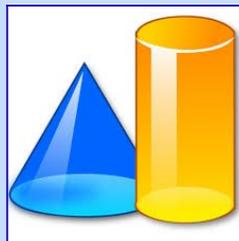




# Supporting Mathematics at Home



## RECEPTION GUIDE



Dear Parents/ Guardians;



At Corpus Christi we know how important it is for parents and teachers to work closely together in order to give your child the best start at school.

Mathematics is a hugely important part of our children's learning and it is really important that we support children in the two key areas of **Number** and **Space, Shape and Measure**.

At Corpus Christi we follow the Early Years Foundation Stage Curriculum. The curriculum suggests typical ranges of a child's development by age. This booklet is designed to support your child's learning of Maths from:

30-50 months

40-60 months

Early Learning Goals

Please remember that children develop at their own rates and in their own ways. The bands and their order should not be taken as necessary steps for individual children and should not be used as checklists! The bands overlap because these are not fixed age boundaries but suggest a typical range of development.

We hope it will provide you with a helpful overview of maths in Nursery and Reception and provide you with ways in which you can help your child at home.

If you require any further assistance, please do not hesitate to speak to your child's class teacher.

Mr S Dervan—Nursery Teacher/EYFS Phase Leader

Mrs A Duffy—Class 1 Teacher

Mrs G Jenson/Ms N Martin—Class 2 Teacher/ EYFS Coordinator

Mrs S Giles—Maths Coordinator



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## Getting Started!

Maths skills are vital to help your child in all areas of their lives. It is extremely important that we support your child in gaining a secure understanding of basic mathematical concepts, which will underpin all of their maths learning in school.

Read through all sections of this booklet regardless **of your child's age**. If they are not secure in the early stages of Maths they will struggle to understand the later ones. And remember, the age bands are not fixed but represent a typical stage of development.

1. Children must understand that a number represents a set of objects. E.g. when we say '4' we mean that there are four toys, that this is the fourth house on the street, that they are 4 years old.
2. When counting, children must be clear that each time they say a number name, they are counting an object. You can support this by ensuring that children touch each object as they count it. **Saying the number names in order is not the same as counting!**



3. Children need to understand ‘How many are there altogether?’ This means the last number they count is the total number of objects.
4. Children need to gain the skill of conservation. This means that they understand that even if you rearrange a group of objects, the amount stays the same unless you take one away or add a new one.

## Top Tips!

- Keep any maths activities as **PRACTICAL** as possible.
- Use real objects that can be moved when counting or adding until your child is confident enough to try with objects that cannot be moved.
- Don’t hurry your child into recording anything on paper. It is more important they understand the underlying concepts.
- Model correct mathematical language whenever you can in real-life situations, e.g. paying for things in a shop, looking at a calendar, finding out how many toys there are altogether when you’re tidying up, asking for the spherical brick.
- Encourage your child to solve problems, experiment and find things out for themselves.



# Numbers

At this stage we want children to match one object to each number as they count (one-to-one correspondence). You can support this by touching each object as you count. Remember, reciting numbers in order is not the same skill as counting! Children should also notice that if you have 5 cups, it doesn't matter if you arrange them into a different pattern, there are still 5 as long as one has not been added or taken away (conservation).

Continue to point out numbers to children in their environment and have a go at recording quantities.

At this stage, a child will **typically**:

- Use some number names and language accurately in play
- Recite numbers to 10
- Know that numbers identify how many objects are in a set
- Start to represent numbers using their fingers, marks on a piece of paper or pictures
- Sometimes match a numeral and quantity correctly
- Compare two sets, saying when they have the same number
- Separate a group of three or four objects in different ways but recognise the total is still the same (conservation)
- Show an interest in numerals in the world around them
- Realise anything can be counted including steps, claps and jumps





## Numbers Language

Encourage your child to use the correct language of mathematics at home. Try to use language in context.

*How many saucepans will fit on the shelf?*

*When one more frog jumps in, how many will there be altogether?*

### Do you speak a different language at home?

If you speak another language at home, use your home language to talk about quantities and numbers. **It is far more important that your child understands the concept rather than the English word!**

**number names to ten**

**numeral**

**group**

**altogether**

**fewer/ none**

**more/ lots**

**how many**

**count**

**hundreds**

**enough**



## How can I help at home?

Try playing some of these games!

- I hear with my little ear– how many claps/ clicks/ bang can you hear?
- Magic beans– show your child a number of beans and count them touching each one as you count. Rearrange them and count again. Even though they have moved, you still have the same number. Magic!
- Encourage your child to cut things that can be *shared* into pieces, eg cake/ pizza.
- Continue to read and sing number rhymes but make predictions, asking *How many will there be next?*
- Talk to your child about how they can solve a problem.
- Give your child ‘real life’ reasons to count, e.g. take enough cups for everyone at the table.
- Put numbers on a shelf for teddies and number the teddies themselves. Can your child put them back in the right place?
- Give your child real or plastic coins to play shops with. Encourage them to count out pennies.

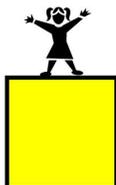


# Space, Shape and Measure (SSM)

At this stage we want children to begin to look more closely at shapes in the world around them and begin to identify their names and some simple features. They may begin to understand and use simple language of position or measure to make comparisons.

At this stage, a child will **typically**:

- Show an interest in shapes and making arrangements of shapes.
- Point out similarities of shapes in the world around them.
- Use simple language of position: forwards/ backwards/ behind/ in front of/ next to
- Use shapes to build models
- Begin to use language to talk about shapes around them, eg round/ straight/ tall/ big/ pointy





## SSM Language

Encourage your child to use the correct language of mathematics at home. Try to use language in context.

*How many saucepans will fit on the shelf?*

*When one more frog jumps in, how many will there be altogether?*

### Do you speak a different language at home?

If you speak another language at home, use your home language to talk about quantities and numbers. **It is far more important that your child understands the concept rather than the English word!**

**2D shape names (circle, square)**

**3D shape names (sphere, cube)**

**in/ on**

**inside/ under/ on top**

**in front/ behind/ next to/ in between**

**long/ longer/ longest**

**short/ shorter/ shortest**

**heavy / light**

**full/ empty**

**round/ straight/ point/ edge/ corner**



## How can I help at home?

Try playing some of these games!

- Encourage your child to organise things by shape. You could draw round the bottom of different boxes and ask your child to match each box to its shape.
- Encourage your child to use a variety of construction toys to help develop spatial awareness and problem solving skills.
- Play Simon Says or similar games involving children positioning themselves *inside, behind, on top* and so on.
- Give your child the chance to compare length, weight, capacity and time in real life contexts. *Which scarf is long enough for Daddy? Which bag is light enough for you to carry? Which bowl will hold more cereal? How many seconds will it take us to get our coats on?*
- Try to spot patterns and examples of symmetry in the world around you and discuss them with your child.



# Numbers

At this stage the children are beginning to apply the early mathematical skills they have learnt to solving new problems and new situations. They should be starting to count consistently (remember, reciting numbers in order is not the same skill as counting), recognise and use numerals accurately and begin to combine groups to find totals.

Between the ages of 40-60 months, a child will **typically**:

- Begin to recognise some numerals of personal significance, e.g. your door number or birth date
- Know the numerals 1-5 then 1-10 and be able to match them to a group of objects
- Count objects reliably first to 5 and to 10 and beyond, saying the number name for each of them
- Tell you how many objects are in a set up to 10
- Count actions or objects which cannot be moved
- Count out up to 6 objects from a larger group, e.g. *Can you please pass me five pencils from that pot?*
- Estimate how many objects they can see and check by counting
- Find the total number of objects in two sets by counting all of them
- Say a number that is one more than a given number
- Find one more or less from a set of objects to 5 then 10
- Start to use the vocabulary of adding and subtracting in real life contexts





## Numbers Language

Encourage your child to use the correct language of mathematics at home. Try to use language in context.

*Have you got enough to give me three?*

*You have four, I have three. How many have we got altogether?*

[Do you speak a different language at home?](#)

If you speak another language at home, use your home language to talk about quantities and numbers. When your child is secure, start to introduce the English vocabulary to them.

**number names to ten**  
**numeral**  
**group/ set**  
**altogether**  
**fewer/ none**  
**more/ lots**  
**how many**  
**count**  
**hundreds**  
**enough**  
**add/ take away/ share**



## How can I help at home?

### Try some of these!

- Encourage your child to make estimates *How many sandwiches will we need?*
- Encourage your child to use mathematical language, e.g. ask them exactly how many cups are left
- Use diaries, pointing out the different dates, phone numbers etc
- Sing rhymes or songs involving counting on or back in 1s, 2s, 5s and 10s.
- Talk to them about the concept of zero.
- Ask your child to put numbers in order. Make sure that your child is secure knowing about number order before you ask about one more or one less!
- Make collections which your child can sort, order, count and label in play, e.g. stamps, dinosaurs, shells, Moshi Monsters etc
- Ask your child to help you make a shopping list writing how many of each item you need
- Make your own shop and ask your child to write price labels
- Matching activities: put different amounts of objects into pots and ask your child to put the right numeral next to each pot
- Invest in some number games, e.g. dominoes
- Play hide and seek to practise counting to 100 or board games to practise moving on a certain number of spaces
- Make tally charts when applicable
- Make number lines and display them in your child's room/ kitchen
- Help children understand that five fingers on each hand make a total of ten fingers altogether, or that two rows of three eggs make six eggs altogether.

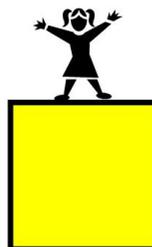


# Space, Shape and Measure (SSM)

At this stage we want children to begin to identify 2D and 3D shapes by their names and describe some features. They should be making comparisons of measure (length, height, weight, size, capacity) and use everyday language related to time. They should also start to use everyday language related to money.

Between the ages of 40-60 months, a child will **typically**:

- Begin to use and understand mathematical names for solid/3D shapes and flat/2D shapes. (Remember, a 'diamond' is not a shape!)
- Use positional language such as *behind* or *next to*.
- Order some items by height, weight or capacity.
- Create and recreate patterns.
- Use everyday language related to time.
- Use everyday language related to money.





## SSM Language

Encourage your child to use the correct language of mathematics at home. Try to use language in context.

*Can you put your teddy on top of the toy box for me?*

*Which bowl will hold more soup?*

*Which shopping bag is the heaviest?*

### Do you speak a different language at home?

If you speak another language at home, use your home language to talk about quantities and numbers. When your child is secure, start to introduce the English vocabulary to them.

**2D shape names (circle, square)**

**3D shape names (sphere, cube)**

**inside/ under/ on top**

**in front/ behind/ next to/ in between**

**long/ longer/ longest/short/ shorter/ shortest**

**heavy / heavier/ heaviest/ light/ lighter/ lightest**

**full/ empty**

**more/less**

**round/ straight/ point/ edge/ corner**

**yesterday/tomorrow/morning/afternoon**

**day/ week/ month/ year**



## How can I help at home?

- Ask 'silly' questions, e.g. show a child an egg cup and ask if it will hold a pint of milk.
- Play guessing games, describing different shapes to your child or revealing different parts of the shape to see if they can guess which it is.
- Play 'robots'. Ask your child to give you instructions on how to move around your house, e.g. 'Take three steps forward. Hide behind the sofa.' Swap and give your child directions.
- Introduce your child to the correct mathematical names for 2D and 3D shapes and point them out in the world around them. N.B. a 'diamond' is called a rhombus! (sphere, cube, cuboid, pyramid, triangular prism, cone) You will be impressed with how quickly your child will learn the correct language if you model it.
- Make models together with building bricks, pointing out differences in shape, colour, size and using the correct shape names.
- Encourage your child to experiment. Can they put their socks in the right length order? Can they find out which bowl holds the most water? Can they help you to weigh ingredients when you are cooking?
- Change up a few pounds at your bank to bags of 1p, 2p and 5p. Set up a toy shop and encourage your child to play with real money. Help them understand that one 2p coin is the same as two 1p coins.



# Numbers

The Early Learning Goals (ELGs) are the expected levels at the end of Reception Year. At this stage the children should be secure in all the early mathematical skills they have been taught, with an understanding of number, counting and ordering. We extend the children's number to 20 and encourage them to solve simple problems relating to addition and subtraction.

There is no expectation that your child should know the written notation of sums! (+ - =) At this stage we want the children to understand the **concept** of addition and subtraction before we teach them notation.

By the end of Reception Year, a child will **typically**:

- count how many objects are in a set reliably to 20
- say the number names to 20 in the correct order
- count on from a given number, e.g. start counting at 7
- count back from a given number e.g. count back from 12
- recognise the numerals 1-20 and put them in order
- say which number is one more or one less than a given number to 20
- using real objects, add and subtract two single-digit numbers
- solve simple additions and subtractions by counting on/back
- begin to solve real-life problems involving doubling, halving and sharing. E.g. there are 6 biscuits and 3 children. Let's share out the biscuits. How many do we have each?





## Numbers Language

Encourage your child to use the correct language of mathematics at home. Try to use language in context.

*Get one more, then we will both have two.*

*What if there were three people to share the pizza instead of two?*

### Do you speak a different language at home?

If you speak another language at home, continue to use your home language to talk about quantities and numbers. However it is now important that your child is able to start using the correct English vocabulary.

**number names to twenty including zero**

**numeral/ number**

**group/ set**

**how many/ altogether**

**one more than/ one less than**

**fewer/ none**

**more/ lots**

**count on/ count back**

**hundreds**

**enough**

**add/ take away/ share**

**double/ half**



## How can I help at home?

- Make sure your child is secure about the order of numbers before you ask them about what comes before or after a given number.
- Use rhymes, stories and songs that involve counting on and back in ones, twos, fives and tens
- Talk to your child about how they can find solutions to different problems
- Encourage your child to make up their own problems for others to solve
- Extend problems for them; e.g. *We have shared out the strawberries for three, but now your sister has come we need to share them out for four. How many will we have each now?*
- Use the correct mathematical vocabulary and show your child examples of recording simple sums. (It is not an expectation that your child will be able to record sums themselves!)
- Show your child a 100 square and encourage them to look for patterns in the numbers.
- Encourage your child to count the things they see and talk about and use numbers beyond 10.
- When your child is confident, show them numbers on a line and how you can count on or backwards along the line.
- Involve your child in activities that require maths, e.g. making shopping lists, setting the table, counting how many biscuits are left, counting how many spoons are in the washing up



# Space, Shape and Measure (SSM)

The Early Learning Goals (ELGs) are the expected levels at the end of Reception Year. At this stage the children should be secure in all the early mathematical skills they have been taught, with an **understanding of and ability to use mathematical language** relating to shape, money, measures, comparison and features. They should also be confident to solve simple problems applying the skills they have learnt.

By the end of Reception Year, a child will **typically**:

- Understand and use everyday language of size
- Understand and use everyday language of weight
- Understand and use everyday language of capacity
- Understand and use everyday language of position
- Understand and use everyday language of distance
- Understand and use everyday language of time
- Understand and use everyday language of money
- Compare quantities and objects
- Recognise, create and describe patterns
- Explore and describe features of everyday objects and shapes using the correct mathematical language



## SSM Language

Encourage your child to use the correct language of mathematics at home. Try to use language in context.

*Can you put your teddy on top of the toy box for me?*

*Which bowl will hold more soup?*

*Which shopping bag is the heaviest?*

[Do you speak a different language at home?](#)

If you speak another language at home, continue to use your home language to talk about quantities and numbers. However it is now important that your child is able to start using the correct English vocabulary.

**2D shape names (circle, square)**

**3D shape names (sphere, cube)**

**inside/ under/ on top**

**in front/ behind/ next to/ in between**

**long/ longer/ longest/short/ shorter/ shortest**

**heavy / heavier/ heaviest/ light/ lighter/ lightest**

**full/ empty**

**near/ far**

**round/ straight/ point/ edge/ corner**

**yesterday/tomorrow/morning/afternoon**

**day/ week/ month/ year**

**penny/ pound/ coin/ note**



## How can I help at home?

- Make books at home about shape, time or measure. Can we make a book about all the square things we can see in our house? Can we write a diary this week? Can we write a story about a snake who grows longer every day?
- Give your child opportunities to experiment with comparing measures, e.g. when cooking, pouring water from various containers when washing up/ in the bath, measuring the height difference between themselves and others
- Play shape snap
- Encourage your child to use correct mathematical language and clear sentences when talking about position, e.g. instead of *'The cat's over there!'* encourage *'The cat is sitting next to the television'*
- Encourage your child to play games where they must use clear positional and directional language
- Let your child experiment with balancing as well as electronic scales
- Take the opportunity to explore interesting problems. E.g. many children believe that a taller container always holds more than a short one. Provide a variety of containers so that they can see this is not always the case.
- Encourage your child to pay for small items when you are shopping, counting out the correct coins
- Encourage your child to talk about patterns, copy them and create their own



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## WEBSITES

Remember, practical activities are the best way to teach your child mathematical skills.

There are many brilliant practical ideas on Pinterest if you search for Early Years Maths ideas.

<https://uk.pinterest.com/>

Also on a website called The Imagination Tree

<http://theimaginationtree.com/>

### FORGOTTEN YOUR NUMBER RHYMES?

Try these websites to remind you of words and actions!

[www.babyspoon.co.uk/nursery.htm](http://www.babyspoon.co.uk/nursery.htm)

[www.youtube.com](http://www.youtube.com)

[www.nurseryrhymes.org](http://www.nurseryrhymes.org)

### **Useful websites for children**

[www.bbc.co.uk/cbeebies/games/theme/maths-and-puzzles](http://www.bbc.co.uk/cbeebies/games/theme/maths-and-puzzles)

[www.milkshake.channel5.com/fun-stuff/games](http://www.milkshake.channel5.com/fun-stuff/games)

[www.familylearning.org.uk/counting\\_games.html](http://www.familylearning.org.uk/counting_games.html)

[www.maths-games.org/counting-games.html](http://www.maths-games.org/counting-games.html)

[www.crickweb.co.uk/Early-Years.html](http://www.crickweb.co.uk/Early-Years.html)

[www.educationcity.com](http://www.educationcity.com)

[www.counton.org](http://www.counton.org)

[www.mathsisfun.com](http://www.mathsisfun.com)

[www.mad4maths.com](http://www.mad4maths.com)

[www.topmarks.co.uk/maths-games/3-5-years/counting](http://www.topmarks.co.uk/maths-games/3-5-years/counting)



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## **MATHLETICS!**

Mathletics is an online learning resource. It incorporates a range of fun games, activities and challenges based around children's ages and their stage of curriculum.

All children at Corpus Christi—from Reception to Year 6 have their own subscription to Mathletics. This allows them to log on at school and home and take part.

Teachers can set homework through Mathletics and can monitor children's progress.

Your child will be given a Mathletics log on at the start of their Reception year. Feel free to explore this with your child and use it frequently. Your child is likely to use this in school too and sometimes class teachers in Reception suggest completing a specific activity as homework.

It is great fun and a good way to explore what your child will be learning in Maths at particular stages throughout their school career.

<http://uk.mathletics.com/primary/>

EYFS

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**NOTES**



EYFS

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**NOTES**



