

Parent Workshop Handout - Activities that support mental maths

Place Value

Activity 1 - Click, Clap, Stamp

Resources - none needed!

This quick game can be played anywhere, and assists understanding of place value to 3 digits. In this game:

- Click = 100
- Clap = 10
- Stamp = 1

Make a number using a combination of clicks, claps and stamps. Silently, the children should keep count and then say the number made. To make it harder, try adding a different sound to represent 1000!

Activity 2 - Make the biggest number

Resources needed - 1-6 dice/ 1-9 dice/ pack of cards

In this game, the children are challenged to make the largest number - this can be as many digits long as you like! This is a 2 player game. They take turns to roll the dice, deciding where the best place to put the number would be - remember, they want to make the largest number possible! So if they roll a 6, and they are trying to make a 4-digit number, the best place would be in the 'thousands' column. However, if they roll a 5, they have an interesting decision to make!

Variations - 'Make the smallest number'... as it sounds!

'Mean version' - After rolling, each player can either place the number on their side, or their partner's. So if you roll a 1, you can put it in your partner's thousands column and ruin their game!

Counting

Activity 3 - Class Counting

Resources - none needed!

Counting is an important skill in maths. This can mean counting backwards or forwards in 1s, or multiples such as 2s, 5s or 10s. It can also mean counting in fractions, decimals or special numbers such as squares. With a partner, try counting up or down in a specified amount. Try including an 'unlucky number'. If, when counting, you include that number, you are out!

Activity 4 - Switch

Another counting game! This time, pick 2 multiples to count in - e.g. 10 and 20/ 25 and 50/ 100 and 1000. Count up or down in the first multiple until you say 'Switch', and then count up or down in the other multiple. E.g. 20, 40, 60, 80 ...SWITCH... 90, 100, 110, ...SWITCH... 130, 150....

Calculation

Activity 5 - Call and Respond

Resources - None needed!

In this simple activity, the adult calls out a number, and the child responds with an 'answer' as quickly as possible. This can be used to practise many different skills such as pairs to 10, doubling, addition/ subtraction facts, multiplication and much more! It can be adapted to the level of your child.

E.g. Pairs to 10 - Adult: "4" → Child: "6"

Activity 6 - Target 100

Resources needed - 1-6 dice

In this game, two people compete to get as close to 100 as possible in 5 rolls of the dice. Children take it in turns to roll a dice and make a single digit number. After rolling, they must decide whether to multiply the number by 10, or keep it the same. They should think carefully, because they want to get as close to 100 as they can in just 5 rolls.

Variations: If you go past 100, you're bust!

Make the target 1000 - say the children can multiply by 10 or 100.

Activity 6 - Card game - Multiples

Resources - Deck of cards

Place a deck of cards on a table face down. Explain that picture cards are 10 and an ace is 1. Agree the multiple that the game will focus on - e.g. 3. Turn them over 1 card at a time - the child should add each card to the previous total and keep a 'running total'. If the total is a multiple of 3 (or whichever multiple you are focusing on), the child should call out 'Threes' (or whichever multiple you are focusing on!).

When the child calls out 'Threes' correctly, they need to say the current total, and the multiplication number sentence.

E.g. "The total is 12. $4 \times 3 = 12$ "

Activity 7 - Countdown

The numbers game on Countdown strikes fear into the hearts of many! Practise playing it in this interactive version:

<http://resources.woodlands-junior.kent.sch.uk/maths/countdown/>

Make it easier by not setting the timer, or allowing the children to use each number more than once.

Activity 8 - Hit the Target

Resources - Dice, paper and pencil

Set out an addition calculation in the formal written method - see below! Roll a dice to make a target number with the right amount of digits. After this, roll the dice a single time, and decide where to place the digit to get an answer as close as possible to the target number.

$$\begin{array}{r} + \quad _ _ _ _ _ _ \\ _ _ _ _ _ _ \\ \hline \\ \hline \end{array} \quad \text{Target number - 652,501}$$

Activity 9 - The answer is '...', what is the question?

Resources - paper and pencil

A simple activity that inspires creative thinking. Start with a number, a decimal, a fraction, a percentage, a shape - anything you like! Whatever you choose is the answer - they have to think of the question. Encourage the children to think outside the box - the question could be a calculation or even a worded problem.

Recommended websites:

<http://resources.woodlands-junior.kent.sch.uk/maths/countdown/>

<https://www.sumdog.com/>

<http://nrich.maths.org/frontpage>

<https://www.mathsisfun.com/>

<https://www.khanacademy.org/math>

<http://www.bbc.co.uk/bitesize/ks2/maths/>