

Going deeper to develop whole class reasoning

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Tower Hamlets CPD Centre

Fran Watson fw279@cam.ac.uk
Liz Woodham emp1001@cam.ac.uk
@nrichmaths



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NRICH Professional Development

- Being a learner
- Reflecting on the impact tasks have in your classroom
- Personalising for your setting



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"If we create a culture where every teacher believes they can improve, not because they are not good enough, but because they can be even better, there is no limit to what we can achieve."

Dylan William,
University of London



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2019-20 Project Overview

Going deeper to develop whole class reasoning.

9 Oct – setting the NRICH scene
26 November, 4 February, 17 March,
19 May and 23 June

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Research element

Share back at school, to be signed up at a future date.



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Dissemination planning

Choose an option from the following:

- A handout for staff
- 10mins input at a team meeting/staff meeting
- Meeting with a parallel colleague in your phase/year.



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Cuisenaire task

How many different trains can you make with a length of 12?

How many different trains can you make with a length of 12 and exactly 3 carriages?

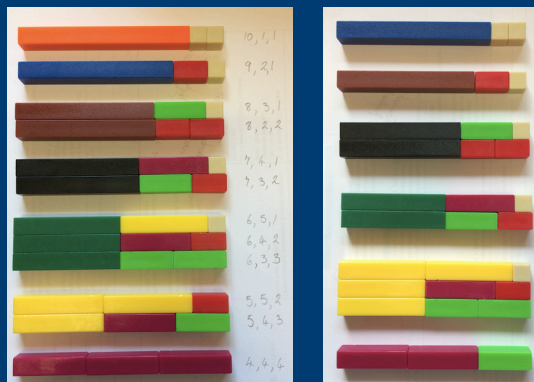
How many of these 3 carriage trains of length 12 can be turned into triangles?

Repeat with trains of length 11...



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Reasoning Mathematically (You On Your Own time)

- What do you think reasoning mathematically is/involves?
- 5 mins
- Reflection content is for your eyes only



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Getting to know you

5 mins to complete for your school (in consultation with your colleague).

Potential prompts are on the sheet, but feel free to add anything additional that you think is relevant.



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NRICH bingo

Published solutions	Live tasks	Submitting a solution
Teachers' resources	id number	Primary curriculum linked
Star rating	Suggested age range	Hiding menu



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Cubies (13872)



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Overheard Reasoning

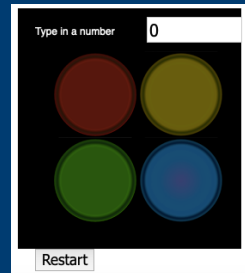


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Light the Lights (7044)

Can you identify the reasoning in the work you've been doing?



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Reasoning in the room

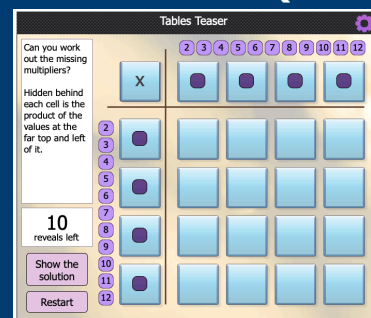
Thinking back to your writing about mathematical reasoning earlier today.
What questions do you have about it?
What questions do you think your colleagues might have?



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Tables Teaser (14242)



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Mystery Matrix (1070)

x						
	32			40		
					49	
			22			
		15				27
			24			
					42	



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Overheard Reasoning



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Back to bingo!

- Full house?
- Talk on your tables to fill in any gaps
- Any questions?



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Teacher Takeaway

- Try a task from today in your setting (and be prepared to talk about it next time – with work/photos etc.)
- Jot down some things in your journal about the task you tried and things you noticed
- Follow up/make preparations for your chosen dissemination method



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References

Ollerton, M., Williams, H. and Gregg, S. (2017) Cuisenaire – From Early Years to Adult.



Cuoco, A., Goldenberg, E. P. and Mark, J. (1996) 'Habits of Mind: An Organising Principle for Mathematics Curricula.' *Journal of Mathematical Behavior* Edition 15 P375-402

Ruthven, K. (1998) An Exploratory Approach to Advanced Mathematics *Educational Studies in Mathematics* Edition 20 P449-467



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