PROFESSOR PETE'S GADGETS

Professor Pete's Gadgets: Ten Frames

This interactive teaching app has a powerful function that allows for addition to be shown on Ten Frames.

Intended learning outcomes:

- Demonstrate familiarity with addition number facts within 0 to 20
- Demonstrate addition strategies to 20 with visual prompts

Main Interface:

Toolbox: tools allow for manipulation of ten frames and count

Double Ten Frame: click in Toolbox to show ten frames

EQUATION: hides or shows the equation shown on the ten frames

NUMERAL

COUNTERS

Addition:
click and hold down for pop-out box to reveal selector panel then select "+"

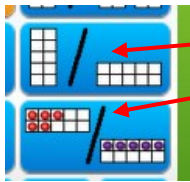**NUMERAL:** hides or shows the symbolic form of the number

NAME: hides or shows the number name

Key Pad: for entering numbers for display

COUNTERS: hides or shows the counters on the ten frames

Random Addition Number Facts:

- Choose between horizontal or vertical ten frame layout
- Choose between pairs or rows arrangements

- **Click** and **hold down** the Number Facts button and a pop-out panel will appear.
- Select addition facts
- **Addition: Select the strategy** you are currently working on. e.g. doubles

s can be

ear and the or. Click this ame number

for

Use of the

0-10: Select numbers to be displayed

Add: show addition of numbers to 20 using counters of two colours

e.g., click "9" "+" "4" to show addition fact 9 + 4 = 13

Lesson Plan: Introduction to addition strategy; e.g., [icon] the "doubles" strategy

1. **Close** the EQUATION, NAME and NUMERAL boxes
2. Make sure that double ten frames are selected
3. **Enter** an equation such as "5 + 5" on the keypad
4. **Discuss** how double 5 is 10 (a fact already known). It is a full ten frame.
5. **Enter** an equation such as "6 + 6" on the keypad
6. **Discuss** how double 6 is double 5 and double 1 making 10 and 2 more (point to the full ten frame of double 5 and then the double 1). It is a full ten frame and 2 more, 12.
7. **Show strategy** for Doubles - to double numbers larger than 5 think of doubling the "extras", this is the ones above 5, one full frame of 10 and ones. You will need to enter other numbers such as "7 + 7" or "8 + 8" (It is really important that students are familiar with both the pairs and rows ar...
8. **Open** th...
9. **Check** a...
10. **Discuss** ...er 5 results in doub...

Double 5:
point to the double 5 is 10, a full ten frame

Double 1:
point to the double 1, the extra, making 2. 10 + 2 = 12