

Mathematical Vocabulary in Primary Schools

Updated for the 2014 Curriculum (from the original DfE 2000 publication)



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Thanks so much for purchasing this booklet. I realised in 2019 that since the year 2000, nobody appeared to have updated the Mathematical Vocabulary booklet from DfE to reflect the 2014 National Curriculum - so here it is.

It doesn't pretend to be as thorough as the 2000 document; instead, I have focussed only on new mathematical vocab required by the published national curriculum as children move up through primary school. Because of this, the new book is hopefully more targeted and quicker to use.

However, I strongly recommend getting hold of the old booklet for a broader sense of the wider range of vocab. It is still available as a PDF online, but if you have any trouble locating a copy, drop me an email and I can help.

Enjoy the book!

Andrew Jeffrey, 2020

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A note about Reception

In the Foundation Stage, language is mostly spoken. Of course this does not mean that children should not have sight of the written word, but preferably this should always be in conjunction with the appropriate imagery so that they can begin to associate and recognise words they cannot necessarily yet read fluently.

At the time of writing, there is an ongoing DfE consultation about which ideas should constitute the EYFS curriculum. I have therefore decided to wait until this has been concluded and the curriculum published, and only then update this document with the relevant vocabulary for children in Reception classes.

Exclusions

There are a few controversial inclusions/exclusions. For example, I have deliberately left the phrase 'Place Value' out of Year 1 even though children are expected to begin to understand the idea. This is because the *phrase* itself is not necessary in order to understand the *concept*, and may actually serve to obfuscate rather than support learning.

Of course, feel free to teach children these words- please ensure that the concept is secure first, so that children have some mental image on which to hang the words.

This is part of a broader principle I call 'CPL', or '*Concept Precedes learning.*' Like CPA, it focuses on the importance of understanding something rather than just learning its name. Asking children to think about, say, a prime, is pointless until they have a sense of what that might look like.

Something else became apparent whilst compiling this volume. Despite topics going into more depth as children progress through year groups, often there is very little new vocabulary required. Time is a good example - once the language of time is mastered, very little new language is required as children go into Key Stage 2.

For this reason, you will inevitably see far more vocabulary in the Year 1 list than in any subsequent year group.

Finally, this list is NOT exhaustive. I have only included words from the mathematics curriculum, as opposed to the original 2000 booklet which tried to be very comprehensive. These should be specifically used alongside other language that children will need for daily interactions.

Year One (this includes word that are new to Year One and some Reception vocabulary)

Red words are non-statutory but desirable.

Number and Calculation

same
different
count(ing)
forwards
backwards
share
left over
more (than)
less (than)
total
fewer (than)
equal (to)
most
least
sum
difference
distance between
total
first
plus
add(ition)
subtract(ion)

minus
ones
tens
column(s)
multiples
twenty one
twenty two
twenty three
(and so on up to)
ninety nine
one hundred
first
second
third
fourth
(and so on up to)
nineteenth
twentieth
order
number
amount

value
size
odd
even
numberline
double
halve
pair
how much
how many
larger
smaller
estimate
compare
together
altogether
bonds
zero
between
above
below

Fractions

(one) half
(one) (two) (three) quarters
sharing
group (ing)

part
whole
equal parts
same size

bar

Measurement (time, mass, length, capacity, money)

TIME
year
month
week
weekend
day
Monday
Tuesday
Wednesday
Thursday
Friday

Saturday
Sunday
January
February
March
April
May
June
July
August
September

October
November
December
night
hour
minute
second
morning
afternoon
evening
yesterday

today
tomorrow
before
after
old(er)
new(er)
clock (face)
o'clock
half past
birthday
watch

hour (hand)
minute (hand)
minutes past/to
quarter past/to
half past/to
fast(er)
quick(er)
slow(er)
early
earlier
late
later

MASS
weigh
weight

heavy
heavier (than)
heaviest
light
lighter (than)
lightest
balance
(weighing) scales
ruler

LENGTH
long(er)(est)
short(er)(est)
gram/g
kilogram/kg
centimetre/cm

metre/m
far
distance
measure
long(er)(est)
short(er)(est)

CAPACITY
volume
full
empty
more than
less than
half full

MONEY
coin
note
amount
penny/p
pound/£
coin values:
one pence
two pence
Five pence
ten pence
twenty pence
fifty pence

Geometry

SHAPE PROPERTIES
pattern
2-D
rectangle
square
circle
triangle
3-D

cube
cuboid
pyramid
sphere
side(s)

POSITION AND DIRECTION
left

right
top
middle
bottom
in front of
behind
between
above
below
around

near
close
far
up
down
forwards
backwards
inside
outside
clockwise

Year Two - new words

Number and Calculation

digit
numeral
twenty one
twenty two
twenty three
twenty four

and so on up to
ninety nine
one hundred
multiple
commutative
place value

step counting
> as 'greater than'
< as 'less than'
partition
place holder
place value
estimate

estimation
inverse
array
calculate
multiplication
division
times tables

Fractions

(one) (two) third(s)
sharing
grouping
two quarters

third
one third
two thirds
equivalent

'one and a quarter'
one and 2 quarters
one and a half
one and 3 quarters

half as much
twice as much
numerator
denominator

Measurement (time, mass, length, capacity, temperature, money)

TIME
analogue
Five/ten/1/4 pas/to
clockwise
anticlockwise

MASS
gram

kilogram

LENGTH
height
width
metre
centimetre
millimetre

CAPACITY
litre
millilitre

TEMPERATURE
degrees
celcius

thermometer

MONEY
price
cost
amount
change

Geometry

SHAPE PROPERTIES
vertical
horizontal
vertices
edges
faces
quadrilateral

polygon
prism
cone
symmetry

POSITION AND DIRECTION
straight
curved
rotate
rotation
Angle
right angle

Statistics

pictogram
tally chart
block diagram

table
data
category(ies)

Year Three - new words

Number and Calculation

hundreds
one hundred and one
one hundred and two
one hundred and three
and so on up to
one thousand

multiple(s)
inverse operations
integer(s)
decimal(s)
remainder

Fractions

fifths
sixths
sevenths
eighths
ninths
Tenths

numerator
denominator
order
unit-fraction
non-unit fraction

Measurement

millimetre
perimeter
roman numerals to XII
am/pm
duration

noon
midnight
analogue clock
digital clock

Geometry

orientation
degree(s)
right angle
perpendicular
parallel
horizontal
vertical
quadrilateral

polygon
polyhedron
polyhedra
acute
obtuse
reflex
reflection

Statistics

interpret
data

category(ies)
scale

Year Four - new words

Number and Calculation

thousands
round
rounding
Roman numerals to 100 'C'
negative
operation
factor

factor pairs
distributive
associative
derive
remainder

Fractions

hundredth(s)
'decimal equivalents
decimal places
proportion

Measurement

convert
conversion
rectilinear
area

dimensions
kilometre
24-hour clock

Geometry

orientation
degree(s)
right angle
perpendicular
parallel
horizontal
vertical
quadrilateral
classify
polygon
pentagon
hexagon
heptagon

octagon
nonagon
decagon
polyhedron
polyhedra
acute
obtuse
isosceles
scalene
equilateral
parallelogram
rhombus
trapezium

protractor
regular
irregular
reflex
coordinates
quadrant
plot
grid
translate
translation
axis/axes
scale

Statistics

label
graph

Year Five - new words

Number and Calculation

million(s)
Roman numerals to 1000 'M'
linear sequence
power(s)
prime
complement

composite
prime factor
square(d)²
cube(d)³
equivalence

Fractions

mixed number(s)
thousandths
percent
percentage(s)

Measurement

composite
metric
imperial
inch
foot
yard
mile

pound (lb)
pint
cm²
cm³
m²
m³

Geometry

orientation
degree(s)
right angle
perpendicular
parallel
diagonal
horizontal

vertical
quadrilateral
polygon
polyhedron
polyhedra
acute
obtuse

reflex
point
reflection
180°
360°
X-axis
Y-axis

Statistics

interpret
data

category(ies)
scale

Year Six - new words

Number and Calculation

interval
long division
Multi-step

common factors
common multiples

Fractions

simplify
degrees of accuracy

Ratio and Proportion

relative size
scale factor

proportion
ratio as a:b

Algebra

symbol
letter
formula(e)
sequence
algebraic(ally)

equation
unknown
variable
constant
generalise

Measurement

mm³
km³
speed

mph
m/s
km/h

Geometry

quadrant(s)
dissect(ion)
net(s)
radius
diameter

circumference
vertically opposite
complementary angles
Pi
quadrants

Statistics

pie chart
mean

average
data set