Addition and Subtraction: Subtract Across 10

Aim:	Success Criteria:	Resources:
Add and subtract numbers using concrete objects, pictorial representations, and mentally, including: a two-digit number and ones; a two-digit number and tens; two two-digit numbers; adding three one-digit numbers. **DfE Ready-to-Progress Criteria:** Add and subtract across 10, for example: 8 + 5 = 13 13 - 5 = 8. (2AS-1) To subtract across 10.	I can recall number facts of 10. I can use ten-frames to subtract across 10. I can use part-whole models to subtract across 10.	**Lesson Pack** Ten-frames Counters Part-whole models
	Key/New Words: Number fact, number pair, number bond, subtract, subtraction, minus, less, part, whole, part-whole model, partition, ten-frame, subtract across ten, bridging ten, recall, predict, reason, explain.	**Preparation:** Differentiated **Subtract Across 10 Activity Sheets** – one per child **Diving into Mastery Activity Cards** - as required

Prior Learning:	It would be helpful if children have experienced using similar strategies when adding across ten. The following lesson supports this learning: _____

Learning Sequence

	Remember It: The **Lesson Presentation** displays subtraction calculations from ten. Children use their knowledge of number facts of ten to complete the calculations.	
	Buy It: The **Lesson Presentation** shows ten-frames packed with fruit. The partially-filled ten-frame must be emptied leaving a multiple of ten before starting to empty the other ten-frame. Children are shown how to use ten-frames and part-whole models to subtract to a multiple of ten, then subtract the remaining part. Children could use ten-frames and counters to follow the questions on the **Lesson Presentation**. As the questions progress, encourage children to predict what they will need to do next.	
	Try It: The **Lesson Presentation** invites children to subtract across ten using a ten-frame or part-whole model. Remind the children to subtract to the nearest ten, then subtract the remaining part. Children are encouraged to use ten-frames and counters to follow the questions on the **Lesson Presentation**.	
	Subtract Across 10 Activity Sheets: Invite the children to investigate the differentiated **Subtract Across 10 Activity Sheets** to demonstrate that they can recall and use number facts of ten as a strategy to subtract across ten. **Can the children recall number facts of 10? Can the children use ten-frames to subtract across 10? Can the children use a part-whole model to subtract across 10?**	

★ — Children learn to subtract across ten by subtracting to the nearest ten then taking away the remaining part. The fruit crates represent ten-frames and coloured fruits distinguish the different groups. They use counters, images and numerals in ten-frames and part-whole models to represent their learning.

★★ — Children apply their knowledge of number facts to help them subtract across ten. The fruit crates represent ten-frames and coloured fruit distinguish the two different groups. Greater challenge is provided when all of the fruits are the same colour, requiring children to identify the different groups themselves. Children complete part-whole models and ten-frames as they investigate calculations.

★★★ — Children complete part-whole models, ten-frames and calculations as they subtract across ten. The fruit crates represent ten-frames and fruits are the same colour, requiring children to identify the different groups themselves.

Diving into Mastery: Schools using a mastery approach may prefer to use the following as an alternative activity. These sheets might not necessarily be used in a linear way. Some children might begin at the 'Deeper' section and in fact, others may 'dive straight in' to the 'Deepest' section if they have already mastered the skill and are applying this to show their depth of understanding. **Can the children recall number facts of 10? Can the children use ten-frames to subtract across 10? Can the children use a part-whole model to subtract across 10?**

Children build fluency using number facts of ten as a strategy to help them subtract across ten. They use counters, pictures and numerals to complete part-whole models and ten-frames.

Children demonstrate their reasoning skills as they calculate the number of apples in an unmarked bag. They investigate by subtracting across ten with part-whole models and ten-frames.

Children apply their problem-solving skills to investigate different ways to reach the same answer. Children then explore different numbers, considering if they would find more, less, or the same number of solutions.

Check it: The children look at part-whole models and ten-frames on the **Lesson Presentation.** They spot errors in the calculations and offer advice to help the characters with their learning.

Exploreit

Take it: Make 2 sets of cards. 11-20 and 0-9.
Pick one card from each set.
Subtract the one-digit number from the two-digit number.
Score a point if you cross ten.
Game ends when all of the cards are used.
The person with the most points wins.
Use ten-frames and part-whole models to help.

Learnit: Children will find this superb _____ a great resource to support addition and subtraction methods.