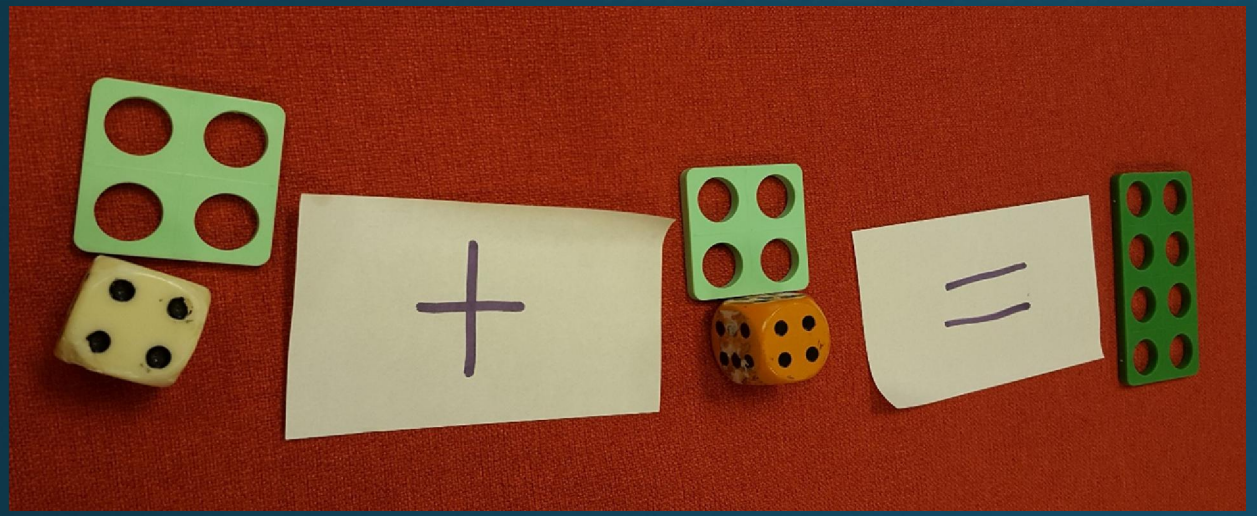
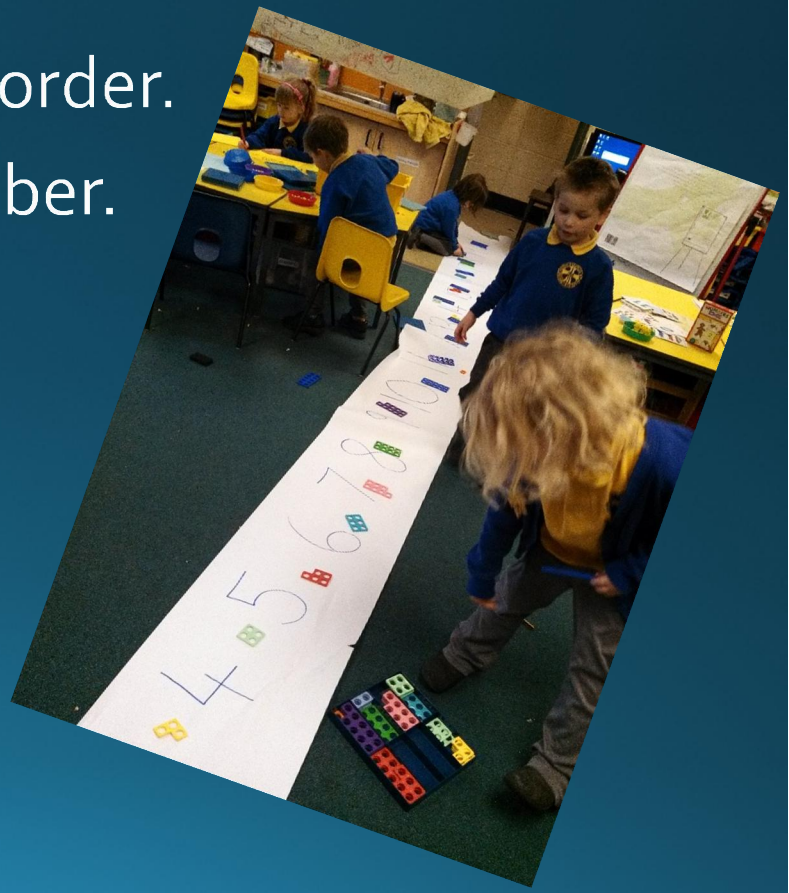
Mathematics in Reception



Number

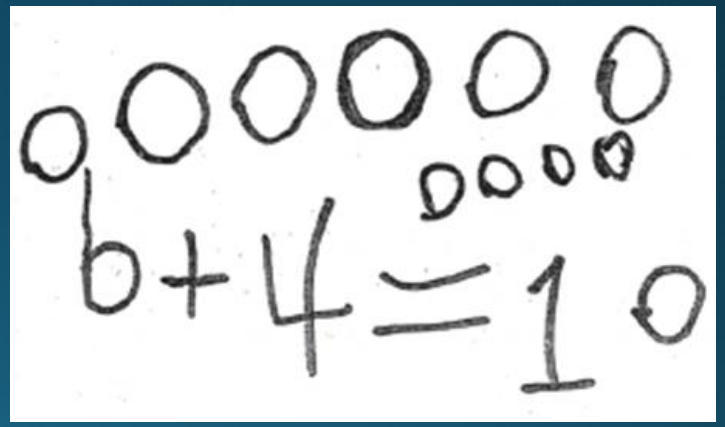
- Reciting numbers in order.
- Counting reliably – 1:1 correspondence - example of 1:1 correspondence
- Recognising numerals 1-20 and putting them in order.
- Knowing one more or one less than a given number.
- Recording number through pictures



Number

- Adding together two groups of objects to find a total.
- Using single digit numbers e.g. 6+4=10

- Taking away from a group of objects

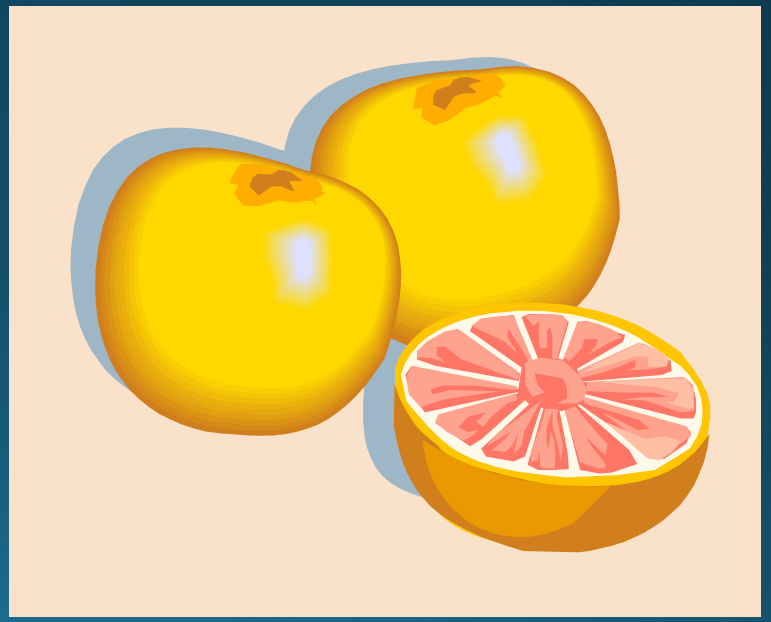


Number

- Solve practical problems including –
- Doubling – ice cream scoops in the café using ‘double’ scoops, Two teddies have come for lunch – now two more have arrived, how many do we have now? How could we record this?

Number

- Halving – Sharing a group of objects equally between two children – food in a café, cutting fruit for snack in half

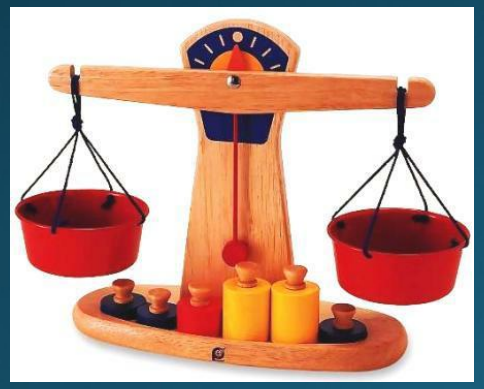


Number

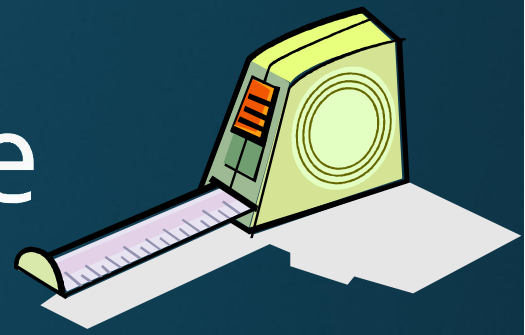
- Children are assessed at the end of the year as either emerging, expected or exceeding.
- ELG – Children count reliably with numbers from one to 20, place them in order and say which number is one more or one less or one less than a given number. Using quantities and objects, they add and subtract two single digit numbers and count on or back to find the answer. They solve problems, including doubling, halving and sharing.
- Exceeding - Children estimate a number of objects and check quantities by counting up to 20. They solve practical problems that involve combining groups of 2, 5 or 10, or sharing into equal groups.

Shape, Space and Measure

- Shapes in the environment – describing shapes eg round, flat.
- Naming 2D and 3D shapes.
- Describing their position in relation to objects – behind, next to etc.
- Describe and create patterns – 
- Uses the mathematical vocabulary of size, weight, capacity, distance, time and money.



Shape, Space and Measure



- As in Number, children are assessed according to whether they are emerging, expected or exceeding in Shape, Space and Measure.
- ELG - Children use everyday language to talk about size, weight, capacity, position, distance, time and money to compare quantities and objects and to solve problems. They recognise, create and describe patterns. They explore characteristics of everyday objects and shapes and use mathematical language to describe them.
- Exceeding - Children estimate, measure, weigh and compare and order objects and talk about properties, position and time.

Maths Passports

- Maths Passports are a strategy for improving children's mental maths skills.
- Each child will be given a passport with a series of targets set out in continents. These targets get progressively more challenging through the school. The passports track progression in basic number skills. The children will develop instant recall skills in all the objectives – they should not be taking time to work out the answer to each question, they need to know it instantly.
- All children will start at their attainment level and progress through the passports at their own pace. The aim is to complete the passports at the latest by Year 6. At first, it may seem that the work they are doing is too easy but we want to check how fast all the children are at each objective.
- The children will be practising mental maths skills in school and will be tested regularly. But in order to progress quickly and to develop instant recall, your child will need your help.

Maths Targets

Passports – a parents' guide

England

- Recite numbers in order from 1 to 10
- Recognise numerals 1 to 5

Ireland

- Counts objects to 10
- Is beginning to count beyond 10

Scotland

- Selects the correct number to represent 1 to 5
- Selects the correct number to represent 6 to 10

Wales

- Counts up to 6 objects from a larger group
- Place numbers 1 to 20 in order

This booklet is a guide to some of the maths passports. It outlines the objectives, answers questions and provides suggestions for activities that can be done at home.

Activities for practising the Maths Passport

Targets: England, Ireland, Scotland & Wales

Counting…

Count regularly.
In the car, walking to school, in the bath.

Count backwards as much as forwards – children often need much more practise with this.

Make deliberate counting mistakes, miss a number out or say one twice. See if your child can point the error out.

Sing nursery rhymes or counting songs. YouTube has loads!

Counting objects up to 10, 20 and more.

Fruit, biscuits, cutlery, peas on a plate!

Try asking your chid something random in between and see if they can still remember the total!

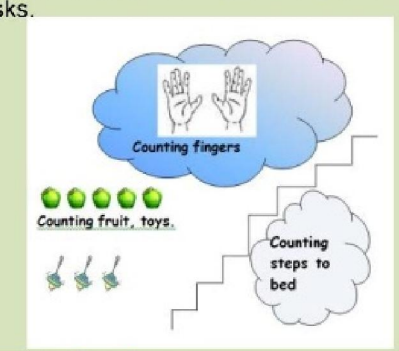
Reading Books

There are lots of books with numbers and counting as a theme.

E.g:
Two at the Zoo
One smiling Grandma
Annos counting book
Not like that, like this
The very Hungry Caterpillar
Counting with Thomas
Ten terrible dinosaurs
Brown Bear, Brown Bear

Counting everyday objects

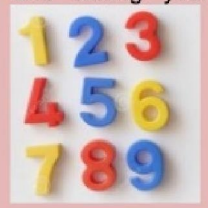
When shopping, cooking or doing routine tasks.



Fridge magnets

Use number fridge magnets or foam bath numbers to put in order.

Try missing some out or putting them in the wrong order and asking your child to correct you.



Count objects to take away

Ask your child to take objects away from a larger group.

For example, "Can you take 6 packets of crisps out of this bag."

One more or one less

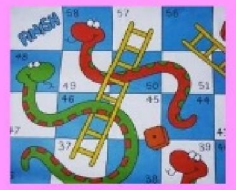
When shopping, cooking or doing routine tasks.

We have 7 pieces of apple. If I eat one there will be one less.
What is one less than 7?

Play board games

Snakes and ladders and other track games are great for practising counting a number of jumps or places.

Junior Uno involves recognising numbers and colours and you can play snap with number cards or clearly numbered playing cards.



Make numbers

Use playdough, shaving foam, paint, water, glitter or a steamy mirror to draw numbers. Practise saying the number you can see, and writing the number someone says.

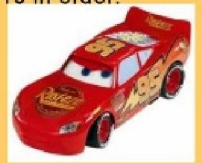
A paint brush dipped in water makes an easy to clean mark.

You can get number cookie cutters. Making and icing number biscuits and putting them in order could be great fun.

Ordering numbers

Use number cards or numbers drawn on post its and put them in order.

Stick sticky labels to cars and line them up in the write order.
Make a car park out of big paper and number the parking spaces. Park cars in spaces from 1-10 in order.



Useful websites

There are many, many excellent websites with games and interactive activities. These are just a few of them.

Mathletics
ICTgames
BBC bitesize and cbeebies
Woodlands Junior
Topmarks
Mad4Maths
Mathszone

Maths Targets

Passports – a parents' guide

Europe

- Count reliably with numbers from 1 to 20
- Say 1 more than any number between 1 and 20
- Say 1 less than any number between 1 and 20

Asia

- To count in twos (forward and back)
- To count in fives
- To count in tens
- Know by heart number bonds to 10
- Recall the doubles of all numbers to at least 10

North Africa

- Know by heart all number bonds that total 20
- Know by heart all bonds of multiples of 10 up to 100
- Know by heart doubles of all numbers to 20
- Know by heart halves of all numbers to 20
- Know by heart all multiplication facts for 2 up to 2 x 10

South Africa

- Know by heart all division facts for 2 up to 20
- Know by heart all multiplication facts for 5 up to 50
- Know by heart multiplication facts for 10 up to 10 x 10
- Know by heart all division facts for 10 up to 100
- Be able to recognise odd and even numbers

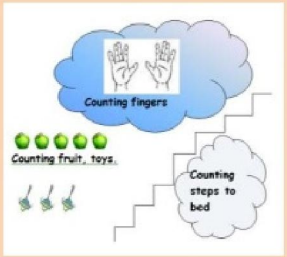
This booklet is a guide to some of the maths passports. It outlines the objectives, answers questions and provides suggestions for activities that can be done at home.

Activities for practising the Maths Passport

Targets: Europe, Asia, North Africa & South Africa

Counting everyday objects

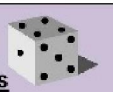
When shopping, cooking or doing routine tasks.



One more or one less

When shopping, cooking or doing routine tasks.

One more, one less



For this game you need a dice, a coin and some building blocks or Lego bricks.

- Take turns to roll the dice.
- Build a tower with that number of blocks or bricks.
- Then toss the coin. Heads means take one brick off. Tails means add one on.
- If you can guess how many bricks there will be after this, you keep them!
- The first to collect 20 bricks or more wins!

Dicey coins

For this game you need a dice and about twenty 10p, 5p or 2p coins.

- Take turns to roll the dice and take that number of 10p/5p/2p coins.
- Guess how much money this is. Then count aloud in tens/fives/twos to check, e.g. *saying ten, twenty, thirty, forty…*
- If you do this correctly you keep one of the coins.
- First person to collect £1 wins.
- Don't forget to give the coins back!

Speedy pairs to 10

Make a set of 12 cards showing the numbers 0 to 10, but with two 5s.
If you wish, you could use playing cards.

- Shuffle the cards and give them to your child.
- Time how long it takes to find all the pairs to 10.

0	10	2	8	4	6
1	9	3	7	5	5

Repeat later in the week. See if your child can beat his / her time.

Track games

Make a number track to 20, or longer. Make it relevant to your child's interests – sea world, space, monsters… Then play games on it.

Throw a dice. Move along that number of spaces. BUT, before you move, you must work out what number you will land on. If you are wrong, you don't move! The winner is the first to land exactly on 20.

Takings

For this game you will need a dice and a collection of small things such as Lego bricks, sticky shapes or dried beans. You will also need pencil and paper.

- Take turns.
- Roll a dice. Take that number of items. Write down the number.
- Keep rolling the dice and taking that number of beans. BUT, before you take them, you must write down your new total.
- You can only take your items if you are right.
- The first person to collect 20 items wins!

Multiplication Facts

Take all of the number cards out of a pack of cards. Turn one over and multiply it by either 10,5 or 2. This could be played as a race against someone else, or against the clock.

Quick Fire Questions

Give your child a number up to 20. Can they double or halve the number?

How fast can they respond with doubles/halves facts?

Bingo

Each player writes down 5 numbers from the 2 times table (from the 2nd to 12th multiple). For example:

8 24 20 22 4

Roll a 6 sided dice twice, add the numbers and then multiply them by 2.

If either player has chosen that number, they cross it out.

The winner is the first person to cross out all of their numbers.

This game could be used for other times tables.

Useful websites

There are many, many excellent websites with games and interactive activities. These are just a few of them.

Mathletics
Woodlands Junior
Topmarks
Mad4Maths
Mathszone

Maths Targets

Passports – a parents' guide

Australasia

- Know by heart all sums and differences of multiples of 10 up to 100
- Know by heart all number bonds that total 100
- Know by heart all multiplication facts for 3 up to 3 x 10
- Know by heart all division facts for 3 up to 30
- Know by heart all multiplication facts for 4 up to 4 x 10
- Be able to use the symbols < > and =

Antarctica

- Know by heart all division facts for 4 up to 40
- Know by heart all multiplication facts for 6 up to 6 x 10
- Know by heart all division facts for 6 up to 60
- Know by heart all multiplication facts for 8 up to 8 x 80
- Know by heart all division fcts for 8 up to 80
- Recognise multiples of 2,5,10 up to 1000

North America

- Double any 2 digit number
- Know by heart all multiplication facts for 7, up to 7 x 10
- Know by heart all division facts for 7, up to 70
- Know by heart all multiplication facts for 9, up to 9 x 10
- Know by heart all division facts for 9, up to 90

South America

- Double any number with up to 1 decimal place
- Halve any number with up to 1 decimal place
- Recall quickly multiplication facts up to 10 x 10 and use them to multiply pairs of multiples of 10 and 100, eg 30x70 or 40x200
- Know the factors of all times table answers up to 10 x 10 (be able to list at least 4 for any number – unless it has less than 4!)
- Halve any 2 digit number

This booklet is a guide to some of the maths passports. It outlines the objectives, answers questions and provides suggestions for activities that can be done at home.

Maths Targets

Passports – a parents' guide

Arctic

- Round numbers to 1 decimal place to the nearest 1
- Know how to calculate fractions of quantities when the numerator is 1
- Find simple percentages (10%,50%,25%) of numbers between 0 and 500
- Quickly recall multiplication facts to 10x10 and use them to multiply decimals such as 7x0.4, 6x0.5

Globetrotters

- Know how to calculate fractions of quantities when the numerator is greater than 1
- Round numbers with 2 decimal places to the nearest tenth
- Find more complex percentages of even numbers between 0 and 500 (15%, 75%)
- Quickly recall multiplication facts to 10x10 and use them to divide decimals such as 4.2÷6, 2.5÷5
- Know number bonds of numbers with 2 decimal places to10

Moon

- Simplify fractions
- Use knowledge of percentages to calculate simple discounts of whole numbers between 0 and 500 (50%,25%,10% off)
- Quickly recall the first 20 square numbers
- Know the root of square numbers up to 400
- Know the factors of any number to 150

Sun

- Know the first ten cubed numbers
- Know the first ten triangular numbers
- Be able to compare fractions, decimals and percentages
- Simplify ratios

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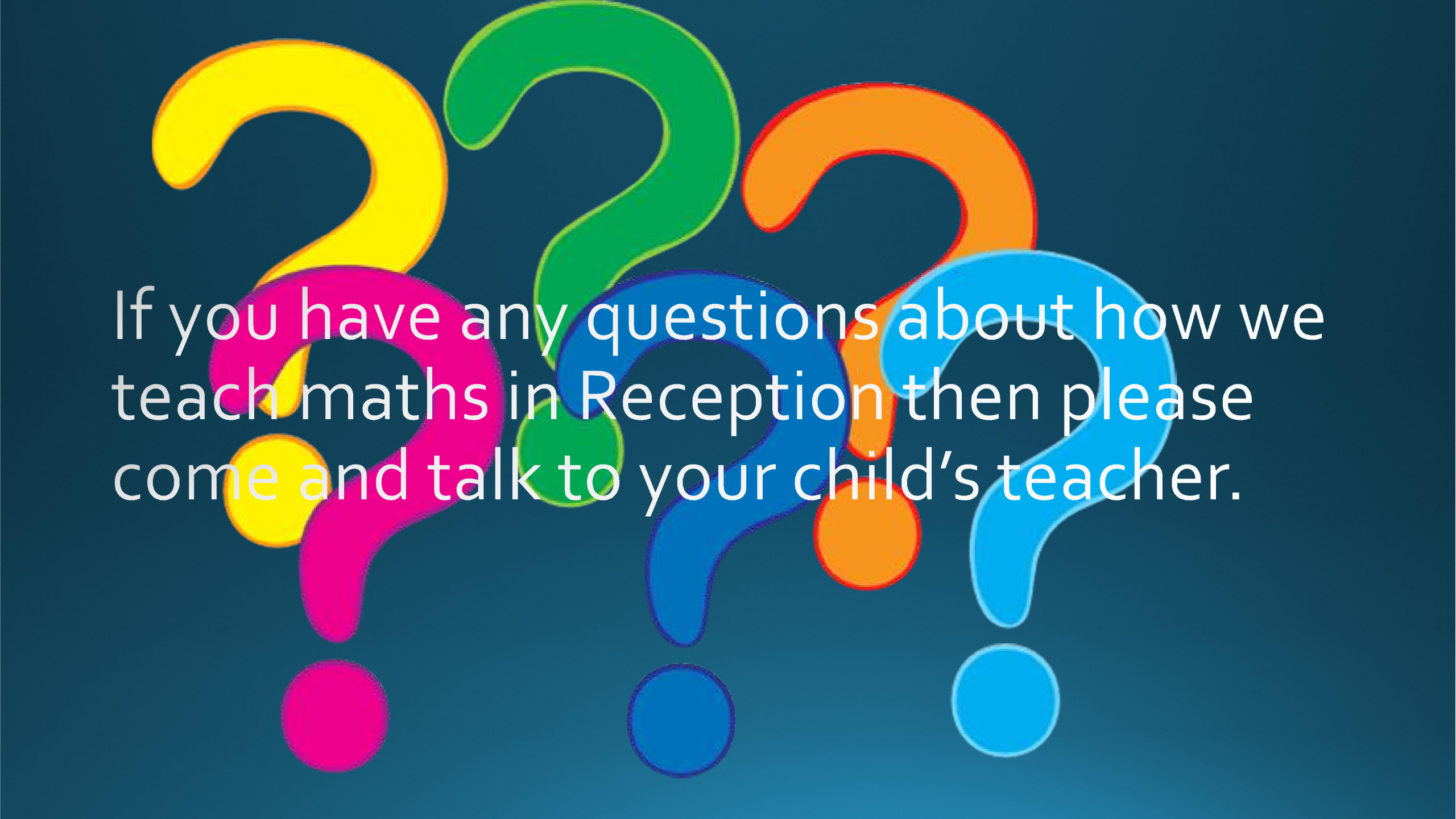

If you have any questions about how we teach maths in Reception then please come and talk to your child's teacher.