**Level 2 – Level 3 Maths activities**

**Number games**

**Adding and subtracting**

Roll two dice. Make two-digit numbers, e.g. if you roll a 6 and 4, this could be 64 or 46. If you haven’t got two dice, roll one dice twice. Ask your child to do one or more of the activities below.

* Count on or back from each number in tens.
* Add 19 to each number in their head. (A quick way is to add 20 then take away 1.)
* Subtract 9 from each number. (A quick way is to take away 10 then add back one.)
* Double each number.

**Make 20(L3 to 10 for level 2 )**

For this game you need to write out numbers 0 to 20 on a piece of paper. Make them big enough to put counters or coins on.

* Take turns. Roll a dice. Put a coin on the number that goes with the dice number to make 20, e.g. throw a ‘4’ and put a coin on 16.
* If someone else's counter is there already, replace it with yours!
* The first person to have counters on 6 different numbers wins.
* Now roll two dice, add the numbers together and look for a number to make 20. The first with coins on 10 different numbers wins.

**Order, order!**

* Each of you should draw 6 circles in a row.
* Take turns.
* Roll two dice and make a two-digit number (see Number games).
* Write the number in one of your circles. Once the number is written in a circle you cannot change it or move it!
* The first to get all six of their circle numbers in order wins.

**Secret sums**

* Ask your child to say a number, e.g. 43.
* Secretly do something to it (e.g. add 30). Say the   
  answer, e.g. 73.
* The child then says another number to you, e.g. 61.
* Do the same to that number and say the answer.
* The child has to guess what you are doing to the   
  number each time!
* Then they can have a turn at secretly adding or subtracting something to each number that you say to them.

**Board games**

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 |
| 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 |
| 31 | 32 | 33 | 34 | 35 | 36 | 37 | 38 | 39 | 40 |
| 41 | 42 | 43 | 44 | 45 | 46 | 47 | 48 | 49 | 50 |
| 51 | 52 | 53 | 54 | 55 | 56 | 57 | 58 | 59 | 60 |
| 61 | 62 | 63 | 64 | 65 | 66 | 67 | 68 | 69 | 70 |
| 71 | 72 | 73 | 74 | 75 | 76 | 77 | 78 | 79 | 80 |
| 81 | 82 | 83 | 84 | 85 | 86 | 87 | 88 | 89 | 90 |
| 91 | 92 | 93 | 94 | 95 | 96 | 97 | 98 | 99 | 100 |

For these games you need to   
sketch a board like this. Notice   
how the numbers are arranged.

* Start on 1. Toss a coin. If it lands heads, move 1 place along. If it lands tails, add 10, saying the total correctly before moving. First person to reach the bottom row wins.
* Start anywhere on the board. Roll a dice. Even numbers move you forwards and odd numbers move you backwards. If you land on a multiple of five, you can move either 10 forwards or 10 backwards. The first person to reach either the top or bottom of the board wins.

**Secret numbers**

Write the numbers 0 to 20 on a sheet of paper.

Ask your child secretly to choose a number on the paper. Then ask him / her some questions to find out what the secret number is, e.g.

Is it less than 10?

Is it between 10 and 20?

Does it have a 5 in it?

He / she may answer only yes or no.

1. Once you have guessed the number, it is your turn to choose a number. Your child asks the questions.

For an easier game, use numbers up to 10. For a harder game, use only 5 questions, or use bigger numbers.

**Takings**

For this game you will need a dice and a collection of small things such as Lego bricks, sticky shapes or dried pasta. You will also need pencil and paper.

1. Take turns.
2. Roll a dice. Take that number of pieces of pasta. Write down the number.
3. Keep rolling the dice and taking that number of pieces of pasta. BUT, before you take them, you must write down your new total.
4. You can only take your pieces of pasta if you are right.
5. The first person to collect 20 beans wins!

For example, Sally has 7. She throws 4. She has to work out how many she will have now. She starts counting from seven: *eight, nine, ten, eleven*. She writes 11.

**Multiplication**

**Bingo!**

One person has the 2x table and the other has the 5x table. Write six numbers in that table on your piece of paper, e.g.

4 8 10 16 18 20

* Roll one or two dice. If you choose to roll two dice, add the numbers, e.g. roll two dice, get 3 and 4, add these to make 7.
* Multiply that number by 2 or by 5 (that is, by your table number, e.g. 7 x 2 or 7 x 5).
* If the answer is on your paper, cross it out.
* The first to cross out all six of their numbers wins.

**Bean race**

You need two dice and a pile of dried beans.

* Take turns to roll the two dice.
* Multiply the two numbers and call out the answer.
* If you are right, you win a bean.
* The first to get 10 beans wins.

**Fractions**

Use 12 buttons, or paper clips or dried beans or…

* Ask your child to find **half** of the 12 things.
* Now find one **quarter** of the same group.



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**Weight**

**Up and down the scales**

* Guess with your child the weights of people in your home.
* Then weigh them (if they agree!). Help your child to read the scales.
* Record each weight, then write all the weights in order.

Repeat after two weeks. What, if any, is the difference in the weights?

**Cupboard maths**

Ask your child to look at the weights printed   
on jars, tins and packets in the food cupboard, e.g.

tinned tuna 185g

tinned tomatoes 400g

jam 454g

Choose six items. Ask your child to put them in order. Is the largest item the heaviest?

**Angles**

**Looking around**

Choose a room at home.

Challenge your child to spot

20 right angles in it.

**Shape**

**Guess my shape**

* Think of a 2-D shape (triangle, circle, rectangle, square, pentagon or hexagon). Ask your child to ask questions to try and guess what it is.
* You can only answer *Yes* or *No*. For example, your child could ask: *Does it have 3 sides?* or: *Are its sides straight?*
* See if he can guess your shape using fewer than five questions.

Now ask them to choose a shape so you can ask questions