

Lesson Plan Chapter 3

In practice

The following lesson plan was used to support a group pupils beginning to developing their skills in problem solving using mathematics. The plan includes ICT to support the children's learning. The programme described here is available on the companion website and you may wish to explore the 'number grids' program before reading the lesson plan. Following the plan is an evaluation of the lesson which explores how successful the plan was in supporting the children to develop their knowledge, skills and understanding.

Topic: Odd and Even Numbers

Age Group: Lower Primary

Objectives:	
To introduce the terms 'odd' and 'even' numbers	
To describe number patterns orally or using pictures	
Key vocabulary: Even, odd, pair	Context: This is the fifth lesson in a series exploring counting on number lines and number tracks. Most of the children can count to 100 and can count backwards in '1's from 20. The previous lesson worked with the class on counting in '2's. All the groups could count in '2's from 0 but some found it difficult to start from any number other than '0'. The higher attaining group could count backwards in '2's from any number
	For this series of lessons I have grouped children according to their prior experience to provide support and challenge
Resources: Washing line and pegs, white socks (real!), 0-20 grid on the whiteboard, hoops, odd and even labels, multilink, 0-30 number cards	Starter activity: I will ask the whole class to stand in a circle. We will start by counting in ones around the circle. Then I will ask every other child to clap rather than say their number, e.g. 1, clap, 3, clap. . . . We will then swap round: clap, 2, clap, 4. . . . We will repeat this counting backwards starting at 28, which is the number of children in the class Next we will count feet around the circle – first counting everybody's feet, then counting in twos. At this stage I will introduce the term 'even'
Main activity	Ask the children to work in groups and give them all some socks (these should have been counted earlier and organised so that some groups have an even number of socks and some have an odd number) Each group have to calculate how many pegs they will need if they peg the socks on the washing line in 'pairs'.

	<p>Ask each group to come and peg their socks on the lines. I will ask each group if there is an 'odd' sock, or an 'even' number of socks which make 'pairs'. As each group pegs up the socks I will circle the even numbers in green and the odd numbers in red on the number square on the whiteboard</p>	
<p>Group activity: Children operating above expected levels</p>	<p>These children will work with the 0–30 set of cards. They will pick a card at random and have to decide if it is 'even' or 'odd'. I will focus on this group to encourage them to discuss how they know it is even or odd</p>	
<p>Group activity: Children operating at expected levels</p>	<p>These children will be using the multilink towers. They need to make some odd towers and some even towers and place these in the correct hoop</p> <p>I will ask the children how they are deciding which are even numbers and which are odd numbers</p>	<p>Assessment: I will ask the children to convince me how they know it is even or odd. They can draw pictures or use diagrams to convince me</p>
<p>Group activity: Children operating below expected levels</p>	<p>This group will continue working with socks on the washing line. This time they will work with 10 pairs of different coloured socks</p>	<p>I will split this group into two so that they can check each other's towers at the end</p>

Plenary: All the groups will come back together on the carpet area. I will set up a 10 x 2 number grid using the 'Number Grids' software. I will show the children the pattern and then hide all the numbers and move them around on the board so they are mixed up. I will ask the children to come to the front and pick a number to uncover. When they uncover it they will have to say if it is even or odd. The class will decide whether they are correct. All even numbers will be moved to the top left of the board and odds to the bottom right. Finally I will ask the higher attaining group to describe how they decided whether a number was odd or even

1	2
3	4
5	6
7	8
9	10
11	12
13	14
15	16
17	18
19	20

I will ask the teaching assistant (TA) to support this group. She will ask them to peg up a number of pairs of socks and then count all the socks