#### Week 6 Overview

N.B. It is crucial that your students be able to <u>recognize instantly the numbers</u> <u>to 10</u> in both layouts before working through the worksheets and activities using both red and purple dots.

#### **Exploring individual numbers:**

#### Addition pairs that make any number to 10

Using a ten frame with counters of two shades, helps your students to visualize the 2 numbers that together make that number. Another way to look at it is to see that two numbers are hidden inside that larger number.

For instance, visualize 7. Using 2 shades, it is easy to see that 7 has these numbers inside it.



#### Use of the Operation sign "+"

The operation signs '+' and '=' are not used at this stage. It is more important to establish that these numbers go together to make another. Using the operation signs adds another level of thinking that makes it more complex for your students. Once these pairs of numbers that go together to make another number are established, it is an easy step to introduce the operation signs.

Once your students can quickly and easily recognize the numbers pairs to make a new number then using a number line can be introduced. Numbers lines are excellent for counting on 1, 2 and 3, but counting on any more than that requires a visual prompt, such as fingers, to keep a track of how many have been counted. E.g. Try counting on 5 from 4? You don't know when you have counted on the 5 unless you use fingers or the like to let you know how many you have counted. It is for this reason that counting on more than 3 is not recommended as a strategy.

Number lines are most efficient when used for finding the relationship between numbers that are close together. This number line shows 6 and 2 is 8.



W6



#### Rotating the ten frames (turn around facts)

By rotating the ten frames students can see that it does not matter which way around the numbers are placed, they still add together to make the larger number. This prevents students from doubling up on remembering the numbers that go together. Once your students have learnt that 5 and 3 make 8, then 3 and 5 make 8 too.



For students to be able to visualize this, it is important that they are able to recognize the ten frames upside down. Playing the dominoes and card games helps with this immensely as the cards are seen from all angles.

# Using the 2 different shaded ten frames sets up the relationship between addition and subtraction



Look at this first ten frame. Once it is established that 4 and 3 make 7, the next step is to find the missing number that can be added to 4 to make 7. This is called the missing addend.

The missing addend is a type of take-away problem. From here it is easy to make the step to 7 take away 4 is 3. By using the missing the missing addend as well as take-away, a student can see the relationship between addition and subtraction. One operation is a reverse of the other.





**Template Instructions:** Write the number to be explored in the top box, then write one of the addends. Students draw the dots and write the missing number.





W6 2

**Template Instructions:** Write or draw in a number and have students write the missing number. Or have the students write their own pairs to make the number.





# Lesson 6A,B,C,D,E

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**TEN FRAMES** 

#### Exploring numbers to 10 using ten frames.

Hand out ten frames and counters\*.

**Note:** Before using the Ten Frames Gadget, make sure students do lots of hands on activities with their ten frames. The concept of exploring numbers to 5 needs to be established in their minds before moving to the more abstract ten frames on the screen. Students need to see that the counters actually go together to make another number. Using the Gadget, whilst showing students what is happening, is not a substitute for working with real concrete objects.

It is important to have students show numbers on their ten frame then find numbers that go together to

**make that number.** Using a different shades of counters for the two numbers that go together helps establish this concept in their minds.

Exploring numbers to 10

Once this concept is established then move on to using the **Ten Frames Gadget.** 

#### Set the Ten Frames gadget to these settings.



\*Place Laminated ten frames and counters in bags. Ensure all students have their own set of counters and there are two sets of 10 counters with different shades e.g. green and red.

Store individually in zip lock bags or containers.



the "+" sign

**EQUATION:** hide it unless

your students already use

## Lesson W6A,B,C,D,E



## Lesson 6A,B,C,D,E Cont'd

- Close the EQUATION and NAME boxes. Keep the counters on screen.
- Enter a number from 0 to 5 in the keypad, and then add 0. This will then become the number explored. Start with the number 4.
- Ask students to say how many counters are on screen. Leave the NUMERAL box open throughout this time.
- Click the random dice button.
- Ask students what numbers can they seen inside the number 4. "2 and 2 counters" or whatever your random generator produces.



- Click the dice again and another pair of numbers will show. Note these.
- Use the different layouts and arrangements.
- Repeat above steps with the 3 and 5.
- Ask students show you using their ten frames so they can createtheir own pairs of numbers that go together to make the number being explored. Make sure they use the different shaded counter so that they can clearly see the original number and then the numbers with within the numbers.
- Worksheet activities: Complete only some of them, there are a lot of sets within each days work only complete those you choose. The rest can be used for revision later or alternatively you could use the extra worksheets for early finishers.

#### Weeks B - E

Repeat above steps with the number to be explored that day.

- B: 6 D: 8
- C: 7 E: 9

As the number explored becomes larger, the combinations that make that number increases.



### Exploring numbers to 5













#### Exploring numbers to 5







Find the number on a number line. How many hops to make the new number? Can you see without counting?



W6 A





























Find the number on a number line. How many hops to make the new number? Can you see without counting? Take care.







W6 C























Find the number on a number line. How many hops to make the new number? Can you see without counting?



































Find the number on a number line. Circle the starting number. How many hops to make the new number? Can you guess without counting?



































Find the number on a number line. Circle the starting number. How many hops to make the new number? Can you guess without counting?







