#mathscpdchat 23 November 2021

Now that we are well into the 2021/22 school year how are you helping your pupils make good progress in maths?
Hosted by [Kathryn Darwin](#)

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

The links shared during this discussion were:

[KS2-4 Scheme of Learning](#) (scroll down to the bottom of the page) which is a resource created and written by [Charlotte Hawthorne](#). It includes, for each year from Y5 to Y11, an 'Overview' of learning planned, and a collection of 'Objectives and Resources'. There is also a 'KS3 Closing the Gap Document' and 'A note on the Don Steward Tasks'. It was shared by [Mr Taylor](#)

[Complete Mathematics: Teacher CPD](#) which is where on the Complete Mathematics website you will find brief descriptions of the many different courses that are offered, and collections of videos

of Complete Mathematics conference sessions, with links to further information about them. It was shared by Atul Rana

Maths White Board which is a collection of interactive resources created by Matt Woodfine. It includes 'Teaching Tools', such as 'Maths White Board' ('I do/We do/You do' modelling tasks, 'mini-whiteboard tasks', 'securing exercises' and 'retrieval practice questions'). 'Blank White Board' and 'Term Planner Board'. There are also 'Printables' (such as a 'Domino Sheet Board' and a 'Code Breaker Board'), 'Games', and 'Class Interaction tools'. It was shared by Catherine Edwards

MyMaths Primary resources which are 'time-saving resources that supplement your Primary school's curriculum' and are also described as comprising 'a whole-school interactive resource for use in the classroom and at home'. It was shared by Rute Castro Silva

MyMaths Secondary resources which are 'time-saving resources that support your whole secondary school' and are also described as 'written by teachers for teachers and their students' and as offering 'everything you need to teach mathematics'. It was shared by Rute Castro Silva

Go Teach Maths which is a website providing 'over 5500 hand-crafted resources for maths teachers of students in Key Stages 2 and 3' and for those preparing for GCSE and IGCSE. They include, for example, PowerPoint and worksheet resources that are intended to be used for revision. It was shared by Katy Sherwin

Maths Genie which is a website providing resources intended to support the preparation of students for Key Stage 2 SATs, GCSE and A level. It was shared by Claire Ollerenshaw

Times tables: the best ways to learn which is an article by John Bald on The School Run website. It was shared by John Bald

The screenshots below, of chains of tweets posted during the chat, show conversations prompted by one of Kathryn's questions. Teachers discussed resources and ideas that they had enjoyed this term using for the first time in their teaching, and that supported well their pupils' learning, and they also mentioned some experiences that *they* learnt from. **Click on any of these screenshots-of-a-tweet to go to that actual tweet on Twitter.**
The conversations were generated by this question from Kathryn Darwin:

Kathryn MCCT 👩 @Arithmaticks · 20h ...
Well... we are a positive bunch this evening! 😬
Let's think about the BEST thing that has happened in/for your MATHS teaching since being back at school... go on, I dare you!
#MathsCPDChat

and included these from Helen Konstantine, Kathryn Darwin, Mr Taylor and Charlotte Hawthorne:

Miss Konstantine @giftedHKO · 20h ...
Replying to @Arithmaticks
Negative numbers. The workshop @mrshawthorne7 did and using two coloured counters to teach it #mathscpdchat

Kathryn MCCT 👩 @Arithmaticks · 20h ...
How did it go in the classroom? I have LOVED it with my Year 7 #mathscpdchat

Miss Konstantine @giftedHKO · 20h ...
Really good. The best part is the confidence low attainers have in working with negatives. No mention of two negatives etc. #mathscpdchat

Kathryn MCCT 👩 @Arithmaticks · 20h ...
I have found this too :) Makes me so happy that they talk about it more positively! (ahaaaa) #MathsCPDChat

MrTaylorMaths @MrTaylorMaths2 · 20h ...
Love that my year 7s genuinely say; "Subtraction can be modelled as the addition of the additive inverse".

Charlotte Hawthorne @mrshawthorne7 · Nov 23 ...
Honestly, one of the best changes in my teaching practice has to be teaching operations with directed numbers using two colour counters. I won't apologise for banging on about it. So many people tell me the same thing too! #mathscpdchat

these from Simon Ball and Kathryn Darwin:

Simon Ball @ballyzero · 20h ...
Replying to @Arithmaticks
Smoothest I've taught linear interpolation for a long while, I would say. Real emphasis on the double number line idea, and making it visual. #mathscpdchat

Kathryn MCCT 👩 @Arithmaticks · 20h ...
LOVE a double number line! DO you think the representation was the key? #mathscpdchat

Simon Ball @ballyzero · 19h

I feel it's supported a number of them quite well. I went deeper on the explanation than I normally would, to nail down the links and why I was doing the things I was doing. #mathscpdchat

these from Mr Taylor, Kathryn Darwin and Catherine Edwards:

MrTaylorMaths @MrTaylorMaths2 · 20h

Replying to @Arithmaticks

Manipulatives and using more representations. #mathscpdchat

Kathryn MCCT 🧑 @Arithmaticks · 20h

Can you give us some examples of ones that have been successful? #mathscpdchat

MrTaylorMaths @MrTaylorMaths2 · Nov 23

Replying to @Arithmaticks

2 colour counters and algebra tiles have been awesome.

Tried getting into bar modelling again as well.

Catherine Edwards @Edwards08C · 19h

I've got Y7 nurture and it's been really successful having a help yourself box of manipulatives to support. In fact I need to order some more beads on a string (sure they have a proper name) as they have been really popular. #mathscpdchat

Kathryn MCCT 🧑 @Arithmaticks · 19h

Oooh interesting, what kinds of things are they using them for? #mathscpdchat

Catherine Edwards @Edwards08C · 19h

So nurture in Y7 we focus on the four operations, number sense and early fractions, they are mostly working at Y1/2 level and some below. Currently we are looking at subtraction with exchanges, the number string makes it easier to count back over ten. #mathscpdchat

Kathryn MCCT 🧑 @Arithmaticks · 19h

I love this idea. We don't have any of these but I may be tempted to get some now! We started Numicon this year and our nurture group LOVE it #mathscpdchat

Catherine Edwards @Edwards08C · 19h

I have a tray of numicon, some of them are familiar and do use it, but I think unless you've got a good idea of which shape is which number it's not so easy to use.
I have done a full numicon scheme before, might do some more work with them. #mathscpdchat

Kathryn MCCT 🧑 @Arithmaticks · 19h

We have the Big Ideas pack and it is doing wonders for them - the year groups above are also benefitting as the teachers that have had training then take it to use with them too! Lots of our feeders had it which helps with familiarity #mathscpdchat

these from Rachel Walker and Kathryn Darwin:

Rachel Walker @mrswalkerteach · 20h

Replying to @Arithmaticks

Using Power Maths as a scheme, freeing me up to think about how to teach each bit of the lesson and not trying to come up with quality questions myself. My time is so much better spent now!

Kathryn MCCT 🧑 @Arithmaticks · 20h
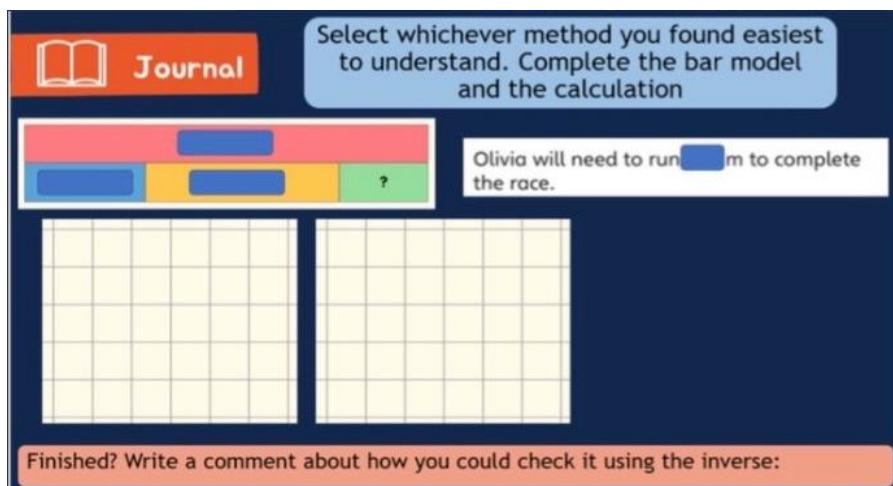
Tell us more... primary/secondary? #mathscpdchat

Rachel Walker @mrswalkerteach · 19h

Primary. It's produced by Pearson to support the mastery approach through primary. We already had a lesson structure approach but this supports it brilliantly. Here's an example of how I've used it today - bar model is part of the visual package that comes with it

Kathryn MCCT 🧑 @Arithmaticks · 19h

Oooh interesting - so you have lots of questions pre-planned and the representations to suport too? #mathscpdchat

Rachel Walker @mrswalkerteach · 19h

Well you can literally follow it as a scheme if you want to but we chose to just tweak our existing approach as that works in our context. It includes fluency activities (like this - my slide, their activity) as well as good IWB representations including number lines&PV counters.

Fluent in 5

Think about the part-whole models that would represent these calculations.

Complete the table.

Starting calculation	Inverse calculation to check
5,540 – 3,000 = ☐	☐ + 2,997 = 5,540
4,582 + 3,499 = ☐	
☐ + 2,999 = 8,000	
9,747 – ☐ = 3,543	

Is this correct? How do you know?

5540 — 3000 · 2297

these from Richard Dare and Kathryn Darwin:

Richard Dare @dare_richard · 20h

Replying to @Arithmaticks

@NCETMsecondary Mastery Specialist training and @CharteredColl #CTeach courses! 😃
#mathscpdchat

Kathryn MCCT @Arithmaticks · 20h

Tell us more! What about them has been so good? #mathscpdchat

Richard Dare @dare_richard · 20h

Both challenging, in a good way, but excellent resources and super interesting!

Kathryn MCCT @Arithmaticks · 20h

Best thing you have learned on both so far ? #mathscpdchat

Richard Dare @dare_richard · 20h   •••

#Cteach has kept me focused on improving three main things, and made me write essays.
Mastery Specialist course has kept me enthused about representations and variation. Keeps reminding me of the depth in KS3 maths. Great! #mathscpdchat

and this from Vicky Osbourne:

Vicky Osborne @CheerVix · 19h   •••

Replying to @Arithmaticks

Because I'm teaching less I have down time to really think about lessons; how they went and also what I will do next. The space from the frantic nature of a school as a workplace has really helped me find my own calm in the classroom! #mathscpdchat

(to read the discussion sequence generated by any tweet look at the 'replies' to that tweet)

The host, Kathryn, asked the question (her second question) that generated the discussions shown above (in the sequences of screenshots linked to the actual tweets) in response to the replies people had given to her first question …

Kathryn MCCT 🙋 @Arithmaticks · 20h   •••

So we've been back in school for over a half term now! If you had to summarise it in one word… how has it been so far? #MathsCPDChat

… which had included the following one-word 'descriptions' of contributors' teaching-experiences so far this term:

exhausting,

hard,

energising,

tiring,

busy,

whirlwind,

non-stop,

draining,

overloaded.

Discussions about some of these one-word responses shed more light on teachers' reasons for giving them … in conversations such as this …

Martyn (He/Him) @martynyeouk · 20h   •••

Replying to @Arithmaticks

Hard #mathscpdchat

Kathryn MCCT 🙆 @Arithmaticks · 20h   •••
Oooh interesting. Why so? Logistics? Teaching itself? #mathscpdchat

Martyn (He/Him) @martynyeouk · 20h   •••
Logistics - been very short staffed :(#mathscpdchat

Kathryn MCCT 🙆 @Arithmaticks · Nov 23   •••
Again, I don't think you are alone in this. How have you been trying to make it work? Anything worked really well? #mathscpdchat

Martyn (He/Him) @martynyeouk · Nov 23   •••
Been trying to find ways to engage pupils and moving them at the same pace as little opportunities for differentiation #mathscpdchat

Kathryn MCCT 🙆 @Arithmaticks · Nov 23   •••
What has worked for this so far? #mathscpdchat

Martyn (He/Him) @martynyeouk · Nov 23   •••
Been slimming down topics and focusing on key elements! #mathscpdchat

Kathryn MCCT 🙆 @Arithmaticks · 19h   •••
This is what I was wondering. More topics at surface level or key ideas in depth? #mathscpdchat

Martyn (He/Him) @martynyeouk · 19h   •••
Yes - key ideas in depth trying different ways of looking at a concept #mathscpdchat

Richard Dare @dare_richard · 19h   •••
Yes! Multiple perspectives and deeper links! #mathscpdchat

Maryse #Antiracist @AllThingsMaths · 19h   •••
Links... yes... there's so much opportunity to embed and apply, and refresh different topics through new topics, improving recall

#mathscpdchat

… and this:

Catherine Edwards @Edwards08C · 19h   •••
Replying to @Arithmaticks
Energising and exhausting! #mathscpdchat

Kathryn MCCT 🙆 @Arithmaticks · 19h   •••
One word Catherine!!! 😋 Please elaborate! #mathscpdchat

Catherine Edwards @Edwards08C · 19h

Sorry, was just going to go with energising, but realised I'm knackered too 🤣

New role is energising, lots of challenges to really sink my teeth into. Switch from classroom teacher to SLT has been a huge working pattern change and tiring in a different way
#mathscpdchat

Kathryn MCCT 🧑 @Arithmaticks · 19h

How is the SLT role? Best thing about it so far?
#mathscpdchat

Catherine Edwards @Edwards08C · 19h

Loving it! Best thing so far is when I get to go off do my research and distil it into something easy to understand so the rest of the team can make decisions.
Plus I'm getting to learn properly how to do the timetable, which is making this nerd happy 🤓 #mathscpdchat

When Kathryn asked her third question …

Kathryn MCCT 🧑 @Arithmaticks · 22h

What has been your favourite topic to teach so far this year? Why?
#mathscpdchat

… there were only three replies:

- expanding single brackets … 'so that I had an excuse to get out the algebra tiles;
- place value … 'because we didn't stick to base TEN';
- method of differences … 'because I didn't make a pig's ear of it like I did when teaching it for the first time last year'.

In their replies to Kathryn's fourth question (about coping with student absences) …

Kathryn MCCT 🧑 @Arithmaticks · Nov 23

We all know that things in schools aren't ideal in terms of absences/cover etc. at the moment...
How are you dealing with STUDENT absences & ensuring that those isolating are still making good progress? #mathscpdchat

… teachers mentioned what they had found to be sources of support and resources, such as … 'Oak National' … 'classnotebook' … 'Hegarty' … 'WRM videos, teacher slides, worksheets and topic tests'.

This conversation took place …

Maryse #Antiracist @AllThingsMaths · Nov 23 · · ·
Replying to @Arithmaticks
WRM videos and the teacher slides. Worksheets. Answers provided afterwards. Available online where I can be to support. Then topic tests regularly to check in.

#mathscpdchat

Maryse #Antiracist @AllThingsMaths · Nov 23 · · ·
I can't ensure it tbh. I can provide it and hope they do it. I can assess their learning once they're back and then we try to fill the gaps.

#mathscpdchat

Maryse #Antiracist @AllThingsMaths · Nov 23 · · ·
We're focusing on making sure they learn, not that we teach the syllabus. So if we don't finish then that's OK. Better they learn what we've done than we've taught it all and there are huge gaps. It's working out OK so far.

#mathscpdchat

Kathryn MCCT 👩 @Arithmaticks · Nov 23 · · ·
How does that work in terms of SoW timings then? Are you planning on just continuing where you leave off next year? #mathscpdchat

Maryse #Antiracist @AllThingsMaths · Nov 23 · · ·
We've not got that far in the conversation but I think we'll carry on where we left off. We have intervention groups in tutor time so that can help fill gaps too. We do a gap analysis once a ½ term that we can refer to for planning.

#mathscpdchat

Kathryn MCCT 👩 @Arithmaticks · Nov 23 · · ·
Replying to @AllThingsMaths
I think that is more than fair - how do you deal with it if they return significantly behind the others? #mathscpdchat

Maryse #Antiracist @AllThingsMaths · Nov 23 · · ·
Tbh we tend to have gaps all over. Sometimes the students at home are ahead of those in school. So we extend and apply for those who are fine, or increase fluency, while others are working on understanding.

#mathscpdchat

Kathryn MCCT 👩 @Arithmaticks · Nov 23 ···
Sounds like a good idea - what does that look like in the classroom practically? #mathscpdchat

Maryse #Antiracist @AllThingsMaths · Nov 23 ···
I've just done 3 lessons of filling gaps. Different practice. Examples on the board. Between 3 and 5 topics being done at once. Sounds harder than it is. Corbett maths, WRM textbooks, maths genie. Some worked solutions provided too.

#mathscpdchat

In their replies to Kathryn's fifth question (about coping with staff absences) …

Kathryn MCCT 👩 @Arithmaticks · Nov 23 ···
And on the other side of things... How are you dealing with STAFF absences & cover to make sure students are able to make good progress? #mathscpdchat

… teachers mentioned consolidation booklets for students to work through independently

Catherine Edwards @Edwards08C · Nov 23 ···
Replying to @Arithmaticks
👍 maths hasn't been hit too hard, but we tend to set consolidation booklets for students to work independently as per department policy. #mathscpdchat

Kathryn MCCT 👩 @Arithmaticks · Nov 23 ···
That's lovely - are they all pre-made and ready to just lift off the shelf? #mathscpdchat

Catherine Edwards @Edwards08C · Nov 23 ···
Saved as pdf to be printed as needed. It's good when you end up with a variety of cover teachers over the week #mathscpdchat

Kathryn MCCT 👩 @Arithmaticks · Nov 23 ···
Jealous! Just questions and answers or examples too? #mathscpdchat

Catherine Edwards @Edwards08C · Nov 23 ···
Mostly Corbett maths and then cover can play the video and find the answers #mathscpdchat

… sharing classes, and providing ways in which students can communicate with an absent teacher

Maryse #Antiracist @AllThingsMaths · Nov 23

Replying to @Arithmaticks

We've a lot of part time staff which has helped enormously with this. So lots of shared classes. We've been lucky thus far.

#mathscpdchat

Kathryn MCCT 🧑 @Arithmaticks · Nov 23

Ah so it just hasn't hit as hard as it could when someone is off? What does the cover look like when someone is away? #mathscpdchat

Maryse #Antiracist @AllThingsMaths · Nov 23

I was absent today although neg results through now. I booked IT rooms. But (yes… WRM again) the vids/teacher slides and worksheets are fab for cover. Then we use Teams actively so students can ask in there if they don't understand and I can do a video up.
#mathscpdchat

Kathryn's next question …

Kathryn MCCT 🧑 @Arithmaticks · Nov 23

What has been the biggest/best change you've made to your teaching so far this year? Why did you make it? How is it supporting pupil progress?
#mathscpdchat

… generated more conversations than any of her other questions, including this one about students using mini whiteboards and about using Cuisenaire® rods and other manipulatives …

Charlotte Hawthorne @mrshawthorne7 · Nov 23

Replying to @Arithmaticks

I have a few, sorry.
1) whiteboards with pens and erasers in folders
2) teaching routines for class books in/out.
3) using Cuisenaire regularly with y7s

#mathsCPDchat

Kathryn MCCT 🧑 @Arithmaticks · Nov 23

Why is (1) so good? My brain can't process it!
YAY for (3) though! Why do you think it has had so much impact?
#mathscpdchat

Charlotte Hawthorne @mrshawthorne7 · Nov 23 ···

(1) because otherwise you give out whiteboards, then pens, then erasers. And they go missing etc. Since they're in folders I don't seem to have this issue.

(3) I knew they were a powerful manipulative but their impact on teaching early algebra has been enormous. #mathsCPDchat

Rute Castro Silva @RuteCastroSilva · Nov 23 ···

Interestingly enough, cuisenaire is one of the few manipulatives I learnt about in my 🇵🇹 teacher training 🤷‍♀️

I wonder if focus of training here will change to include more manipulatives... I guess it will if more schools/teachers use them ❤️

Charlotte Hawthorne @mrshawthorne7 · Nov 23 ···

It's not surprising that's the one they focus on as they can be used for so much. Wish teacher training here included more manipulatives training. Otherwise it's luck of the draw if you get placed at a school that uses them.

Rute Castro Silva @RuteCastroSilva · Nov 23 ···

When I moved from primary to secondary and discovered the dusty set of cuisenaire rods 🙈🙈🙈... Happiness is made of small things 💗

And reluctantly other teachers are starting to use. Sadly they think it's "a bottom set thing" 🤦‍♀️

Richard Dare @dare_richard · Nov 23 ···

Replying to @mrshawthorne7 and @Arithmaticks

MINI!

WHITEBOARDS!

I love them!

Yes good class routines are very important.

I need to get into using Cuisenaire rods (I use Mathsbot.com ones occasionally)
#mathscpdchat

… this conversation about using ratio tables …

Richard Dare @dare_richard · Nov 23 ···

Replying to @Arithmaticks

The ubiquity of the ratio table in representing proportional reasoning.

Shows links and gives a way to start scaffolding a task.
#mathscpdchat

Richard Dare @dare_richard · Nov 23

#mathscpdchat

> **Finding the mean average**
>
> Pets   People
>
> 12   8
>
> ÷ 8   ÷ 8
>
> 1.5   1
>
> Mean number of
> pets **per person**
>
> Stressing the 'mean **per person**'emphasises the commonality of
> procedure with other topics and the possibilities for manipulation
> common to other topics.
> It also emphasises the use of mean averages for comparison,
> in the same way that speed, density and 'best
> — buy'calculationsallow comparison

Maryse #Antiracist @AllThingsMaths · Nov 23

Yes... love this. Nice link to the units too. E.g. km per hour = km each hour
= km/h => distance ÷ time.

Non calc probs are so much easier when we think differently too.

#mathscpdchat

Richard Dare @dare_richard · Nov 23

Replying to @AllThingsMaths and @Arithmaticks

Thank you! 😃

… this conversation, about the 'silent teacher' strategy, and replacing displays with co-constructed 'working walls' …

Catherine Edwards @Edwards08C · Nov 23

Replying to @Arithmaticks

1) Stopping the students writing anything down during the "I do" example.

2) removing my displays and co-constructing working walls on the boards instead.

#mathscpdchat

Richard Dare @dare_richard · Nov 23

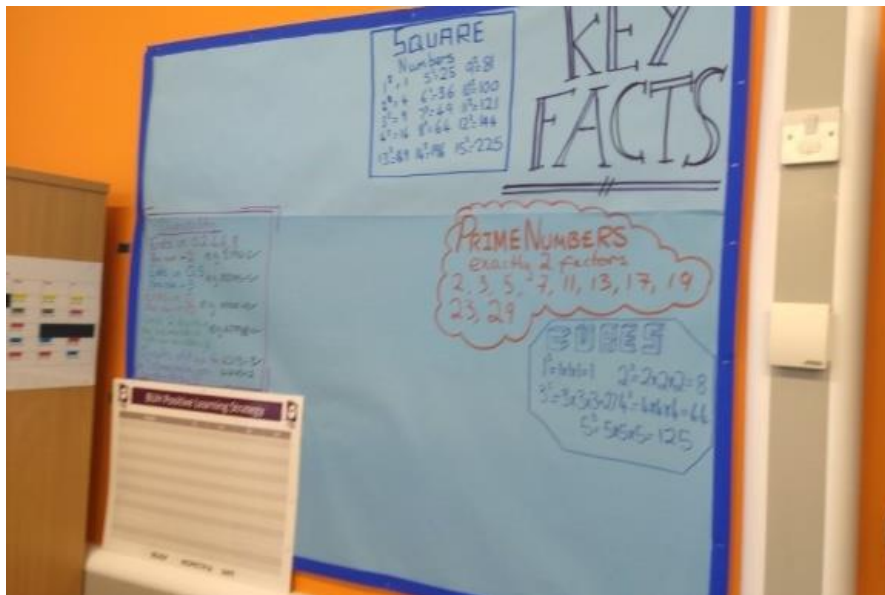Do you do 'silent teacher' for (1)?

(2) I like: bold!
#mathscpdchat

Catherine Edwards @Edwards08C · Nov 23

1) I mostly narrate my thought process. I'm working up to silent teacher. I've started doing silent teacher for the do now answers.

2) it's much fuller now

… this conversation, about a maths-teaching strategy used in all classes within a school

MrHawesMaths @HawesMaths · Nov 23

Replying to @Arithmaticks

Moving to one note for all notes and tasks. (students don't copy and focus on the maths) and then using @DrFrostMaths for retrieval, prep etc for all classes in the school. #mathscpdchat

MrHawesMaths @HawesMaths · Nov 23

Kind of looks like this for each lesson. Consistent and easy to refer to. Plus it means I can go to town in my whiteboard for examples etc. Save time as students don't need to copy the notes as they are there whenever.
#mathscpdchat

Starter Activity

Spend 5-10 minutes working through these differentiated equations. We will mark them tomorrow.
Remember to eliminate the SMALLEST group of letters FIRST.

★	★★	★★★
A1 Solve: $e+10 = 3e+2$	**B1** Solve: $4g+17 = 7g-4$	**C1** Solve: $-5h-58 = -13h-2$
A2 Solve: $h+4 = 2h+1$	**B2** Solve: $2d+10 = 6d-2$	**C2** Solve: $-10-11r = -3r-42$
A3 Solve: $3p+5 = 4p+2$	**B3** Solve: $a+8 = 2a+5$	**C3** Solve: $-4-6p = 40-10p$
A4 Solve: $m+5 = 2m+3$	**B4** Solve: $3t+11 = 6t-7$	**C4** Solve: $-7a-2 = 3a-92$
A5 Solve: $3y+9 = 5y+1$	**B5** Solve: $7j+26 = 11j+6$	**C5** Solve: $-7u-24 = -14u+4$

==Research and find out the definitions of these four words;==

Circumference

Diameter

Radius

Pi

==Now read the notes --> on how to calculate the circumference of a circle==
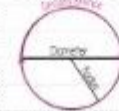
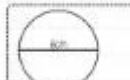## Notes

Circumference of Circles

Key Ideas

Main Notes

- The circumference of a circle (perimeter) is always approx three times the distance across the circle.

- The ratio that links Circumference...
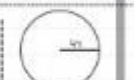- The Radius is half the distance... The Radius instead. Just double...

Calculating the circumference of a circle:
1. Find the Diameter of the circle (distance across passing through...). If you have the Radius, you will need to double it.
2. Multiply by π, sometimes you can be asked to use 3.142 or...
3. Round your answer to level of accuracy needed.

Perimeter of a semi circle:
- To work this out, you...circumference (this g...
- You will also need to...the total distance aro...

Important! Before you solve:
- The Radius is half the length of the Diameter
- Always check the question to see how you need to present your answer

Reflection

==Now match up the correct answers to the...==

Exercises to work through

Match-Up
Circumference of a Circle

1	Find the circumference of a circle with a diameter of 36 cm, giving your answer to 1 decimal place.	A	40200 km
2	Find the circumference of a circle with a radius of 7.5 cm, giving your answer to 1 decimal place.	B	15.7 cm
3	Find the circumference of a bicycle wheel with a radius of 33 cm, giving your answer to 1 decimal place.	C	47.1 cm
4	A wheel has a diameter of 62 cm. Find the circumference of the wheel to 1 decimal place.	D	73.8 cm
5	The radius of the Earth is 6400 km. Find the circumference of the Earth, to the nearest 100 km.	E	75 mm
6	The diameter of the Moon is 3480 km. Find the circumference of the Moon, to the nearest 100 km.	F	2541 m
7	A coin has a diameter of 24 mm. Find the circumference of the coin to the nearest mm.	G	113.0 cm
8	The radius of a button is 9 mm. Find the circumference of the button to the nearest mm.	H	194.7 cm
9	Find the arc length of a semi-circle with diameter	I	10000 km

Starter Activity

Name: _____ Primary 5-a-day Silver

24th November

$$6\overline{)6\,2\,2}$$ 087

$$\frac{1}{5}+\frac{1}{5}+\frac{1}{5}$$

$\frac{3}{5}$

Josie buys a notebook that costs £6.45 and a pen that costs £1.19.

Work out the total cost.

$$\begin{array}{r} 6.45 \\ +\ 1.19 \\ \hline 7.64 \end{array}$$

A is the point (2, 2)

Plot the point A

B is the point (3, 5)

Plot the point B

© Corbettmaths 2017 www.corbettmaths.com

Notes

Factors and Multiples

Key Ideas

Main Notes

Factor
- A number that can divide into another number exactly (no remainder)
- Occur in pairs

List the Factors of 60

1	60
2	30
3	20
4	15
5	12
6	10

1 2 3 4 5 6 10 12 15 20 30 60 ☑

List the Factors of 16

1	16
2	8
4	4

1 2 4 8 16 ☑

You do not need to include 4 twice

Listing Factors

1. Always start in a logical order – Start with 1 and the number itself. Then 2, then 3 etc.
2. As soon as you start to move up the right column, you have found all of the factors

For listing factors – Remember your facts for divisibility to see if you can divide by 2, 3, 4, 5, 6, 10 etc.

Reflection:

Worked Examples

I go:

List factors of 24

1	24
2	12
3	8
4	6

1, 2, 3, 4, 6, 8, 12, 24

List factors of 36

1	36
2	18
3	12
4	9
6	6

1, 2, 3, 4, 6, 9, 12, 18, 36

We go:

List common factors of 18 and 54

18: 1 18, 2 9, 3 6
54: 1 54, 2 27, 3 18, 6 9

Find Highest common factor of 14 and 48

14: 1 14, 2 7
48: 1 48, 2 24, 4 16 (12), 6 8

= 2

You go:

MrHawesMaths @HawesMaths · Nov 23 ···

I did this during lockdown and it transferred to the classroom so easily. Plus if I have any students absent, it is easy to catch up. #mathscpdchat
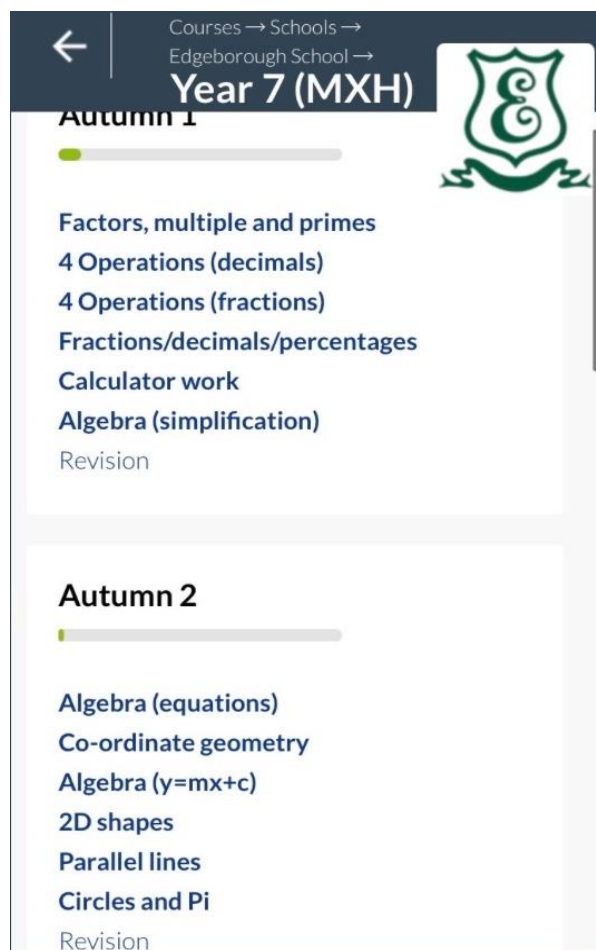
J Dougall @MsDougallMaths · Nov 23 ···

Replying to @HawesMaths @Arithmaticks and 2 others

Amazing! Do students have access to this in class on their own devices or just the section you share on your screen?

MrHawesMaths @HawesMaths · Nov 23 ···

On their own devices.

Kathryn MCCT 👩 @Arithmaticks · Nov 23 ···

How has DFM helped with that? #mathscpdchat

(Kathryn is referring to the website of @DrFrostMaths, which Mr Hawes mentioned in his first tweet in this conversation.)

MrHawesMaths @HawesMaths · Nov 23 ···

We have managed to develop a culture where if a student needs to do some work they can 1) look at tasks set 2) do clean up tasks 3) look back at what we have done 4) look ahead to what we might do. #mathscpdchat

Courses → Schools → Edgeborough School →

Year 7 (MXH)

Autumn 1

Factors, multiple and primes
4 Operations (decimals)
4 Operations (fractions)
Fractions/decimals/percentages
Calculator work
Algebra (simplification)
Revision

Autumn 2

Algebra (equations)
Co-ordinate geometry
Algebra (y=mx+c)
2D shapes
Parallel lines
Circles and Pi
Revision

…and this conversation about numeracy lessons …

Maryse #Antiracist @AllThingsMaths · Nov 23

Replying to @Arithmaticks

Dept decision: to have one lesson per fortnight solely on numeracy for particular classes. I'm enjoying it. It seems to be removing that barrier to progress.

#mathscpdchat

Kathryn MCCT 💁 @Arithmaticks · Nov 23

Ooh nice - what are you covering in these lessons? Why do you think it is having such a big impact? #mathscpdchat

Maryse #Antiracist @AllThingsMaths · Nov 23

Depends. For some the 4 basic operations. Others directed number. It means we can do a lesson on, say, equations and work on the number needed prior to the lesson. Students are more comfortable with neg or decimals answers.

#mathscpdchat

Kathryn MCCT 💁 @Arithmaticks · Nov 23

I like this idea - so there isn't a set scheme, more of a 'pick the number topic that will support you most'? #mathscpdchat

Maryse #Antiracist @AllThingsMaths · Nov 23

Replying to @AllThingsMaths and @Arithmaticks

Yep. Although we are big on gap analysis. Students do a key skills test at the start of the year so we can use that and tweak where needed. Resources are provided as well as SoW but we pick and mix to suit the students.

#mathscpdchat

… and this conversation about planning ahead, and giving students 'bundles' of worksheets …

Karen @karenshancock · Nov 23

Replying to @Arithmaticks

Belated. Topic planning and handing out ALL the sheets (including extension tasks) in one pack at the start of the unit… I have saved sooo much time handing out paper.
I didn't realise until I watched a colleagues lesson where they handed out 3 separate sheets. #mathscpdchat

Kathryn MCCT 👩 @Arithmaticks · Nov 23 ···
I do this. Sometimes I just give them out in a couple of stages - still saving me time, but also my SANITY #mathscpdchat

Catherine Edwards @Edwards08C · Nov 23 ···
Been a lifesaver for me this year, means I have half a chance of knowing what I'm going to be teaching next 🤣 #mathscpdchat

Karen @karenshancock · Nov 23 ···
It's helped loads with those isolating and dialling in because they have all the sheets at home! (Or I can pop the new pack in the post) Also treasury tagged to the inside of their exercise book whilst in use. Transfer to folder when unit finished. #mathscpdchat

Karen @karenshancock · Nov 23 ···
Replying to @Arithmaticks
My biggest saving is the extension activities being in the pack. "If you finish the page I asked you to do, do not just turn the page - turn to the extensions at the back and make a start..."
That's made such a difference on giving every one a chance at the tasks. #mathscpdchat

Replies to this question …

Kathryn MCCT 👩 @Arithmaticks · Nov 23 ···
What is the best resource you have found to support you this term? Was it for cover/planning/CPD? #mathscpdchat

… are represented by the links shown at the top of this summary. (You can decide for yourselves what to use them for!)

These tweets at the end of the chat …

Kathryn MCCT 👩 @Arithmaticks · Nov 23 ···
I have absolultey no more questions to ask tonight.
I just want to take this opportunity to tell you all how amazing you are. Teaching is not easy right now. We are short off staff, sometimes even short of students in frot of us, and it is tiring. BUT... #mathscpdchat

Kathryn MCCT 👩 @Arithmaticks · Nov 23 ···
... you are all still turning up for your students, and doing all you can to support them making progress in maths. And if your replies tonight are anything to go by, you are succeeding.
Keep going - your enthusiasm shines through, even when you are exhausted! #mathscpdchat

… were popular!