Number and Place Value Prior Assessment Question 3:

Q3: I know the value of each digit and can use the correct vocabulary.

NPV 1: read, write, order and compare numbers up to 10 000 000 and determine the value

Teacher Input Ideas:

Look at question 3 on the prior assessment task for place value. Discuss with the children the errors they made and establish where the children's gaps are. You may find that the most common error is in understanding the vocabulary.

Give the children digit cards to create different 7 digit numbers and encourage the children to say these aloud to their partner. Use what the children are saying aloud to help model the value of the digit. For example: 8756920 the number is eight million, seven hundred and fifty-six thousand, nine hundred and twenty. The digit in the hundreds place is 9. The value of this is nine hundred. When I read this aloud I have nine hundred.

Repeat for other numbers. Some children may need support when identifying the amount if there is a zero or a teen number. Discuss together 6717; the digit in the tens column is 1. The value of this is ten. We say seventeen, but we know that teen numbers are created with tens and ones.

Practice Activities

Purple Practice: Most suited for children that made errors in **all parts of Question 3 of the Place Value Prior Assessment task** and have little understanding in identifying the different values of digits.

This activity consists of two parts. Part one encourages the children to identify the digit in the place/ column asked, encouraging children to address gaps in assessment question 3c. The last question in this section is designed for the children to question the number and to show confidence when explaining their view, using place value vocabulary.

Part two encourages the children to explore the correct use of vocabulary to identify the value of a given digit in a number. Ensure that the children are using the correct vocabulary such as "The value of the digit is 60" (not 6 tens).

Green Practice: Most suited for children that **made errors in Question 3 a and b and** have difficulty using the correct vocabulary.

This task encourages the children to explore the correct use of vocabulary to identify the value of a given digit in a number. Ensure that the children are using the correct vocabulary such as "The value of the digit is 60" (not 6 tens).

Yellow Practice Most suited for children who demonstrate some **understanding** in **Question 3** and will benefit from creating their own amounts using their understanding of place value.

Practical: The blocks on the yellow task should be cut up. The child should select a card and create a 7 digit number ensuring that the criteria on the card is met. For example: I pick the card with eight hundred written on; the number I create is 7653842. Some of the cards are written in words and some using digits.

If children require a further challenge, the children could be given a calculator to explore how these criteria could be met when adding 2 amounts together. For example, to make the value of the digit in the thousands place nine thousand, this sum could be placed into the calculator: 2544894 + 5624 852= 8169746. This requires the children to think about their knowledge of number bonds/ patterns and place value when adding two amounts together.

Mastery Give the children time to absorb this problem and begin to explore independently. A simple 1 by 7 grid could be drawn onto a whiteboard so that children can move digits around easily or digit cards could be used. Some children may start exploring through trial and improvement or by working through the clues in order.

The children should scan through the clues and notice that some digits can only be placed in one position (for example the 6 must go into the tens place). This then may lead them to rule out six as a multiple of 3. Other prompts such as what digit will have to be in the ones column to make the number divisible by two, may help to rule out other possibilities. Questioning and encouraging the children to work through trial and improvement is key.

Further challenge: When child has found one correct 7-digit number, inform them that there are at least 4 ways. Can they find more? Encourage children to talk to each other about the decisions they are making.

Answers

Purple

1 a) 34658 b) 1293 c) 8273291 d) 9736

e) 8273209 f) 265320 g) 7392034 h) 4637200

i) 09038 zero

2 a) forty or 40 b) one hundred thousand or 100000 c) two thousand 2000

d) two million 2000000 e) nine hundred 900 eighty thousand 80000

Green

1) Seventy or 70 2) five thousand or 5000 3) nine hundred or 900

4) ten or 10 5) nine million or 9000000 6) sixty thousand 60000

7) two thousand 2000 8) ten thousand 10000

9) seven hundred thousand or 700000 10) zero or 0

11) two million or 2000000 12) eight hundred or 800

Mastery:

Some possibilities

8 9 2 3 7 6 4

4 9 2 3 7 6 8

2 3 8 9 7 6 4

4 3 8 9 7 6 2

BRICKWORK Mathematics

Purple Practice

Lo: I know the value of different digits in numbers.

1) Look at the numbers below and circle the correct digit.

a) 34658
The digit in the tens place

b) 1293
The digit in the ones place

c) 8273291
The digit in the hundreds of thousands place

d) 9736218
The digit in the millions place

e) 8273209
The digit in the tens place

f) 265320
The digit in the thousands place

g) 7392034
The digit in the tens of thousands places

h) 4637200
The digit in the hundreds place

i) 9038
The digit in the tens of thousands place

2) Write the value of each underlined digit.

a) 10<u>9</u>48

b) <u>1</u>26472

c) 1<u>2</u>739

d) <u>2</u>739238

e) 263<u>7</u>908

f) 14<u>8</u>5638

BRICKWORK Mathematics

Green Practice

Lo: I know the value of different digits in numbers.

Write the value of each underlined digit.

1) 908373

2) 25282

3) 283920

4) 736413

5) 9837362

6) 362521

7) 3522619

8) 9814536

9) 780906

10) 789070

11) 2000182

12) 6800826

BRICKWORK
Mathematics

Yellow Practice

Lo: I know the value of different digits in numbers

eight hundred	20	nine thousand
eight million	900000	nine hundred thousand
seventy thousand	1000000	four hundred
ten	five	6000

BRICKWORK Mathematics

Mastery: place value

Problem solving

Here are some digit blocks. Use the clues below to create a 7 digit number.

3	6	7	4	8	2	9

The millions must be an even number.

The value of the digit in the tens column must be worth sixty.

The hundreds of thousands must be a multiple of 3.

The whole number must be divisible by 2.

The value of the digit in the hundreds place must be an odd number.

The tens of thousands and the thousands digits must be two consecutive numbers.

Discuss your answer with a friend. Do you have the same answer? Can you prove that you are correct?