Place Value Questions 13, 14 and 15

Objective: I can say one more and one less than a 3 digit number to 300.

I can say ten more and ten less than a 3 digit number to 300.

I can say hundred more and less than a 3 digit number to 300.

NPV: 1 count from 0 in multiples of 4, 8, 50 and 100; find 10 or 100 more or less than a given number.

Assessment Questions 13, 14 and 15.

Prior Learning:

Question 13:
I can find 1 more or 1 less than a number

I feel

Answer these sums:

167 + 1 =	123 - 1 =
209 + 1 =	111 - 1 =
119 + 1 =	170 - 1 =
199 + 1 =	300 - 1 =

Question 14:
I can find 10 more or 10 less than a number

I feel

Answer these sums:

146 + 10 =	123 - 10 =
231 + 10 =	111 - 10 =
193 + 10 =	101 - 10 =
290 + 10 =	200 - 10 =

Question 15:
I can find 100 more or less than a number

I feel

Answer these sums:

46 + 100 =	176 - 100 =
187 + 100 =	245 - 100 =
105 + 100 =	209 - 100 =

Teacher Notes:

 You may want to break up the activities and plan individual inputs for different lessons. You may want one lesson counting forwards in ones, tens and hundreds and another lesson counting back in these too. Or you may want to split the activities in to 3 lessons of counting back and forwards in ones and then in tens and then in hundreds.

Practice Activities

Purple Practice: most suited for children who show little understanding of counting on and back in ones, tens or hundreds and will benefit from the use of hundred squares or objects.

In the purple task the children are provided with 3 charts, 1-100, 101-200, and 201-300 so that the children can secure counting forwards and backwards in ones. The children could be given coloured pencils, counters or the sheets could be laminated. The children to be given different simple 3 digit amounts such as:

86, 133, 102, 116, 156, 204, 267.

 The children can then work out what one more and one less is by counting on and back using the hundred squares. Ensure the children understand why these can be used. Ensure the children know how they are organised and that we are adding one more square each time. When we have ten squares a new row has been made, the whole square makes a hundred. Objects could be used alongside these for any children showing difficulty. You could then encourage the children to work out ten more and less by counting on using the squares and then counting back. Encourage the children to spot that the hundred and ones stay the same and it is the ten digit that changes. Discuss why. As the children show more confidence, encourage the children to move away from counting on in ones and look at counting on ten at a time. Repeat for hundreds. You may want to ensure the amounts you provide the children with do not cross a ten and hundred boundary until they show that they are secure.

Green Practice: Most suited for children who showed some accuracy in questions 13,14 and 15 and need to secure counting on and back in either ones, tens or hundreds.

 For this activity the children are provided with 3 digit numbers that do not cross a ten or hundred boundary when either one, ten or hundred is added or subtracted. The children are also provided with a place value table to support working out the answer or to explain their understanding if needed.

The children are provided with blocks to either add or subtract 1, 10 or 100. These can all be presented to the children or you may just want to focus on adding and subtracting 1 and then 10 and then 100 or split it by adding and then subtracting. This can also be presented as a game. Children can select number blocks and then either the – or + 1,10 or 100 cards can be cut up and turned over to be selected.

<u>Yellow Practice</u> Most suited for children who showed some accuracy however made errors when presented with amounts where they were required to cross a ten or hundred boundary.

The activity is presented in the same way as the green activity however the number blocks provided encourage the children to cross a ten or hundred boundary when either one, ten or hundred is added or subtracted.

<u>Mastery: Group practical reasoning.</u>

Provide the children with sweets or objects grouped in hundreds, tens and ones. Each group to have amounts of sweets such as 226. The children to have – 1 -10 cards. Children to pick cards to take away. Such as 226- 1 . Children to talk through that they can take one sweet away easily. We now have 225 sweets. Children to take it in turns to select cards. Such as 225 – 10 = 215. Another child may take another 10 away so there will be 205 sweets. When another child takes away 10, encourage the children to discuss what happens? Can we take ten away? What will you have to do? How do you know? By changing one of the hundreds into ten packs of ten, how does that help? Children to be given time to talk about what is happening and explain their understanding of why the hundred changes as well as the ten. Give the children time to explain and reason. Children to keep continuing around the group taking away ten sweets and one sweet at a time.

<u>Answers:</u>

Explore the answers in groups

BRICKWORK
Mathematics

1	2	3	4	5	6	7	8	9	10
11	12	13	14	15	16	17	18	19	20
21	22	23	24	25	26	27	28	29	30
31	32	33	34	35	36	37	38	39	40
41	42	43	44	45	46	47	48	49	50
51	52	53	54	55	56	57	58	59	60
61	62	63	64	65	66	67	68	69	70
71	72	73	74	75	76	77	78	79	80
81	82	83	84	85	86	87	88	89	90
91	92	93	94	95	96	97	98	99	100

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

Select a purple block. Then select a pink block. Can you find the answer?

123	**156**	**112**
254	**238**	**215**

+ 1	**- 1**
+ 10	**- 10**
+ 100	**- 100**

BRICKWORK
Mathematics

Green Practice

Practical resource

ones
tens
hundreds

BRICKWORK
Mathematics

Select a purple block. Then select a pink block. Can you find the answer?

107	209	219
231	160	199
201	159	111
299	187	302

+ 1	+ 10	+ 100
- 1	- 10	- 100