#mathscpdchat 15 November 2022

How can time-of-year themed maths tasks generate meaningful new learning?
Hosted by Tazreen Kassim-Lowe

*This is a summary of the discussion – to see all the tweets, follow the hashtag **#mathscpdchat** in Twitter*

The links shared during this discussion were:

NRICH search results for 'Christmas' which is a list of links to NRICH Christmas-themed tasks, each with a brief description of the task and the suitable approximate age/stage of pupils/students for whom it is designed. It was shared by Tazreen Kassim-Lowe

Making Maths: Snowflakes which is an illustrated NRICH page showing a way to try to cut out a paper snowflake with six perfect lines of symmetry. Students might also try to modify the process in order to create other kinds of snowflake. It was shared by Tazreen Kassim-Lowe

A-Level Christmas Calculated Colouring 2021 which is a task created by Tom Bennison and presented on his blog. It can be downloaded as a PDF file. It was shared by Tom Bennison

Maths of Christmas Wrapping which is a YouTube video of an episode of The One Show in which Carol Vorderman, with Dr Sara Santos, demonstrates and discusses some maths associated with wrapping cubes and cuboids. It was shared by Tazreen Kassim-Lowe

The Mathematics of Festive Crafts which is one of the pages on the website of *Creative Star Learning Ltd.*, all the pages of which present 'practical ideas about learning and playing outdoors that have been written and/or curated by' Juliet Robertson, who is a former education consultant. Photos on the page show 'rustic snowflakes'. Pupils can be challenged to weave together sticks to make shapes, and explore the rotational symmetry, angles between sticks, and relations between them, in what they make. It was shared by Tazreen Kassim-Lowe

An example of a rich data classification task which is an *Espresso* article from Cambridge Mathematics. It summarises 'what research suggests about teaching statistics using rich data sets'. It was shared by Tazreen Kassim-Lowe

Quorum-sensing which is a task from NRICH suitable for students aged 16 to 18. It is about the rate of decay of bacterial cells that cause Rudolph's nose to glow! It was shared by Mary Pardoe

Reindeer Festive Card Sort which are collaborative problem-solving activities from the ATM. They were designed to help develop both individual and group problem solving skills of pupils. It was shared by Mary Pardoe

Young Children Learning Mathematics which is a downloadable PDF collection, put together years ago by Dr Helen Williams, of (not recent) articles from the ATM's journal, *Mathematics Teaching*. It contains the article *How Many Snow People* by Penny Latham, that was mentioned during the chat. It was shared by Mary Pardoe

Lobster Pots which is a game from *MathCounts* described on an illustrated page which is free-to-download as a pdf file. It was shared by Karen Hancock

Pirate game generator which is a resource created by Craig Barton. It was shared by Mr Hawes

Archived NCETM Secondary Magazine 75 which contains the *Mince Pies* and *Quilt* Christmas tasks by Dudeney that were shared during the chat. It was shared by Mary Pardoe

Archived NCETM Secondary Magazine 129 which contains an image of a star transformed on a coordinate grid that was shared during the chat. It was shared by Mary Pardoe

An illustrated summary of the discussions in this #mathsCPDchat follows.

The host's welcome message …

Tazreen Tershanah @tershanah · 15h

It's that time again. Thanks for joining this #mathscpdchat: How can time-of-year themed maths tasks generate meaningful new learning?

Don't forget to use the hashtag: #mathscpdchat

I will do my best to respond to posts and comments thoughtfully. Thanks for your patience.

… generated this comment-and-reply:

MrHawesMaths @HawesMaths · 15h

Replying to @tershanah

We have several thermometers placed around the school. Useful for temp investigations this time of year. Quite cold and then fluctuates quite a bit over the day. #mathscpdchat

Tazreen Tershanah @tershanah · 15h

Replying to @HawesMaths

#mathscpdchat Thanks for this @HawesMaths . A great example of all year round maths using real life examples of linear number systems. 👍🏽

This was followed by a poll, which included Question 1, …

Tazreen Tershanah @tershanah · 16h

Let's start the discussion with a poll. #mathscpdchat

👇

Question 1. When are you most likely to bring in time of year themed tasks? Answer the poll and comment on why.

Don't forget to use the hashtag! #mathscpdchat

… and which, after two more tweets from the host, …

Tazreen Tershanah @tershanah · 16h

Replying to @tershanah

#mathscpdchat Winter seems to be taking the lead at the moment. Why do we think that is?🤔

Tazreen Tershanah @tershanah · 16h

#mathscpdchat It seems as though we are discussing this topic at the right time of year!

… generated more replies and discussion than any of her later main questions. The following conversation picked-up from Tazreen's comment above:

MrHawesMaths @HawesMaths · 16h

Replying to @tershanah

I like this time leading into winter and the other side. Nov - Feb. Can do lots of topical work. Fireworks, Remembrance, Christmas and then new year. Quite a lot to be explored. #mathscpdchat

Tazreen Tershanah @tershanah · 16h

Replying to @HawesMaths

#mathscpdchat There does seem to be a bottle neck of topical work Nov-Feb, doesn't there? How do you bring the maths out of the topical work?

MrHawesMaths @HawesMaths · 16h

Replying to @tershanah

I remember once (long ago) doing an lcm task on fireworks banging at the same time.I have done questions involving standard index form for remembrance looking at numbers of soldiers etc. Christmas is obvious. And in the new year,we look ahead to any cool dates ahead #mathscpdchat

There was also this very long discussion, starting with a reply by Maryse to Tazreen's question:

(note: Maryse's reference to 'A level colouring' was described in more detail, and a link to the resource supplied, in another later conversation shown below.)

Tazreen Tershanah @tershanah · 16h

Replying to @AllThingsMaths

So pleased you mentioned wrapping presents! There is some great real life maths on the gift wrapping: youtube.com/watch?v=_5Mksl... #mathscpdchat

youtube.com
Maths of Christmas Wrapping - The One Show
Perfect wrapping (using mathematics) at the BBC The One Show, introduced by Carol Vorderman wit...

Tazreen Tershanah @tershanah · 20h

Speaking of Christmas Wrapping: #mathscpdchat

Helen Madeley @MadeleyHelen · Oct 1

Just came out of this session. It was fascinating! We ended up approximating root 2. The three triangles created by that fold below, were all Pythagorean. Who knew!? Thank you Geoff Faux #ATMVirtual22 Brilliant. twitter.com/ATMMathematics...

Show this thread

Teachers of Maths @ATMMathematics · Oct 1

ATM Virtual Conference. Geoff Faux, Starting with a square sheet of paper. Geoff folding in thirds, is using Pythagoras, and using Algebra. #ATMVirtual22

1:04 PM · Oct 1, 2022 · Twitter Web App

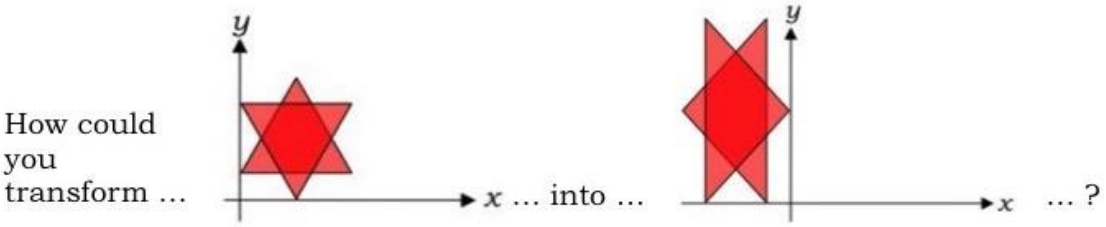
Mary Pardoe @PardoeMary · 16h

Replying to @AllThingsMaths and @tershanah

But Christmas is a 'gift' … can modify tasks you would have done anyway to fit the season?

EG adapted from here: ncetm.org.uk/media/iz5nj2kx..

#mathscpdchat



Maryse @AllThingsMaths · 16h

Replying to @PardoeMary and @tershanah

The shapes are a gift for exploring! The students see it as the obligatory "fun" (which makes me a little sad that I don't manage to inspire that excitement at other times!)

#mathscpdchat

Tazreen Tershanah @tershanah · 16h

Replying to @PardoeMary and @AllThingsMaths

#mathscpdchat Thanks for this @PardoeMary. The shapes of Christmas really are a gift.

Tazreen Tershanah @tershanah · 16h

Replying to @AllThingsMaths and @PardoeMary

#mathscpdchat So much great conversation about symmetry for a lot of seasonal festivals in face. I bet you do manage to inspire excitement at other times. Tell me a bit more about shapes and how they are a gift for exploring.

Tazreen Tershanah @tershanah · 16h

Replying to @tershanah @AllThingsMaths and @PardoeMary

#mathscpdchat *in fact

Maryse @AllThingsMaths · 16h

Replying to @tershanah and @PardoeMary

Exploring tessellation, or making decorations (we moved 3D shape near to Christmas on the SoW, so used nets to make them), we created cards using graphs, rotation and patterns.

#mathscpdchat

Maryse @AllThingsMaths · 16h

Replying to @AllThingsMaths @tershanah and @PardoeMary

It was through approaching thematically that I first taught mixed attainment btw

#mathscpdchat

Tazreen Tershanah @tershanah · 16h

Replying to @AllThingsMaths and @PardoeMary

#mathscpdchat Approaching a concept thematically may allow for wider net of connections to be cast. Can you let us know what you mean by thematically?

Maryse @AllThingsMaths · 16h

Replying to @tershanah and @PardoeMary

We would do lessons based around a topic such as sports. Then a certain number of lessons to explore, which integrated many skills. E.g. speed, rounding, accuracy, conversions, ordering numbers.
#mathscpdchat

Joanne Green @MsJoanneGreen · 22h

Would these be Olympic sports, World Cup, and Wimbledon?
olympics.com/en/news/breaki.. Break dancing is now an Olympic sport.

Maryse @AllThingsMaths · 22h

Replying to @MsJoanneGreen

Tbh we'd use the facilities PE weren't using at the time! Lots of athletics. But we did use the old ice skating for scores to intro quartiles and we did F1 in season. #mathscpdchat

Maryse @AllThingsMaths · 22h

Replying to @AllThingsMaths and @MsJoanneGreen

If we knew a student didn't like something, or was anxious, we purposely asked them to be an outlier. We also deviated e.g. skipping 100m rather than running.

#mathscpdchat

Maryse @AllThingsMaths · 16h

Replying to @AllThingsMaths @tershanah and @PardoeMary

Wimbledon was chaotic. We'd watch a match and each group had to count a certain thing, such as strokes in a rally, or aces or serving speeds. Then we'd create the stats the BBC provide. Check against theirs after.
#mathscpdchat

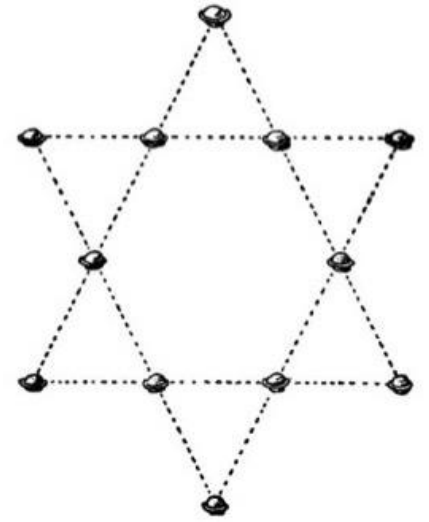
Mary Pardoe @PardoeMary · 16h

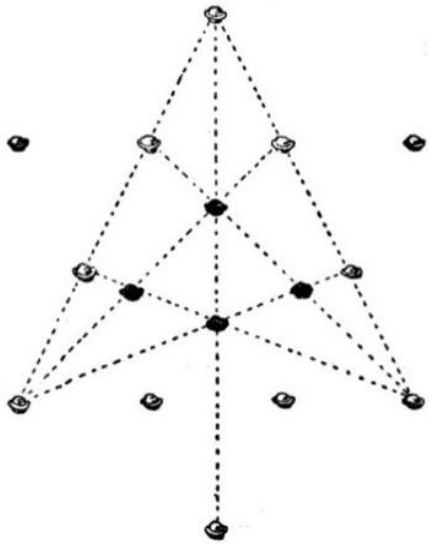
Replying to @tershanah and @AllThingsMaths

This (very old) example is a bit related to shapes? (Dudeney ...from here: ncetm.org.uk/media/3ablavzb.. #mathscpdchat Can 'open it up' somewhat ... as shown in third pic?

The Twelve Mince-Pies

It will be seen in our illustration how twelve mince-pies may be placed on the table so as to form six straight rows with four pies in every row. The puzzle is to remove only four of them to new positions so that there shall be seven straight rows with four in every row. Which four would you remove, and where would you replace them?





Is this the only solution?

Challenge students to create their own mince-pies puzzles with various different numbers of mince-pies. They should provide at least one solution to each puzzle that they create.

What is the least number of mince-pies with which it is possible to form a puzzle of this kind?

Can they create more than one puzzle with one initial arrangement of mince-pies?

Give mince-pies as prizes?

Tazreen Tershanah @tershanah · 16h

Replying to @PardoeMary and @AllThingsMaths

Oldie but a goodie! #mathscpdchat

Tazreen Tershanah @tershanah · 20h

Replying to @PardoeMary and @AllThingsMaths

#mathcpdchat The hexagonal nature of these is reminding me of snowflakes and the opportunity to consolidate or even re-introduce (if you like) multiples of 6? @nrichmaths is great for meaningful themed activities: nrich.maths.org/5352

Tazreen Tershanah @tershanah · 15h

Replying to @AllThingsMaths and @PardoeMary

creativestarlearning.co.uk/maths-outdoors...

A website which explores the mathematics of festive crafts. #mathscpdchat

creativestarlearning.co.uk

The Mathematics of Festive Crafts

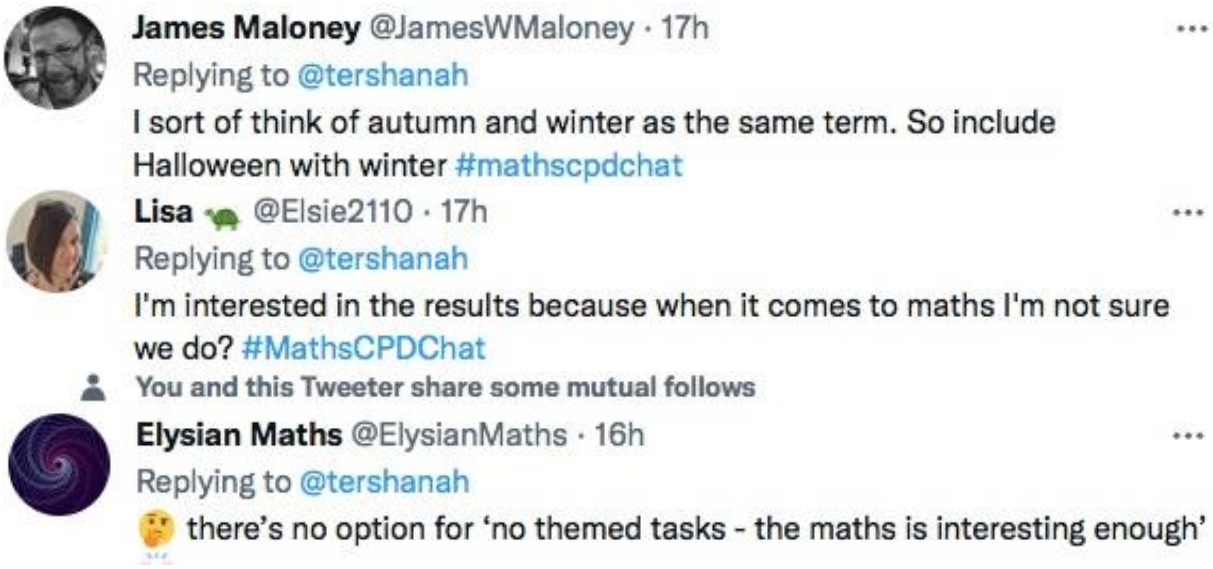
Nature art for Christmas

This next conversation shows what Maryse was indicating by 'A level colouring' near the beginning of the previous long discussion:

In response to Tazreen's first main question, that she asked with her poll …

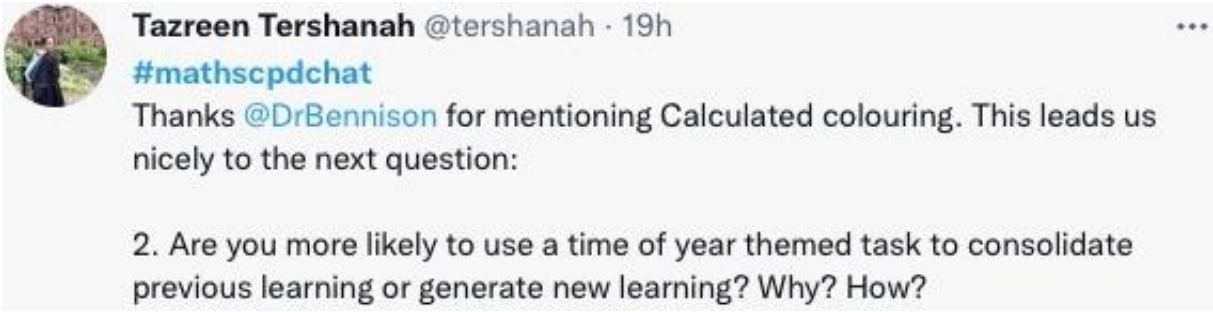
Question 1. When are you most likely to bring in time of year themed tasks?

… there were also these three 'single' replies:



The host's (Tazreen Kassim-Lowe's) second and third main questions prompted replies suggesting that time-of-year themed tasks are more likely to be used with the aim of helping students to consolidate some previous learning, rather than as starting points for new learning. And the third main question, asking for characteristics of meaningful (for pupils/students) tasks, generated some examples … which the sequence of (linked-to-Twitter) screenshots below show. In those replies and conversations **only** you can **click on any screenshot of a tweet to go to that actual tweet on Twitter.**

The second main question from Tazreen Kassim-Lowe …



… generated interchanges between James Maloney and Tazreen Kassim-Lowe …

James Maloney @JamesWMaloney · 19h

Replying to @tershanah and @DrBennison

Consolidate mostly, but often the theme does generate an engagement that helps new learning. #mathscpdchat

Tazreen Tershanah @tershanah · 19h

Replying to @JamesWMaloney and @DrBennison

Thanks @JamesWMaloney for reminding us that new learning/ consolidation of previous learning needn't be mutually exclusive. #mathscpdchat

… and between Tom Bennison and Maryse:

Tom Bennison @DrBennison · 19h

Replying to @tershanah

Consolidate previous learning for (certainly for the example I gave. Some of the questions I write are surprisingly challenging ;)

Maryse @AllThingsMaths · 19h

Replying to @DrBennison and @tershanah

We use 'em!

Tazreen Kassim-Lowe's third main question …

Tazreen Tershanah @tershanah · 21h

#mathscpdchat Now for a tricky question!

Question 3: What makes a time of year themed task meaningful? Examples and resources welcome.

… prompted this comment from Maryse …

Maryse @AllThingsMaths · 22h

A3

Link, embed, enrich, enhance the curriculum. My interpretation of this includes stepping outside the curriculum. I think one reason it's so exciting is some staff can really explore their own interests that may lie wider.

#mathscpdchat

… and responses and examples from Tazreen Kassim-Lowe herself and Mary Pardoe, with comments from Dr Helen Williams:

Tazreen Tershanah @tershanah · 21h

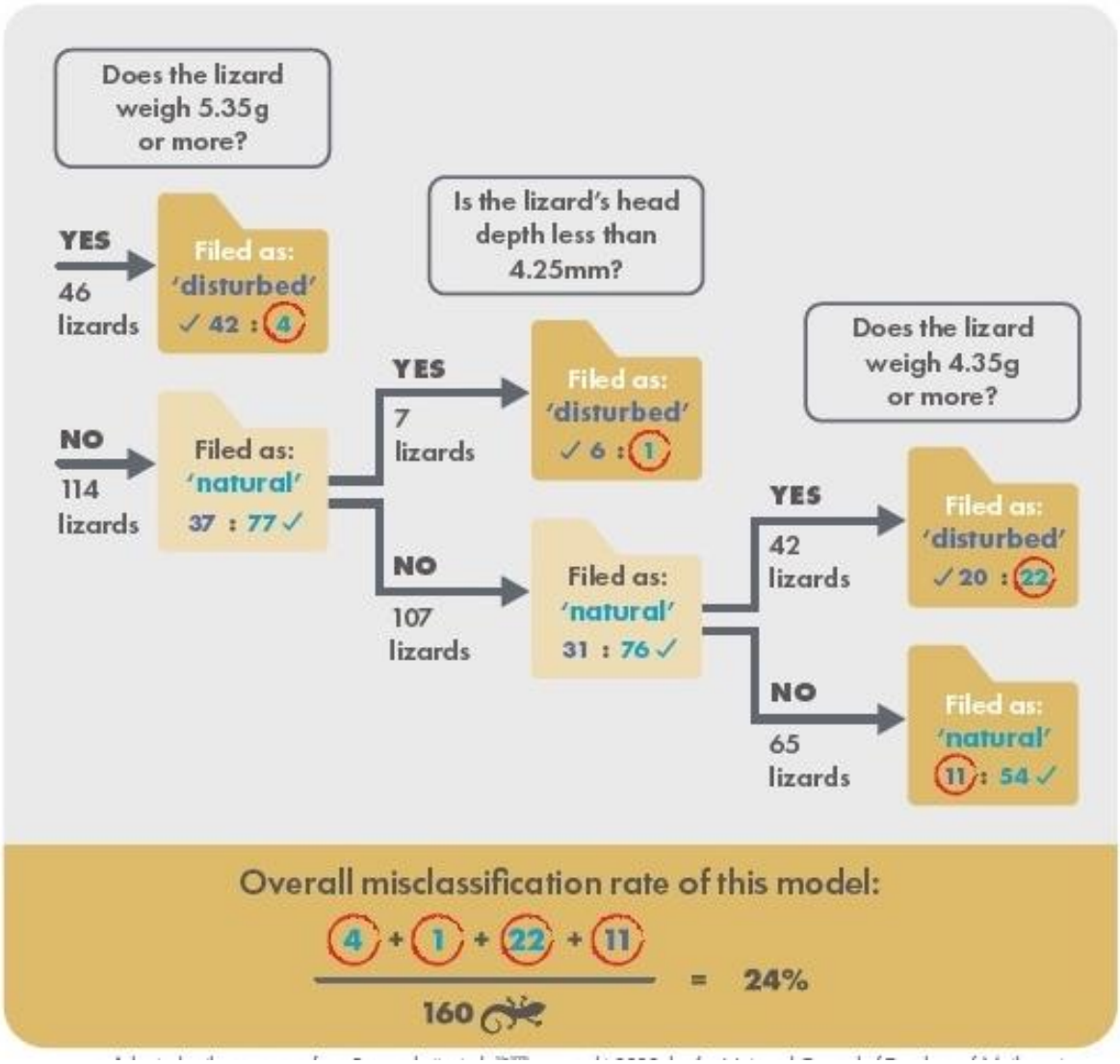
Replying to @tershanah

As already mentioned this evening. There is so much scope to create rich data sets to explore and interpret. #mathscpdchat Although not explicitly linked to themed year activities, this @CambridgeMaths Espresso is a snapshot of research on rich data sets:cambridgemaths.org/espresso/view/

An example of a rich data classification task

160 lizards were captured from two different habitats:
disturbed (developed by humans) and
natural (no human development).

Are there ways of classifying the lizards that might help us predict whether a randomly chosen lizard has come from a disturbed or natural habitat?



and from Mary Pardoe and Kathryn Darwin …

Mary Pardoe @PardoeMary · 20h

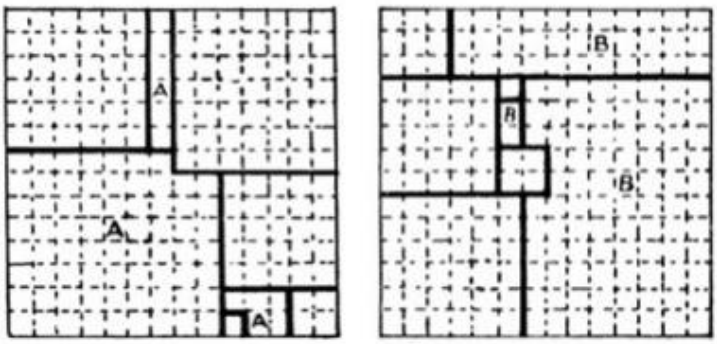
Replying to @tershanah

If/when they provide scope for thinking (mathematically) and are about something that's likely to have been experienced (at least second-hand) by students? … e.g. quilts … again this is very old (Dudeney again)
ncetm.org.uk/media/iz5nj2kx.. #mathscpdchat

Mrs. Smiley's Christmas Present

Mrs. Smiley's expression of pleasure was sincere when her six granddaughters sent to her, as a Christmas present, a very pretty patchwork quilt, which they had made with their own hands. It was constructed of square pieces of silk material, all of one size, and as they made a large quilt with fourteen of these little squares on each side, it is obvious that just 196 pieces had been stitched into it. Now, the six granddaughters each contributed a part of the work in the form of a perfect square (all six portions being different in size), but in order to join them up to form the square quilt it was necessary that the work of one girl should be unpicked into three separate pieces. Can you show how the joins might have been made? Of course, no portion can be turned over.

The first step is to find six different square numbers that sum to 196. For example, 1 + 4 + 25 + 36 + 49 + 81 = 196; 1 + 4 + 9 + 25 + 36 + 121 = 196; 1 + 9 + 16 + 25 + 64 + 81 = 196. The rest calls for individual judgment and ingenuity, and no definite rules can be given for procedure. The annexed diagrams will show solutions for the first two cases stated. Of course the three pieces marked A and those marked B will fit together and form a square in each case. The assembling of the parts may be slightly varied, and the reader may be interested in finding a solution for the third set of squares I have given.



Are there only three solutions? When comparing their solutions students will need to decide what will be their criteria for 'sameness'.

Challenge students to make up their own square patchwork quilt puzzles for quilts with various numbers of small squares on each side.

What is the minimum number of small squares for which it is possible to create a puzzle of this kind? For example, can you make a puzzle for a 4-by-4 quilt?

Tazreen Tershanah @tershanah · 20h

Replying to @PardoeMary

#Mathscpdchat Great minds @PardoeMary. Geoff Faux has done some great work on this too with @ATMMathematics: nrich.maths.org/search/?search..

I think there is an opportunity to talk about quilts around Christmas but also black history month, too.

One of the three schools used their paper quilt as a magic carpet in their Christmas production of

The quilt at the end of the morning

Afterword 1
Quilt-making follow-up session 15th November 2007

As a follow-up to the quilt-making workshop, we extended work started by the Y6 pupils and introduced this to the Y5 children. As the Y5s had not experienced the first workshop, I paired the Y6s with the Y5s and I asked the Y6 children to adopt a supportive role.

The work Y6 produced during this session

Mary Pardoe @PardoeMary · 22h

Replying to @tershanah and @ATMMathematics

Love this! #mathscpdchat (Perhaps he'd seen ... or even done ... Dudeney's problem?🤣)

Mary Pardoe @PardoeMary · 21h

Replying to @PardoeMary @tershanah and @ATMMathematics

There's more at the ATM! EG this ...atm.org.uk/Reindeer-Festi... #mathscpdchat

Reindeer Festive Card Sort

Sign

Here are two card sorting activities to use with your class in the run up to Christmas.

Use these collaborative problem solving activities to develop both individual and group problem solving skills while working in groups to solve the problem.

In order to solve the problem children should read and make sense of the problem. Ascertain what they are being asked to do. Find parts of the problems they can solve. Have Fun!

Reindeer Dinner - find the order that the Reindeer arrived for their dinner.

This activity has been inspired from activities included in the ATM Publication **It Makes you Think**, KS2

Reindeer Pudding Thief - Find out which reindeer ate Santa's Christmas pudding

This activity has been inspired from activities included in the ATM Publication **We Can Work it Out**, KS2, lower KS3

Tazreen Tershanah @tershanah · 20h

Replying to @tershanah @PardoeMary and @ATMMathematics

#mathscpdchat Speaking of @ATM Their Calendar images are sensational and include questions underneath to generate mathematical thinking.

Tazreen Tershanah @tershanah · 21h

Replying to @tershanah @PardoeMary and 2 others

#mathcpdchat If you are a member there are also archived calendar images dating back a few years!

Mary Pardoe @PardoeMary · 21h

Replying to @PardoeMary @tershanah and @ATMMathematics

... and this, about snow people, is in an @ATMMathematics collection put together by @helenjwc

#mathscpdchat

HOW MANY SNOW PEOPLE? Penny Latham

Between 1986 and 1989 a group of teachers met regularly at Abbey Wood Mathematics Centre, London, as a group affiliated to PrIME [1] in order to look at mathematical processes. The following description of a lesson with a group of seven Y2 pupils was one of the contributions.

Dr Helen apparently awardwinning Williams @helenjwc · 21h

Replying to @PardoeMary @tershanah and @ATMMathematics

Oh my goodness - that's an old one !

Dr Helen apparently awardwinning Williams @helenjwc · 21h

Replying to @helenjwc @PardoeMary and 2 others

I notice - What a lovely Q to start this thread. And one that is worth bringing up at a meeting to discuss at some depth.

A conversation, with examples, was generated by the following comment, which was directed at the chat, but was not a response to any particular one of the host's four main questions:

MrHawesMaths @HawesMaths · 20h
I know it's cheeky but I do do themed versions of the pirate game. #mathscpdchat

Tazreen Tershanah @tershanah · 20h
Replying to @HawesMaths
#mathscpdchat Can you outline the Pirate Game for those of us who don't know what it is? Is it creating new learning or consolidating previous learning?

MrHawesMaths @HawesMaths · 20h
Replying to @tershanah
Neither, really just good old fashioned fun I suppose but students love it and of course there is scope to add learning in there if you do wish. This blog explains it mrbartonmaths.com/blog/pirate-ga... #mathscpdchat

mrbartonmaths.com
Pirate game grid generator: TES Maths Resource o...
An updated version of the ever popular end of term Pirate Game, this time with an infinite grid ...

Maryse @AllThingsMaths · 20h
Replying to @HawesMaths
Love ☠️ 🏴‍☠️ game

Karen @karenshancock · 20h
Replying to @HawesMaths
I'm more of a Lobster Pots fan. #mathscpdchat

SG @audiohoser_sg · 15h
Replying to @karenshancock and @HawesMaths
Ooh, I had forgotten this one...it is play day tomorrow with my Year 8's! We usually have a fun problem solving lesson half term tests but I might do this instead.

MrHawesMaths @HawesMaths · 20h
Replying to @karenshancock
Love a lobster pots game as well!!

Lucyjc1612 @Lucyjc1612 · 20h
Replying to @HawesMaths and @karenshancock
The what now?! Do tell!! 🦞

MrHawesMaths @HawesMaths · 20h

Replying to @Lucyjc1612 and @karenshancock

mrbartonmaths.com/blog/tes-maths... I tend to do lots of variation on the probabilities or even get the mini whiteboards out for quick fire questions. If over half get it right, good weather, over half wrong, stormy. Tie? Rock Paper Scissors shootout vs me! #mathscpdchat

mrbartonmaths.com
TES Maths ROTW 21 - The Lobster Game - Mr Bart...
If you are looking for a good end of term activity, then look no further than The Lobster Game. ...

MrHawesMaths @HawesMaths · 20h

Replying to @HawesMaths @Lucyjc1612 and @karenshancock

I pull out cards, counters, dice, 20 sided dice, my favourite is the 'roll off' for double money. Two students, three dice. One student is good weather, one student is stormy. Highest total wins. Super competitive #mathscpdchat

A tweet to #mathscpdchat during the hour of the discussion, that was probably not intended to be part of the chat, nevertheless prompted the sharing of a time-of-year themed task intended to challenge more 'advanced' secondary students:

Matt Roberts @Mroberts90Matt · 20h

@SarahFarrellKS2 has excellent views into primary Maths - a must listen to get thoughts on improving the teaching and learning of times tables **#mathscpdchat**

Mary Pardoe @PardoeMary · 20h

Replying to @Mroberts90Matt and @SarahFarrellKS2

It's not only primary-age students who sometimes do time-of-year themed tasks! This is an NRICH task (here: nrich.maths.org/7411) #mathscpdchat

Quorum-sensing

Age 16 to 18 Short
Challenge Level ★★

Rudolph's nose glows because it is home to a species of bacteria, *Vibrio rudolphi*, that luminesces when it reaches a certain population density. It detects the size of its population by quorum sensing: each bacterial cell releases a signal molecule, X, at a rate of 1 per minute and if the concentration of X is greater than or equal to 10^{11} cells/ml, the bacteria will glow. X decays with a half life of ten minutes but the bacteria divide every 30 minutes.

Sadly, Rudolph catches a nasty cold, which, by the time he is better, has killed all of the bacterial cells in his nose except for one. Santa is worried: there are only 24 hours left until Christmas. Will Rudolph's nose be glowing again in time?

If you need any data that is not included, try to estimate it: Santa wants an answer now, so that he can make alternative plans if need be.

Did you know ... ?

The mathematics of rates and half-lives are of great importance in mathematical biology where growth factors are often in competition with decay factors.

Quorum-sensing

Age 16 to 18 Short
Challenge Level ★★

The bacteria divide twice an hour, so divide 48 times in 24 hours.

Thus 2^{48} bacteria cells after 24 hours, assuming the bacteria split in two when they divide.

X has half life of 10 mins, so there are 6×24 half lives in 24 hours. We only consider the bacteria released near the end then, as very little from the beginning will be left after 24 hours.

Now $10^{11} < 2^{48}$ so if Rudolph's nose was 4mL, his nose will certainly be glowing.

Assuming instead that Rudolph's nose was 4mL, we need the concentration of bacteria to be 4×10^{11}.

After 23.5 hours there were 2^{47} cells and 2^{47} have just been released. Right at 24 hours, there will be $\frac{2^{47}}{2} + 2^{48}$ cells, which is greater than 4×10^{11}.

So Rudolph will have a glowing nose.

Tazreen Tershanah @tershanah · 20h

Replying to @PardoeMary @Mroberts90Matt and @SarahFarrellKS2 #mathscpdchat There really is something for everyone. What a brilliant resource. I was thinking about reindeer multiplicatively e.g. 8 reindeer how many legs? How many eyes? for the younger learners.

The host's final question, which was posted a few minutes before the official end of the chat, …

Tazreen Tershanah @tershanah · 22h

Final question of the evening

4. What is your main takeaway from the #Mathscpdchat tonight? Is there anything new you would like to try?

…prompted only one reply:

Joanne Green @MsJoanneGreen · 22h

@tershanah #mathscpdchat that because the national curriculum doesn't have time of year themed learning, that maths learning in this was is haphazard and depends upon the enthusiasm of the school.

The host ended the chat with these thoughts:

Tazreen Tershanah @tershanah · 22h

We are at the end of the #mathscpdchat!
Ways to make time-of-year themed mathematics meaningful:
1. As a rich context to explore previous learning
2. As a real life data set
3. As an opportunity to explore real life maths around us
4. By making it fun and engaging!