



## P1 Addition

# Using the picture book “12 Ways to Get to 11” to teach compositions of 11 by CL TAM

### LEARNING OBJECTIVES

- To learn about the compositions of 11
- To be familiar with the use of number frame as a tool to support addition
- To apply the acquired skills to other numbers less than 18

### LEARNING DIFFICULTIES (ESPECIALLY FOR NON-CHINESE SPEAKING STUDENTS):

- Weaker students may still need to add by counting fingers. Once the sum is greater than 10, they encounter difficulties
  - Some of them are not able to count on. After some quantity is added, they need to count from the beginning again
  - Some of them are not able to count systematically
- English is not their first language. If they find something boring or difficult to master, they may give up easily

### STRATEGIES

- Use picture books to arouse students' motivation
  - More attractive
  - Objects on each page could be counted by fingers  
(For example: Counting the total of 6 green apples and 5 red apples on a picture book is easier than finding the sum of  $6+5$  by counting fingers)
- Introduce ten-frame as a tool to facilitate counting
  - Recording and counting numbers with visual aids help reduce difficulties and increase accuracy for students
  - Representing numbers with ten-frame makes addition more manageable
  - With ten-frame, students are more likely to visualise the sum-to-ten combinations which serve as a base for more complex sums
- Ask open-ended questions for students to try different compositions of 11
  - Cater for diversity and promote creativity
  - Students are more motivated to try



## LESSON DESIGN

- The picture book "12 Ways to Get to 11" does not have a storyline. Teachers can choose any pages and let students observe the objects on each page and count
  - Teachers may ask students to count and record the quantity of individual objects. After that, the total number is counted
  - The sum  $m+n=11$  is written down
  - Ten-frame is used to record the quantity of each kind of objects to facilitate addition (Weaker students, irrespective of their first languages, tend to find the sum by counting all over again from the beginning. The visual characteristics of ten-frame help students improve their addition skills)
  - Observe the ten-frame record of the first kind of objects and see how many spaces are empty. Take that amount from the 2nd ten-frame and the sum could be observed
- Open-ended exercises are provided to students for more practice
  - Students are able to find different features of the 11 objects to find different ways to get to 11

## CLASSROOM OBSERVATIONS

- Picture books, even without a storyline, help engage students in the counting activity



- Students try to discover different features in the picture problem to find the compositions of 11
- Ten-frames are used to facilitate the record of individual quantity and thus finding the sum
- Stickers of different colours are provided to raise students' awareness of the numbers to be added

