Beech Hill School
Reception Maths Coverage

Maths		
Autumn 1 – If You Go Down to The Woods Today…		
Pupils will learn one number over the course of approximately 2 weeks; focusing on Counting, Comparison, Composition and Change for each number.		
Number	**Numerical Patterns**	**Space Shape and Measure**
Pupils will be introduced to 10 towns. This term pupils will be introduced to; The Zero Pond/0, King One/1, Tommy Two/2 and Thelma Three/3. Pupils will watch the following Numberblocks episodes; S3E5, S1E1, S1E2, S1E3, S1E4, S1E5 **Counting** Pupils will use the **Stable Order Principle** to practise saying the number names, to at least 3, in the correct order. Pupils will develop their ability to apply the O**ne-to-one Principle**, matching one object to one number consistently, when counting at least 3 objects. They will be able to tag objects and events with number labels. Pupils will learn to answer the question 'How Many?' by developing their ability to apply the **Cardinal Principle**, saying how many there are in a set with the last number counted. Pupils will use the **Abstract Principle** to count at least 3 actions/ sounds or objects which cannot be moved.	**Comparison** Pupils will explore the ordinal relationships between one, two and three. They will describe the relationship between numbers using the vocabulary 'more than', 'less than' and 'the same as'. They will also learn the vocabulary first, second and third.	Pupils will make playdough which can then be used in the provision. When doing this they will explore measuring ingredients. Whilst learning about the numbers 1 and 3, pupils will explore simple 2D shapes. They will learn to recognise and describe a circle and a triangle, naming the number of sides and corners. Pupils will explore shape features through constructing shapes with sticks/ straws/ string and found materials. They will develop their ability to match shapes which are the same size and orientation/ match shapes with different sizes and match shapes with different orientations. Pupil will explore jigsaws through the continuous provision. Pupils will explore tea party props, such as cups, saucers, tea pots and spoons in the water tray. Pupils will explore different cups and containers in the set whilst explore pouring and filling. They will engage in role play,

Recognition- pupils will Identify number representations, including Numicon, objects, pictures, pairs (number 2) and numerals. They will be introduced to structured representations, such as dice, ten frames and fingers as well as some unstructured representations. Pupils will also represent numbers in their own ways using objects, actions and marks. **Composition** Pupils will learn that each number builds upon the previous number by adding one more. They will use the vocabulary '**another one'** to numbers 0, 1 and 2 They will learn that a group of objects can represent a whole (unitising) and that a whole can be one object and if some of it is removed, it is no longer the original whole. **Change** Pupils will learn that adding can be the change of an existing set by increasing its quantity (**Augmentation**). They will recognise that sets can be combined to make a new group and that if objects are added to an existing set, the quantity has **increased**		accepting drinks and asking which cup has the most in. Pupils will be encouraged to use capacity related language, for example, 'I would like my drink full to the top please. Like this one. Half-full is not enough. This one is empty'. Pupils will be provided with different role-play scenarios where different quantities are required to challenge the children's use of maths vocabulary.

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Maths		
Autumn 2- It was a Dark, Dark Night		
Pupils will learn one number over the course of approximately 2 weeks; focusing on Counting, Comparison, Composition and Change for each number.		
Number	**Numerical Patterns**	**Shape, Space and Measure**
This term pupils will be introduced to; Freddie Four/4, and Fiona Five/5 Pupils will watch the following Numberblocks episodes; S1E6, S1E7, S1E8, S1E9, S1E10, S1E11, S1E12 S1E13, S1E14, S1E15 **Counting** **Subitising-** Pupils will develop their ability to recognise a standard arrangement of up to 5 objects and say the amount without counting. They will watch videos such as Jack Heartman's 'Subitise to 5' to support this skill. Pupils will use the **Stable Order Principle** to practise saying the number names, to at least 5, in the correct order. They will then use this principle to identify when numbers are not in the correct order and to then reorder numbers which are out of sequence. They will also use this principle to identify missing numbers from a sequence. Pupils will develop their ability to apply the **One-to-one Principle**, matching one object to one number consistently, when counting at least 5 objects. They will be able to tag	**<u>Comparison</u>** Pupils will explore ordering quantities, numerals and mixed representations; - Identify the smallest quantity to start with - Identify the largest quantity to start with - Identify zero to start with Pupils will describe the relationship between numbers using the vocabulary 'more than', 'less than', 'fewer', 'the same as', 'equal to	Pupils will make playdough which can then be used in the provision. When doing this they will explore measuring ingredients. Whilst learning about the number 4, pupils will explore squares and rectangles. They will learn to recognise and describe a square and a rectangle naming/ counting the number of sides and corners. Pupils will explore shape features through constructing shapes with sticks/ straws and found materials. Pupils will watch Numberblocks episode S3E16 (Flatland) to support their understanding of shape. Pupils will explore 2D and 3D shapes through shadow play. Pupils will develop their ability to match shapes which are the same size and orientation/ match shapes with different sizes and match shapes with different orientations. Pupil will explore jigsaws through the continuous provision.

objects and events with number labels. Pupils will be able to answer the question 'How Many?' by developing their ability to apply the **Cardinal Principle**, knowing that the last number in the count is the total size of the group. **Recognition**- pupils will Identify number representations, including Numicon, objects, pictures, pairs (number 2) and numerals. Pupils will use structured representations, such as dice, ten frames and fingers as well as un structured representations. Pupils will also represent numbers in their own ways using objects, actions and marks. Pupils will arrange objects in different ways and apply the **Order Irrelevance Principle** to help them understand the conservation of number- that the number of objects remains the same however they are rearranged. Pupils will use the **Abstract Principle** to count at least 5 actions/ sounds or objects which cannot be moved. **Composition** Pupils will learn how each number builds upon the previous number- knowing a number as the previous number plus one (Number System) Pupils will explore the structure of each number through **part-whole relationships-**Understanding the connection between		Pupils will explore pattern through making their own Christmas tree decorations. They will thread red and white beads in turn onto a pipe cleaner and bend it into shape.

an amount and how it can be split. They will use 'part, part, whole' models to help them partitioning numbers into smaller quantities (Decomposition). They will also explore combining quantities to make a number (Composition). They will learn that a whole can be one object, and if some of it is removed, it is no longer the original whole. They will learn that if a whole is split the new parts are smaller than the original whole and that the smaller parts can be put back together to make the original whole. **Unitising-** pupils will recognise two 2's and begin to handle quantities as a single object, counting the units rather than the single objects. **Change** Pupils will learn number bonds to 5 using manipulatives in conjunction with pictorial representations. They will explore how number bonds can be represented using number sentences alongside context. **Combining and increasing Sets-** Pupils will learn that adding can be the change of sets into one new group (Aggregation) and that the new group is a larger quantity than either of the original sets. **Separating and decreasing Sets-** Pupils will learn that subtraction can be separating a set to identify what is		

remaining and that both of the sets are smaller quantities than the original group.		

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Maths		
Spring 1- Go Wild!		
Pupils will learn one number over the course of approximately 2 weeks; focusing on Counting, Comparison, Composition and Change for each number.		
Number	**Numerical Patterns**	
This term pupils will be introduced to; Seal Six/ 6, Sir Seven/ 7 and Eric Eight/ 8 Pupils will watch the following Number blocks episodes; S2E1, S2E2, S2E3 **Counting** Pupils will learn how each number builds upon the previous number- knowing a number as the previous number plus one (Number System) Pupils will use the **Stable Order Principle** to practise saying the number names, to at least 8. They will also explore the ordinal number names (first, second, third etc) for each number learnt to date. Pupils will be able to answer the question 'How Many?' by developing their ability to apply the **Cardinal Principle**, knowing that the last number in the count is the total size of the group, to at least 8. **Recognition**- pupils will Identify number representations, including Numicon, objects, pictures, pairs (number 2) and	**Comparison** Pupils will describe the relationship between numbers using the vocabulary 'more than', 'less than', 'fewer', 'the same as', 'equal to	Pupils will make playdough which can then be used in the provision. When doing this they will explore measuring ingredients. Whilst learning about the number 6 pupils will explore hexagons. They will learn to recognise and describe a hexagon, naming/counting the number of sides and corners. Pupils will explore ordering lengths which are marked in one to six units- for example towers of up to 6 cubes which increase by 1 each time. They explore the vocabulary of size. They will be able to use comparative language bigger than, smaller than, taller than, shorter than. Pupils will find 2D shapes within 3D shapes through printing with shapes. Pupils will investigate 3d shapes through building models and structures using shapes (cube, cone, sphere, cuboid, pyramid) and then describe the features of their model.

numerals. Pupils will use structured representations, such as dice, ten frames and fingers alongside unstructured representations. Pupils will also represent numbers in their own ways using objects, actions and marks. **Subitising-** Pupils will develop their ability to recognise up to 6 objects, in structured arrangements, and say the amount without counting. They will watch videos such as Jack Heartman's 'Subitise Rocks' to support this skill **Composition** Pupils will learn the structure of each number through **part-whole relationships-** Understanding the connection between an object and how it can be split and then put back together again. They will use 'part, part, whole' models to partitioning numbers into smaller quantities (Decomposition) and to combine quantities to make a number (Composition). **Change** Pupils will explore how adding can be the change of sets into one new group (Aggregation). They will be able to find the total quantity of a new group, knowing that it is a larger quantity than either of the original sets.		Children will copy 2D pictures and patterns with 3D resources such as pattern blocks, tangrams, building blocks and magnetic construction tiles, as well as found materials. Pupils will learn that there are seven day in a week and be able to say name all seven days in the correct order, starting with Monday. Pupils will also learn to say the months of the year in the correct order. This will be embedded daily through the completion of a class day, date and weather chart. Pupil will explore jigsaws through the continuous provision

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Maths		
Spring 2- Farmyard Hullabaloo		
Pupils will learn one number over the course of approximately 2 weeks; focusing on Counting, Comparison, Composition and Change for each number.		
Number	**Numerical Patterns**	**Shape, Space and Measure**
This term pupils will be introduced to; and Nina Nine/ 9 and Tia Ten/ 10. Pupils will watch the following Number blocks episodes; S2E4, S2E5, S2E6, S2E7, S3E10, S3E9 **Counting** Pupils will learn how each number builds upon the previous number- knowing a number as the previous number plus one (Number System) Pupils will use the **Stable Order Principle** to practise saying the number names in the correct order **forwards and backwards** to 10. **Recognition**- pupils will Identify number representations, including Numicon, objects, pictures, pairs (number 2) and numerals. Pupils will use structured representations, such as dice, ten frames and fingers alongside unstructured representations. Pupils will also represent numbers in their own ways using objects, actions and marks.	**Comparison** Pupils will experience the relationships between consecutive numbers, describe the relationship between numbers using the vocabulary 'more than', 'less than', 'fewer', 'the same as', 'equal to' if they add or take one away. **Composition** Pupils will explore the square numbers 4 and 9 and how they make a shape with the same number of blocks down and across.	Pupils will make playdough which can then be used in the provision. When doing this they will explore measuring ingredients. Pupils will investigate 3d shapes through building models and structures using shapes (cube, cone, sphere, cuboid, pyramid) and then describe the features of their model. Children will copy 2D pictures and patterns with 3D resources such as pattern blocks, tangrams, building blocks and magnetic construction tiles, as well as found materials. Pupils will make their own pictures by arranging familiar 2D shapes. Pupils will use mathematical vocabulary (shape names, round, straight/ curved, corner, sided, flat.) to describe their pictures Pupils will explore filling an outline/ shape/ space with shapes using trial and error.

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Composition Pupils will use part-part-whole models to explore the connection between a quantity and how it might be split. They will explore how a whole can be one object and if some of it is removed it is no longer the original whole, and that if a whole is split the new parts are smaller than the original whole. They will also explore how the smaller parts can be put back together to make the original whole. Pupils will explore how a group of objects can represent a whole (unitising) and apply this to explore the number 10. They will learn that 10 is made up of ten ones and is also one unit of ten. **Change** Pupils will explore number bonds to 10. They will listen to Jack Heartman's 'I know my Numberbond's to 10' song and join in. **Increasing a set-** Pupils will practise adding 1 to a number. They will experience how a number is related to the adjacent one and how the counting numbers increase by 1. They will learn that they can make any number by adding 1 to the previous number. Pupils will see how this can be represented using number sentences alongside context. Pupils will record their own number sentences.		Pupils will continue to develop their awareness of dates and numbers, days of the week and months of the year by completing a daily class Day, Date and Weather chart. Pupil will explore jigsaws through the continuous provision.

Decreasing a set-Pupils will learn that subtraction can be the change of an existing set by decreasing its quantity and knowing that if objects are removed from a set, the quantity has decreased. Pupils will practise subtracting 1 from a number. Pupils will see how this can be represented using number sentences alongside context. Pupils will record their own number sentences		

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Maths		
Summer 1 – Robot Rumpus		
Pupils will learn one number over the course of approximately 2 weeks; focusing on Counting, Comparison, Composition and Change for each number.		
Number	**Numerical Patterns**	**Space, Shape and Measure**
Pupils will watch the following Number blocks episodes; S2E8, S2E9, S2E10, S2E11, S2E12, S3E12 **Counting** Pupils will apply the **One-to-one Principle**, to develop their understanding of one-to-one correspondence mapping (matching a quantity to number label) **Conceptual Subitising-** Pupils will learn to recognise a quantity as a whole from subitised parts. They will recognise structured representation of a whole by describing two parts. Pupils will apply this skill to recall know number facts to identify a whole in an unstructured arrangement. Pupils will also develop their ability to subitising representations by describing what is absent. They will watch videos such as the Jack Heartman's Subitise videos and to support this skill Pupils will use their knowledge of the **Stable Order Principle** to identify missing numbers from a sequence and correct an inaccurate sequence of numbers. **Change**	**Comparison** Pupils will look at **equivalence** and identify when quantities are the same (e.g. 6 is the same as 3 plus 3). Pupils will learn that some number are **odd** and some number are **even**- They will be able to sort numbers into odds and evens and describe the relationship between adjacent numbers (for example; an even number comes after an odd number/ an odd number comes after an even number) **Composition** Pupils will learn that odd numbers are even numbers plus one. They will explore how even numbers can be partitioned into smaller equal groups. **Change** Pupils will explore doubling and halving by observing how the numbers 1, 2 and 4 double up to make their respective doubles 2, 4 and 8. Pupils will explore halving through sharing numbers into two smaller equal groups. They will explore how these	Pupils will make playdough which can then be used in the provision. When doing this they will explore measuring ingredients. Pupils will explore simple repeated ABABAB patterns. They will learn how to duplicate and then extend a pattern. Pupil will explore jigsaws through the continuous provision

Pupils will explore how a quantity decreases if objects are removed from a set. They will begin to recognise when a contextual problem is following this subtraction structure and be able to represent the set from a contextual problem using manipulatives to find the reduced quantity. They will use the vocabulary of subtraction when removing from the set. Pupils will develop their ability to use marks to record their understanding of subtraction.	quantities can then be put back together/ combined to make the original number,	

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Maths		
Summer 2- Down at the Bottom of the Garden		
Pupils will learn one number over the course of approximately 2 weeks; focusing on Counting, Comparison, Composition and Change for each number.		
Number	**Numerical Patterns**	**Space, Shape and Measure**
Pupils will use Ten Town (11-20) to explore numbers beyond 10 Pupils will watch the following Number blocks episodes; S2E10, S3E18, S3E20 **Counting** Pupils will use the **Stable Order Principle** to practise saying the number names in the correct order **backwards** from 10-0. Whilst doing this they will be encouraged to describe the relationship between the adjacent numbers, for example 9 is less than 10. **Ordinal numbers-** Pupils will use their knowledge of the **Stable Order Principle** to use first, second, third etc in practical context. **Recognition**- pupils will Identify number representations, including Numicon, objects, pictures, pairs and numerals. Pupils will explore standard representations, such as dice, ten frames and fingers as well as nonstandard representations. Pupils will also represent numbers in their own ways using	**Comparison** **Ordering numbers to 10-** Pupils will order numbers (quantities, numerals and mixed representations) from smallest to largest by identifying the smallest quantity to start, including zero. They will also order numbers from largest to smallest by identifying the largest quantity to start with. **Estimation**- Pupils will make a reasonable estimation (sensible guess) of a number of objects without counting. They will be able to subitise to recognise if the quantity in a set is known or unknown. Pupils will be able to recognise images within a within a quantity (structured arrangement) and use this to support estimation. They will also be able to recognise known images within a quantity (random arrangement) and use this to support estimation. **Counting** Pupils will use the **Stable Order Principle** to practise saying the number names beyond 20 in the correct order. They will sing songs, such as Jack Heartman's 'Get Fit and Count to 100' to	Pupils will make playdough which can then be used in the provision. When doing this they will explore measuring ingredients. Pupils will further explore patterns- developing their ability to recognise patterns and identify missing elements. Pupils will then learn how to duplicate an ABABAB pattern and then extend an ABABAB pattern. They will then explore duplicating and extending an ABBABB pattern. Pupils will make their own ABABAB and ABBABB patterns. Pupils will watch Numberblocks episode S3E17 (Pattern Palace) to support their understanding of pattern. Pupil will explore jigsaws through the continuous provision.

objects, actions and marks. **Conceptual Subitising-** pupils will recognise a quantity as a whole from subitised parts. They will recognise structured representation of a whole by describing two parts. Pupils will apply this skill to recall know number facts to identify a whole in an unstructured arrangement. They will watch videos such as the Jack Heartman's Subitise videos to support this skill **Composition** Pupils will revisit how a group of objects can represent a whole (unitising) and apply this to numbers beyond 10. They will recap that 10 is made up of ten ones and is also one unit of ten. They will then learn that teen numbers as one unit of ten and… They will use Numicon as a manipulative to explore the composition of teen numbers. **Change** **Combing sets-** Pupils will recognising when a contextual problem is following an addition structure and represent the sets from a contextual problem using manipulatives to find the total quantity of the new group. Use the vocabulary of addition when combining sets. They will use marks to record their understanding of addition. **Decreasing sets-** Pupils will recognising when a contextual	help them recite numbers beyond 20. They will also use 100 squares and begin to spot patterns within them.	

problem is following a subtraction structure and represent the sets from a contextual problem using manipulatives to find the remaining quantity of sets. They will use the vocabulary of subtraction when removing manipulatives from a set They will use marks to record their understanding of subtraction.		