Number/Money

Requirements for Using Mathematics

Across the curriculum, at a level appropriate to their ability, pupils should be enabled to:

- choose the appropriate materials, equipment and mathematics to use in a particular situation;
- use mathematical knowledge and concepts accurately;
- work systematically and check their work;
- use mathematics to solve problems and make decisions;
- develop methods and strategies, including mental mathematics;
- explore ideas, make and test predictions and think creatively;
- identify and collect information;
- read, interpret, organise and present information in mathematical formats;
- use mathematical understanding and language to ask and answer questions, talk about and discuss ideas and explain ways of working;
- develop financial capability;
- use ICT to solve problems and/or present their work;

using their Knowledge and Understanding of:

Number

Money

(Non-Statutory)

Prerequisite Skills (Q Skills) in USING MATHEMATICS across the Curriculum

Progress is also demonstrated by decreasing levels of support from adults: with direction, with decreasing direction, without direction.

Q1 Experience (experience/encounter)	Q2 Respond (become aware, respond, interact intermittently)
In sensory activities and activity-based learning/play-based learning, pupils:	In sensory activities and activity-based learning/play-based learning, pupils:
• encounter a variety of mathematical materials and equipment;	• interact with materials and equipment;
• experience mathematical activities; • experience daily routines;	• respond to mathematical activities; • become aware of daily routines;
• experience a problem; • encounter simple logical strategies;	• become aware of the existence of a problem; • respond and interact with simple logical strategies;
• experience a variety of simple patterns;	• become aware of and respond to a variety of simple patterns;
• encounter collections of objects; • encounter a variety of objects/pictures/symbols;	• interact with a range of objects; • interact with matching and collecting of objects/pictures/symbols;
• experience a range of mathematical language;	• respond to some basic mathematical language;
For example: • experience a range of materials; • experience a range of number rhymes and songs; • experience games where objects are hidden or rearranged; • encounter simple two factor patterns;	For example: • respond with some interest to a range of materials; • respond to number rhymes and songs; • respond to/search for objects that are out of sight; • show awareness of a range of simple two factor patterns;
• experience real/pretend coins and real/pretend shopping experiences/activities.	• respond intermittently to activities that include real/pretend coins and real/pretend shopping situations which involve giving and receiving.

(Non-Statutory)

Prerequisite Skills (Q Skills) in USING MATHEMATICS across the Curriculum

Progress is also demonstrated by decreasing levels of support from adults: with direction, with decreasing direction, without direction.

Q3 Engage (engage with, imitate modelled behaviour, direct attention, focus, recognise)	Q4 Actively Participate (interact, share, actively participate, collaborate, anticipate, recall)	Q5 Consolidate (begin to develop an understanding)
In structured activities, in familiar and accessible contexts within activity-based learning/play-based learning, pupils:	In structured activities, in familiar and accessible contexts within activity-based learning/play-based learning, pupils:	In structured activities, in familiar situations and contexts, pupils:
• engage with mathematical materials in response to teacher guidance/modelling;	• recognise that a choice has to be made when selecting materials and equipment for a simple activity;	• make choices in selecting specific materials and equipment for a simple activity;
• recognise mathematical activities in response to cues and prompts; • engage with daily routines in response to teacher modelling;	• participate in mathematical activities; • participate in daily routines;	• show some understanding of mathematical notation, such as numerals/words/sets; • anticipate and follow through daily routines;
• engage with and imitate ways of asking for help; • recall simple logical strategies in response to teacher modelling;	• demonstrate a basic understanding that problem solving requires a strategy, such as asking for help; • participate in simple supported logical strategies;	• attempt a range of problem-solving strategies, such as seeking help; • become familiar with an increasing range of basic logical strategies;
• imitate simple and familiar patterns in response to teacher modelling;	• participate in copying simple patterns;	• recognise and continue simple patterns;
• respond to and engage with objects being collected; • engage with and imitate a simple sequence of objects/pictures/symbols that includes an element of choice;	• actively participate in the collection of objects/information; • represent familiar events/situations/experiences with appropriate symbols/objects/pictures;	• communicate basic information and assist in its organisation; • represent a wider range of familiar/unfamiliar events/situations/experiences with appropriate symbols/objects/pictures;
• recognise and engage with some basic mathematical language;	• recall and participate in activities involving simple mathematical language;	• begin to understand appropriate mathematical language;
For example:	For example:	For example:
• interact with a range of materials and with support match two unequal and two equal sets; • engage in and/or imitate some actions during number rhymes and songs; • engage in and/or copy rote counting in ones up to 10; • imitate touch counting up to 10; • imitate the matching of numerals up to 10; • imitate different ways of making sets, using a range of different materials, for a given number within 10; • respond to and imitate ordinal number terminology – first, second, third; • imitate ordering of sets up to 10; • engage in mathematical games in which objects are rearranged and/or concealed; • imitate a range of simple two factor patterns;	• participate in matching a range of materials, numerals and sets and demonstrate an understanding of 1:1 correspondence; • communicate at least one number from a familiar rhyme/song/story; • recognise and count forwards numbers up to 10; • touch count consistently up to 10; • rote count backwards from 10; • match numerals up to 10; • participate in different ways of making sets, using a range of different materials, for a given number, within 10; • actively participate in activities that involve adding one more to change the label of a set; • recognise sets up to 10; • participate in activities using ordinal number terminology; • participate in ordering sets up to 10; • participate in combining two sets using concrete objects; • participate in different ways of partitioning sets into sub-sets; • recall missing objects when objects are rearranged or concealed; • continue simple two factor patterns;	• match and demonstrate an understanding of 1:1 correspondence and the terms 'more than', 'less than', 'not enough' and 'the same'; • participate in number rhymes/songs/stories involving numbers up to 10; • count forwards in ones from different starting points with numbers up to 5; • touch count consistently up to 10 and know the size of a set is given by the last number; • rote count backwards, within 5, in ones from different starting points; • match numerals using different fonts up to 10; • order numbers within 5; • investigate different ways of making sets, using a range of different materials, for a given number, within 10; • explore and demonstrate understanding that 1 more changes the label of a set; • recognise sets of up to 10 and label with the correct numeral; • estimate sets up to 5; • use ordinal number terminology; • order sets up to 10; • combine two sets and give the total; • explore different ways of partitioning sets into sub-sets and communicate the outcome; • understand that the number of objects are the same when objects are rearranged and/or concealed; • understand in counting activities that 'none' is represented by 0/zero; • create repeating patterns using objects, numbers or pictures;
• imitate the exchange of coins in the context of play/role play and pretend/real life shopping activities; • imitate modelled choosing of objects they would like to spend their money on; • imitate the exchange of coins in a range of everyday activities; • imitate the matching of individual coins; • imitate the sorting and classifying of real coins from pretend coins.	• exchange coins for goods in the context of play/role play; • choose objects they would like to buy from a limited selection of two or three items; • exchange coins in simple transaction when out shopping; • participate in matching and sorting individual coins; • actively participate in the sorting and classifying of real coins and pretend coins.	• exchange coins for goods in the context of real life money activities, such as tuck shop, canteen, and understand the concept of waiting for change; • understand the concept that cash can be represented by cards/vouchers; • indicate objects they would like to buy from a wider range; • identify the number on a coin; • distinguish real coins from pretend coins.