Finding one or ten less and subtracting two-digit numbers lesson plan

Subject: Maths	**Lesson Title:** Finding one or ten less and subtracting two-digit numbers
Date:	**Time Span:**
Year Group: Year 2	**Group Size:** 30

Desired Learning Outcomes

To be able to find one less than a given number

To be able to subtract a multiple of ten / 2-digit number using a hundred square

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Key Language: Less, subtract, take away, minus, equals	**Use of ICT:** Smartboard for introduction

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Assessment (Make reference to each section of the lesson)
Intro – TA to check children who may / may not be able to find one less than a number.
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 explain their working out and reasoning?

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

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Anticipated Misconceptions/Difficulties
Children moving the wrong direction on the hundred square
Children counting the number they start on as a 'jump' e.g. saying 40 - 20 = 30 because they put their finger on the number 40 and count it as one jump of ten
Children not knowing what to do / moving incorrectly when they reach the end of a row e.g. they get to 50 and to count on one less move to the wrong place

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Resources
Number lines available from http://www.sparklebox.co.uk/2576-2580/sb2579.html#.UFmg1BgQmPo (laminated and cut up)
Hundred squares (laminated and cut up)

	Time

Introduction
TA to take children who are unable to find one less than another number. If unsure if some children can do this, ask them to do a couple of examples quickly to find out.
TA to model for children how to find one less than a number on a number line, by beginning on the first number and moving one space backward. Emphasise how when we add **less** we move back / down the number line.
Once children are confident with this, model how to find one less than a number mentally, by putting the number in their heads (pretend to push it in to your head) and counting back one
Teacher (with remainder of class)
Explain that we will be learning how to find 1 less or 10 less than a number.
Model how to do this on a number line (exaggerate how slow it is and how long it takes to jump ten spaces)
Introduce a hundred square, explaining how to count back one and how each row has ten numbers in it.
Model how a hundred square allows us to subtract 10 more quickly (exaggerate how quickly) by just moving up a row. Ask children what they notice. What changes in the number? (only the digit in the tens column changes, but the digit in the units column stays the same when we move up a row i.e. subtract ten)
Teach children saying and actions of:
   • To take away one (put one finger up), we move back (point to the side)
   • To take away ten (put ten fingers up), we move up a row (point up)
Model how to find ten less or one less than a number using this method, reinforcing the saying above and how we take away ten by only changing the tens number
(At this point you may get middle ability children to begin their independent work)
Model for higher ability children how to use a hundred square to subtract multiples of ten and 2-digit numbers
To subtract multiples of 10 you need to see how many tens there are and move up this many rows e.g. to calculate 70 - 40, there are 4 tens in 40 so you need to start on 70 and move down 4 rows to get to 30.
To subtract 2 digit numbers you need to first move up however many tens there are and then back how many units e.g. to calculate 56 - 32 there are three tens so you move down five rows and there are two units so then you move back two spaces.
Cover examples where you need to cross a 'tens barrier' e.g. 42 - 26 and model how to move back to the beginning of the next row up when you reach the end of a row e.g. when you get to 51, to count back one more you move up and across to 50.
	15 mins

Main (including differentiated tasks) Lower ability – find one less than a number Middle ability – find one less or ten less than a number on a hundred square Higher ability – find multiples of ten less than a number e.g. 43 - 20 Gifted and talented – subtract two-digit numbers from a number e.g. 43 - 21 Extension – make up some of their own subtraction number sentences to calculate	20 mins
Plenary Revise sayings and actions from introduction. In ability partners give children 2 questions per pair, one for each partner. Children need to talk to their partner, explaining why they are using the method that they are using e.g. moving up 4 rows to subtract 40 because there are 4 tens in forty.	10 mins