

Written by Natasha Dolling, Director of Mathematics at LEO Academy

🐦 [@LEO_maths](#) 🐦 [@NatashaDolling](#)



Trust

Count on Us during lockdown: How LEO Academy Trust kept it going

LEO Academy Trust is always looking to engage our children with mathematics beyond the classroom and open up their minds to opportunities that spark their imagination and increase confidence in this core subject. Primary Count On Us challenge, funded by the Mayor's Fund for London, was the perfect opportunity for our children to get involved in this exciting competition, while also raising the profile of maths back in their classrooms. With such a brilliant outlook and opportunity for our children, all LEO academies jumped at the chance to take part.

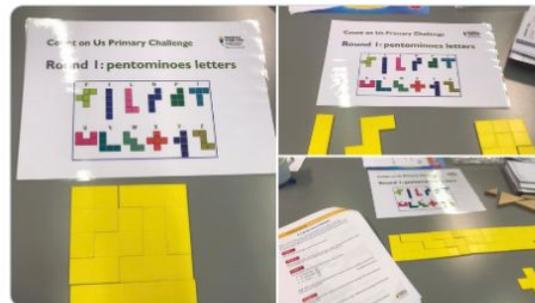


What better way to kick off a new week! Teacher Training for the #CountonUs Primary Maths Challenge with @themathszone 👍 #MondayMotivation



Teachers from across @LEOacademies are taking part in the #Countonus primary challenge training with @mayorsfund

First up: puzzling pentominos! Each school is taking back a bag of these resources- we can't wait to see the fantastic shape learning that will come from this!



First up, all the LEO Maths Leaders and Director attended the teacher training which was packed with problem solving ideas and resources. Staff had great fun with tangrams, pentominoes, the 24 game and cracking codes! Each school was so inspired that a 'Maths Club' was started to give *all* children opportunities to use these resources, work collaboratively with children whom they wouldn't normally work with, and work on some problems they may not have come across before in their maths lessons.



Year 4 and 5 @ManorParkSchSM1 have been using pentominos in their maths club inspired by the #CountOnUs primary challenge @mayorsfund Lots of problem solving skills and shape knowledge required! Great extra maths opportunity for the pupils. #Learning #Opportunity



Cheam Common Junior
@CCJAcademy

Our Y4 & 5 Maths Club, inspired by the @mayorsfund #CountOnUs Primary Maths Challenge, meets every week. Today, the children were developing their skills at tangram challenges & the @24game. Keep up the great learning & well done everyone.



Children at @BrookfieldSM3 have been hard at work preparing for the #CountOnUsChallenge with @mayorsfund They have been using pentominos to do some problem solving! #learning #Excellence #opportunity



Year 5 @CFPSchool have been making shapes using tangrams in preparation for the #CountOnUs Primary challenge with @mayorsfund Lots of problem solving skills and shape knowledge required! #learning #excellence #opportunity



It was just as this momentum was building that schools were closed indefinitely. The fantastic mathematical extra-curricular opportunity for our children to visit and compete in City Hall was cancelled and Maths clubs could no longer continue. There had also been plans to use some of the resources in a 'practical maths challenge' and school-wide 24 game tournaments were already in the calendar for Summer term. All the work and energy surrounding this had to be redirected to help prepare all LEO children to complete distance learning at home.

We decided to make every effort to continue the drive behind the Count On Us Primary Challenge. In fact, being online in a new, virtual learning environment gave us the scope to

reach even *more* children than we were previously. With the use of social media and google classroom, we set to work!

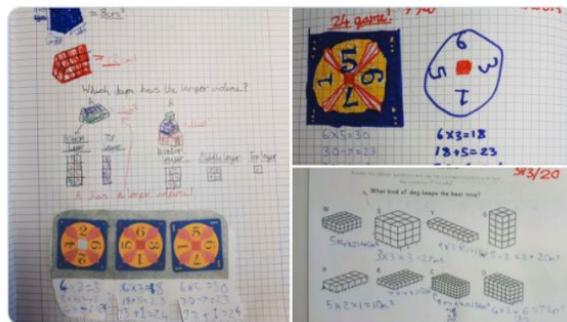
First up was something so relatively simple and easy, I'm amazed we weren't doing it before. Before school closures, even happened, the LEO maths twitter account started releasing a daily 24 game challenge for children who were self-isolating, to keep them engaged with some maths learning. It's super easy to play and you don't need anything... just some thinking skills! Use all four numbers and any of the four operations to make the number 24. That's it! Sound simple? It certainly isn't! Some combinations of numbers are so tricky that even the staff have been scratching their heads. Very quickly, our tweets reached beyond LEO academies with schools, children and adults joining in from as far away as Wales, and America.



In the event of a school closure @LEO_maths will be releasing a daily dose of playing the @24game for our children to do at home. Use all 4 numbers and any operation to make the number 24! $+$ $-$ \times \div
Easy to do on the go, in any format and with 3 levels of difficulty. Try yourself!



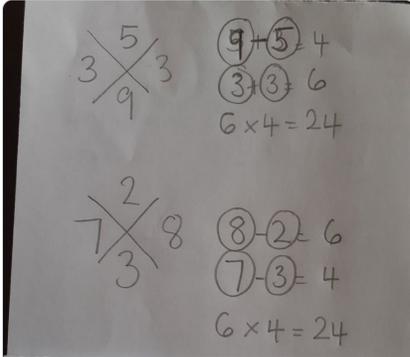
Some fantastic work from students at @CFPSSchool. They have been calculating volumes and playing the @24game at home. Well done!



Angela Morris
@GelBer68

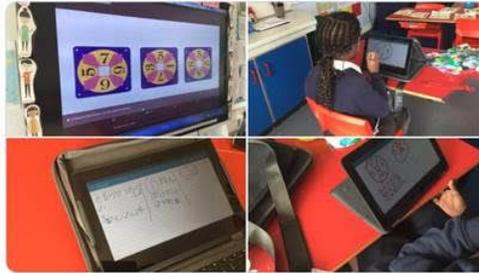
Replying to @LEO_maths @24game and 7 others

Another good challenge #24game



Brookfield Primary
@BrookfieldSM3

Great effort today to solve Level 1 and 2 of @24game - we're persevering with level 3! @LEO_maths



Louise Swaysland
@Loulouwco

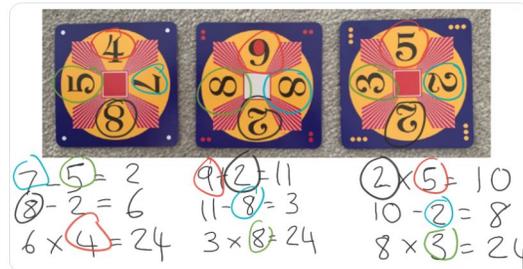
@LEO_maths Been waiting all day to finish our school/home working with the Maths challenge. Love it!! 🎓👨🎓



LEOmaths
@LEO_maths

It's the moment you've been waiting for: here are today's @24game solutions. Remember, there are a variety of methods for each card. Join us again on Monday for more 24 Game challenges.

#LEODistanceLearning #HomeLearningUK



Oana Santos
@oana_santos

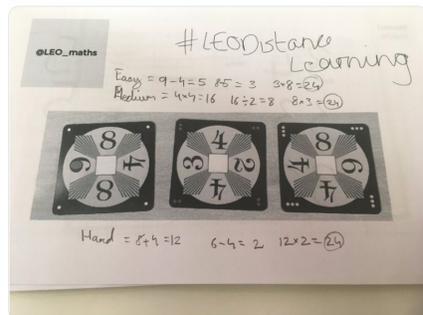
Replying to @LEO_maths @24game and 7 others

Here are today's answers from R.

#LEODistanceLearning

@24game

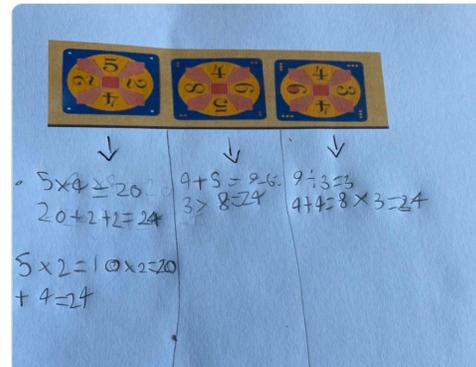
@LEO_maths



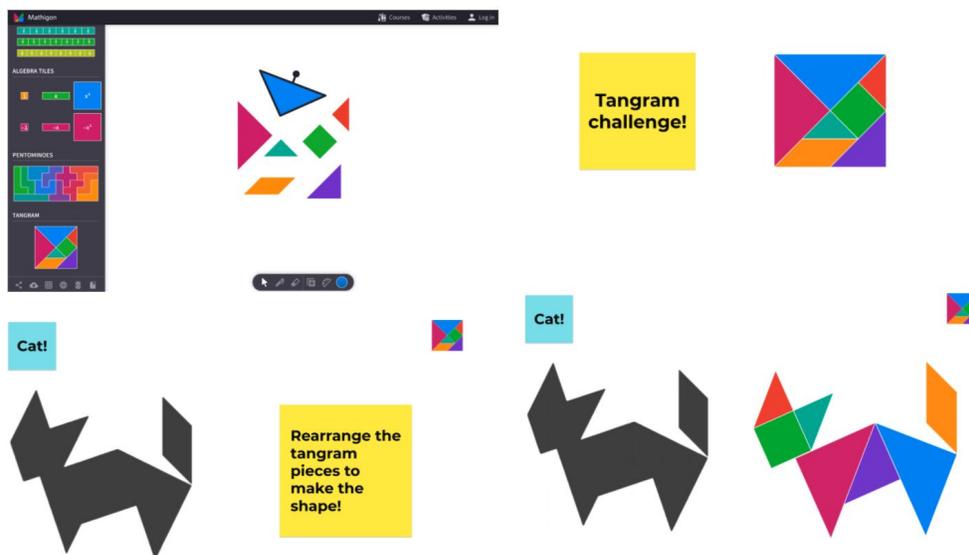
Rachel Goddard
@rachelou79

@CCJacademy @LEO_maths Matthew has had a go at today's @24game. Here are his answers

#LEODistanceLearning



The other challenges that involved physical shapes were proving trickier to do online- how do you get children to manipulate pentominoes and tangram shapes when they don't have them at home? Without wanting to rely on children having printers or having the tools to make them, we came across a website that was our answer; <https://mathigon.org/polypad> This free website lets you move and rotate all of the shapes at will- the next best thing to having the actual resources in front of you.



This was the perfect platform for children to create cats, dogs, letter shapes and different sized rectangles while practising their spatial awareness and problem solving skills, which is what these challenges were designed for.

The coding activity is a great, open- ended task that gets children writing and deciphering coded messages, based on a shifted alphabet. The original challenge that would have been completed in the heats, involved children deciphering clues linked to different London Bridges. This challenge was, again, perfect for sharing online as no resources are required. This activity was also ideal to fit into Maths Week London, which was also being scheduled to go ahead virtually. As the concept was so simple, I decided to take it further and create a spin off challenge, involving anagrams of famous London landmarks:



LEO ACADEMY TRUST

LEARNING. EXCELLENCE. OPPORTUNITY.



HELPING YOUNG LONDONERS GROW

**Shift
2**

**yjj
grafw**

Plaintext	a	b	c	d	e	f	g	h	i	j	k	l	m
cipher text	c	d	e	f	g	h	i	j	k	l	m	n	o
Plaintext	n	o	p	q	r	s	t	u	v	w	x	y	z
cipher text	p	q	r	s	t	u	v	w	x	y	z	a	b

all itchy
yjj grafw

→ all itchy
city hall

Use the ciphered text to crack the coded alphabet and receive an anagram. Reshuffle the letters to make a famous London landmark; 'all itchy' becomes 'City Hall' where the Count On Us primary challenge heats and training were taking place!

Another bonus activity that tied in seamlessly into Maths Week London, was calculating length of journeys on a London tube map. It was an open ended challenge that brilliantly combined creativity, practising an essential maths skill, all while being linked to the topic of London.

