



## MATHEMATICS: BEYOND THE TEXTBOOK – March 2022

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### BEYOND THE TEXTBOOK – MARCH 2023

#### Inspiration comes in all forms

People ask me why I continue with my maths challenge programme when I could have a quiet life and do things for myself. Well, I recently received an email from a teacher in Norwich saying that her pupils were excited about the challenge, they have decided to organise a weekly Maths Club for the younger ones in the school.

I have been doing some research on maths speakers and presenters and I have come across two videos:

Why Everyone should love maths – a [TEDx presentation](#) given by Bobby Seagull of University Challenge fame. I met him during Maths Week Ireland and what an inspirational character.

Maths is everywhere – [TEDx student talks](#) given by a 7-year-old. It is remarkable the knowledge and reasoning skills he has.

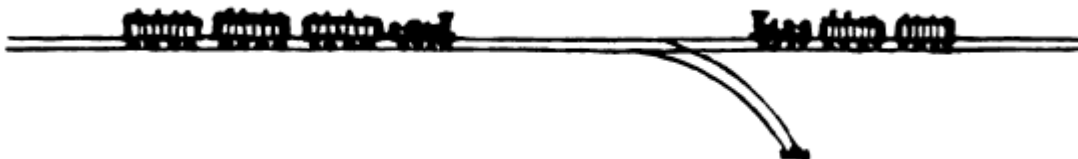
**Puzzle of the Month** (a H E Dudeney infamous conundrum)

#### RAILWAY SHUNTING

What are the fewest possible moves?

How are the two trains in our illustration to pass one another, and proceed with their engines in front? The small side track is only large enough to hold one engine or one car at a time, and no tricks, such as ropes and flying switches, are allowed. Every reversal—that is, change of direction—of an engine is counted as a move in the solution. What is the smallest number of moves necessary?

To work on the problem, make a sketch of the track, and on it place counters or coins to represent the engine and carriages.



#### Easter bunny activities

Maths Whizz - <https://www.whizz.com/blog/easter-maths-activities/> Several activities for 9 to 11 year olds covering fraction work and simple equations.

Primary Resources is always a reliable website to give a wide variety of activities with a theme. All ages.

<https://www.primaryresources.co.uk/seasonal/seasonal1.htm>

## Websites of the month

### [Math Playground](#)

A compendium of puzzles, reinforcement, fun for 6 – 11 year olds. Unusual activities with clear graphics and instructions. Ideal to reinforce the four operations for the young mathematicians to gain more confidence, not realising they are doing “proper” maths.

### [205 Holiday Maths Activities](#)

This is an Australian website and you are going to be surprised at many of the suggestions BUT the holidays is all about resting from the rigours of formal maths and enjoy oneself. “When your kids are on holidays, they don't want to sit down and revise their maths problems. They want to run around and have fun while it lasts!”

28. Teach them a card trick to amaze their friends.
29. Draw a map of your neighbourhood using graph paper.
30. Put together a homemade kite from newspaper and balsa wood.
31. Knit scarves.
32. Learn Double Dutch jump rope.

“Before you start any of these activities, brainstorm with your kids about how to include maths. What can you add? Subtract? Multiply? Find the average? Create a word problem? Count the items”?

Briefing the parents before giving the URL of this website will enhance the objective.

### **Puzzle solution**

Make a rough sketch like our diagram and use five counters marked X, L, R, A, and B. The engines are Land R, and the two cars on the right A and B. The three cars on the left are never separated, so we call them X. The sidetrack is marked S. Now, play as follows: R to left, R to S, XL to right, R to left, XLA to left, L takes A to S, L to left, XL to right, R to A, RA to left, XLB to left, L takes B to S, L to left, LX right away, RA to B, RAB right away. Fourteen moves, because the first and third moves (R to left and XL to right) do not involve a change of direction. It cannot be done in fewer moves.

### **Final words**

More games to look out for your pupils and / or yourself:

<https://www.funwithpuzzles.com/2016/12/fun-math-brain-teasers.html>