

# 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

# 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:
<ul style="list-style-type: none"> <li>• encounter a variety of mathematical materials and equipment;</li> </ul>	<ul style="list-style-type: none"> <li>• interact with materials and equipment;</li> </ul>
<ul style="list-style-type: none"> <li>• experience mathematical activities;</li> <li>• experience daily routines;</li> </ul>	<ul style="list-style-type: none"> <li>• respond to mathematical activities;</li> <li>• become aware of daily routines;</li> </ul>
<ul style="list-style-type: none"> <li>• experience a problem;</li> <li>• encounter simple logical strategies;</li> </ul>	<ul style="list-style-type: none"> <li>• become aware of the existence of a problem;</li> <li>• respond and interact with simple logical strategies;</li> </ul>
<ul style="list-style-type: none"> <li>• experience a variety of simple patterns;</li> </ul>	<ul style="list-style-type: none"> <li>• become aware of and respond to a variety of simple patterns;</li> </ul>
<ul style="list-style-type: none"> <li>• encounter collections of objects;</li> <li>• encounter a variety of objects/pictures/symbols;</li> </ul>	<ul style="list-style-type: none"> <li>• interact with a range of objects;</li> <li>• interact with matching and collecting of objects/pictures/symbols;</li> </ul>
<ul style="list-style-type: none"> <li>• experience a range of mathematical language;</li> </ul>	<ul style="list-style-type: none"> <li>• respond to some basic mathematical language;</li> </ul>

For example:

<ul style="list-style-type: none"> <li>• experience a range of materials;</li> <li>• experience a range of number rhymes and songs;</li> <li>• experience games where objects are hidden or rearranged;</li> <li>• encounter simple two factor patterns;</li> </ul>
<ul style="list-style-type: none"> <li>• experience real/pretend coins and real/pretend shopping experiences/activities.</li> </ul>

For example:

<ul style="list-style-type: none"> <li>• respond with some interest to a range of materials;</li> <li>• respond to number rhymes and songs;</li> <li>• respond to/search for objects that are out of sight;</li> <li>• show awareness of a range of simple two factor patterns;</li> </ul>
<ul style="list-style-type: none"> <li>• respond intermittently to activities that include real/pretend coins and real/pretend shopping situations which involve giving and receiving.</li> </ul>

# 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.

<b>Q3 Engage</b> (engage with, imitate modelled behaviour, direct attention, focus, recognise)	<b>Q4 Actively Participate</b> (interact, share, actively participate, collaborate, anticipate, recall)	<b>Q5 Consolidate</b> (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:
<ul style="list-style-type: none"> <li>engage with mathematical materials in response to teacher guidance/modelling;</li> </ul>	<ul style="list-style-type: none"> <li>recognise that a choice has to be made when selecting materials and equipment for a simple activity;</li> </ul>	<ul style="list-style-type: none"> <li>make choices in selecting specific materials and equipment for a simple activity;</li> </ul>
<ul style="list-style-type: none"> <li>recognise mathematical activities in response to cues and prompts;</li> <li>engage with daily routines in response to teacher modelling;</li> </ul>	<ul style="list-style-type: none"> <li>participate in mathematical activities;</li> <li>participate in daily routines;</li> </ul>	<ul style="list-style-type: none"> <li>show some understanding of mathematical notation, such as numerals/words/sets;</li> <li>anticipate and follow through daily routines;</li> </ul>
<ul style="list-style-type: none"> <li>engage with and imitate ways of asking for help;</li> <li>recall simple logical strategies in response to teacher modelling;</li> </ul>	<ul style="list-style-type: none"> <li>demonstrate a basic understanding that problem solving requires a strategy, such as asking for help;</li> <li>participate in simple supported logical strategies;</li> </ul>	<ul style="list-style-type: none"> <li>attempt a range of problem-solving strategies, such as seeking help;</li> <li>become familiar with an increasing range of basic logical strategies;</li> </ul>
<ul style="list-style-type: none"> <li>imitate simple and familiar patterns in response to teacher modelling;</li> </ul>	<ul style="list-style-type: none"> <li>participate in copying simple patterns;</li> </ul>	<ul style="list-style-type: none"> <li>recognise and continue simple patterns;</li> </ul>
<ul style="list-style-type: none"> <li>respond to and engage with objects being collected;</li> <li>engage with and imitate a simple sequence of objects/pictures/symbols that includes an element of choice;</li> </ul>	<ul style="list-style-type: none"> <li>actively participate in the collection of objects/information;</li> <li>represent familiar events/situations/experiences with appropriate symbols/objects/pictures;</li> </ul>	<ul style="list-style-type: none"> <li>communicate basic information and assist in its organisation;</li> <li>represent a wider range of familiar/unfamiliar events/situations/experiences with appropriate symbols/objects/pictures;</li> </ul>
<ul style="list-style-type: none"> <li>recognise and engage with some basic mathematical language;</li> </ul>	<ul style="list-style-type: none"> <li>recall and participate in activities involving simple mathematical language;</li> </ul>	<ul style="list-style-type: none"> <li>begin to understand appropriate mathematical language;</li> </ul>

For example:

<ul style="list-style-type: none"> <li>interact with a range of materials and with support match two unequal and two equal sets;</li> <li>engage in and/or imitate some actions during number rhymes and songs;</li> <li>engage in and/or copy rote counting in ones up to 10;</li> <li>imitate touch counting up to 10;</li> <li>imitate the matching of numerals up to 10;</li> <li>imitate different ways of making sets, using a range of different materials, for a given number within 10;</li> <li>respond to and imitate ordinal number terminology – first, second, third;</li> <li>imitate ordering of sets up to 10;</li> <li>engage in mathematical games in which objects are rearranged and/or concealed;</li> <li>imitate a range of simple two factor patterns;</li> </ul>
<ul style="list-style-type: none"> <li>imitate the exchange of coins in the context of play/role play and pretend/real life shopping activities;</li> <li>imitate modelled choosing of objects they would like to spend their money on;</li> <li>imitate the exchange of coins in a range of everyday activities;</li> <li>imitate the matching of individual coins;</li> <li>imitate the sorting and classifying of real coins from pretend coins.</li> </ul>

For example:

<ul style="list-style-type: none"> <li>participate in matching a range of materials, numerals and sets and demonstrate an understanding of 1:1 correspondence;</li> <li>communicate at least one number from a familiar rhyme/song/story;</li> <li>recognise and count forwards numbers up to 10;</li> <li>touch count consistently up to 10;</li> <li>rote count backwards from 10;</li> <li>match numerals up to 10;</li> <li>participate in different ways of making sets, using a range of different materials, for a given number, within 10;</li> <li>actively participate in activities that involve adding one more to change the label of a set;</li> <li>recognise sets up to 10;</li> <li>participate in activities using ordinal number terminology;</li> <li>participate in ordering sets up to 10;</li> <li>participate in combining two sets using concrete objects;</li> <li>participate in different ways of partitioning sets into sub-sets;</li> <li>recall missing objects when objects are rearranged or concealed;</li> <li>continue simple two factor patterns;</li> </ul>
<ul style="list-style-type: none"> <li>exchange coins for goods in the context of play/role play;</li> <li>choose objects they would like to buy from a limited selection of two or three items;</li> <li>exchange coins in simple transaction when out shopping;</li> <li>participate in matching and sorting individual coins;</li> <li>actively participate in the sorting and classifying of real coins and pretend coins.</li> </ul>

For example:

<ul style="list-style-type: none"> <li>match and demonstrate an understanding of 1:1 correspondence and the terms 'more than', 'less than', 'not enough' and 'the same';</li> <li>participate in number rhymes/songs/stories involving numbers up to 10;</li> <li>count forwards in ones from different starting points with numbers up to 5;</li> <li>touch count consistently up to 10 and know the size of a set is given by the last number;</li> <li>rote count backwards, within 5, in ones from different starting points;</li> <li>match numerals using different fonts up to 10;</li> <li>order numbers within 5;</li> <li>investigate different ways of making sets, using a range of different materials, for a given number, within 10;</li> <li>explore and demonstrate understanding that 1 more changes the label of a set;</li> <li>recognise sets of up to 10 and label with the correct numeral;</li> <li>estimate sets up to 5;</li> <li>use ordinal number terminology;</li> <li>order sets up to 10;</li> <li>combine two sets and give the total;</li> <li>explore different ways of partitioning sets into sub-sets and communicate the outcome;</li> <li>understand that the number of objects are the same when objects are rearranged and/or concealed;</li> <li>understand in counting activities that 'none' is represented by 0/zero;</li> <li>create repeating patterns using objects, numbers or pictures;</li> </ul>
<ul style="list-style-type: none"> <li>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;</li> <li>understand the concept that cash can be represented by cards/vouchers;</li> <li>indicate objects they would like to buy from a wider range;</li> <li>identify the number on a coin;</li> <li>distinguish real coins from pretend coins.</li> </ul>