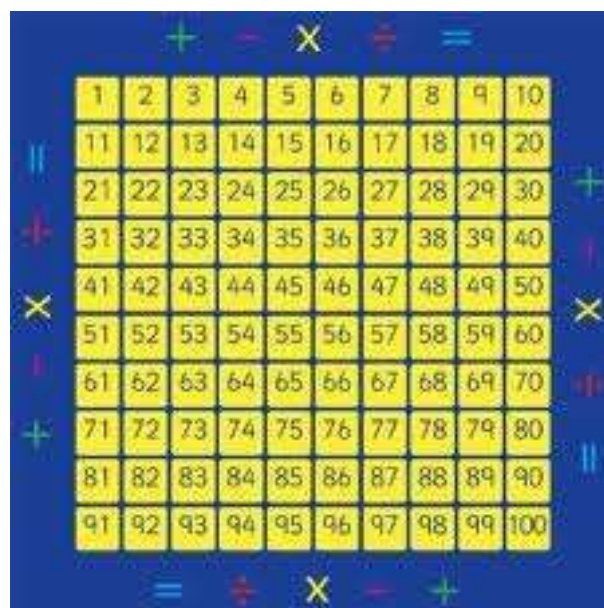# 100 IDEAS FOR USING A HUNDRED SQUARE

- These ideas are in no particular order and can be adapted to any age range or ability.

- The objectives are for children to learn to recognise numbers, understand numbers and find different ways of working with numbers to improve their understanding.

- These ideas are only starting points and can be adapted and developed with imagination.

- These activities can also be completed with a 200 square etc.

- As an extra challenge or for a bit of fun, make up your own challenges. Can you think of 10 more to make 110 activities?

1. Cut up a hundred square and make it into a number line.
2. Colour all the even numbers and establish a rule for recognising even numbers.
3. Find the multiples of 3.
4. Play a game in two's. Each picks a number between 10-20. Add together the digits of that number and move that many spaces. The winner is the first person who is closest to 100.
5. Find the square roots of the numbers to the nearest whole number.
6. Pick 10 numbers and treble them.
7. Make a Lucas Sequence, e.g. 1.3.4.7.11.18
8. Find all the cubic numbers.
9. Investigate all the numbers and find the numbers where the digits add up to 9.
10. Pick a number between 1 and 9 and keep adding 10 until you get to the end of the number square.
11. Find all the numbers whose digits add up to 11.
12. Make your own 100 square.
13. Choose 10 numbers from the square and subtract them from 100.
14. Find two consecutive numbers which add up to a square number, e.g. 12 and 13 = 25.
15. Pick numbers and reverse the digits and add them together, is the answer different from adding the digits without reversing.
16. Find all the numbers containing a digit 1.
17. Find all the prime numbers.
18. Go to a prime number add 1 and divide by 4.
19. Divide any number by 10.
20. Reverse the number, read the new number.
21. Find any palindromes - numbers which are the same forwards and backwards e.g. 77
22. Make a spiral hundred square.
23. Pick a number and add the number above or below it.
24. Find the square numbers.

25. Pick a number and halve it. Use objects to help you if needed.
26. Think of a number pattern, use a cut up 100 square to make it, remove some of the numbers and get your friend to fill in the missing numbers or finish the pattern.
27. Find all the triangular numbers.
28. Pick a number, double it, add 1. Explain how to get back to your original number.
29. From a cut up 100 square make a calendar for the month of your birthday.
30. Find all the multiples of 4.
31. Pick a number and find the next multiple of 6.
32. Make a zig zag hundred square, e.g. 1-10 goes from left to right, next row 11-20 from right to left, etc.
33. Find the multiples of 5.
34. Find your age.
35. Find numbers where the digits add up to 10.
36. Pick a number which is greater than 10, double the units digit and add it to your original number.
37. Use your hundred square to draw some snakes and ladders and play the game with a dice.
38. Find the multiples of 8.
39. Find the twin prime numbers, two consecutive prime numbers with an even number between them.
40. Pick a number, double an odd number and subtract 10, halve an even number and add 1, keep repeating, can you get back to 1? Make your own rules.
41. Find your house number.
42. Pick a number, subtract 4 then subtract 3, keep repeating. How many sums until you reach 1?
43. Pick a number, subtract the number below. Try for 10 different numbers, what do you notice?
44. Put some coloured counters on a number series. How many different series can you find?
45. Make a Fibonacci series.
46. Find the factors of 100.

47. Add the ages of all the people in your family and find that number.
48. Pick a number, add 100. What do you notice? What if you add 200?
49. Find some squares within the hundred square, add the corners together.
50. If A=1, B=2, etc., what numbers are your initials? What is the value of your name?
51. Pick a number and add the next odd number. Find a rule about adding odds and evens.
52. Pick a number, shut your eyes, what numbers are either side of your number? Write them down.
53. Find the age of your eldest brother or sister.
54. Pick a number, can you make your number by adding 2 consecutive numbers? Are there any impossible numbers?
55. Pick 2 numbers, find the difference.
56. Pick a number, shut your eyes, what numbers are above and below your number?
57. Pick a number, add 7, subtract 3, how many sums do you do to reach 100? What was the 5th answer in your sequence?
58. Pick a number, multiply the units digit by 5, and add the tens digit to the answer.
59. Draw some rectangles on your hundred square, add up the numbers around the edge of each rectangle.
60. Find numbers which can be divided by both 2 and 3.
61. Using your cut up square, make a 7 x 7, or 8 x 8 number square. What is the last number in this square?
62. Pick a number, find 2 numbers which add up to your number, are there any other pairs of numbers which make the same total?
63. Find a number with a prime number above and below it.
64. Using the cut up square, make a hollow number square. How many numbers have you used?
65. Pick a number, make a sequence by adding 5 each time.
66. Find a number with a digit 2 in it. What is its value?
67. Pick a number, subtract the digits.
68. Pick three numbers and add 2 of the numbers and subtract the third number.
69. Pick a number and divide it by 7. Is there a remainder?

70. In pairs, pick a number each and put a counter on that number. Using a knight's move, (2 forward and 1 to the side) can you move to 1 or 100?
71. Pick a number, find its multiples. Is there a rule to move from one multiple to another?
72. In pairs, one person gives the first three numbers of a sequence, play hangman to guess the sequence to 100.
73. Find a number which can be divided by the sum of its digits.
74. Find all the multiples of 10.
75. Find the year of your birth, 19--
76. Pick a number; if the number is even, halve it, if it is odd, add 1 and double. Can you get to 100?
77. Design your own rules for investigations to 100.
78. Find pairs of numbers which add up to 100.
79. Find 3 numbers which total 100.
80. Use the hundred square to fill in a multiplication square. Which numbers are never used, which numbers do you need several times?
81. Using the knight's move, which is the fastest way of travelling from 1 to 100.
82. Find the multiples of 11.
83. Make a number sequence using 10 numbers. Turn over the numbers so your partner can't see them. Turning one number at a time, in any order, how many do you turn over until they guess the correct sequence.
84. Choose your favourite number and say why it is special.
85. Find two numbers which have a difference of 13.
86. Find two numbers which add up to 21.
87. Pick 10 pairs of numbers and multiply them together.
88. Combine three prime numbers. Is the answer always odd?
89. Combine two prime numbers. Is the answer ever odd?
90. Pick 4 numbers, using +, -, x, only once each, what is the biggest number you can make? The smallest?
91. Start on any number, divide by 2 and add the remainder. Do you always reach 1?
92. In pairs, each put a counter on 1. Each must follow one of the following instructions. Square the number then add 1, or add 1 and square the number. Move your counter to the answer and then repeat. What happens? Who gets nearest to 100 first? Pick a different starting point, does the result change?
93. Make a Fibonacci sequence, add the previous 3 numbers. If you were to finish at 100, where would you start?

94. Play 'I'm Thinking of a Number'. It is less than… It is more than… It is an odd number. It is in the 3 x table.

95. Paired Adding Game - Play a game in two's. Each picks a number between 10-20. Add together the digits of that number and move that many spaces. The winner is the first person who is closest to 100.

96. Adding 10 - Pick a number between 1 and 9 and keep adding 10 until you get to the end of the number square.

97. Pick 3 numbers and make a number sentence. Move the numbers around and change the sign. How many sentences can you make with just those 3 numbers?

98. Find numbers which total: 50, 30, 20

99. If a = 1 and b = 2 and c = 3 How many numbers do you need for the alphabet?

100. Double an odd number and add 10. Halve an even number add 1. Keep repeating – how soon before you get back to one?