Measure

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:

Measure (weight)
Measure (length)
Measure (capacity)
Measure (area)
Measure (time)

(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:	For example:
• experience two similar objects that are clearly different in weight only;	• respond with some interest to two similar objects that are clearly different in weight only;
• experience two similar objects that are clearly different in length only;	• respond with some interest to two similar objects that are clearly different in length only;
• experience a range of materials and sizes and shapes of containers;	• respond with some intermittent interest to a range of materials and sizes and shapes of containers;
• experience covering a surface with a range of paints/crayons and sizes and shapes of paper;	• respond with interest to covering a surface with a range of paints/crayons and sizes and shapes of paper;
• experience daily routines; • experience the terms 'now'/'later' and 'first'/'then'.	• respond to daily routines; • respond to the terms 'now'/'later' and 'first'/'then'.

(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:
• imitate adult by handling a group of similar objects that are different in weight; • become familiar with language associated with weight, such as heavy/light;	• interact with/explore/handle similar objects that are different in weight; • identify objects that are heavy/light;	• compare and order two or three objects that are associated with weight; • sort objects that are heavy/light;
• imitate adult by handling a group of similar objects that are different in length; • become familiar with language associated with length, such as long/short;	• interact with/explore/handle similar objects that are different in length; • identify objects that are long/short;	• compare and order two or three objects that are associated with length; • sort objects that are long/short;
• engage with a range of materials and sizes and shapes of containers; • become familiar with language/symbols associated with capacity, such as full/empty;	• explore a range of materials and sizes and shapes of containers; • identify containers that are full/empty;	• compare and order two or three objects that are associated with capacity; • sort containers that are full/empty;
• imitate teacher modelling of covering the surface of a page with paint or spreading a table with a cloth;	• participate in an activity that involves the covering of a surface, such as a page, with paint or a table with a cloth;	• demonstrate an understanding of the language associated with area;
• engage in an increasing number of daily routines and activities; • engage in a range of turn-taking activities; • engage in activities about personal recent/past/future events, such as birthdays, news time etc; • engage with vocabulary involving time, such as snack time, lunch time, bus etc; • recognise and tolerate the terms 'now'/'later' and 'first'/'then'.	• anticipate and participate in an increasing number of daily routines and activities; • participate in a range of turn-taking activities; • recall personal recent/past/future events such as today, tomorrow, yesterday, 'time to'; • participate in activities that use language and terms associated with time, such as anticipate the end of an activity by responding to a visual timer; • demonstrate an acceptance/understanding of the terms 'now'/'later' and 'first'/'then' used in context; • participate in activities that introduce the language of days of the week, such as daily/weekly pictorial timetable.	• identify daily routines; • demonstrate understanding of following a timetable, such as 'what we need to do first, then, and then, and finally'; • demonstrate an understanding of turn-taking, such as waiting for your turn; • demonstrate an understanding of personal recent/past/future events using terms such as today, tomorrow, yesterday, 'time to...' etc; • demonstrate an understanding that a clock can indicate specific times, such as home time, lunch time, play time; • demonstrate an acceptance/understanding of the terms 'now'/'later' and 'first'/'then' used in context; • learn by rote names of the days of the week.