Ukufunda

Let's get involved in our children's education

DOING MATHS MENTALLY: MENTAL CALCULATION STRATEGIES

1ST STRATEGY: NEAR DOUBLES

This strategy relies on your child knowing their doubles facts up to 100. It involves seeing that 7 + 8 is the same as 7 + 7 +1 (double 7 plus 1 more). If your child doesn't know their doubling facts, to build their confidence, use a pack of cards. As you flip each card over, your child must double the number shown. J=11, Q=12, K=13. For further practice, add 2 cards together and then double the answer.

HINT

If your child can only solve these problems by using standard written algorithms, then encourage them to solve them in 2 different ways i.e. one way must be **different** to the algorithm and mental if possible. If you encourage your child to work mentally, they will find ways other than the algorithm, as algorithms are harder to do without pencil and paper!

1st group		2nd group	
6 + 6	is 12	15 + 15	is 30
6 + 7	Double 6 is 12, plus 1 more=13	15 + 16	Double 15 is 30, plus 1 more=31
6 + 8	Double 6 is 12, plus 2 more=14	17 + 15	Double 15 is 30, plus 2 more=32
3rd group		**4th group**	
50 + 50	is 100	100 + 100	is 200
49 + 49	Double 50 is 100, less 2=98	99 + 99	Double 100 is 200, less 2=198
49 + 51	**Now try this one**	99 + 98	**Now try this one**

DICE GAME TO PRACTICE NEAR DOUBLES

- Play with a friend
- Throw a single dice, then double it and add 1.
- For example: throw a 6. Double 6 is 12 then add 1 = 13.
- The winner is the person with the highest number.

VARIATIONS:
Subtract 1 from the number and then double it e.g. throw a 5.
Subtract 1 is 4, double 4 is 8
Make up your own variations

EXPLORING DOUBLES

- Choose a number and add it to itself. Write the sum.
  For example: choose 5 **5+5=10**
- Now make the 1st number 1 more and the second number 1 less. What number did you get?
  Write the sum. **6+4=10**
- Try this with some other numbers and see what happens.
- What would happen if you made the 1st number 2 more and the 2nd one 2 less?
- *What is the pattern?*
- *Can you explain what is happening?*

MAKE IT COUNT

This week we introduce 2 strategies for calculating mentally. The first is called **Near Doubles**. Research shows that children are able to easily recall answers for making doubles. We can capitalise on this and use it as a strategy. The 1st series of examples encourages us to use this type of strategy.

Our second mental strategy is called **Making Landmark Numbers**. Landmark numbers are numbers that are easy to use in mental calculations such as multiples of 5, 10, 100 and 1000. 25 and 50 can also be used. The 2nd series of examples shows how this strategy can be used.

I encourage you to try and use the strategies on this page in day-to-day calculations and see how they work. Until next time.

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2ND STRATEGY: MAKING LANDMARK NUMBERS

1st group
9 + 2 Landmark number is 10

9 + 2
1 + 1
9 + 1 = 10
10 + 1 = 11

Now try these 9 + 5 9 + 14

2nd group
19 + 3 Landmark number is 20

19 + 3
1 + 2
19 + 1 = 20
20 + 2 = 22

Now try these 19 + 15 19 + 27

3rd group
39 + 4 Landmark number is 40

39 + 4
1 + 3
39 + 1 = 40
40 + 3 = 43

Now try these 39 + 15 28 + 39

4th group
98 + 5 Landmark number is 100

98 + 5
2 + 3
98 + 2 = 100
100 + 3 = 103

Now try these 98 + 15 98 + 52

TARGET PRACTICE: Do these in your head if you can
Use the **Near Doubles** strategy

- Could you score 31 if you threw 2 darts at the board?
- Could you score 46 if you threw 3 darts?
- What other scores could you get if you threw 3 darts at the board?
- **ESTIMATE** the total of all the scores.
- Check using the **Near Doubles strategy.**

Now use the **Landmark Numbers strategy** with these numbers

- Could you score 152 if you threw 3 darts? Which numbers would you need to hit?
- **ESTIMATE** the total of all the scores. Check using the **Landmark Numbers** strategy.

WHICH STRATEGY?

Decide which strategy would work best for answering these problems. Both strategies may work for one problem, so decide which to use. Put a *circle* around those you can solve using the **Near Doubles** strategy. One has been done for you. Explain your thinking.

19 + 15	19 + 18	(6 + 7)	39 + 8	15 + 16	25 + 27
16 + 18	29 + 25	98 + 7	199 + 152	50 + 48	49 + 24