



### Routes for Learning/ABC steps pedagogy

#### Learners should be given opportunities to develop their skills, knowledge and understanding through:

- a developmentally appropriate curriculum where the seven (six in Welsh-medium settings/schools) Areas of Learning and programmes of study complement each other and work together
- continuous and enhanced provision and focused activities in the indoor and outdoor learning environments
- different types of play and a range of planned activities, including those that are child-initiated
- experiences that allow them to adopt a variety of roles, including leadership within a small group, paired learning or working within a team
- different resources, including ICT
- active learning opportunities that build on prior experiences and support them to become independent thinkers and learners
- activities that allow them to use their senses, be creative and imaginative
- tasks and challenges that encourage problem solving and discussion.

### Range of experiences

#### Learners should be given opportunities to:

- experience a mathematically-rich environment that allows them to explore and develop mathematical concepts and language
- develop practical mathematical skills in a range of contexts
- communicate in a range of mathematical contexts for a variety of purposes and audiences
- practise, develop and refine their mathematical skills within all aspects of provision, including continuous provision, and through all Areas of Learning
- experience and use a range of media and stimuli including emerging technologies
- understand and use a range of measures and recognise and use shapes within play and structured activities.

### Key

Within the table, text taken from the LNF will appear as normal text. Text that has been modified from the LNF or that is a specific Routes for Learning/ABC steps skill will appear as bold. These skills are further identified by the following icons.

**Modified skill** ▲ **RfL/ABC steps skill** ❖ When combined with the LNF statements, these skills form the Routes for Learning/ABC steps Mathematical Development Area of Learning.

### N.B.

In order to comply with accessibility and legibility, these tables have been designed to be printed at their optimum size of A3.

# Mathematical Development Area of Learning

## Routes for Learning/ABC steps



Strands	Elements	RfL routemap	A steps	B steps	C steps	
		Learners have achieved the following on the Routes for Learning (RfL) routemap.	Learners are able to:	Learners are able to:	Learners are able to:	
Developing numerical reasoning	Identify processes and connections	Intentional exploration of the environment [RfL 27]	focus attention on objects, manipulating and exploring them using a range of methods	pay attention, respond to and use number words in structured activities led by an adult	use counting and comparing sometimes outside focused teaching activities	
		Shared attention [RfL 40]	show an interest in number activities and counting with an adult, copy some actions, and/or vocalise at appropriate moments	assist in counting and match identical objects when the task is structured by an adult	complete a task requiring several steps	
		Modifies action when repeating action does not work [RfL 38]	use a favourite object in a new or different way after watching an adult do so	treat familiar items as similar despite differences in their appearance or their medium of representation (as objects, pictures, etc.)	select and manipulate objects in order to help solve a problem	
		Object permanence [RfL 34]	locate and remove a favourite object from among a collection of different objects	watch an adult order a number of items in a particular way (e.g. cars in a row) then attempt to copy	make an attempt at a simple estimate, e.g. <i>how many objects will fit in a container</i>	
	Represent and communicate				search for all missing items when 2 or 3 objects are hidden	
				respond appropriately to some words describing: <ul style="list-style-type: none"> <li>– quantity, e.g. <i>more</i></li> <li>– size, e.g. <i>big</i></li> <li>– position, e.g. <i>in</i></li> </ul> when applied to real objects	respond appropriately to words describing: <ul style="list-style-type: none"> <li>– quantity, e.g. <i>some, more, a lot</i></li> <li>– size, e.g. <i>big, little</i></li> <li>– position, e.g. <i>in, on under</i></li> </ul>	
				sign or indicate to show responses or choices	demonstrate an awareness of number in activities	
					record by making marks or drawing pictures	

# Mathematical Development Area of Learning

## Routes for Learning/ABC steps



Strands	Elements	RfL routemap	A steps	B steps	C steps
		Learners have achieved the following on the Routes for Learning (RfL) routemap.	Learners are able to:	Learners are able to:	Learners are able to:
Developing numerical reasoning	Review				recognise if the pattern is wrong, where items are in pairs, and put it right by completing the set or removing the odd item
					interpret written numerals correctly (up to <b>3</b> ) in a practical task, e.g. reads '3' and gives out corresponding number of drinks to others <b>▲</b>
Using number skills	Use number facts and relationships		anticipate climax in familiar number songs or rhymes (showing emergent recognition of number words)	<b>listen to very familiar number rhymes, songs, stories and games, and join in by saying, or indicating, at least one number ❖</b>	<b>listen to very familiar number rhymes, songs, stories and games, and join in by saying, or indicating, more than one number ❖</b>
		'Looks' backwards/forwards between two objects (knows two objects are present) [RfL 29]	recognise which quantity is greater when numbers are small	count 2 or 3 objects with support	count reliably up to <b>3</b> objects <b>▲</b>
		Shared attention [RfL 40]	point to an object or vocalise at an appropriate moment to indicate a number when an adult is counting	recite numbers <b>from 1 to 3 ▲</b>	recite numbers from 1 to <b>5 ▲</b>
				associate numerals (1 and 2) with number activities	
					recognise that '2' is more than '1'
	Fractions, decimals, percentages and ratio				

# Mathematical Development Area of Learning

## Routes for Learning/ABC steps



Strands	Elements	RfL routemap	A steps	B steps	C steps
		Learners have achieved the following on the Routes for Learning (RfL) routemap.	Learners are able to:	Learners are able to:	Learners are able to:
Using number skills	Calculate using mental and written methods				add 'more to', or 'take away' from, a set when the task is structured by an adult, and can re-count to find new total
	Estimate and check				
	Manage money	Communicates choice to attentive adult [RfL 37]	give a coin in exchange for an item after observing others do so in role play shop (may have no notion of coin's value but will engage in the social interaction)	point to choice of item from two or three in role play shop then give coin(s) in exchange	give money in exchange for an item in a real shop when coins and choice are prepared in advance
				find coins from a limited collection which are the same as ones shown by an adult	sort coins according to one attribute, e.g. colour, size or shape
Using measuring skills	Length, weight/mass, capacity	Selects from two or more items [RfL 36]	explore the distinctions between objects by putting/holding them together, joining/stacking/breaking them apart/putting them into containers	find the 'big' object from 2 otherwise similar items: – where the difference in size is large and the activity is structured by an adult	independently compare the size of objects by lining them up or holding them together: – find the 'big' one from two objects and order several objects according to their size
				find one the same from a small collection of objects when the activity is structured by an adult	
	Time	Does two different actions in sequence to get reward [RfL 35]	show growing awareness of rhythmical patterns and begin to coordinate some sounds with gestures or pointing	adjust speed of clapping to match a model (faster or slower)	accept a wait for a more favoured activity by referring to a pictorial representation of their day (use the concepts of 'finished' and 'next')
				anticipate a routine event when it is represented by a picture/symbol or object of reference	use simple pictures to understand the sequence of events and activities in their day

# Mathematical Development Area of Learning

## Routes for Learning/ABC steps



Strands	Elements	RfL routemap	A steps	B steps	C steps
		Learners have achieved the following on the Routes for Learning (RfL) routemap.	Learners are able to:	Learners are able to:	Learners are able to:
Using measuring skills	Temperature				appreciate the difference of hot and cold
	Area and volume Angle and position	Anticipates within social routines [RfL 17] ❖	complete simple movements when instructions are accompanied by gestures and physical prompts ❖	imitate simple movements when modelled or when instructions are accompanied by gestures ❖	follow one-step instructions for simple movements within games and play activities ❖
Using geometry skills	Shape				manipulate 2D and 3D shapes to match them to each other and to their outline, e.g. in a shape sorter ❖
					use 3D shapes constructively in their play, e.g. stacking or fitting them alongside each other ❖
Using data skills	Collect and record data Present and analyse data Interpret results	Selects from two or more items [RfL 36]	'gather' and hold onto several objects sharing a particular preferred property, while discarding others	separate from a collection objects which share a common attribute (of their own choosing)	separate objects which share a specified attribute, e.g. big/little, round
				match an object to an identical object and a picture to an identical picture	consistently match pictures to objects (not necessarily identical)
				match a very familiar object to a clear photo of an identical object	match related pairs of objects or pictures, e.g. knife and fork, cup and saucer
					use sorting and ordering to organise objects using them in context but not always correctly
		Purposeful action on everyday environment [RfL 24]	touch, point to or give an object to indicate an 'answer' in a number activity	manipulate objects or pictures within simple number games and activities – the final position of the items records the solution	record numbers by matching numerals to sets of objects (up to 3) ▲

# Mathematical Development Area of Learning

## Routes for Learning/ABC steps



Strands	Elements	RfL routemap	A steps	B steps	C steps
Using data skills	Pattern	Learners have achieved the following on the Routes for Learning (RfL) routemap.	Learners are able to:  keep a simple clapping/drum pattern. ❖	Learners are able to:  repeat a clapping pattern consisting of either one or two beats, stopping and starting when an adult does. ❖	Learners are able to:  copy simple patterns involving two repeated, alternating elements, e.g. <i>big block/little block</i> , or <i>stand/sit</i> , or <i>clap/stamp</i> . ❖