Counting and place value lesson plan

Subject: Maths	**Lesson Title:** Counting and place value
Date:	**Time Span:**
Year Group: 2	**Group Size:** 30

Desired Learning Outcomes

To be able to count reliably up to 20

To understand that the position of a digit gives it its value

Key Language: Digit, number, place, hundreds, tens and units	**Use of ICT:** Place value ITP

Assessment (Make reference to each section of the lesson)

Intro – TA to check children who may / may not be able to count up to 20. Can children explain why teacher's deliberate mistakes are incorrect?
See if children are able to draw a representation of a number on their whiteboards
Main – Mark children's work as they complete it. Sit with any children who are struggling, bringing them back to the carpet if necessary. If still unsure by end of lesson sit with TA during plenary.
Plenary – Can children draw a suitable representation of a given number?

Use of Other Adults

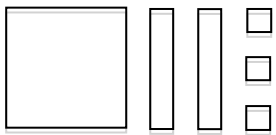
TA to work with lower ability children during main part of lesson
TA to sit and continue working with children (of any ability) who struggled in plenary

Anticipated Misconceptions/Difficulties

Counting an item more than once
Counting in the incorrect sequence e.g. one, two, three, six, nine, five
Not understanding that mixed items can be counted e.g. counters and pencils
That if a group of items takes up more space then it has 'more' items

Resources

Range of objects to count
Place Value ITP on IWB
https://www.ictgames.com/mobilePage/arrowCards/index.html (if the link does not work, Google 'place value interactive teaching tool' to find something similar)
Base ten teaching materials
Worksheets / independent work on IWB
Pupil whiteboards

Introduction	**Time**
TA to take children who are unable to count reliably (if unsure if can count reliably ask child to quickly count a number of items) and cover the following principles: One-to-one – each item should only be counted once. TA to make deliberate mistake of continuously counting each item more than once, until children say 'No! That's wrong'. Ask them to explain why Stable-order – that the order of number names does not change. TA to make deliberate mistake of counting incorrectly e.g. one, two, five, three, eight, until children say 'No! That's wrong'. Ask them to explain why. Practice counting up and down to 20. Cardinal – the last number counted tells us 'how many' items there are Abstraction – that anything can be counted, including unrelated and mixed items. TA to count mixed objects e.g. pencils, rubbers and sharpeners, as one group. Order-irrelevance – that we can count from any object; we don't have to start from right to left. TA to count from objects in the middle and on the right. Conservation of number – TA to show children a smaller number of larger items e.g. 4 biscuits and a larger number of smaller items e.g. 6 small coins. Discuss with the children which group has 'more' items. Discuss how we can make it easier to not make mistakes when we count e.g. arranging the items in to a row or moving the 'counted' objects away from the 'to be counted' ones Children to practice counting groups of items correctly in pairs. Teacher (with remainder of class): Revise how we need to look at the position, or place, of a number to know what it is worth i.e. is it in the hundreds, tens or units column. Use place value ITP from https://www.ictgames.com/mobilePage/arrowCards/index.html (if the link does not work, Google 'place value interactive teaching tool' to find something similar) to model how 4 is worth 4 units, 40 is worth 4 tens and 400 is worth 4 hundreds, so 40 is worth more than 4 and 400 is worth more than 40. Repeat with other similar numbers e.g. 6, 60 and 600. Also explain with base-ten materials http://www.worldwideshoppingmall.co.uk/toys/shelves/numeracy-base-10.asp (if have them) Model how we can 'exchange, ten units for one stick of ten and explain how ten units are worth the same as one stick of ten. Model how we can use drawings to represent each number (like below). Model how to complete independent work On pupil whiteboards ask children to draw a representation of a given number. Tell children not to show their whiteboards until asked (to stop copying). Keep any children who are still unsure and go through with them again.	15 mins
Main (including differentiated tasks) Lower ability – count objects up to 20 Middle ability – write **2 digit** numbers to match representations of them in units blocks and tens sticks. Higher ability – draw representations to show the value of each digit in 2 digit and **3 digit numbers** e.g. for 123  Gifted and talented – as above, but also with 4-digit numbers, with larger rectangles for the thousands Extension – think of own numbers to draw representations of, and draw them	20 mins
Plenary In ability partners give children a pupil whiteboard and a pen. Ask children to give their partners a number to draw a representation of. Discuss if they think their partner drew a suitable representation. Why / why not? Repeat	10 mins