Parents' motivation influences students' academic outcomes

Whether parental help has positive or negative effects on students' academic outcomes depends on the motivation and involvement of their parents. Results of a study conducted by the Hector Research Institute of Education Sciences and Psychology suggest that students whose parents are interested in math and perceive their own math competencies to be high perform better than students with parents who show a low interest in math and regard their competencies in the domain as equally low -- regardless of the intensity of the help students receive at home. The results have now been published in *Child Development*.

Family background plays a crucial role in the development of students' academic motivation and achievement. Previous research suggested that parents' academic involvement is, on average, associated with better academic outcomes, but the pattern of results was far from being unequivocal and it also remained unclear what kind of help is actually helpful and what is harmful. For example, excessive parental involvement may be perceived by students as controlling behaviour. This can have a detrimental effect on their academic confidence and correspondingly on achievement. Thus, researchers at the University of Tübingen set out to investigate which family characteristics have a positive effect on academic outcomes and which characteristics can be more of a hindrance. To this end, they collected data from more than 1,500 ninth-grade students and their parents.

Article taken from ScienceDaily (<https://www.sciencedaily.com>). Click [here](#) to read the whole report.

This month's puzzle - **The Widow's Legacy**

A gentleman who recently died left the sum of £8000 to be divided among his widow, five sons and four daughters. Every son should receive three times as much as a daughter, and that every daughter should have twice as much as their mother. How much did the widow receive? N.B. This puzzle was created pre-decimal currency!!! 12 pence = 1 shilling, 20 shillings = £1. I have also given you the metric result.

This month's websites

Fun with 3D shapes - [card stock geometry puzzle](#)
Maths projects (Years 7 and 8) – [functional maths](#)
Outdoor maths – [Third Space Learning](#)

Maths Games and Puzzles – why involve them in maths lessons?

- Games can make mathematics enjoyable and fun
- Games can help pupils perceive mathematics as part of our everyday world.
- Games can help children view mathematics as a human endeavour as something that people create.

I recommend the book Maths Games and Puzzles for Elementary Grades. The [preview pages](#) give you a good idea of the content. The book can be found on [EBAY](#).

DCBEAGLE Challenges

I host over 60 events this academic year and the numbers have increased for 2017 / 18. At the moment invitations are being sent out for next term's challenges. You do not have to wait for the email because you can visit the website and register there.

Fri 15 Sep	Year 6 Maths	Wrekin College Shropshire
Thu 21 Sep	Year 5 Maths	Christ Hospital, Horsham
Fri 22 Sep	Year 4 Maths	Davenies Beaconsfield
Tue 26 Sep	Year 6 Maths	Windlesham House Sussex
Thu 28 Sep	Year 5 Maths	St Andrew's Eastbourne
Fri 29 Sep	Year 4 Maths	Crosfields, Reading
Wed 04 Oct	Year 6 Maths	Red Maids' Bristol
Thu 05 Oct	Year 4 Maths	King Edwards School Bath
Mon 09 Oct	Year 5 Maths	Ballard School, Bournemouth
Tue 10 Oct	Year 6 Maths	Dean Close, Cheltenham
Tue 31 Oct	Year 6 Maths	St Edward's School Oxford
Tue 07 Nov	Year 4 Maths	Summer Fields, Oxford
Fri 10 Nov	Year 4 Maths	St Edward's Cheltenham
Thu 16 Nov	Year 6 Maths	Aldwickbury School
Fri 17 Nov	Year 5 Maths	St Edward's Cheltenham
Tue 21 Nov	Year 5 Maths	Rupert House
Thu 23 Nov	Year 6 Maths	Monkton Combe Bath

Puzzle of the month solution

£205 2s 6d or £205.12

Final words

Enjoy the rest of the summer term and do take mathematics outside the classroom and into the playground.