

Bessemer Grange

Maths in Early Years

By Laura Dunphy

Aims



- * To get an insight into how Maths is taught through play at Bessemer Grange.
- * To take away some ideas to support your children at home.

Expectations



Numbers:

- * Children count reliably with numbers from one to 20.
- * Place numbers in order and say which number is one more or one less than a given number.
- * Using quantities and objects; children add and subtract a single-digit number. They count on or back to find the answer.
- * They solve problems, including doubling, halving and sharing.

Phase 1

- * This focuses on the development of children's awareness, understanding and use of the language of number. On the development of children's early awareness of quantity.



less



more



Phase 2: Number words and numerals

- * The main focus in Phase 2 is the development of children's knowledge and use of the number sequence from one to five, and the recognition of the numbers 1 to 5.



Phase 2

Counting sets

- * Phase 2 focuses on the development of children's ability to count up to five objects and to recognise, without counting, sets of one, two or three objects



Phase 3

Number words and numerals

- * Phase 3 focuses on the development of children's knowledge of the number sequence from one to nine and **recognition** of the numerals 1 to 9

Birds on a Wire!



A interactive lesson with ordering single digit numbers, even and odd numbers, and greater than or less than with single digits.

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Phase 3

Counting Sets

- * This phase concentrates on extending children's counting skills to enable them to count up to ten objects, actions or sounds accurately



Phase 4

Number words and numerals

- * Phase 4 extends the range of numbers that children can confidently use, including zero and numbers to 20



Phase 4

Counting Sets

- * Phase 4 focuses on extending children's counting skills to enable them to count up to ten objects accurately, in any arrangement.
- * The early stages of addition and subtraction are developed as children begin to partition and combine sets and to remove objects from sets



Addition Strategies



Symbols

- + add symbol
- = equals/total amount



**Visual
and
verbal**

- Adding 2 sets of objects together
- Counting on



Mental

- Put the highest number in your head
- Count on using your fingers

Subtraction Strategies



Symbols

- - Take away or subtract
- = equals/makes

$$9 - 3 =$$

Verbal and visual

- Using objects to take away
- Hold fingers up and take away

Mental

- Put highest number in head
- Take away lowest number using fingers



Phase 5

Number words and numerals

- * Phase 5 focuses on extending the range of numbers that children can confidently use, to include numbers to 30
- * Children also start to explore the sequences of numbers when they count from zero in twos, fives and tens



Phase 5

Counting Sets

- * Phase 5 focuses on extending children's counting skills to enable them to estimate, count and compare sets of up to 20 objects.
- * Addition and subtraction are further developed as children partition and combine sets and count on and back



Maths at home

Remember to keep maths practical and fun!

- * **Counting songs:** 1,2 buckle my shoe,
* 10 green bottles,
* 12345 once I caught



- * **Talk about numbers in the environment** (front door numbers, what would be 1 more/less, number plates, road signs, paying in shops- including change etc)

- * **Help with cooking** (measuring, weighing, more/less, double/ half amount, ordering the recipe)



- * **Setting the table places** (how many cups/ plates, etc, what if someone else comes for dinner? Will we need more/less?)

Remember to keep maths practical and fun!

- * **Estimating amounts** (how many apples/ socks? Checking by counting, what if I eat 2/ add 2 more, can you count in a different way? 2's, 5's, 10's)

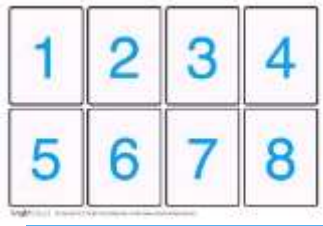


- * **Talk about shapes in the environment** (how many sides/ corners does that have? Are they curved/ straight? Is it a flat 2D or solid 3D shape?)



- * **Emptying and filling containers in the bath** (using comparative language such as more/less, empty/full)





Number systems

- * **Can you cut out the numbers and sequence them?**
- * **Can you make a 2 digit number?**
- * **What's the highest 2 digit number you can make?**
- * **What's the lowest 2 digit number you can make?**

More or less ? Greater or fewer?

Objects



Numbers





Games

- * Roll the dice what number did you get?
- * Roll the dice again what number did you get?
- * Was it more or less than the first roll? Or the same?
How can we check?
- * What would 1 more / less be? *How can we check?*
- * What 2 digit numbers can you make?
- * What is the total amount of those dice?
- * Can you subtract one number from the other? Or what's the difference between the numbers?
- * Let's play



Addition

- * To decide who goes first, let each child roll the dice and whoever rolls the largest number goes first.
- * They then take it in turns to roll the dice, count the number of spots and move the correct number of spaces.
- * As they move round the board encourage the children to use the language of addition, for example, by saying aloud their number sentence e.g. “2 add 2 equals 4”. Reinforce the use of a variety of mathematical vocabulary by repeating their number sentence using alternative vocabulary, for example, “Yes that’s right, 2 plus 2 equals 4.”
- * The first person to get to the finish is the winner!
- * **What does that number sentence look like?**



Subtraction



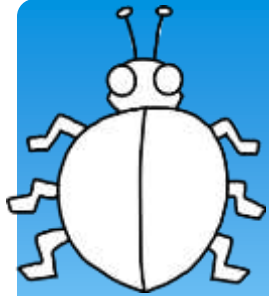
Context – Stories

Joshua went to the shop and bought 8 lollipops.
He gave 3 to his little sister.

How many does he have left?

Will Joshua have more or less lollipops now?

How can we work it out? Draw dots, draw lollipops
and cross out 3. Can you write the number
sentence.



Number bonds to 5 / 10

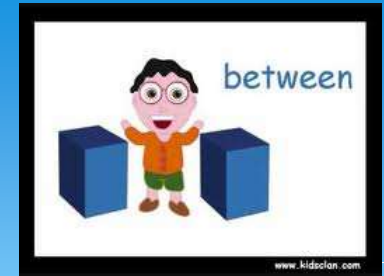
- * How many different ways can we make 5 and 10?
- * If you put one dot on one side how many more do we need to make 5 / 10?
- * Can you draw that number of dots on the other side?
- * What would that number sentence look like?

Snakes and Ladders





Expectations



Shape, space and measures:

- * Children use everyday language to talk about:
 - * size
 - * weight
 - * capacity
 - * position
 - * distance
 - * time
 - * 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.



Shape

Maths Challenge

Go on a shape hunt.

What shapes can you see?

Are they 2D? Or 3D?

How do we know?



Capacity

How full is it?

How empty is it?

How much does it hold?

How can we measure the capacity?

Will they have the same capacity?

How can we check?



Size – length, height, width.

Maths Challenge



Can you find 3 different sized shoes in your house and put them in order of size?

What else can you find to order my length?

Money



Maths Challenge

Ask your grown up if you can count the coins they have got?

How many are 10p coins?

Practise writing these numbers at home.

Ordering numbers



Maths Challenge

What numbers are in your phone number?

Which is the biggest number?

Can you put them in order from smallest to biggest?

Practise writing these numbers at home.

Distance



Maths Challenge

How many footsteps from

Your house to the bottom of your garden?

Your front door to your bedroom?

Your kitchen to your bathroom?

What happens to the number if you take bigger steps?

Practise writing these numbers at home.

WEBSITES



www.bbc.co.uk/schools/starship/maths/



www.bbc.co.uk/schools/digger/



www.ictgames.co.uk



Questions???

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