

# **COUNT ON US**

# **PRIMARY CHALLENGE**



**TEACHER GUIDE: 2022/23** 

#### INTRODUCTION

Count on Us Challenge, the Mayor's Fund for London's maths programme, works with schools to help young Londoners reach their full potential, supporting them to become confident mathematicians and leading them towards a brighter future. The programme fosters a change in attitude and increases self-belief and resilience by motivating pupils to improve their numeracy skills, problem solving and team working skills.

The Count on Us Primary Challenge is now in its ninth year. Over this period, the programme has adapted to reflect changes in the curriculum and external challenges beyond our control, such as the recent pandemic. We are very proud of all of the schools that rose to the challenge and have participated over the last two years, despite the difficulties and obstacles. We held a virtual Challenge in 2020, with pupils engaged at home or in school, and then online Heats and a fantastic in-person Final in 2021.

Last year, we were back to normal, with over 50 schools engaged in running maths clubs, in-class activities and in-school tournaments before choosing their team to compete in regional Heats across London. The 12 highest scoring schools then came to the new City Hall and competed in a nail-biting Final, with Elmgrove Primary coming 1<sup>st</sup>, Nelson Primary 2<sup>nd</sup> and Harris East Dulwich 3<sup>rd</sup>.

We are looking forward to working with you on this year's Count on Us Challenge programme and look forward to seeing you at the exciting events in 2023.

This Teacher Guide will take you through the programme, from 'getting started' to 'getting ready for the tournament' and should be used alongside the Pupil Activity Book.



### Using the Count on Us Primary Challenge to support maths curriculum area

- ⇒ How does the Count on Us programme link to the National Curriculum?
- ⇒ What key maths skills does it develop?

Below is a summary of the key activities in the Count on Us Challenge programme and their links to the maths curriculum. This Teacher Guide will take you through each of these areas, outlining how to introduce, get better at and finally, be the best you can in each of the activities. The activities are designed for you to use in class and/or in maths clubs and are accessible to all pupils.

IMPORTANT: alongside this Guide, there is a Pupil Activity Book, with prepared tasks for your pupils to engage with. Look through this before you get started and you will see how useful these exciting, challenging and motivating maths activities are in reengaging pupils with the maths curriculum.

| Activity           | Area of maths          | Description from National      |  |  |  |
|--------------------|------------------------|--------------------------------|--|--|--|
|                    | curriculum             | Curriculum (Y4/5)              |  |  |  |
| 1. Dominoes,       | Problem solving,       | Mathematical reasoning         |  |  |  |
| Pentominoes and T- | developing             | solving increasingly           |  |  |  |
| Shape puzzles      | mathematical fluency   | sophisticated problems         |  |  |  |
| 2. 24® Game        | Addition, subtraction, | Mental maths, quick recall of  |  |  |  |
|                    | multiplication and     | number bonds                   |  |  |  |
|                    | division               |                                |  |  |  |
| 3. Codebreaking    | Statistics             | Using timetables, price tables |  |  |  |
|                    | Measurement            | etc                            |  |  |  |
|                    |                        | money, time, distance          |  |  |  |

We look forward to working with your school this year and seeing you at the exciting Heats in May 2023.

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### WHAT DOES THE COU PRIMARY CHALLENGE INVOLVE?

The Count on Us Primary Challenge programme is designed to be suitable for all pupils in Years 4 and 5. The maths activities can be done in class or in clubs. After several months of practising and holding an in-school tournament, you will be able to choose a mixed-gender team of 3 pupils to represent your school at the tournament Heats in May. The highest scoring teams will then go forward to the Final at the end of June 2023.

This year's tournament will build on the successes of previous years, to:

- Involve over 70 schools from across London.
- Include rounds on pattern and code breaking as well as the popular 24® Game.
- o Focus on embedding activities across schools to ensure that a greater number of pupils have access to them.
- Support all schools in participating in the Count on Us programme through the:
  - ✓ Teacher Guide
  - ✓ Pupil Activity Book, with a newly revised Round 1
  - ✓ Primary Challenge Resource Area on the Mayor's Fund for London website
  - ✓ In-person training for new schools/teachers and online training for others
  - ✓ Tournament Handbook
  - ✓ Online Drop-in sessions for Teachers.

Over the Spring and Summer terms, pupils will become experts at finding number bonds at extremely high speeds, as well as solving exciting code-based problems. Some activities are individual, and others work best when solved in teams.

Teachers are able to access online support to revisit activities covered at training, access ideas to use in school and hear from teachers and pupils who have taken part in previous tournaments. The Tournament Handbook assists schools to run their own tournaments.

This Teacher Guide provides an outline to the maths activities involved in the programme and how to integrate them into your everyday activities. Before taking part in any of the events, your pupils should have had lots of opportunities to develop their maths skills in each of these areas.



#### WHAT DOES THE PROGRAMME STRUCTURE LOOK LIKE?

The programme consists of 4 stages, starting with the training session and culminating in the Count on Us Final. However, it must be stressed that the most important part of the programme is **Stage 2**, where you will set up class and/or club activities for larger numbers of your pupils to engage with the activities. The tournament events later in the year are only the icing on the cake!

- Stage 1 In-person and Online Training sessions in November and January for all participating schools, clarifying expectations, sharing good practice and ensuring that all teachers are confident in setting up and practising the activities in school.
- Stage 2 In-school practice for Years 4 and 5 pupils. Teachers will use the activities in class and / or in clubs to give as much practice as possible, using the Pupil Activity Book as support, before holding:
- Stage 3 In / inter-school tournament in all schools to let as many pupils as possible experience the excitement of the Count on Us Challenge and to help teachers choose their team to represent the school.
- Stage 4 Heats for all schools with the 12 highest scoring schools will progress to the Final.



#### WHY IS IT IMPORTANT TO PRACTISE?

There is no doubt that in order to get better at something we need to work at it. A musician will spend hours practising an instrument; an athlete will train to develop strength, speed, and agility. The same is true for maths. The work your pupils will be doing in preparation for the Primary Challenge is based on the notion of 'deep practice'. As they use the 24® Game cards, pattern and code breaking ideas, they will become more confident, develop effective strategies, and become fantastic problem solvers!

Count on Us Primary Challenge schools are expected to provide opportunities for **all Y4** and Y5 pupils to participate in the maths activities contained within the Primary Challenge. Schools can practise the activities:

- in class
- in Count on Us maths clubs
- through in-school or inter-school tournaments
- in teacher v pupil competitions

The **Count on Us Resource Area** on the Mayor's Fund for London (MfL) website contains all the guidance and support activities you need, including the Pupil Activity Book, and will provide you with many ideas for class and club activities to get you started.

**IMPORTANT:** Before coming to the Heats, as well as using activities regularly in class or in clubs, schools are expected to run an in-school tournament or with a partner school in April 2023. Not only will your pupils develop familiarity with the activities and the format, but this will also allow you to select your team. The **Tournament Handbook**, which will be available in March 2023, includes ideas to help you run your in-school tournament, as well as more activities to further challenge your pupils to ensure they are at their competitive best!

Password for the Resource Area 2022-2023: CLARKE1883



#### **HOW TO EARN POINTS BEFORE THE HEATS: TEACHER TASKS**

This year, we are setting **6 tasks** for teachers to engage with in setting up the programme and preparing for the tournament. Each of the completed activities will earn you 5 points towards your school's score at the Heats.

Send evidence for each completed task to cou@mayorsfundforlondon.org.uk

|   | Task                                    | Evidence                        |  |  |  |  |
|---|---|---------------------------------|--|--|--|--|
| _ | Share activities with Y4/5 teachers.    | Attendance and photo/notes from |  |  |  |  |
| 1 | Chare delivities with 1 1/6 teachers.   | in-school meeting.              |  |  |  |  |
|   | Create Action Plan showing activities   | Email Action Plan to COU by     |  |  |  |  |
| 2 | and timescale                           | February 2023                   |  |  |  |  |
|   | Set up a maths club / practice time for | Send photos to COU by February  |  |  |  |  |
| 3 | at least 30 pupils.                     | 2023                            |  |  |  |  |
| _ | Use 24 Game as lesson starter for two   | Send photos/video to COU by     |  |  |  |  |
| 4 | weeks.                                  | March 2023                      |  |  |  |  |
| 5 | Run in-school tournament in April.      | Send photos/planning to COU by  |  |  |  |  |
|   |   | April 2023                      |  |  |  |  |
| _ | Identify one pupil whose confidence     | Send photos and paragraph to    |  |  |  |  |
| 6 | and skill in maths has improved through | COU by February 2023.           |  |  |  |  |
|   | engaging with Count on Us activities.   |                                 |  |  |  |  |

#### CHOOSE YOUR TEAM AFTER YOUR IN-SCHOOL TOURNAMENT IN APRIL!

#### WHO CAN I SELECT FOR THE TEAM?

After running an in-school tournament, schools will then select 3 players who must be:

- **Year 4 or 5** pupils you can select from either *or* both years
- A combination of boys and girls no single sex teams are allowed!
- **New** to taking part in the Count on Us Primary Challenge if you have a talented or enthusiastic pupil from a previous year, let them support you in running a Club!

It is important that you consider a number of factors when selecting the team. You might not select your quickest players but instead, select players who would benefit from the experience. You will also want to make sure your team work well together.



### SUPPORT MATERIALS

#### **PUPIL ACTIVITY BOOK**

To support practising in school and to encourage as many pupils to get involved as possible, we have created a Pupil Activity Book, structured around each of the rounds of the Primary Challenge. This is available to download on the **Count on Us Resource Area**; you will need to print one for each of your pupils.

As pupils complete tasks in each stage of their Activity Book, they will mark the completed bridge on the 'My Learning Journey' map page (you can use gold stars / coloured dots or your normal reward stickers) in their Activity Book. Each sticker represents a bridge they have crossed in their learning journey to the old City Hall (Tower Bridge):

**STAGE 1:** Dominoes – ALBERT BRIDGE

**STAGE 2:** T Shapes and Pentominoes – CHELSEA BRIDGE

**STAGE 3**: Number: 24® Game – WESTMINSTER BRIDGE

**STAGE 4**: Codebreaking – MILLENNIUM BRIDGE

**STAGE 5:** School Tournament – **TOWER BRIDGE** 





The Pupil Activity Book is full of tasks to support your pupils with learning, practising, and getting better at each of the activities in the Count on Us Challenge. The aim is for pupils to be able to track their own learning progress and reflect on their confidence in each of the Primary Challenge areas. There are also bonus tasks for your pupils to complete if they are preparing for the Heats or need a greater challenge! You can decide when to award stickers. For some pupils, completing the first two activities will be a great achievement; for other pupils, you may decide to award the sticker only after they have completed every task, including the bonus one!

### THE COUNT ON US ACTIVITIES: A SUMMARY

#### Round 1 **NEW!** Pattern and problem-solving A team activity

Note: this is a revised Round.

**Dominoes** – pupils create a number pattern to match the layout of a domino grid they are given.

**Pentominoes** – pupils combine pentomino pieces to match the task.

T-Shapes – pupils make the pictures shown using the 4 T-Shape pieces.

They will need to be very skilled at solving each of these under pressure in timed conditions.

#### Round 2 24® Game

### An individual activity

Using the 24® Game cards, pupils compete to find the answer 24. Successful schools will have used these in class, in clubs and at home. Pupils will need to be very quick at spotting number patterns and bonds.

#### Round 3 Codebreaking

### A team activity

Teams crack the Caesar Shift codes to find a solution to a tricky problem. They will need to be very good at working together, allocating tasks and problem solving. This year, we will have a **London / finance** theme to this round.



#### WHAT DOES EACH ROUND CONSIST OF?

### Round 1. Pattern and problem-solving puzzles

This round consists of using the Domino, Pentomino and T-Shapes to solve puzzles.

#### At the tournaments:

(Read carefully, as this is organised differently this year)

This round is played in school teams, who will work together to arrange their Domino, Pentomino and T-shape pieces to solve the puzzles they are given. Speed is important, as is familiarity with each of these resources.

Each team will have a Domino, Pentomino and T-Shape set and 3 'exchange' cards.

### Part 1) Dominoes, Pentomino and T-Shape Starter

On the screen in the event room and on a sheet in front of them, teams will be shown three puzzles to solve – a Domino, a Pentomino and a T-Shape puzzle. They must complete each of these puzzles before progressing to Part 2. Judges will award points for each correctly completed puzzle and record this on the Team Scoresheet.

### Part 2) Dominoes, Pentomino and T-Shape

After completing each of the starter puzzles in Part 1, teams can collect additional puzzles from the table in the centre of the room. They must complete 3 Dominoes, 3 Pentominoes and 3 T-Shape puzzles before they can progress to Part 3.

#### Rules:

- One person from each team collects a Part 2 puzzle sheet (either a Domino, Pentomino or T-shape puzzle) and takes back to their team.
- They must complete this puzzle before collecting a new puzzle sheet. The completed sheet stays on their desk until the end of the round.
- If a team gets stuck, they can exchange their puzzle sheet by using one of their 3 'exchange' cards, which they bring to the central table with their puzzle sheet. They give this card and the sheet to the COU person and take a new puzzle.
- If a team discovers that they have taken a puzzle they have already solved, they can change this with the COU person. The teacher judge with the team will raise their hand to confirm it is a duplicate.



**IMPORTANT**: teams can only do 3 puzzles for each of the activities. So, if they have completed 3 Pentominoes Part 2 puzzles, they must do 3 T-Shapes and 3 Domino puzzles before progressing to Part 3!

### Part 3) Dominoes, Pentomino and T-Shape

This is where it gets really tough! If a team has completed Part 1 and Part 2, they can then go on to the Super Bonus sheet and earn extra points.

When the team has completed Part 2, the teacher judge at the table will raise their hand and the team will be given a bonus sheet containing three very challenging puzzles. They will earn points according to how many they can do before time runs out.

Below you will see what each of the three puzzles look like, how to get started with them and then how to help your pupils get better at solving them:

### 1. Dominoes puzzles

Pupils arrange their dominoes to look exactly like the grid here. This is the kind of domino grid that your pupils will be able to complete by the time they come to the Heats. BUT don't rush straight into making the domino grids. Start by exploring smaller grids to build up strategies and teamwork.

| 4 | 4 | 6 | 1 |
|---|---|---|---|
| 1 | 4 | 6 | 1 |
| 4 | 4 | 1 | 6 |
| 3 | 3 | 3 | 6 |
| 6 | 3 | 2 | 6 |

**NOTE:** Look through the activities in the Pupil Activity Book which is full of ideas.

#### i) Getting started: Explore the 2 x 2 and 3 x 2 grids

How many ways can you arrange the dominoes?

Why are no more possible?

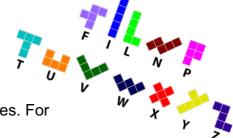
| 3 | 5 |
|---|---|
| 3 | 5 |
| 4 | 4 |



- ii) Look at the larger grids in the Pupil Activity Book. After exploring them and trying to lay out their dominoes in the same pattern, get your pupils to move on to:
  - ✓ working with another person
  - ✓ talking through their strategies as they choose and place pieces
  - ✓ setting time targets
- iii) Give out blank 4 x 4 and 4 x 5 grids. Let them create their own grids, to understand why some are easier to solve than others. Share their grids out to classmates. Discuss why they think some are easier.

### 2. Pentomino puzzles

There are 12 Pentomino shapes in a set. Each of the pieces is made up of 5 squares (hence Pentomino).



At the tournaments pupils will be given a set of challenges. For example:

- Choose any of the pieces and make any rectangle or square.
- Make a square / rectangle of a different size.
- Make another square / rectangle of the same size, using different pieces.

More directed activities.

- Make a 4 x 5 rectangle, then a 6 x 5 rectangle.
- Make a 4 x 5 rectangle, then change at least one of the pieces to make another 4 x 5 rectangle.
- Take the T shaped piece. Can you make a T that is exactly double the size of the T? How many pieces can you do that for?

The Pupil Activity Book has several activities to help get your pupils started. The most important thing you can do is to let your pupils play with the pieces, exploring and getting used to how they fit together. Teams that do the best are always those where the teacher stands back and lets the pupils find their own strategies.



### 3. T-Shape puzzles

This is a very well-known and surprisingly tricky puzzle.

**IMPORTANT**: it is very tempting to show your pupils how to solve these or let them show each other. **DON'T!** If you do this, they will never get the chance to go on the learning journey and won't have the skills and understanding they will need when they come to the Heats / Final.



i) The best way to get better at T Shape puzzles is to keep doing them. In your School Resource Kit and in the Resource Area on the website, you will find templates. Print onto card, cut out and give every pupil a set.





- ii) Make sure every pupil has access to the Pupil Activity Book. Search for new shapes on the internet. Just look up T-Shapes!
- iii) Practise doing the puzzles in timed situations, on their own and in pairs, threes.



## Round 2. Number - Using the 24® Game

#### At the tournaments:

Each team member competes against players from other schools to find the answer 24 from each of the 24® Game cards placed on the table.



**IMPORTANT**: This round is extremely fast. Many players can spot the number patterns very quickly by the time they come to the Tournament. Therefore, it is vital that you find as many opportunities as you can to let your pupils practise.

#### Basic Rules of the 24® Game

### **How to Play the 24® Game**

All four numbers on the card must be used once and once only to make 24 using the four basic arithmetic operations: + - × and ÷

For example: you get a card with the numbers:

4 - 2 = 2  $4 \times 3 = 12$ You could use the numbers in this way:

So, the 'last stage' solution is:  $2 \times 12 = 24$ 

When you claim a card, you MUST give the 'last stage' (12 × 2) first, before explaining your solution!

The deck of cards is held by the teacher referee at each table, and they are responsible for introducing each card into play. Players compete to make 24 using all of the numbers on each card.

When a player thinks they have a solution, they put their hand on the card and explain how to make 24 – starting with the FINAL STAGE and then full solution, as above. If they are correct, they claim the card, putting it aside with the rest of their claimed cards. Play continues and a new card is placed on the 24® Game Mat.

At the end of each round, players move to the next table and wait for instruction to begin play.



## A summary of the rules for the Tournament

**NEW:** Players must leave their hand on the card, so they cannot see the numbers when they are claiming the card. This prevents pupils from claiming the card before they have worked out the complete solution!

### Claiming a card

- ✓ Lay hand flat on card and keep there.
- ✓ Last stage announced first.

### Hesitation, deviations and moving on...

Card removed if:

- ✓ Longer than 3 seconds to start claim
- ✓ Get lost with explanation
- ✓ Make a mistake
- ✓ Two players agree to pass (3 times in a round)

## **Scoring**

- ✓ Players keep cards won for that round.
- ✓ Points added up and scored at end of round (1 dot = 1 point etc)

## Moving around

- ✓ Teams of three players: A, B, and C
- ✓ A moves clockwise, B stays put, C moves anticlockwise.
- ✓ At the end of the round, players add up their points (the dots at the corners of each card, ranging from 1-3 to reflect the level of difficulty of the card) and enter their score onto their individual scorecard. Referees check and initial their scorecards.



### Ideas to get started, get better and be the best you can:

### Introducing the 24® Game in class

Write the numbers **5**, **4**, **3** and **1** on the whiteboard and ask your pupils to get the answer 24, using **each number once and once only**. You could ask them to write the answers on their mini whiteboards or on sticky notes. Give time for more than the quickest two or three to find a solution. Ask for solutions and write them up.

Possible solutions:  $5 \times 4 = 20$  20 + 3 + 1 = 24

OR 5+3=8 4-1=3 8×3=24

Write this solution on the board and ask why it's incorrect:

5 + 1 = 6  $4 \times 6 = 24$ 

(Only three numbers used)

...and this one: 5 + 3 = 8  $1 \times 3 = 3$   $8 \times 3 = 24$ 

(The number 3 has been used twice)

### Using the cards – getting started

Initially, extract all the 1 point cards (1 white dot in the corner) and 2 point cards (2 dots). These are easier than the 3 dot cards. Arrange your pupils in groups of 3 (you may want to engineer these!) and share out the cards. You may choose to give 1 point cards to less confident mathematicians.

Discuss the strategies they used to make 24. These could be:

- finding key number bonds: 6 x 4, 8 x 3, 16 + 8 ...
- finding pairs
- finding numbers to make 1

Explain the rules of claiming the card and how to explain the solution. Then, let them play. If a particular group finishes quickly, ask them to turn the cards over and continue. You can also gradually introduce the 3 point cards.

**Important:** Pupils should practise finding the last step of the solution to make 24 first: e.g., "3 times 8" or "15 plus 9". The focus is always on finding number patterns.



#### Other classroom ideas for the 24® Game

Give each pupil a 24® Game card. Challenge them to:

- Find as many different answers as possible, using all four numbers and +, -, ×, ÷.
- Find the largest answer and the smallest answer possible.
- Find one or more answers that are square numbers.
- Find one or more prime numbers.
- Find one or more ways of getting an answer of 1.

Give each pupil two 24 Game® cards.

Challenge them to find the same answer with each card using all four operations, without getting an answer of 24.



### **Round 3. Code Breaking**

#### What this round is about:

The final round is an exciting problem-solving activity using the Caesar Shift code. This year, the code breaking round will have a money theme.

### At the tournaments:

School teams will be given a problem to solve. However, before they can solve the problem, they will need to decipher a coded message. They will have to decipher the message to find the elements to the problem they have to solve.

Points are given for each correctly decoded message and answer, with additional points for solving the problem.

**Important:** We will only be using the **Caesar Cipher** code. Pupils should be very familiar with this so that they can get onto the investigation part of the task.

### What is the Caesar Cipher?

The Caesar Cipher (code) was used in Roman times by Julius Caesar. In order to disguise his plans when he sent these to his armies, he moved the letters along 3 spaces. So, A became D, M became P etc.

The vital message 'Attack at Dawn' would therefore read as 'Dwwdfn dw Gdzq'.

The only problem was that his enemies soon got good at cracking the code!

We aren't as kind as Caesar. We are going to use the Caesar Cipher shift, but we will vary it. We might use an offset (shift) of 5, or 12 or 23...We will tell teams the offset at the qualifying Heats, but at the Final we might not be so kind!

| plaintext   | а | b | С | d | е | f | g | h | i | j | k | - | m |
|-------------|---|---|---|---|---|---|---|---|---|---|---|---|---|
| cipher text |   |   |   |   |   |   |   |   |   |   |   |   |   |
| plaintext   | n | 0 | р | q | r | S | t | u | ٧ | W | X | у | Z |
| cipher text |   |   |   |   |   |   |   |   |   |   |   |   |   |



### Ideas to get started, get better and be the best you can:

Don't spend hours creating coded messages. A much quicker way is to use the Caesar Cipher chart on Simon Singh's <u>Black Chamber</u> website.

- Go to 'Offset' box to select your shift (offset) eg 3.
- Type a word to encrypt, e.g., the name of a pupil in your class: Chantelle.
- Click Encipher Plaintext: F k d q w h o o h

#### Get started in class:

- Give out a blank code breaking chart (see above)
- Give the Caesar Shift (offset).
- In pairs, ask them to fill in the chart, using the shift you have given.
- Give the class an enciphered name.
- Who is it?
- Who is this: K D E L E D (Shift 3)?

#### Other classroom ideas

- Give class list out but enciphered with a shift of 3 showing groups.
- Pupils work out which group they are in for an activity.
- Decipher names of favourite authors, capital cities, shapes, healthy foods.
- Give out a simple enciphered action, e.g. put your hand up. Award points.
- Find an item using clues from a message.

For more ideas of codebreaking activities and to see the activities from previous events, visit the Resource Area on the website.



#### **COUNT ON US RESOURCE AREA ON MFL WEBSITE:**

Now that we've given you an overview of the programme and what you and your pupils will be doing back in schools to practise for your in-school tournaments and the Heats, let's take a closer look at the support we have put in place to make sure that you have everything you need to help your pupils progress from getting started, to getting better and finally be the best they can.

To ensure that schools have access to as much support and information as possible, we have set up a fantastic Count on Us Resource Area on the MfL website.

This is available only to participating schools and is password protected:

Password for 2022-23: CLARKE1883

The Resource Area has three sections:

- 1. **Getting Started with Count on Us** Programme overview and information about the training sessions and school resource kits.
- 2. Running Count on Us in School Teacher Guide, Pupil Workbook and inschool practice ideas.
- 3. **Tournament Time** Tournament Handbook, information about selecting your Tournament Team and details about the Regional Heats and Final.
- 4. Extra Resources Domino and T-Shape template, Pentomino letters illustration, Codebreaking charts and 24® Game scorecards. Also, examples from previous Heats to use in class or maths club.

As we move through the programme, we will be capturing examples of good practice and tips from teachers and pupils. We will also set up regular drop-in sessions to ask, share and network with other Count on Us teachers.



### THE HEATS AND FINAL:

### The Room

The room will be arranged with team tables laid out as spokes of a wheel - one table for each team. Each table is managed by a referee (a teacher from each school).

School teams can practise any of the activities while they are waiting for the Count on Us Primary Challenge Heat to start. At this point the table referee from each school should remind pupils of the rules. Each school fills in their 24® Game scorecard which is left on the table.

### Round 1: Pattern and problem-solving

Pupils stay at their home table and work as a team. When the Challenge is ready to begin, each teacher moves to sit with a new school. Teacher referees award points as outlined earlier.

### Round 2 Numbers: 24® Game

Each player is allocated the letter A, B or C when they arrive and given a scorecard which they fill in with their name and school name and keep for the next three rounds.

When the hooter to move goes, player B stays at the table, player A moves clockwise to the next table and player C moves anti-clockwise to their next table so that they are ready for the first round. For round 1 of the 24® Game only, the teacher referee also moves one table clockwise and then stays at that table for subsequent rounds.

## Round 3: Problem solving: code breaking

Pupils work as a team at their home tables. Teachers move to referee another school. Scoring is done by the Tournament director.



#### HOW IS THE IMPACT OF THE COU PROGRAMME MEASURED?

We will be measuring the impact of the programme on your pupils and gathering feedback about how it could be developed for future years.

This information will be gathered through evaluation forms for your pupils and staff, interviews with teachers and pupils, as well as individual case studies from schools and pupils. The evaluation forms will be shared at each of the Primary Challenge events.

#### WHAT DO YOU NEED TO DO NEXT? A CHECKLIST

| <br>AT DO TOO NEED TO DO NEXT! A OTLONEIOT  |
|---|
| Assign a lead person to take responsibility for the COU Primary Challenge.        |
| *Share COU activities and programme outline with other Y4/5 teachers.             |
| *Create a COU Action Plan, outlining activities and timescale.                    |
| *Set up a COU Primary Challenge Club or identify practise opportunities in class. |
| Practise with all your pupils as much as possible! Use last year's players as     |
| mentors.  |
| *Use 24® Game cards as starter activity in class for two weeks.                   |
| *Run your in-school tournament and select a mixed-gender team of three.           |
| *Identify one pupil whose confidence and skill in maths has improved through      |
| engaging with Count on Us activities and send in paragraph describing this.       |
| Arrange for a lead <b>and</b> support person to attend the Heats with pupils.     |
| Remember the lead person will be a referee, so they must know these activities!   |
| Complete and return photo consent forms.  |
| Ensure that all parental consent forms for Heat events are complete.              |
| Arrange transport and staff supervision to the Heats (and Final, if successful).  |

<sup>\*</sup> Earn 5 points for completing each of these tasks. Send evidence as outlined.



If you have any questions or would like to discuss the Count on Us Primary Challenge and the wider numeracy programmes, please contact the Count on Us team at the Mayor's Fund for London. In the meantime, have lots of fun with the activities and we look forward to seeing you and your pupils at the Heats.

## **Key dates for your diary:**

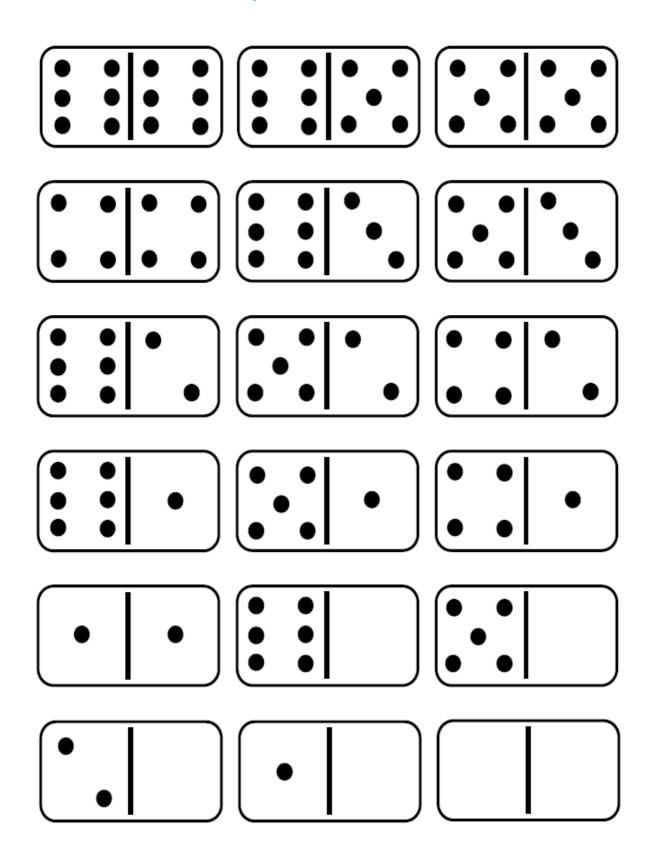
**Drop-in sessions:** February – May 2023

**Heats:** Mid May 2023

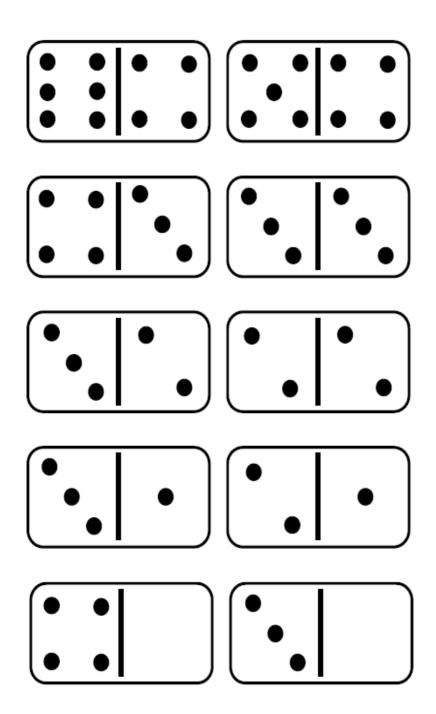
w/c 26th June 2023 **FINAL:** 



**DOMINOES TEMPLATE:** print onto card and cut out.









T SHAPE TEMPLATE: print onto card and cut out.

