Milborne First School: Stem Sentences in Maths

Please add to this document over the academic year. This will help us create a bank of stem sentences and also see the progression of stem sentences across the year groups for different areas of maths. Please display these in the classroom or print relevant ones to stick in maths journals for the children to answer. Some ready made ones are in shared files- teachers- maths.

Please add these to the key skills powerpoints and knowledge organisers for daily practise ensuring that they are repeated each term.

General					
	Reception	**Year 1**	**Year 2**	**Year 3**	**Year 4**
Stem Sentences	**I started by…** **The pattern I noticed was...**	**I solved the problem by…** **I already know that...so…** **I wonder why...**	**I noticed that…** **I think...because…** **I checked by...**	**I noticed that…** **It must be because..** **If I know… then I know....** **I used the inverse of...**	**A better strategy would be…** **I was systematic because I...**
Number Place Value					
	Reception	**Year 1**	**Year 2**	**Year 3**	**Year 4**
Stem Sentence 1	This is the number ☐ It has ☐ ones.	Ten ones are equal to one ten. We have one group of ten. We have ten. This is the number ☐. The ☐ represents ☐ tens. The ☐ represents ☐ ones.	There are ____ tens and ____ ones. There are ____ altogether. The number ____ is written as ____. These words represent the number ___	There are ten ones in ten. (from Yr 1) There are ten tens in one hundred. There are ten hundreds in one thousand. There are one hundred ones in one hundred.	There are ten thousands in 10000 There are four groups of twenty five in one hundred.
Stem Sentence 2	This is the number ☐ It has ☐tens and ☐ones, tens and ☐ ones make .	☐ is greater than/more than ☐ because is fewer than/less than ☐ because ..	The digit___has the value of ___	In the number _____ the digit ___ is in the hundreds place. The digit ___ is in the tens place. The digit ____ is in the ones place. The value of the digit ____ is ____.	In the number ___ the digit ____ is in the thousands place, the digit ___ is in the hundreds place. The digit ___ is in the tens place. The digit ___ is in the ones place. The value of the digit is ____.

Stem Sentence 3	☐ is greater than/more than because is fewer than/less than because ..	This is the number . It has tens and ones. tens and ones make	I can partition___into ____ and ____	____ is less than _____. It is the smallest number. ___ is more than ____. It is the greatest number.	___ thousands is smaller than ___ thousands. _____ is smaller than _____. _____ thousands is greater than ___ thousands, so ____ is greater than _____.
Stem Sentence 4	**For counting in tens:** This is _. _ is ten more than _. _ is ten less than _.	.	The numbers are increasing (decreasing) because ____.	One hundred is divided into ______ equal parts; so each part/ division has a value of______	We round a number down when the digit in the ones place is less than five. We round a number up when the the digit in the ones place is five or more.

Addition and Subtraction

	Reception	Year 1	Year 2	Year 3	Year 4
Stem Sentence 1	I have … ones here and … ones here. I will have … ones altogether.	I have … tens here and … ones here. I will have .... altogether.	I know that _ + _ is equal to _ so _ tens + _ tens is equal to_ When we find ten more, the tens digit changes and the ones digit stays the same e.g ….. When we find ten less, the tens digit changes and the ones digit stays the same.	I know that _____ plus _____ is equal to (the same as) ten (10)/ ____. Unless bridging: when the ones make ten or more. For example ____ + ____ = ____ When adding tens, if there are no ones, only the tens digit needs to change. For example ____ + ____ = ____ Unless bridging: when the tens make one hundred or more. For example ____ + ____ = ____ When adding hundreds, if there are no tens and no ones, only the hundreds digit changes.	When adding hundreds only
Stem Sentence 2	I have … tens here and … ones here. I will have .... altogether.	I have … tens here and … tens here. I will have .... altogether.	When we add three numbers, the total will be the same whichever we add first.	I know that ten/____ minus _____ is equal to (the same as) ____ . So, ten tens minus _____ tens is equal to ____ tens. 100 minus ____ is equal to ____.	

Stem Sentence 3	I know I will have a teen number because I have one ten and … ones.	… is the whole number. I subtract …. tens. I am left with ….	There are ___, ___ and ___. Altogether there are____.	I know that _____ plus ____ is equal to ten, so I know that ____ plus ____ is equal to one hundred. I know that ten minus ____ is equal to ____, so I know that one hundred minus _____ is equal to ____.	
Stem Sentence 4	… is the whole number. I subtract …. ones. I am left with ….			I know that ___ minus ____ is equal to ____. So ____ tens minus ____ tens is equal to ___ tens. On hundred and _____ minus ____ is equal to _____.	

Multiplication and Division

	Reception	Year 1	Year 2	Year 3	Year 4
Stem Sentence 1		Equal means the same. Equal means it is fair.	There are ☐ ……………………….. altogether. The …………………….are divided equally between groups. Equally means there are the same number of …………………… in each group. ☐ There are ………………………… in each group.	I have ☐ ____________________ altogether. I share them ***equally*** between ☐ ____________________. ***Equally*** means there are the same number in each group. There are ☐ ____________________ in each group.	I have ☐ __________________ altogether. I am _*(sharing)*_them ***equally*** between ☐ __________________. This can also be called **division.** I have **divided** ☐ into ☐ groups. My answer is ☐.
Stem Sentence 2		There are . ………. altogether We share them equally between …….. Equally means exactly the same amount. We share the ….. until there are none left and each ….. has an equal number of ….. in it. There are …... in each …...	When … have been shared equally and each group has an equal number of …., sometimes there might be … left over. We call these remainders.	There are ☐ ____________________. They are shared equally between ☐ ____________________. Equally means the same amount in each group.	I have ☐ __________________ altogether. I am _*(grouping)*_them ***equally*** between ☐ __________________. This can also be called **division.**

				There are ☐ ____________________ in each group.	I have **divided** ☐ into groups of ☐. My answer is ☐ in each group.
Stem Sentence 3					Multiplication can be done in any order. This is the rule of **commutativity**. This means that ☐ will have the same answer as ☐.

Fractions and Decimals

	Reception	Year 1	Year 2	Year 3	Year 4
Stem Sentence 1		2 halves make 1 whole. A half is 2 equal parts. To find half of ☐ you must share equally between 2. Each group gets A half can be written as 1/2	Each piece is 1 part out of equal parts. We write it as 1/2 .	<u>Equivalent Fractions</u> Equivalent means equals or the same as. To find an equivalent fraction, a fraction that is the same amount as another fraction, you multiply the top, the numerator, and the bottom, the denominator, by the <u>same</u> number. For example 1/2 is the same as 2/4. My example _______ is the same as _______ x 2 $\frac{1}{2} = \frac{2}{4}$ x 2 The simplest fraction is the	A **fraction** is used to describe a **whole** that has been split into **parts**. The **whole** can be a shape, an amount of objects or a number. We represent a fraction using a **fraction bar**. The **fraction bar** shows 2 pieces of information**.** Above the fraction bar is the **numerator.** This shows how many parts of the whole you are working with/have visible. Below the fraction bar is the **denominator**. This shows how many parts the whole has been split into altogether.

				fraction with the smallest numerator and denominator.	
Stem Sentence 2		4 quarters make 1 whole. A quarter is 4 equal parts. To find a quarter of ☐ you must share equally between 4. Each group gets ☐ A quarter can be wr itten as ¼	☐ equal parts make 1, 1 whole. The name of each part is a ………. The denominator is ☐	Fraction of 1 WholTo share 1 whole with more than one person, each person gets part of the one whole. Each person gets a fraction of the one whole. You need to divide (share) the one whole by the number of people getting a part or fraction. They will get one part of that fraction. Your answer will be a fraction. For example ________ shared with _______ people is	**Equivalent** means "**the same**". Equivalent fractions have the same **value** even though they look different. ½ = ¼ = 3/6 = 4/8 = 6/12 Equivalent fractions can be found using **multiplication** and **division** facts.
Stem Sentence 3			☐	Fractions of a Number To find the fraction of a number you must…. 1. 1.Start with the whole number 2. Divide (or share) this number into groups 3. **Divide by** the DENOMINATOR If you need to find more than one part of the fraction e.g ⅔ or ⅘ 4. **Multiply** the answer by the NUMERATOR	Decimals show **whole** numbers and **parts** of the whole. ☐ is a decimal. It has a decimal point that separates the **whole** and the **parts of the whole**. In this decimal ☐, the digit ☐ stands for ones. The digit ☐ stands for ☐ tenths. The digit ☐ stands for ☐ hundredths.
Stem Sentence 4					Decimals show **whole** numbers and **parts** of the whole. Decimals are represented by digits, placed to show their **value**. Sometimes, we can **rename** hundredths as tenths. <table><tr><td>ones</td><td>tenths</td><td>hundredths</td></tr><tr><td></td><td>O</td><td>ooooooo ooooooo o</td></tr></table>Model/grid shows how to rename 10 hundredths to 1 tenth.

					There ☐ hundredths in ☐ tenths.

Measurement

	Reception	Year 1	Year 2	Year 3	Year 4
Stem Sentence 1		We measure time in hours, minutes and seconds.	There are **60** minutes in an hour There are 60 seconds in one minute	There are **10** mm in 1cm therefore ____mm is ___cm. There are **100** cm in 1m therefore ____cm is ___m. There are **1000** m in 1km therefore ___m is ___km.	There are 10 lots of 100g in a kg.. 100g is the same as 0.1kg. I can convert g into kg by dividing by 100. I can convert kg into g by multiplying by 100.
Stem Sentence 2		The long hand shows the minutes. The short hand shows the hour.	Each number on an analogue clock represents **5** minutes. 12 fives make 60.	There are ______ g in 1 kg. If an item weighs more than 1000g, the measurement is given in kg and g. The mass of the ___________________ is _____ kg _____ g. On a set of scales each line can represent more than one g. On these scales each line represents _________ g.	There are 10 lots of 100ml in a litre. 100ml is the same as 0.1litre. I can convert ml into litres by dividing by 100. i can convert litres into ml by multiplying by 100.
Stem Sentence 3			There are 100 cm in 1 metre	The table measures cm ☐ 100 cm is the same 1m so ☐ cm = 1m ☐	Time is measured in **hours, minutes** and **seconds**. There are ☐ seconds in a minute and ☐ minutes in an hour.

					Therefore, there are ☐ minutes in ☐ hour/s. There are ☐ seconds in ☐ minutes.

Geometry: shapes and position					
	Reception	**Year 1**	**Year 2**	**Year 3**	**Year 4**
Stem Sentence 1	This is a 3D shape. A 3D shape is not flat.	You can describe a 3D shape by the number of faces, vertices and edges.	A triangle has ____ sides. A square has ____ equal sides. A rectangle has _____ sides.	**Horizontal Lines** go across from left to right or right to left. (arrow picture) **Vertical Lines** go up and down from top to bottom or bottom to top. (arrow picture)	A line of symmetry divides a shape so that one side is the mirror image of the other side.
Stem Sentence 2	This is a picture of a 3D shape.		This is a ☐ It has ☐ces, v☐tices and edges.☐	**Parallel Lines** are two ______________ lines opposite each other. The lines will ____________ meet or make an __________ together. angle straight always never	If I fold a figure/image along the line of symmetry, both sides will completely overlap each other.
Stem sentence 3				**Perpendicular Lines** are two straight lines that meet together and make a right angle.	A co-ordinate tells us the position of an object on a grid. The grid has a horizontal axis called the x axis. The grid has a vertical axis called the y axis. The co-ordinate is the position in relation to the x and y axis. The first digit is the x axis, the second digit is the y axis.

Statistics, Ratio, Proportion and Algebra

	Year 2	Year 3	Year 4
Stem Sentence 1			A graph is used to present data. Different graphs show different types of data. This is a _________ graph. It shows _(*continuous/ finite)*___ data.
Stem Sentence 2			*Building on from stem sentence above….* This graph shows __*describe information* __ (eg, the rate of growth over a year). Other data that might be recorded in a _______ graph includes _______ (give 2 examples)___