Addition and Subtraction: Add 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. Add and subtract across 10, for example: 8 + 5 = 13 13 - 5 = 8. (2AS-1) To add across 10.	I can recall number facts of 10. I can use ten-frames to add across 10. I can use part-whole models to add across 10.	**Lesson Pack** Ten-frames Counters Part-whole models
	Key/New Words: Number fact, number pair, number bond, add, addition, plus, more, part, whole, part-whole model, partition, ten-frame, add across ten, bridging ten, recall, predict, reason, explain.	**Preparation:** Differentiated Add Across 10 Activity Sheets – 1 per child Diving into Mastery Activity Sheets – as required

Prior Learning:	It would be helpful if children could recall number facts of ten. _____ is a great lesson which supports this learning.

Learning Sequence

	Remember It: Children select incomplete calculations shown on the Lesson Presentation, then show the correct number of fingers to make a number fact of ten.	
Whole Class	**Pack It:** The Lesson Presentation shows ten-frames ready to be packed with apples. The box must be filled before starting to pack another. Children are shown how to use ten-frames and part-whole models to find a number fact of ten, then add the remaining part. Children would benefit from starting with pictorial representations then marks and symbols before moving on to numerals.	
Whole Class	**Try It:** The Lesson Presentation invites children to add across ten using a ten-frame or part-whole model. Remind the children to look for number facts of ten, then add the remaining part. Children work through the questions practically using counters and ten-frames.	
	Add Across 10 Activity Sheets: Invite the children to investigate the differentiated Add Across 10 Activity Sheets to demonstrate that they can recall and use number facts of ten as a strategy to add across ten. Can the children recall number facts of ten? Can the children use ten-frames and part-whole models to add across ten? ★ Children add across ten by finding the number fact of ten, then add the remaining part. They use counters, images and numerals in ten-frames and part-whole models to represent their learning. ★★ Children use number facts of ten to help them add across ten. They use ten-frames and part-whole models. ★★★ Children recall number facts of ten as they use ten-frames and part-whole models to add across ten.	
	Diving into Mastery: Schools using a mastery approach may prefer to use the following as an alternative. These sheets might not necessarily be used in a linear way. Some children might begin at the 'Deeper' section and 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 ten? Can the children use ten-frames and part-whole models to add across ten? Children build fluency using number facts of ten as a strategy to help them add across ten. They use counters, pictures and numerals to complete part-whole models and ten-frames. Children demonstrate their reasoning skills as they investigate adding across ten with part-whole models and ten-frames. They check children's work, spot inaccuracies and explain how to correct them Children work systematically to investigate how one number fact of ten can be used to solve different addition calculations across ten. They use part-whole models and ten-frames to demonstrate their learning. Children discover patterns and use these to predict outcomes. They move on to pick other number facts of ten and apply these to addition calculations across ten.	

Whole Class	**Match it:** Invite the children to match the calculations with the ten-frames shown on the Lesson Presentation. Ask the children what they notice. They may note that the same number fact of ten is used for each calculation. The totals, whole and one part increase by one, while the number fact of ten remains the same. The first ten-frame doesn't change because it shows the same number fact of ten. Invite the children to suggest more addition calculations across ten with the same number fact.	

Exploreit

Makeit: Play with a partner. Work together to write numbers from 6 to 9 on cards. Shuffle them and pick one each. Collect a set of coloured counters to match the value on your card. The first player places their counters on a ten-frame. The next player fills any spaces on the first ten-frame before starting to use the next.

The first person to say or correctly predict the number fact of ten wins a point. The first person to add ten to the ones on the other ten-frame wins a point. The game finishes when all of the cards have been used. The winner will be the person who has scored the most points.

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