

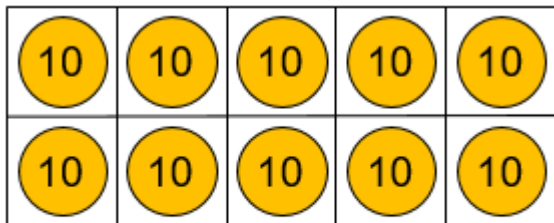
# Number and Place Value

Year 3

## Equivalence of 10 tens and 1 hundred (1)

### Vocabulary:

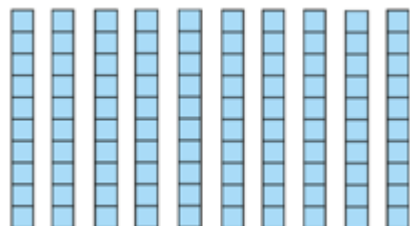
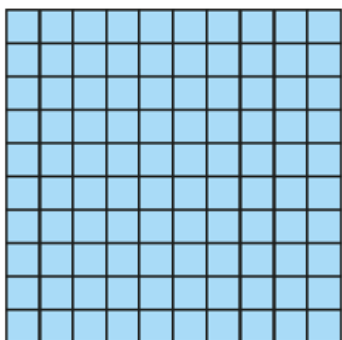
Ones Tens Hundreds Place Value Digit Represents Counters Pence  
Coin Tens Frame Multiple Previous Next Gattegno Deines  
One-tenth the size Ten-times the size Centimetres Metres



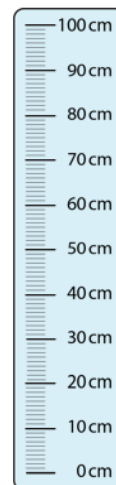
100

Count in multiples of 10 to 100 using Place Value Counters.

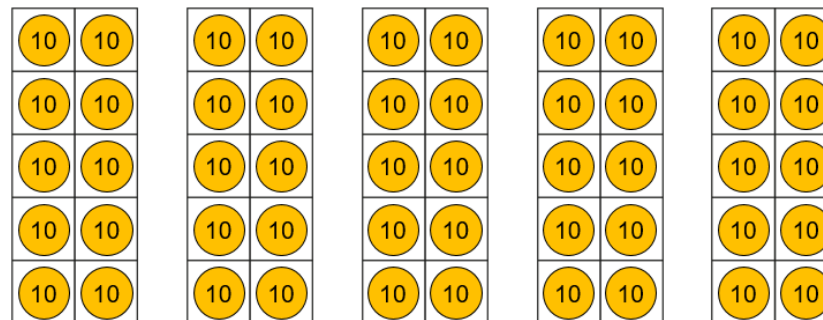
Ten tens are equivalent to 100.



Demonstrate using Deines that 10 tens are equal to 1 hundred.



Make connections to other forms of measure eg. cm on a metre stick/money



Recognise the number of tens in a three-digit number.

10 tens are equivalent to 100.

18 tens are equivalent to 180.

Numberblocks – Season 4

Episode: One hundred

**Grouping and Exchanging Models**



# Number and Place Value

## Year 3

### Equivalence of 10 tens and 1 hundred (2)

#### Vocabulary:

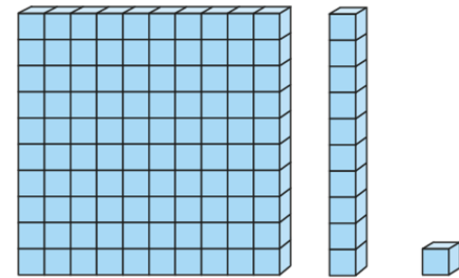
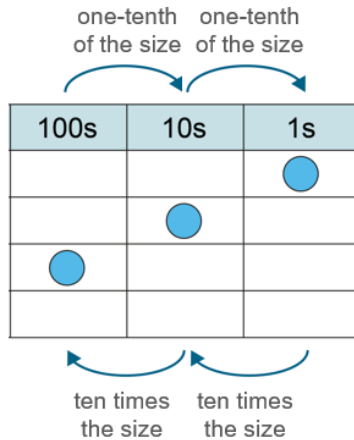
Ones Tens Hundreds Place Value Digit Represents Counters Pence Coin  
 Tens Frame Multiple Previous Next Gattegno Deines One-tenth the size  
 Ten-times the size Centimetres Metres

10	20	30	40	50	60	70	80	90	100
110	120	130	140	150	160	170	180	190	200
210	220	230	240	250	260	270	280	290	300
310	320	330	340	350	360	370	380	390	400
410	420	430	440	450	460	470	480	490	500
510	520	530	540	550	560	570	580	590	600
610	620	630	640	650	660	670	680	690	700
710	720	730	740	750	760	770	780	790	800
810	820	830	840	850	860	870	880	890	900
910	920	930	940	950	960	970	980	990	1,000

1,000	2,000	3,000	4,000	5,000	6,000	7,000	8,000	9,000
100	200	300	400	500	600	700	800	900
10	20	30	40	50	60	70	80	90
1	2	3	4	5	6	7	8	9

Tap the Gattegno chart in multiples of 10.  
 Create multiples of ten using the Gattegno chart.

Count in multiples of ten up to 1000.  
 Ten, Twenty, Thirty...  
 One ten, two tens, three tens...



Consider how a number increases/decreases in size using scaling models.  
 100 is ten times the size of 10.  
 10 is one-tenth the size of 100.

Hundreds Tens Ones

**Scaling Models**

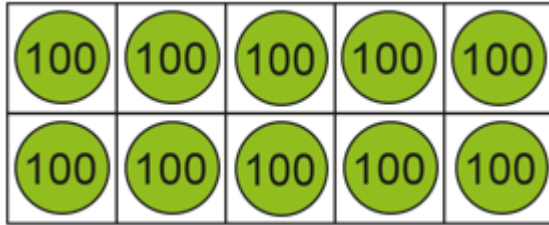
# Number and Place Value

Year 4

## Equivalence of 10 hundreds and 1 thousand (1)

### Vocabulary:

Ones Tens Hundreds Thousands Place Value Counters Pence Coin Tens  
Frame Multiple Previous Next Gattegno Deines One-tenth the size  
Ten-times the size Centimetres Metres Millilitres Litres  
Grams Kilograms

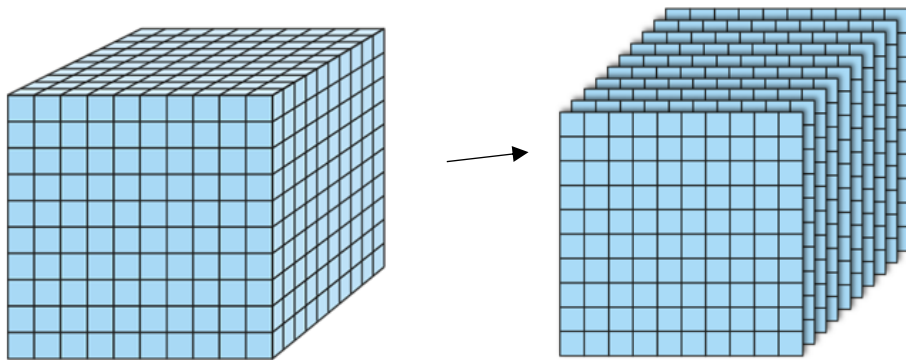
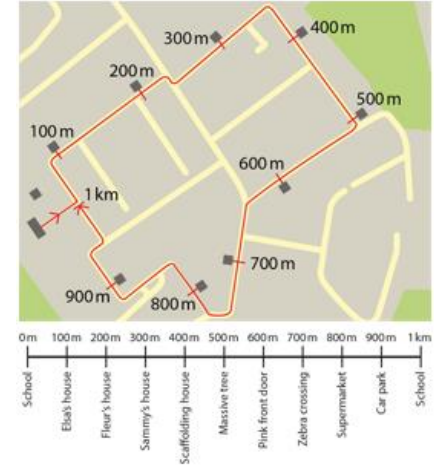


1,000

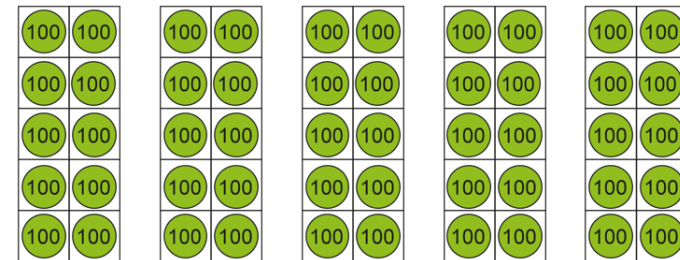
Count in multiples of 100 to 1000 using Place Value Counters.

10 hundreds are equivalent to 1000.

Make connections to other forms of measure eg. measuring jugs, distances.



Demonstrate using Deines that 10 hundreds are equal to 1 thousand.



Recognise the number of hundreds in a four-digit number.

10 hundreds are equivalent to 1000.

18 hundreds are equivalent to 1800.

Dual count in hundreds

Eight hundred, nine hundred, one thousand, one thousand one hundred....

Eight hundred, nine hundred, ten hundreds, eleven hundreds...



Numberblocks – Season 4

Episode: One Thousand and One

**Grouping and Exchanging Models**

# Number and Place Value

Year 4

## Equivalence of 10 hundreds and 1 thousand (2)

### Vocabulary:

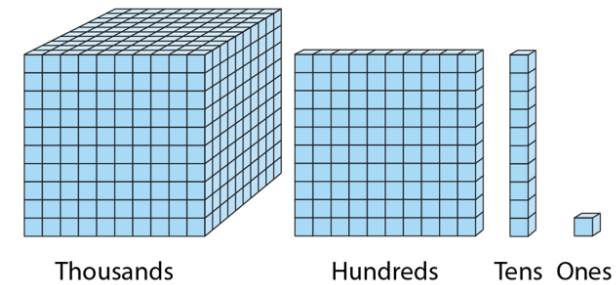
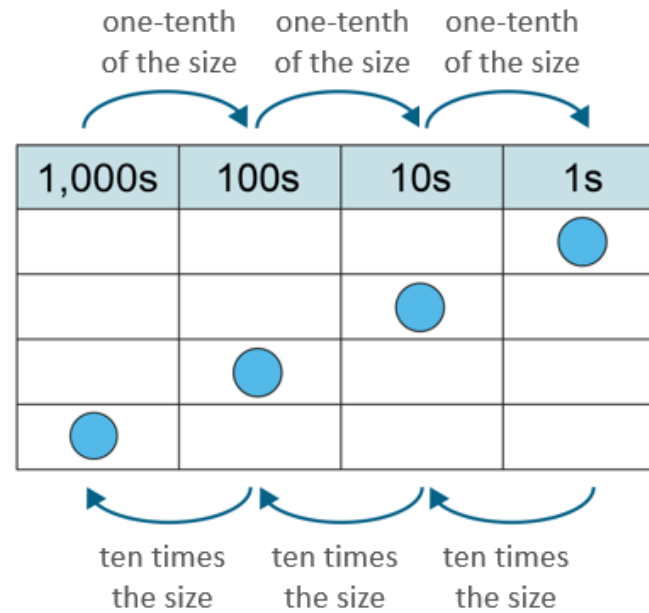
Ones Tens Hundreds Thousands Place Value Counters Pence Coin Tens  
 Frame Multiple Previous Next Gattegno Deines One-tenth the size  
 Ten-times the size Centimetres Metres Millilitres Litres Grams  
 Kilograms

100	200	300	400	500	600	700	800	900	1,000
1,100	1,200	1,300	1,400	1,500	1,600	1,700	1,800	1,900	2,000
2,100	2,200	2,300	2,400	2,500	2,600	2,700	2,800	2,900	3,000
3,100	3,200	3,300	3,400	3,500	3,600	3,700	3,800	3,900	4,000
4,100	4,200	4,300	4,400	4,500	4,600	4,700	4,800	4,900	5,000
5,100	5,200	5,300	5,400	5,500	5,600	5,700	5,800	5,900	6,000
6,100	6,200	6,300	6,400	6,500	6,600	6,700	6,800	6,900	7,000
7,100	7,200	7,300	7,400	7,500	7,600	7,700	7,800	7,900	8,000
8,100	8,200	8,300	8,400	8,500	8,600	8,700	8,800	8,900	9,000
9,100	9,200	9,300	9,400	9,500	9,600	9,700	9,800	9,900	10,000

1,000	2,000	3,000	4,000	5,000	6,000	7,000	8,000	9,000
100	200	300	400	500	600	700	800	900
10	20	30	40	50	60	70	80	90
1	2	3	4	5	6	7	8	9

Tap the Gattegno chart in multiples of 100.  
 Create multiples of ten using the Gattegno chart.

Count in multiples of hundred up to 1000.  
*Eight hundred, nine hundred, one thousand, one thousand one hundred...*  
*Eight hundred, nine hundred, ten hundreds, eleven hundreds...*



Consider how a number increases/decreases in size using scaling models.  
*1000 is ten times the size of 100.*  
*100 is one-tenth the size of 1000.*

### Scaling Models

# Number and Place Value

## Year 5

### Tenths and Hundredths

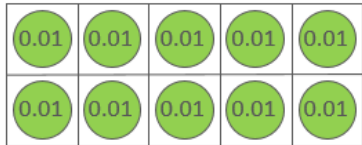
#### Vocabulary:

Ones Tens Tenths Hundredths Place Value Counters Pence Coin Tens  
Frame Multiple Previous Next Gattegno Deines One-tenth the size  
Ten-times the size Centimetres Metres



1

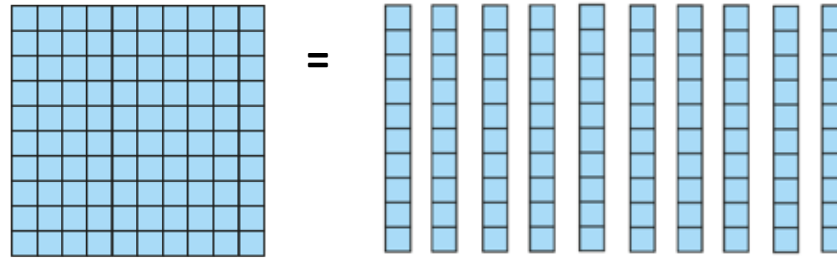
Ten tenths are equal to one (whole).



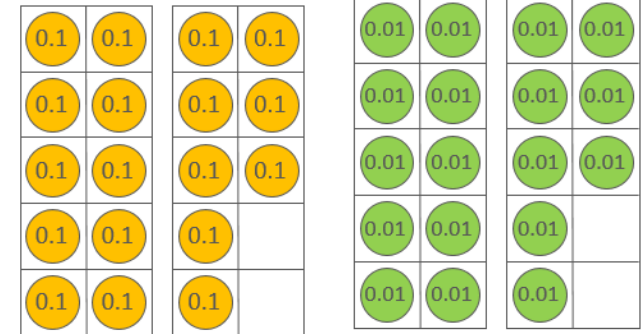
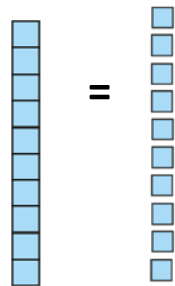
0.1

Ten hundredths are equal to one tenth.

One (whole) is equal to ten tenths.



One tenth is equal to ten hundredths.



1.8

0.18

Recognise the number of tenths and hundredths

*18 tenths are equivalent to 1.8*

*18 hundredths are equivalent to 0.18*

Dual count in tenths and hundredths

*Eight tenths, nine tenths, ten tenths, eleven tenths...*

*0.8, 0.9, 1.0, 1.1*

*Eight hundredths, nine hundredths, ten hundredths, eleven hundredths...*

*0.08, 0.09, 0.10, 0.11*

**Grouping and Exchanging Models**

# Number and Place Value

## Year 5

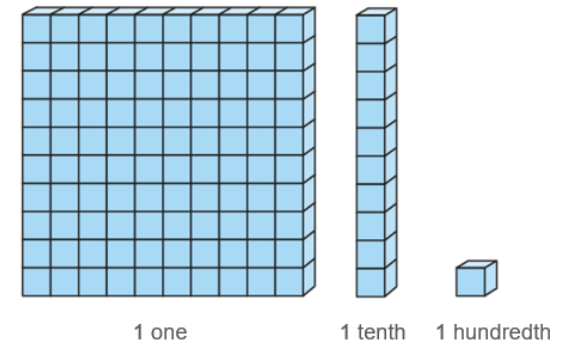
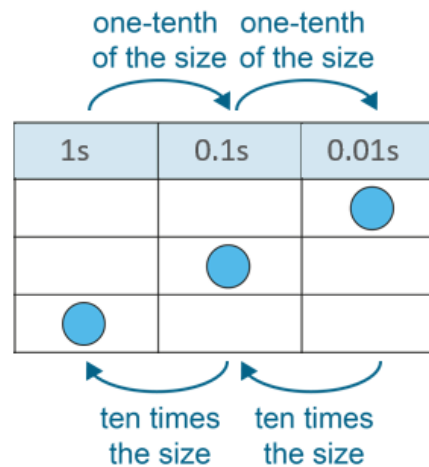
### Tenths and Hundredths (2)

#### Vocabulary:

Ones Tens Tenths Hundredths Place Value Counters Pence Coin Tens  
 Frame Multiple Previous Next Gattegno Deines One-tenth the size  
 Ten-times the size Centimetres Metres

0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9	1
1.1	1.2	1.3	1.4	1.5	1.6	1.7	1.8	1.9	2
2.1	2.2	2.3	2.4	2.5	2.6	2.7	2.8	2.9	3
3.1	3.2	3.3	3.4	3.5	3.6	3.7	3.8	3.9	4
4.1	4.2	4.3	4.4	4.5	4.6	4.7	4.8	4.9	5
5.1	5.2	5.3	5.4	5.5	5.6	5.7	5.8	5.9	6
6.1	6.2	6.3	6.4	6.5	6.6	6.7	6.8	6.9	7
7.1	7.2	7.3	7.4	7.5	7.6	7.7	7.8	7.9	8
8.1	8.2	8.3	8.4	8.5	8.6	8.7	8.8	8.9	9
9.1	9.2	9.3	9.4	9.5	9.6	9.7	9.8	9.9	10

0.01	0.02	0.03	0.04	0.05	0.06	0.07	0.08	0.09	0.1
0.11	0.12	0.13	0.14	0.15	0.16	0.17	0.18	0.19	0.2
0.21	0.22	0.23	0.24	0.25	0.26	0.27	0.28	0.29	0.3
0.31	0.32	0.33	0.34	0.35	0.36	0.37	0.38	0.39	0.4
0.41	0.42	0.43	0.44	0.45	0.46	0.47	0.48	0.49	0.5
0.51	0.52	0.53	0.54	0.55	0.56	0.57	0.58	0.59	0.6
0.61	0.62	0.63	0.64	0.65	0.66	0.67	0.68	0.69	0.7
0.61	0.72	0.73	0.74	0.75	0.76	0.77	0.78	0.79	0.8
0.81	0.82	0.83	0.84	0.85	0.86	0.87	0.88	0.89	0.9
0.91	0.92	0.93	0.94	0.95	0.96	0.97	0.98	0.99	1



**Count in multiples of tenths and hundredths.**  
*Eight tenths, nine tenths, ten tenths, eleven tenths...*  
**0.8, 0.9, 1.0, 1.1**  
*Eight hundredths, nine hundredths, ten hundredths, eleven hundredths...*  
**0.08, 0.09, 0.10, 0.11**

### Scaling Models

**Consider how a number increases/decreases in size using scaling models.**  
*1 is ten times the size of 0.1.*  
*0.1 is one-tenth the size of 1.*

# Number and Place Value

## Year 6

### Powers of 10 (1)

#### Vocabulary:

Ones Tens Hundreds Thousands Ten-thousands Hundred-thousands  
 Millions Ten-Millions Tenths Hundredths Represents Digit Place Value  
 Counters Gattegno Tens Frame Equivalent Equation Multiply Divide  
 Ten/hundred times the size One-tenth/hundredth times the size

Millions			Thousands			Ones			-ths	
100s	10s	1s	100s	10s	1s	100s	10s	1s		
								0	0	1
								0	1	
								1		
								1	0	
							1	0	0	
					1	0	0	0	0	
			1	0	0	0	0	0	0	
		1	0	0	0	0	0	0	0	
	1	0	0	0	0	0	0	0	0	

1,000,000	2,000,000	3,000,000	4,000,000	5,000,000	6,000,000	7,000,000	8,000,000	9,000,000
100,000	200,000	300,000	400,000	500,000	600,000	700,000	800,000	900,000
10,000	20,000	30,000	40,000	50,000	60,000	70,000	80,000	90,000
1,000	2,000	3,000	4,000	5,000	6,000	7,000	8,000	9,000
100	200	300	400	500	600	700	800	900
10	20	30	40	50	60	70	80	90
1	2	3	4	5	6	7	8	9
0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9
0.01	0.02	0.03	0.04	0.05	0.06	0.07	0.08	0.09

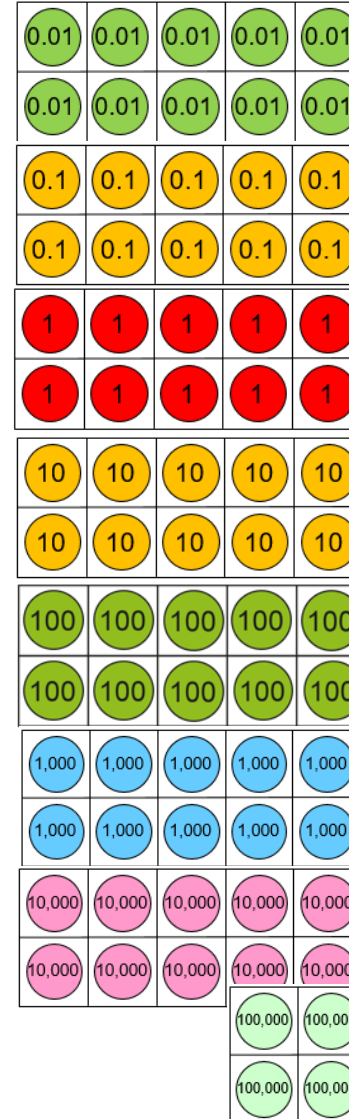
0 . 0 1     one hundredth  
 0 . 1       one tenth  
 1            one  
 1 0         ten  
 1 0 0       one hundred  
 1 , 0 0 0   one thousand  
 1 0 , 0 0 0   ten thousand  
 1 0 0 , 0 0 0   one hundred thousand  
 1 , 0 0 0 , 0 0 0   one million  
 1 0 , 0 0 0 , 0 0 0   ten million

Recognise that the 1 becomes ten times the size as it moves from right to left in a place value chart.

Recognise that 1 becomes one-tenth the size as it moves from left to right in a place value chart.

Recognise that the 1 becomes 10 times the size as it moves up in a Gattegno chart.

Recognise that 1 becomes one-tenth the size as it moves down in a Gattegno chart.



**Recognise that:**

- 10 hundredths are equivalent to 1 tenth.
- 10 tenths are equivalent to 1 one.
- 10 ones are equivalent to 1 ten.
- 10 tens are equivalent to 1 hundred.
- 10 hundreds are equivalent to 1 thousand.
- 10 thousands are equivalent to 1 ten thousand.
- 10 ten thousands are equivalent to 1 hundred thousand.
- 10 hundred thousands are equivalent to 1 million.
- 10 millions are equivalent to 1 ten million.

### Grouping and Exchanging Models

