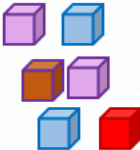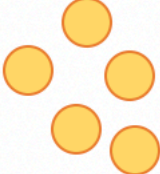## Assessment Question 1:

Year 2 to Year 3 is a large leap for most children, as they are very familiar with numbers to 100, however less familiar with numbers to 1000. The jump to numbers to 1000 is often where misconceptions occur. Children need to be able to count objects over 100 and practise crossing ten and hundred boundaries. Often opportunities to count objects lessen as the numbers increase. Opportunities to count objects are still important in year 3 as the children need to understand and explore how numbers are formed and often most errors are made when teachers move away from practical objects to abstract too quickly.

This lesson is designed to observe and assess what the children know about numbers over 100 and to ensure that they can say numbers in order and cross boundaries of ten and hundred. If children cannot say the numbers accurately when counting, then they will not be able to move their understanding to the relationship between hundreds, tens and ones and ordering amounts. You may want to spend more than one lesson on this work. Spending time on counting forwards and backwards is really important. Using objects also helps the children to see how our number system is formed and created. Base ten is still very abstract for many year 3 children, therefore a lot of the activities in this unit suggest children making their own groups of ten and hundred with things like straws, pasta, paper clips, sweets and organising these in to bags, elastic bands, boxes etc.

Assessment Task:

Place different objects on to the tables in trays. Children to have a tray to count. Ensure you know how many there are in the tray so that you can assess if the children have this correct. Children could have a simple sheet to record their answers for each object. If possible, try to watch children as they are counting.

	Question 1: I can count over 100 objects	I feel
123 Number + Place Value		

Practical:

Look at the different objects on each table and count how many of each object there is .

Input ideas:

- Create a class counting table. Ask the children to bring in objects from home such as bottle lids, buttons, football cards etc. You may also want to link this to an art project or a topic on recycling. Build up bags and boxes of items with the children, encouraging them to count and group these to help make it easier to count on each day when children bring more objects in.

- Collect items for the children to count and place these on to different tables. The children to count how many they have. Use mini inputs to model any misconceptions the children have. You could place a pile of objects on to the floor and inform the children that you have already counted them .For example: there are 97 objects here. I have some more to add to this group. Shall we count on? Give each child an object. They are to add their object to the pile and say the number as they do so, so as a class we are counting one more each time. Encourage children to model the number sequence when crossing ten and hundred.

- Use large bead strings. Children to count on beads at a time. As we count each one or ten, fill in the blank hundred square to show the children how it works and how we write the numbers. Don't focus too much on the writing, more the verbal and understanding that each box is given a new label as we are adding one more box each time. It is useful to use these blank hundred squares for numbers between 100 and 200 and 200 and 300 too.

Practice Activities

Purple Practice: most suited for children who show difficulties in assessment task Question 1 and demonstrate difficulty in counting over a hundred objects .

Practical: provide the children with objects to count between one hundred and two hundred. Encourage the children to count with an adult the items. Model to the children crossing boundaries such as 109, 110 and 111. Some children often jump from 110 to 120. Also some children make errors around 119 and jump to 200. Model saying the amounts and how these are formed when a new ten has been made.

If children are demonstrating difficulty here, then sticking stickers or colouring in a blank hundred square on the purple support sheet can help. This helps children to keep a track of what they have counted and also shows the clear link between one, ten and hundred. The children have also been provided with filled out hundred squares between 101- 200 and 201 to 300 so that you can model the number order and the crossing of ten and hundred.

Green Practice: For when children can count objects accurately and are ready to move to recording their counting.

Once the children show understanding of crossing boundaries and can show that they can count objects accurately, support the children in filling in a blank hundred square between 101 and 200 and 201 and 300. Ensure the children can say which number is next and can explain how they know. The children may need help with starting the first 2 rows and crossing boundaries.

Key Questions: What happens when you come to the end of a row? Why? What have you made a group of? What digits change? How do you know? What digit changes at the end of the grid? Why? What do I start the next grid with? How many squares have you coloured in? How do you know?

You may want to laminate these grids for the children to keep or stick inside their books to refer to throughout the unit/year. .

Yellow Practice Most suited for children who show a good understanding of counting objects and are ready to count on and back from any number.

For the yellow activity, the children are provided with blocks with 3 numbers on in sequence. The children are to read the numbers and then count on the next 3 blocks and record these. The sequences are for numbers over 100 and 200. Questions 4 to 8 cross boundaries of ten and hundred. The last question encourages the children to count back.

Mastery – Problem solving

The children are given a problem to solve involving house numbers and work out where Olivia lives. The children can apply their knowledge of numbers and crossing one hundred to work out the house number. Some children will be able to work this out mentally and some children may need to label the house numbers underneath the picture provided to help them to solve the problem. Or some children may need whiteboards to make jottings. Give the children time to suggest how to work it out and then share ideas.

Answers:

Yellow:

1) 127, 128, 129
2) 115,116, 117,
3) 104, 105, 106
4) 110, 111, 112
5) 118, 119, 120
6) 169, 170, 171
7) 200, 201, 202
8) 209, 210, 211
9) 106, 105, 104
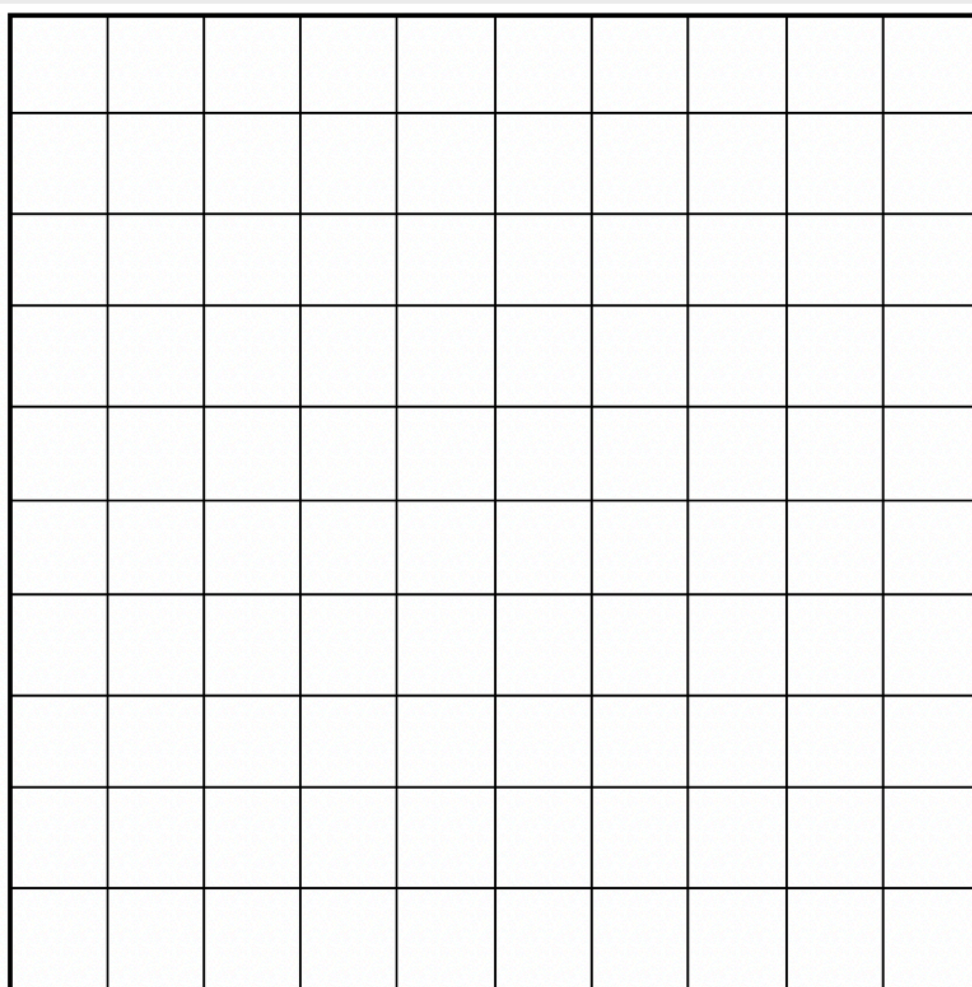
Mastery:

Olivia lives at house number 103

Challenge:

Olivia would live at 107

BRICKWORK
Mathematics

Use the grid to help you to count objects.

Can you count 100 objects?
Can you count 200 objects?
Can you count 300 objects?

BRICKWORK
Mathematics

101	102	103	104	105	106	107	108	109	110
111	112	113	114	115	116	117	118	119	120
121	122	123	124	125	126	127	128	129	130
131	132	133	134	135	136	137	138	139	140
141	142	143	144	145	146	147	148	149	150
151	152	153	154	155	156	157	158	159	160
161	162	163	164	165	166	167	168	169	170
171	172	173	174	175	176	177	178	179	180
181	182	183	184	185	186	187	188	189	190
191	192	193	194	195	196	197	198	199	200

BRICKWORK
Mathematics

201	202	203	204	205	206	207	208	209	210
211	212	213	214	215	216	217	218	219	220
221	222	223	224	225	226	227	228	229	230
231	232	233	234	235	236	237	238	239	240
241	242	243	244	245	246	247	248	249	250
251	252	253	254	255	256	257	258	259	260
261	262	263	264	265	266	267	268	269	270
271	272	273	274	275	276	277	278	279	280
281	282	283	284	285	286	287	288	289	290
291	292	293	294	295	296	297	298	299	300

BRICKWORK
Mathematics

Fill in each square with the correct number.

Practise counting to 100, 200 and 300.

LO: I can count on from a number in ones.

Carry on counting and fill in the next 3 blocks.

1.

| 124 | 125 | 126 | | | |

2.

| 112 | 113 | 114 | | | |

3.

| 101 | 102 | 103 | | | |

4.

| 107 | 108 | 109 | | | |

5.

| 115 | 116 | 117 | | | |

6.

| 166 | 167 | 168 | | | |

7.

| 197 | 198 | 199 | | | |

8.

| 206 | 207 | 208 | | | |

9.

| 109 | 108 | 107 | | | |

BRICKWORK
Mathematics

Sunil lives at number 101 on his street. Jake lives two houses before Sunil. Olivia lives 5 houses after Jake.

What number house does Olivia live at?

Challenge:

What if all of the numbers on that side of the street were odd? Which number would she live at now?