

DCBEAGLE CHALLENGES

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BEYOND THE TEXTBOOK – February 2018

Pupils should be encouraged to use their fingers.

In the Mathblog.com site there is an interesting article written by Aditya Singhal where he reminds us that our fingers can be a visual aid when calculating solutions. We all know that giving pupils concrete situations and / or aids they have a better understanding of the mathematical concepts.

“A study even claims that the human mind interprets visuals 60,000 times faster than text.”

Do know you can find the square root of a 6-digit number using your fingers`!

This website www.mathsblog.com is a treasure trove of mathematical ideas and theories.

Puzzle of the Month

The Merchant

A merchant can place 8 large boxes or 10 small boxes into a carton for shipping. In one shipment, he sent a total of 96 boxes. If there are more large boxes than small boxes, how many cartons did he ship?

The gender gap

My friends in Kenya have sent me this question about teaching methods to help close the gender gap with regards to achievement and interest in the subject. If you have any ideas or could point me to any research please let me know.

Immaculate Wijenje (Head of Maths at Kenton College, Nairobi) writes: “In looking at our last few years' exam results, it is apparent that we have a gender disparity, with our girls generally not achieving results as good as the boys. It is also a fact that our lowest sets usually have more girls than boys.

I wonder if you could have a think about how we can address the issue of raising our girls interest in Maths and any activities we could carry out towards this end without seeming to be gender-biased.”

Fractions! Fractions! Fractions!

www.teachingideas.co.uk has a wonderful resource page for all who are about to cover various concepts of fractions (click [here](#)). It is very much “hands on” activities rather than using screens. Like the first article in this newsletter I am a great believer that learning and understanding are accelerated if you can “feel” the apparatus.

Talking Three Dimensional

- Identifying the shapes looking at nets – Power Point presentation (click [here](#))
- Playing with cubes – an NRICH activity (click [here](#))
- Skeleton shapes – looking at the resources which shape can be made – click [here](#) for this NRICH activity.

DCBEAGLE Challenges

Tuesday 20 February	Year 5	Belmont (Mill Hill)
Thursday 22 February	Year 5	Langley Preparatory Norwich
Friday 23 February	Year 6	Langley Preparatory Norwich
Tuesday 27 February	Year 5	Cranford Oxfordshire
Thursday 01 March	Year 4	Christ's Hospital, Horsham
Friday 02 March	Year 5	Wrekin College Shropshire
Monday 05 March	Year 4	Gayhurst, Bucks
Tuesday 06 March	Year 4	West Hill Park, Fareham
Thursday 08 March	Year 5	Elmhurst School, Croydon
Friday 09 March	Year 6	St Gregory's, Harrow
Tuesday 13 March	Year 6	The Choristers School, Durham
Wednesday 14 March	Year 4	Newcastle High for Girls
Wednesday 14 March	Year 5	Newcastle High for Girls
Monday 19 March	Year 5	Abbot's Hill Hemel Hempstead
Tuesday 20 March	Year 5	Wolverhampton Girls' High
Thursday 22 March	Year 5	Christ's Hospital at The Guildhall in London - Private

Do visit my Portfolio page (<http://www.dcbeagle.com/dcbportfolio.html>) to see all my challenges and other events. You are welcome to register for any of the summer challenges now.

Video of the Month

Math Magic (click [here](#)) – best for Years 6 – 9, A compendium of tricks using mathematics which will not enlighten the pupils' interest in maths but they could practise and enjoy entertaining their friends and family.

TED Talk – Faster than a calculator (click [here](#))

Pi Day – March 14th – best for Years 6 – 9. Matt Parker's calculating pi using real pies (click [here](#))
Fun Facts about Pi (click [here](#))

The Merchant solution

11 cartons total

7 large boxes ($7 \times 8 = 56$ boxes), 4 small boxes ($4 \times 10 = 40$ boxes), 11 total cartons and 96 boxes

Final words

Because I am taking more and more challenge bookings I have decided to drop my puzzling days from my portfolio. There could be a possibility that I will be presenting challenges in Birmingham and Manchester this next academic year. If you know of schools who may want to host the challenges do let me know.