

Numberlink Boards

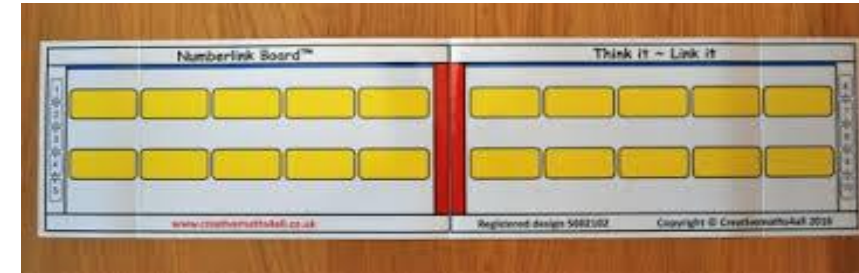
Parent Workshop

February 2025

Aims



- Understand how a Numberlink Board works and how it can be used to support the learning of times tables.



- Understand how the Numberlink Board can support your child with their mathematical fluency e.g. noticing patterns.

Multiplication Vocabulary

The diagram illustrates the components of a multiplication equation. It features the equation $2 \times 3 = 6$ in large, colorful numbers. Below the equation, three labels are positioned with arrows pointing to their respective parts: 'Multiplier' (yellow, underlined) points to the number 2; 'Multiplicand' (pink) points to the number 3; and 'Product' (blue) points to the number 6.

$$2 \times 3 = 6$$

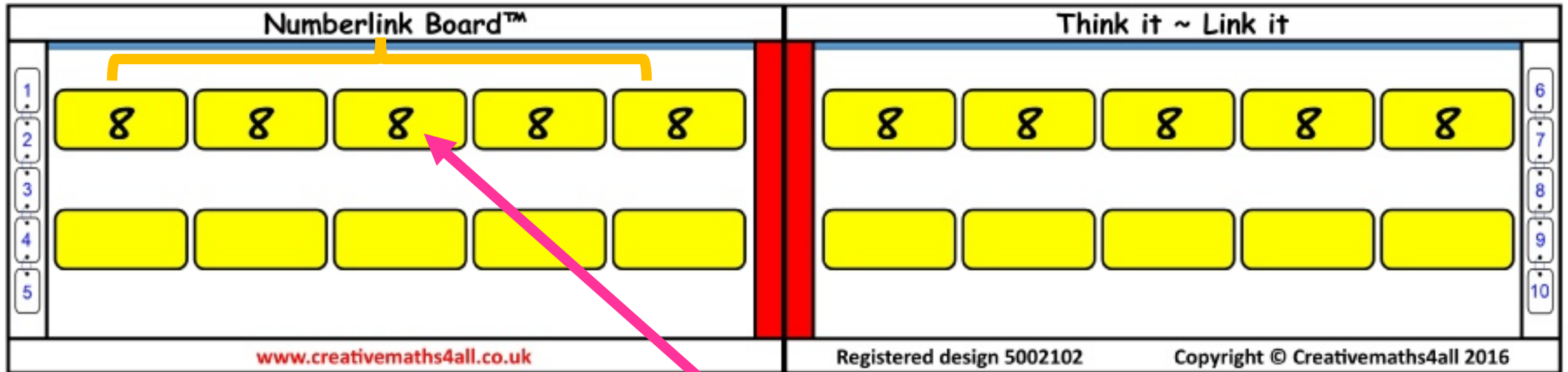
Multiplier

Multiplicand

Product

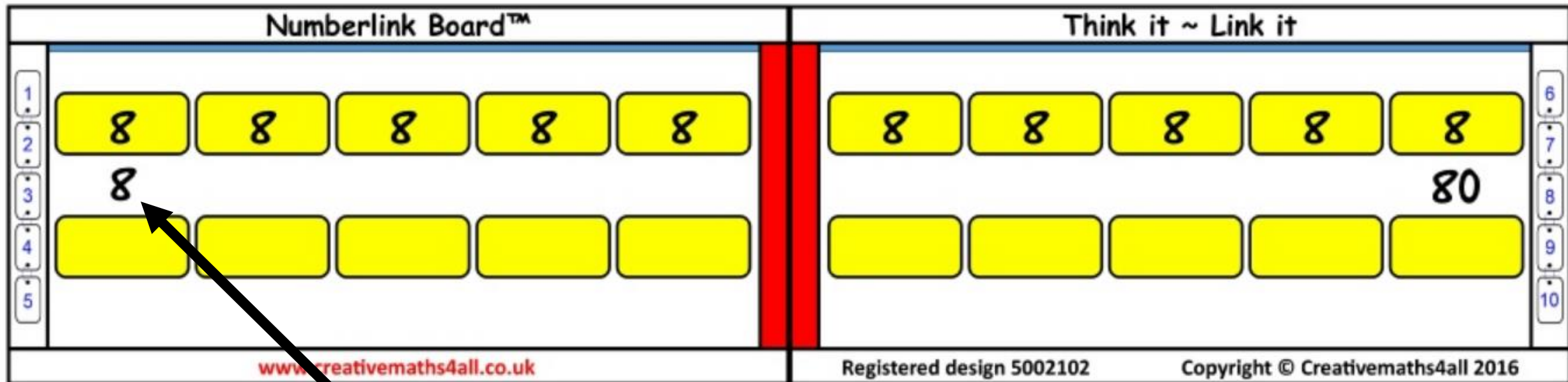
How does a Numberlink board work?

Multiplier



Multiplicand

How does a Numberlink board work?



Product

Step 1

Write in the multiplicands

Write the multiplicands in the top row of yellow boxes. This reminds the children of this structure of multiplication as repeated addition.

Numberlink Board™					Think it ~ Link it					
1	8	8	8	8	8	8	8	8	8	6
2										7
3										8
4										9
5										10

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The multiplicand is the size of the group.

Step 2

Write in the key facts

Fill in the products in the order **$\times 1$** , then **$\times 10$** then **$\times 5$** . The **products** should be written in the **white space** below the multiplicands. Children will then have key facts to support the connection of other multiples. This is a key feature of the Numberlink Board™.

Numberlink Board™					Think it ~ Link it				
1	8	8	8	8	8	8	8	8	8
2	8				8				80
3				40					
4									
5									

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Product

1x, 10x, 5x, derive

Numberlink Board™					Think it ~ Link it				
1	8	8	8	8	8	8	8	8	8
2									
3	8								80
4									
5									
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Use the key facts to derive other facts

Numberlink Board™					Think it ~ Link it				
1	8	8	8	8	8	8	8	8	8
2									
3	8								80
4									
5									

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If 8×5 is 40 what is 8×6 ?

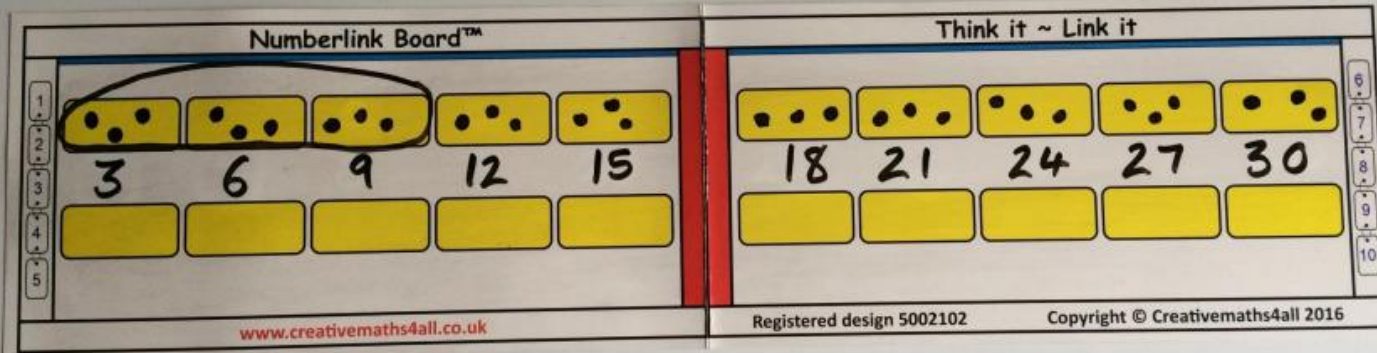
If 8×10 is 80 what is 8×9 ? Use what you know.

Step 3

Write in the rest of the products

Numberlink Board™					Think it ~ Link it						
1	8	8	8	8	8	8	8	8	8	6	
2	8	16	24	32	40	48	56	64	72	80	7
3	8	8									8
4	88	96									9
5											10
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$$3 \times 3 = 9$$



If children need support working out multiples initially, they can draw dots to show the **cardinality** of the number and count the dots.

Some games!

Turn Table

- Each player chooses the times table they would like to practise. The players can choose different times table to practise if they want.
- Each player writes their multiplicands on, but none of their products.
- The first player rolls the dice. The dice shows the multiplier, eg. if you roll a 6 find 6 times the multiplicand. The first player writes that product in the correct place on their board. (For the purpose of this game, use 0 as 10.)
- The second player has a turn and writes their product on the board.
- Take it in turns to roll the dice. If a number is rolled twice, the product is rubbed off the board. If a number is rolled again, the product can be written back on.

The winner can be:

- the first person to write all the products on the board, or the person who has the most products on when the time set for the game is up.

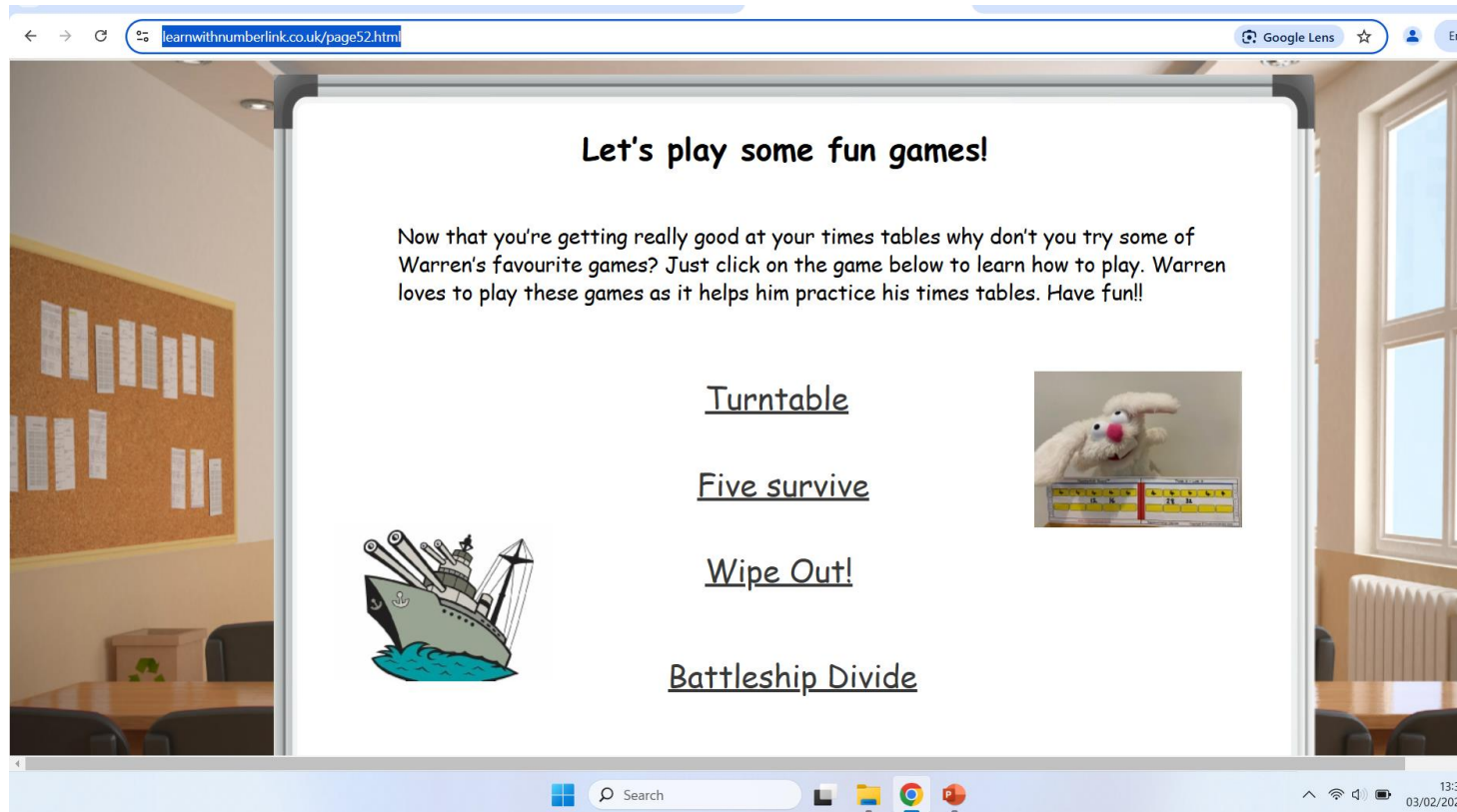
Wipeout!

- Each player decides on a multiplication table they are going to work on and writes the multiplicands in the yellow boxes (as for Turntable game).
- Each player takes it in turns to turn over a card, which acts as the multiplier, and then writes the product on their board.
- If a player turns over a picture card they can rub a product off their opponent's board!
- If their opponent's board is already empty they have to write a product in!
- Play until all the cards are finished or the time is up.

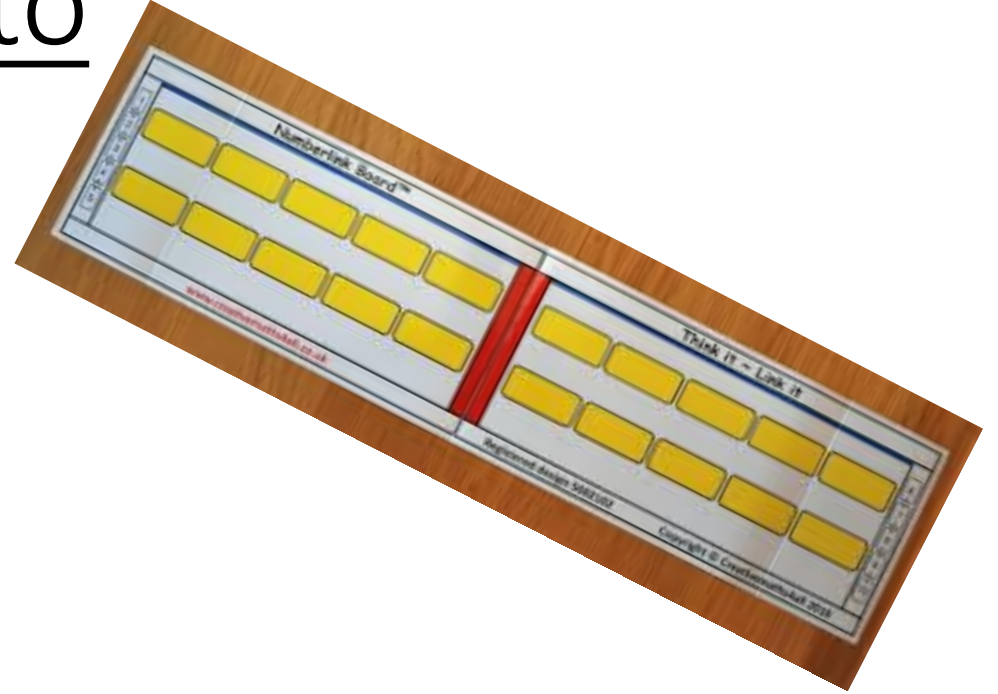
The winner is the player with the most products on their board.

Other games

- <https://learnwithnumberlink.co.uk/page52.html>



Using Numberlink boards to inform mental strategies



Doubling/halving

46 x 5

Numberlink Board™					Think it ~ Link it				
1									6
2									7
3	46			230				460	8
4									9
5									10
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Using 'Rounding and Adjusting'

$$4 \times 79$$

Numberlink Board™					Think it ~ Link it				
1	80	80	80	80	80	80	80	80	80
2	80	160	240	320	400	480	560	640	720
3	80	160	240	320	400	480	560	640	720
4	79	79	79	79	79	79	79	79	79
5	79	158	237	316	395	474	553	632	711
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Making connections

Numberlink Board™					Think it ~ Link it				
1	2	3	4	5	6	7	8	9	10
7	7	7	7	7	7	7	7	7	7
7	14	21	28	35	42	49	56	63	70
0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7
0.7	1.4	2.1	2.8	3.5	4.2	4.9	5.6	6.3	7.0
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Spot patterns between two different times tables

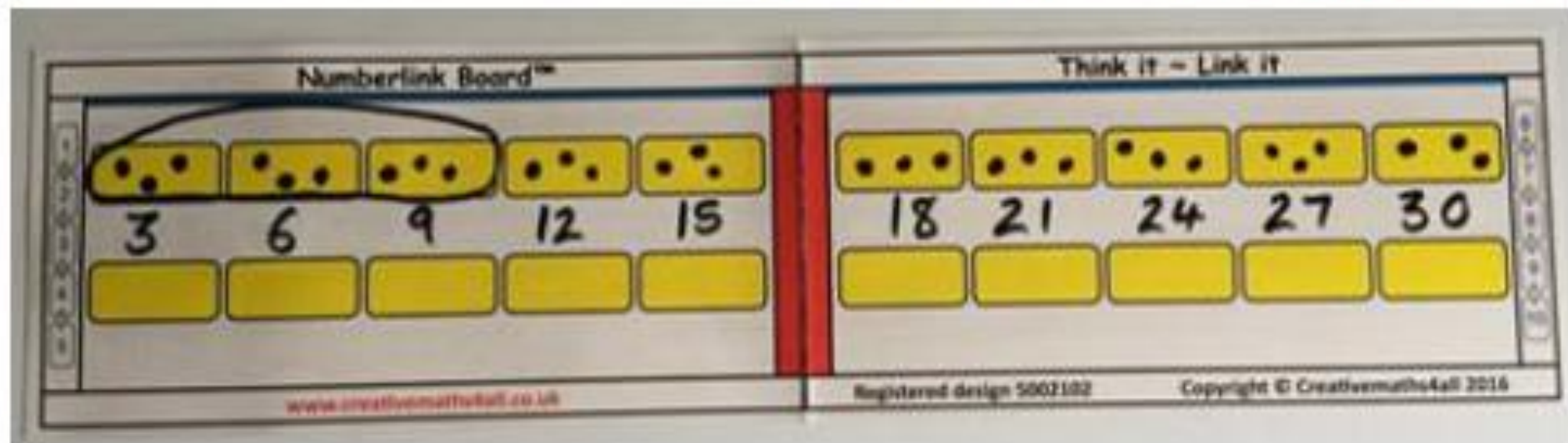
Numberlink Board™					Think it ~ Link it				
1	6	6	6	6	6	6	6	6	6
2	6	12	18	24	30	36	42	48	54
3	12	12	12	12	12	12	12	12	12
4	12	24	36	48	60	72	84	96	108
5									
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Using the Numberlink Board™ for Division

Before moving to division, explore multiples of 3 using multiplication.

$$9 = 3 \times 3$$

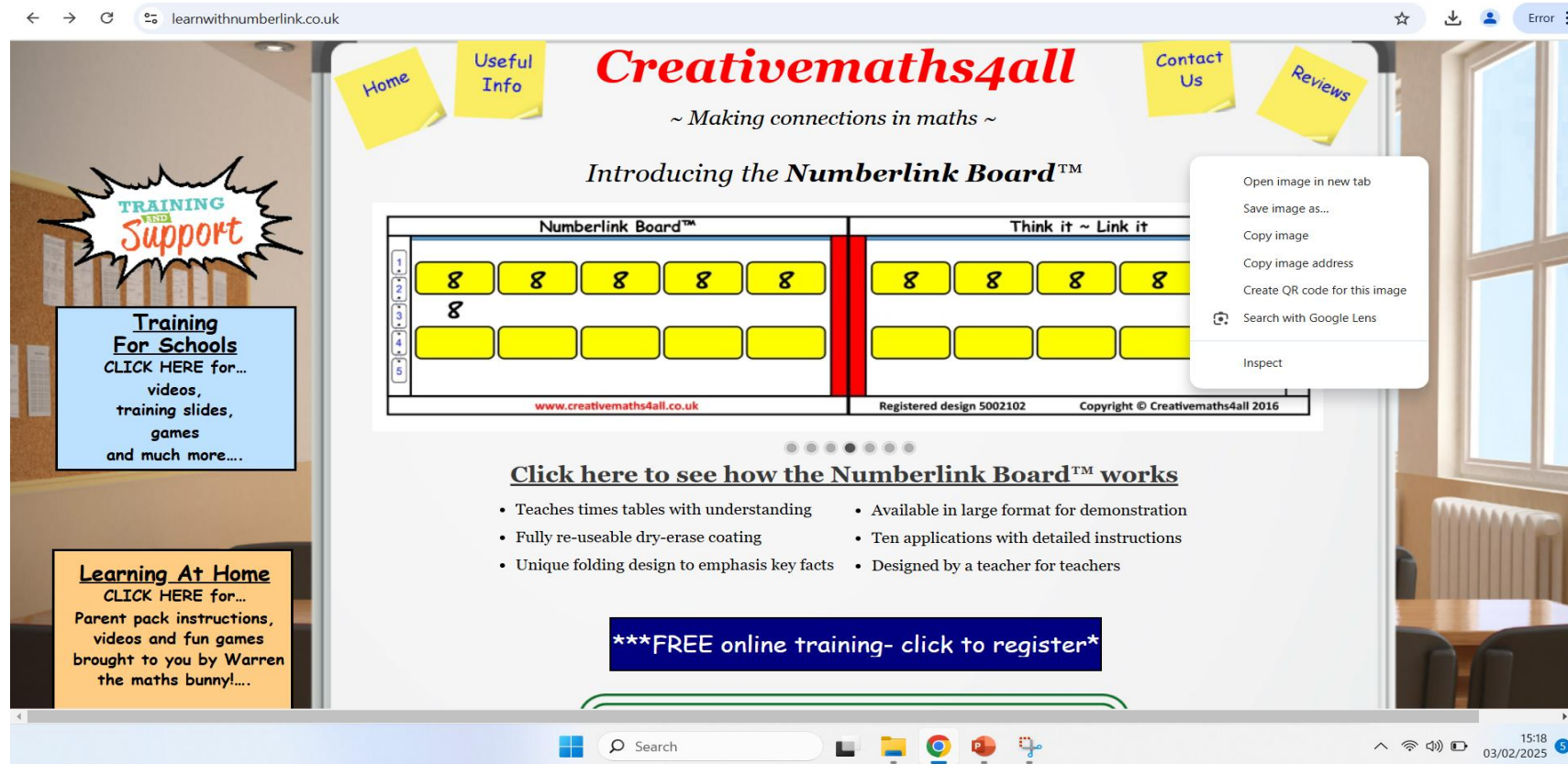
9 is equal to 3 groups of 3.



How many groups of three are there in 9?

$$9 \div 3 = 3$$

Numberlink Board



- <https://learnwithnumberlink.co.uk/>

Any questions?

