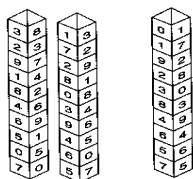
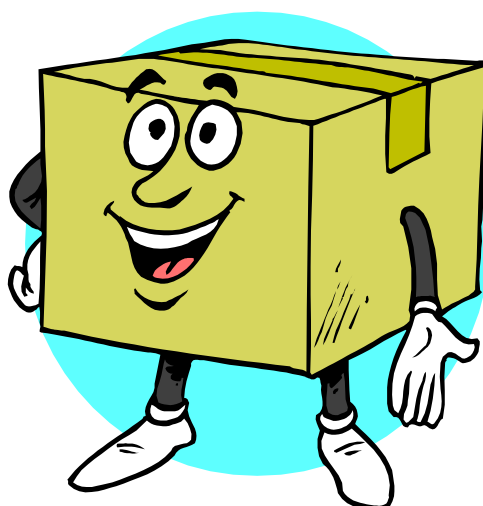


# Mathematics at Alderman Jacobs School:



*a guide to squashy boxes.*

# Introduction

Squashy Boxes are a simple but effective resource for practising key rapid recall and mental calculation strategies.

In this booklet you will find some ideas for using squashy boxes to help your child to practice rapid recall and mental calculation strategies. These can be used with the pro-formas given.

Whilst shown in certain year groups, all children progress at different rates and you may find that your child needs reinforcement from the previous year tasks or extension from the following year.

The pro-formas included at the back are:

1. Blank for you to include your own numbers
2. 4 sided - multiples of 10
3. 4 sided - single digits

Please note the spare column on each is so that you can glue this and stick it behind the first column to secure the box.



## Early Years

	What are we learning?	How can we learn it?
1.	Count reliably with numbers from 1-20.	Use each single digit as a starting point and count on in ones stopping at 10 or 20.
2.	Find one more and one less than a given number up to 20.	Use single or two to make numbers up to 20. For one more, one less, find a number on the box that is one more or one less than .....

## Year 1

	What are we learning?	How can we learn it?
1.	Count on and back in twos	Use the squashy box with multiples of 2 on it and use each as a starting point to count on, then back, in 2s.
2.	Count on and back in tens	Use the squashy box with multiples of 10 on it and use each double digit as a starting point to count on, then back, in 10s
3.	Say the number that is 1 or 10 more or less than any given number.	Work down the squashy box or, choosing numbers at random, one more, one less, ten more, ten less (for latter need two digit numbers)  Or  For one more, one less, find a number on the box that is one more or one less than .....

4.	Know by heart all pairs of numbers with a total of 10 and 20.	Find two numbers on box that make 10  Or  What need to add to number to make up to 10? Repeat this for 20, using an extra '1' box to make teens numbers as needed.
5.	Add and subtract one-digit and two-digit numbers to 20, including zero.	Create two one digit numbers and add/subtract these together. Introduce an extra '1' box to create two-digit numbers and then add or subtract an extra box.

## Year 2

	What are we learning?	How can we learn it?
1.	Count on and back in ones and tens, starting from any 2 digit number.	On each alternate 2 digit number, count on, then back in ones Practice the same in tens.
2.	Know by heart all addition and subtraction facts for each number to at least 20.	What do we add to the number to make 20? If we take the single digit away from 20, what will be left? Find two numbers that when added make ..... Find two numbers where the smallest subtracted from biggest leaves .....
3.	Know by heart multiplication facts for 2, 5 and 10 x tables.	Take each single digit number and say the answer when it is multiplied by 2, 5 or 10. For any even number up to 20 say the number of 2s in it. Count on and back in 2s from any even number under 20.
4.	Count, read, write and order whole numbers to at least 100.	Using 2 digit numbers, which number/s is/are: a) largest b) smallest c) bigger than .... d) smaller than ..... e) comes before ..... f) comes after ..... g) odd/even h) next i) between ..... and .....
5.	Know what each digit	Which numbers have ..... tens?

represents in a two digit number.	How many units in .....? Call out the number of tens in each 2 digit number?
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## Year 3

	What are we learning?	How can we learn it?
1.	Count on or back in tens or hundreds from any two (or three) digit number.	On each alternate 2 digit number, count on, then back in tens Repeat in hundreds.
2.	Know by heart all addition and subtraction facts for each number to 20.	With single digits know what to add to 20. With two digit teen numbers say the amount to take away to leave 10. With numbers up to 20 say the answer when asked what is left when you take away ..... Find two numbers that when added make ..... Find the two numbers where the smallest subtracted from the biggest leaves .....
3.	Add and subtract mentally 'a near multiple of 10' to or from a two digit number.	Take a number and +/- 10. Then ask what the answer will be if you +/- 11. Repeat for +/- 9. Continue for 19, 29, 21, 31.  Can you find two numbers that are ..... more/less than each other?
4.	Know by heart facts for the 3, 4 and 8 times tables.	Take each single digit number and say the answer when multiplied by 3, 4 or 8. For any even number up to 20 say the number of

3's in it.

Count on and back in 4's from any even number under 20.

For any multiple of 8 up to 50 say the number of 8's in it.

Count on and back in 3's from any number under 20.

Show me a number in the 3x, or 4x, or 8x tables.

## Year 4

	What are we learning?	How can we learn it?
1.	Round any positive integer to nearest 10, 100 or 1000.	Take each 2 digit number and round it to the nearest 10. Ditto but with a 3 digit number rounded to the nearest 100. Repeat with a 4 digit number to the nearest 1000. Tell me/show me a number that, when rounded to nearest 10, would be .....
2.	Use known number facts and place value to add and subtract mentally, including any pair of two digit whole numbers.	Tell me two/three numbers which when added nearly make ..... Subtract 3 <sup>rd</sup> number from the fifth number. What do you need to add to each number to make ..... What do you need to subtract from each number to make .....
3.	Know by heart multiplication facts for the 2,3,4,5, 8 and 10 times tables. Derive quickly division facts corresponding to the 2,3,4,5, 8 & 10 times tables.	Take each single digit number and say the answer when multiplied by 2,3,4,5, 8 or 10. For a given number say the number of 2's, 3's,4's,5's, 8's or 10's in it. Count on and back in 2's, 3's, 4's, 5's, 8's and 10's from any number under 20. For a number say the number of 2's, 3's, 4's, 5's, 8's & 10's in it.



## Year 5 and 6

	What are we learning?	How can we learn it?
1.	Multiply and divide any positive by 10, 100 or 1000 and understand the effect.	Take each number and multiply it by 10/100/1000 Take each number and divide by it 10/100/1000
2.	Know by heart all multiplication facts in 2,3,4,5,6,7,8,9,10, 11, 12 times tables.	Take each single digit number and say the answer when multiplied by any given times tables. For given number say the number of 2's, 3's and 4's etc. in it. Count on and back in 2's, 3' ,4's, 5's, 6's, 7's, 8's, 9's, 10's, 11's and 12's from any number under 20. For number say number of 2's, 3' ,4's, 5's, 6's, 7's, 8's, 9's 10's, 11's and 12's in it.

2	7	5	8	
9	3	6	1	
7	5	4	5	
5	6	0	2	
3	1	8	9	
6	4	7	0	
1	8	3	6	
4	0	1	3	
8	2	9	4	
0	9	2	7	

20	70	50	80	
90	30	60	10	
70	50	40	50	
50	60	00	20	
30	10	80	90	
60	40	70	00	
10	80	30	60	
40	00	10	30	



