

Newbottle and Charlton CEVA Primary School-Maths Vocabulary Expectations

Tiers of vocabulary

In their 2017 book 'Bringing words to life', Isabel Beck et al. talk about three tiers of vocabulary:

Tier 1 – basic words with a single meaning that we use in everyday talk such as girl, book etc.

Tier 2 – high frequency words that occur in many areas, but are less common in everyday talk such as apply, explain, verify etc. These words may also have more than one meaning.

Tier 3 – less common subject-specific words such as numerator, equilateral, decagon etc.

It is important for us, as teachers of mathematics, to make sure our students gain familiarity with the Tier 2 words as well as the Tier 3 (that we often list as the 'key words' in our lessons). This is especially important in mathematics as there are so many words that have meanings in maths, but may be already familiar to students from their meanings outside the subject. Here are just a few examples:

table	origin	prime	even	right	power
general	similar	set	volume	root	rational

This document sets out Key Stage 1 (KS1) and Key Stage 2 (KS2) maths vocabulary under the new National Curriculum as well as vocabulary for EYFS. The tables can be used to check pupils' understanding of new vocabulary introduced in years 1- 6. The lists are intended as a guide as to what pupils should know, and are not exhaustive. Of course, key terms may be introduced earlier as a challenge for our learners, although it is also important to ensure that learning is 'new' and carries an 'element of surprise'. It is expected that key vocabulary is displayed in the classroom at appropriate times during the academic year and in line with the current topic area being taught within the class and is promoted through mathematical talk in lessons.

Number and Place Value

EYFS	Y1	Y2	Y3	Y4	Y5	Y6
count	sort	count in steps	ascending	Roman numerals	ten thousands	millions
subitise	represent	count in multiples	descending	1000 more	one hundred thousands	ten millions
order/ordinal	multiples	place value	10 or 100 more	1000 less	power of	
compare	partitioning	estimate	10 or 100 less	thousands	integer	
forwards	ones	compare	hundreds	round	negative numbers	
backwards	tens	place holder				
numerals						
digit						
one more						
one less						
equal to						
more than						
less than						

Addition and Subtraction

EYFS	Y1	Y2	Y3	Y4	Y5	Y6
add	addition/ add	sum	column addition	4digit number	5/6 -digit numbers	7-digit number
plus	subtraction/ subtract	total	column subtraction	operations	multi-step	
altogether	difference	3-digit number	exchange	methods	integers	
total	equals	commutative	estimate	efficient		
take away	facts		inverse			
minus	problems					
number bonds	missing number					
whole	2-digit number					
part	inverse					
digit	fact families					

Multiplication and Division

EYFS	Y1	Y2	Y3	Y4	Y5	Y6
double	multiplication	multiplication tables	exchange	factor pairs	factors	long division
half	division	commutative	mathematical statements	formal written method	common factors	order of operations
twice as many	arrays	repeated addition	missing number	multiples	common multiples	
equal	rows	lots of	integer scaling		prime numbers	
unequal	columns	groups of	derived facts		square numbers	
share		multiply	remainders		cube numbers	
group		divide	product		short division	
odd					dividend	
even					divisor	
					quotient	
					operations	

Fractions, Decimals and Percentages

EYFS	Y1	Y2	Y3	Y4	Y5	Y6
whole part	whole half quarter equal parts	three quarters thirds equivalent fraction unit fraction non unit fraction numerator denominator one whole	tenths compare order	decimal hundredths convert proper fractions improper fractions decimal point decimal place	fifth thousandths mixed numbers per cent % factors integer complements	simplify ratio proportion

Measures						
EYFS	Y1	Y2	Y3	Y4	Y5	Y6
measure	mass	centimetres/ metres	equivalent	kilometres	decimal notation	conversion
wide/wider	volume	millilitres/litres	millimetres	rectilinear figure	scaling	miles
narrow/narrower	capacity	grams/kilograms	perimeter	area	metric unit	formulae
compare	ruler / metre stick	standard units	convert	convert	imperial unit	feet
long/er/est	measure	estimate	digital	24-hour clock	inches	imperial measures
short/er/est	cm	record	analogue		compound	
length	container	temperature	duration		square centimetres	
height	money- pounds, pence	degrees	a.m/p.m		square metres	
weight	hours, minutes, seconds	quarter past	leap year		volume	
full/half full/ empty	o'clock	quarter to	midnight		cubic centimetres	
more than/ less than	half past	calculate	noon			
heavy/heavier/ heaviest	before/after	change				
light/lighter/ lightest						
time						
days, week, month, year, weekend						
morning, afternoon, evening, night						
today, yesterday, tomorrow						
quickest, fastest, slowest						

Geometry- Properties of Shape

EYFS	Y1	Y2	Y3	Y4	Y5	Y6
2d shapes	edges	pentagon	right angle triangle	triangles- scalene, isosceles, equilateral	regular polygon	vertically opposite
rectangle	pyramid	hexagon	hexagon	quadrilateral	irregular polygon	radius
square	cylinder	lines of symmetry	octagon	right angle	degrees	diameter
circle	faces	properties	polygon	obtuse angle	estimate	circumference
triangle	surfaces	edges	prism	rhombus	reflex angle	nets
sides	similar	vertices	turns	trapezium		dimensions
corners	different	vertex	angles	parallelogram		
round	sort		horizontal	kite		
straight	compare		vertical			
flat	pattern		parallel lines			
3d shapes	symmetrical		perpendicular lines			
cube						
cuboid						
cone						
sphere						
curved						

Geometry- Position and Direction

EYFS	Y1	Y2	Y3	Y4	Y5	Y6
over	position	clockwise		co-ordinates	reflection	four quadrants
under	direction	anti- clockwise		quadrant	horizontal	co-ordinate plane
between	movement	straight line		grid	vertical	
around	whole turn	rotation		translation	lines of symmetry	
through	quarter turn	arrange		plot		
on	half turn	sequences		polygon		
into	three quarter turn			axis		
next to	left					
behind	right					
beneath	forwards					
order	backwards					
repeat	above					
patterns	below					
on top of	ordinal numbers					

Statistics

EYFS	Y1	Y2	Y3	Y4	Y5	Y6
		tally table block diagram chart horizontal vertical pictogram sort compare category	table bar chart two-way tables	time graph discrete data continuous data line graph calculate interpret comparison sum difference	timetable two-way table	pie chart mean average