

Example Lesson Plan:

Year: 2; Term: 1	Week: 1	Focus: Introducing the rekenrek
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Subject knowledge

This week, the children will be introduced to the rekenrek. This is one of the key representations used in the programme; the children will use it regularly to develop their understanding of numbers within 20 and the relationships between them. Like the other representations used, the rekenreks will also develop the children's fluency. The structure of the beads on the rekenrek emphasises the 'anchors' of 5 and 10 and links a cardinal model (in which objects can be seen individually) with the linear number system (in which numbers are represented as points on a number line). Gradually, the children will be encouraged to visualise movements on the rekenrek before making them, with the aim that, over time, the rekenrek can become a 'tool for thinking'. This will enable the children to calculate efficiently with understanding, without the need for a physical model.

The children will also revisit perceptual subitising (saying 'how many' without counting) using simple dot patterns and be introduced to 'making 5' using the rekenrek and a key stem sentence.

The key aspects of the learning this week are:

- to draw attention to the structure of the beads on the rekenrek
- to develop skill in using a rekenrek: setting it to its 'ready position' and moving beads 'into play'
- to draw on the children's ability to subitise (say 'how many' without counting) small numbers rather than counting beads
- to begin to 'see' numbers in relation to other numbers, as well as being able to subitise them.

Connections

The children will draw upon previous subitising activity to subitise within 5.

Throughout the programme, the children will develop their understanding of numbers within 20 through continued use of the rekenrek and other key representations, seeing that numbers can be made on 1 row, or split across both rows.

Further optional experiences

For children who need extra experiences, this concept can be further explored in the following ways:

- Children who need further support subitising the beads on the rekenrek may benefit from some extra subitising activities. You could use dot pattern cards or counters for this. It will be most beneficial for children to be fluent in subitising within 5 before continuing with the rest of the programme.
- Children who need further support in setting the rekenrek into its 'ready position' and moving beads with 'one push' may benefit from repeating the session activities in small groups. Placing a sticker in the same location (as shown) on all rekenreks might be beneficial.



Session 1	Children will: - subitise dot images within 4 - make observations about the beads on the rekenrek - practise putting the rekenrek into the 'ready position' ('reds are ready to start').
Revisit	Use slides 4 to 22 of the presentation to introduce the activity and practise subitising within 4. <i>Can you say 'how many' dots without counting?</i> <i>Can you show me the same number on your fingers?</i>
Teach and practise	Introducing the rekenrek Display a rekenrek to the class and distribute a rekenrek to each child. If rekenreks are not yet available, focus on an interactive/virtual one. <i>We have a new tool to help us learn. It's called a 'rekenrek'.</i> <i>Have a good look at [your/the] rekenrek and see what you notice.</i> Allow the children time to explore the structure of the rekenrek. <i>What did you notice about the rekenrek?</i> Accept all responses and encourage the children to look at the rekenrek and see if they can identify what is being described. If the children do not identify any key facts, prompt them with comments, such as: <i>Did you notice anything about the colour of the beads on each row?</i> <i>I wonder how many red beads are on the top row? I wonder how many white beads are on the top row?</i> <i>I wonder if there are more beads on the top or the bottom row?</i> Setting up the rekenrek <i>Every time we use the rekenrek, we will all use it in the same way so we can share our thinking together.</i> <i>This is called the 'ready position'. 'Reds are ready to start.'</i> Teach the children to place the beads on the right-hand side of the rack. [You can use a sticker to help the children remember where the beads should go.] If you are using a virtual rekenrek, move some beads and then return them to the 'ready position' so that the children can see how it works.
Resources	Interactive rekenrek – optional; rekenreks – if available [1 for display, and 1 for each child]