

# ***Introducing addition***

## ***Early hands on addition***

You do not need to wait until all numbers 0 to 10 are secure.

Once we are sure that recognition of the Numicon shapes and numerals 0 to 10 is developing and almost secure we can begin to introduce early hands on addition.

The first two sums we introduce are 1+1 and 2+2 using the one and two Numicon shapes and play dough. The shapes are pushed into the play dough next to each other and removed to show the answer then the equivalent Numicon shape is placed over the pattern in the play dough.

A typical session still begins with the 0 to 10 path, followed by matching several numerals and Numicon shapes, followed by a counting activity (one to one correspondence between 4 and 6).

Then a little addition is introduced.

## ***Resources***

Enough one and two Numicon shapes for each child x2 and the leader

Enough Numicon four shapes for each child and the leader.

A portion of play dough for each child and the leader.

## ***Activity***

Give out a portion of play dough to each child and enjoy playing with it. Practice squashing it into a flat shape. If you have some little rolling pins use these to roll out the dough.

Then demonstrate 2 + 2 by pushing in two Numicon 2 shapes side by side, say 'two add two' then and remove the shapes to reveal four 'lumps' pick up the four Numicon shape and say 'two add two equals four' as you place the four shape over the 'lumps'.

Next give out two, 2 shapes to each child and go through the exercise again, helping them to place the shapes together and push them into the play dough and remove, repeating the same sentence. Then give out the four shapes.

Next re roll the play dough and repeat but this time with two, one shapes to perform the sum

$$1 + 1 = 2$$



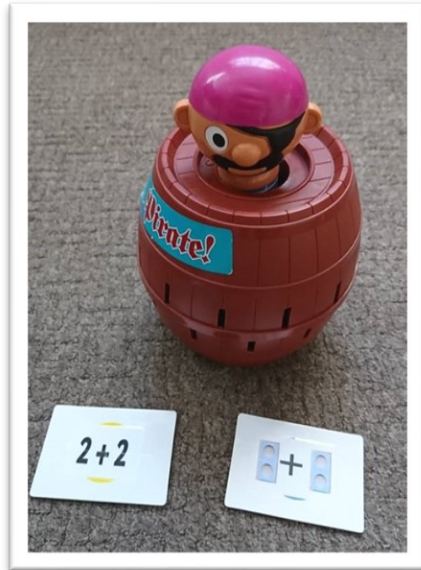
Finish by rolling the play dough into balls and count them back into the tub.

### ***Other ideas to introduce 'hands on addition'***

#### ***Play Pop Up Pirate***

Using Pop up Pirate and a mixture of cards showing  $1+1$  and  $2+2$  as either Numicon images or the usual numerals (see picture), take turns to turn over a card say the sum, then use Numicon to make the sum and work out the answer checking by choosing from two shapes.

So, for example, if making  $2 + 2$ , the shapes will be laid together (the base board can be used if this helps to keep the shapes in the correct place) and the child will be shown 4 and 6 shapes. They should choose the four shape as they should be able to 'see' this is the correct shape. If not help them to choose the correct one. Later start the activity by ordering shapes 1 to 10 in a number line then when they make  $2+2$  they can choose the correct answer from the number line. Once complete the child can push a sword into Pop Up Pirate and then it's the next child's turn. One turn each will be sufficient the first time you play this, then just finish off the game of Pop Up Pirate – a great incentive to maintain focus.



### Play magic bag

The magic bag is also used to introduce 1+1 and 2+2 using two frogs and two frogs sat on the log for the speckled frogs song and 2 ducks and 2 ducks in the pond for the little ducks song.

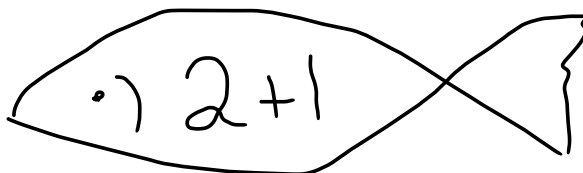
These can be supported by showing the sum using the correct Numicon shapes



As the children are ready introduce other sums, 1 + 2, 1 + 3, slowly working on sums within 6.

### ***Play the fishing game***

Make a 'river' with a length of blue cloth, and place several fish in it. Make the fish out of cardboard and write sums on them:  $1+1$ ,  $2+2$ ,  $1+2$ ,  $3+1$ ,  $2+3$   $1+4$ . Attach paper clips to each fish and using a magnetic fishing rod take turns to catch a fish, make the sum and find the answer from the number line 1 to 5.



### ***Using spinner (or die) and number bag***

#### ***Resources***

Two large cards, one with + and one with = written on

A Numicon base board

Numicon shapes 1, 2 and 3 in a number bag

Numicon shapes 1, 2, 3 and 4 on a die

Numicon shapes 1 to 6 (with several spare 1s, 2s and 3s)

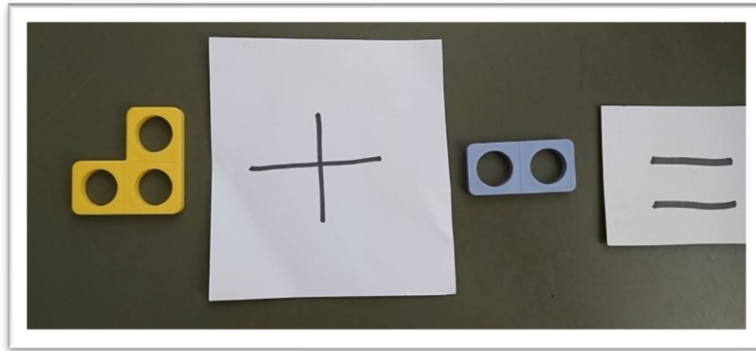
#### ***Activity***

Start by ordering the shapes 1 to 6 (place the spares on top – match them together)

Ask the child's support and the child to work in pairs.

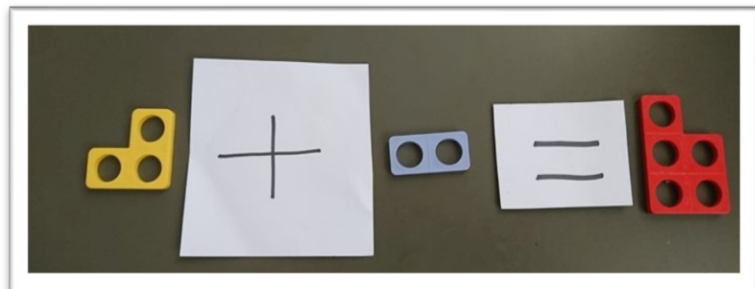
The die is rolled by the child and then the correct Numicon shape is selected from the number line. Then sing the number bag song and the Support Assistant chooses a shape out of the bag (to ensure the sum is within 6 and also to select a shape within the ability of the child). This is a bit long winded but there is no rush – we are working to enjoy the activity and take pressure off the child.

Next set out the shapes to make the number sentence



Placing the cards with + and = in the correct positions. Together read (say and sign) the number sentence.

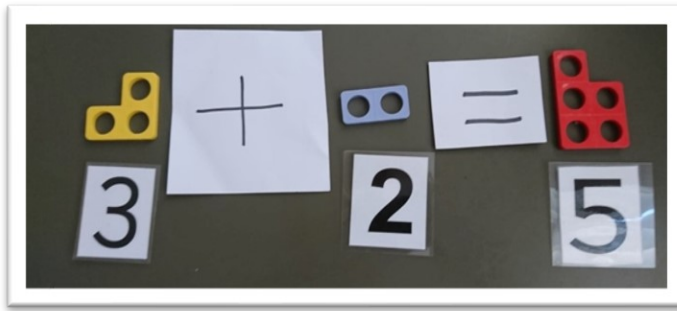
Then pick up the two shapes and place them together 'add' them. Can the child 'see' the answer and select the correct shape from the number line. Help them to succeed. Place the correct shape over the two 'added' shapes and say the number sentence. Then place them back in the number sentence and 'read' it together, '3+2=5'



'Read' the sentence together.

Tidy away and repeat.

At a later stage start with a number line of Numicon shapes and match numeral cards to them. Then when you build the number sentence use both shapes and numbers.



Modify to use spinner and die and to use a selection of shapes and numerals.

The Numicon Firm Foundations kit activity group 8 has lots of lovely ideas to work on early hands on addition. I suggest supporting this early addition with the number sentence '1 + 1 = 2' etc.

There are also lots of addition worksheets in our resources to help teach this early addition and then begin to generalize it to everyday basic sums, 'one boy is playing out, another boy comes out to play. How many boys are now playing out?'

