



DCBEAGLE Challenges
BEYOND THE TEXTBOOK
April 2017

Hopefully you are all rested ready for the summer term where most of the creative maths is done due to the assessments out of the way. A sad fact!

BIDMAS Is ambiguous

This is the opinion of Rob Eastaway (<http://www.robeastaway.com>) who always writes sensible and realistic articles and blogs:

"Let's see who's dumb" said the provocative post that went viral recently.

$$60 + 60 \times 0 + 1 = ?$$

Those who said the answer is 1 are apparently dumb; smart people (it claimed) are supposed to say 61.

For $60 + 60 \times 0 + 1$, BIDMAS says you should do the multiplication part before doing the additions, so according to this rule, the answer is $60 + 0 + 1 = 61$. If you have a basic calculator, however, it will tell you the answer is 1, because it does the calculations in sequence, starting at the left. Is the basic calculator 'wrong' or 'dumb'? No, but it's probably not doing what the person who posed the question meant it to be doing. If anyone was 'dumb' it was the person who asked the question and expected everyone to come up with the same answer.

For the full article click [here](#).

This month's puzzle

Diluted whisky

I pour from one tumbler enough water to double the contents of the wine glass, Then I pour from the wine glass enough of the mixture to double the contents of the tumbler. Finally, I pour from the tumbler into the wine glass until their contents are exactly equal.

What are the relative proportions of whisky and water in the tumbler. Are they equal or two parts of whisky to one of water or what?

Mathematical sheep dog

Bob the sheepdog was getting the sheep in for Farmer Fred. He completed his task and went bounding over to the Farmer shouting "Farmer Fred, Farmer Fred.... I chased 40 sheep in to the yard for you".
"40 sheep?" queries Farmer Fred. "I've only got 37"
"I know" says Bob. "I rounded them up"

DCBEAGLE Challenges – Summer Term

As usual there are not many challenges in the summer mainly because of the busyness of the term. Hence many are filling up very quickly. I am still looking for a host for a Year 5 challenge in the Harpenden area.

Tuesday	25 April	Year 4 Maths	Aldwickbury, Harpenden
Thursday	27 April	Year 5 Maths	Junior King's, Canterbury
Friday	28 April	Year 4 Maths	(Old Hall) Wrekin College
Tuesday	02 May	Year 5 Maths	Davenies School, Beaconsfield
Wednesday	03 May	Year 5 Maths	Elmhurst School, Croydon
Tuesday	16 May	Year 4 Maths	Brighton Grammar School
Thursday	18 May	Year 6 Maths	St Faith's Cambridge
Friday	19 May	Year 4 Maths	St George's Junior Weybridge
Tuesday	23 May	Year 5 Maths	Headington School Oxford
Monday	05 June		Chandlings Puzzling Day
Tuesday	06 June	Year 5 Maths	Luckley House, Wokingham
Monday	12 June	Year 5 Maths	Dulwich College, Cranbrook

Summer maths lessons

When giving mathematical tasks to pupils outside the classroom they do not realise that their understanding of concepts improve and they become more confident in the subject because they are enjoying themselves. I have discovered a website [Creative STAR Learning](#) which gives you many activities for you to adapt or copy and it covers a wide spectrum of age groups starting at KS1.

Introduce Pi to your Year 6s using paper plates (or other circular shapes) and drawing a large circle with a diameter. They can visualise that the circumference is just over three times the length of the diameter ($\text{Pi} = 3.142$). The activity could begin with a colouring competition for homework where the pupils have to illustrate a maths fact.

Never spend money in creating a permanent maths trail – the pupils and you will get bored using it. Be creative and make your own. Useful links [NRICH](#), [Maths Eyes](#), [NCTM](#).

On the maths table

I am aware that I have neglected the Maths Table for a few months. Playing cards are a must because there is so much one can do with them including constructing card 'houses'. [The School Run](#) website has a very good article on the benefits of playing with cards:

- Playing cards builds number confidence
- Playing means learning by experience
- Games encourage fluency
- A pack of playing cards offers endless possibilities
- Playing cards will improve memory
- Cards help develop quick thinking skills
- Card games are a great alternative for learning times tables
- Cards encourage number talk
- Playing cards teaches new strategies (and it's great fun!)
- Maths card games encourage risk-taking.

As well as detailed explanations of the above points there are resources and instructions of several card games. Other websites with card games rules: [Activity Village](#) and [Delia Creates](#).

You cannot beat playing cards under the trees or picnic area in the summer sun!

Diluted whisky solution

Three parts water to one of whisky.

Finally ...

What do you call people who like tractors?

Protractors

What do you call a teapot of boiling water on top of mount Everest?

A high-pot-in-use

Teacher: Did your parents help you with these homework problems?

Pupil: No I got them all wrong by myself!

Do enjoy the summer term.