## Number and Place Value: Rounding 4-Digit Numbers to 1000


#### Abstract

Aim: Round any number to the nearest 10,100 or 1000.

DfE Ready-to-Progress Criteria: Reason about the location of any four-digit number in the linear number system, including identifying the previous and next multiple of 1,000 and 100 , and rounding to the nearest of each. (4NPV-3)

To round 4-digit numbers to the nearest 1000.


| Success Criteria: | Resources: |
| :--- | :--- |
| I can identify the multiples of 1000 that a |  |
| 4-digit number is between. | Lesson Pack |
| I can identify which digit to focus on in order |  |
| to round to 1000 . |  |
| I can identify which digits round up and |  |
| which digits round down. |  |$\quad$| Key/New Words: |  |
| :--- | :--- |
| Round, digit, place value, thousands, <br> hundreds, tens, ones, whole number. | Preparation: <br> Differentiated Rounding 4-Digit Numbers to <br> 1000 Activity Sheets - 1 per child <br> Diving into Mastery Activity Sheets - as <br> required |

## Preparation:

Differentiated Rounding 4-Digit Numbers to Diving into Mastery Activity Sheets - as required

Year 3 Conceptual Prerequisite: Reason about the location of any three-digit number in the linear number system, including identifying the previous and next multiple of 10 and 100 .

## Learning Sequence

Remember It: Using the corresponding slide on the Lesson Presentation, the children practise counting
forwards and backwards from any 4-digit number in steps of 100, crossing multiples of 1000. Can the children
explain which digit always changes when counting in steps of 100, and what happens to the digits in a number

when crossing a multiple of 1000? | Rounding on a Number Line: Use the corresponding slides on the Lesson Presentation to demonstrate how to |
| :--- |
| use a number line to round a 4-digit number to 1000 by identifying if it is closer to the previous or next multiple of |
| 1000. The third example demonstrates how a number with five hundreds rounds up to the next multiple of 1000. |

## Exploreit

Roundit: Children complete the Rounding to 1000 Differentiated Activity Sheet.
Revealt: Children complete the rounding questions on the Rounding Reveal the Picture Activity. Can they guess the picture before it is fully revealed?

Rememberit:
Children create rhyme to remember how to round a given number to the nearest 1000 . They could use this fabulous Rounding to 1000 Poem Number Line Banner as inspiration!
Learnit: Children will find this visually exciting Knowledge Organiser a useful tool to support their understanding of place value.

## $\square$ Maths

## Number and Place Value

# Rownding trodigits Numbers to 1000 



## Aim

- To round 4-digit numbers to the nearest 1000.


## Success Criteria

- I can identify the multiples of 1000 that a 4-digit number is between.
- I can identify which digit to focus on in order to round to 1000.
- I can identify which digits round up and which digits round down.


## Remember It

Let's count forwards or backwards in steps of 100 from a 4-digit number.
Count the next 5 numbers in each sequence.

$$
\begin{aligned}
& 1600,1700 \ldots \\
& 2497,2397 \ldots \\
& 8702,8802 \ldots \\
& 5102,5002 \ldots
\end{aligned}
$$

Which digit will always change when you count in hundreds?

Which digits will change when you cross a multiple of 1000 ?


## Rounding on a Number Line

When we round a number, we make it simpler but keep its value close to what it was. For example, we might round a number to the nearest 10, 100 or 1000.


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## Rounding on a Number Line Practice

Let's practise rounding to the nearest 1000 on a number line.


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## Place Value Rounding

We can round numbers without using a number line.
We do this by using what we know about place value.


## Place Value Rounding



## Place Value Rounding



## Place Value Rounding



## Rounding Races

Compete against another person to complete the lap around the track by answering each question correctly. Who will win the race?



## Photo Finish

The five numbers before a multiple of 1000, and the four numbers after, round to the same number to the nearest 100 and 1000 .


19951996199719981999200020012002200320042005

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Aim: To round 4-digit numbers to the nearest 1000.


## Next Steps

| T | Teacher | I | Independent |
| :--- | :--- | :--- | :--- |
| PPA | Planning, Preparation and Assessment | AL | Adult Led |
| S | Supply | GP | Guided Practice |



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## Rounding 4-Digit Numbers to the Nearest 1000

To round 4-digit numbers to the nearest 1000.

Use the numberline to help you round each number in the picture to the nearest 1000 to find out the colour of each section.

Numbers that round to 1000: white Numbers that round to 2000: blue Numbers that round to 3000: red Numbers that round to 4000: skin tone Numbers that round to 5000: green

Numbers that round to 6000: brown
Numbers that round to 7000: grey
Numbers that round to 8000: yellow
Numbers that round to 9000: purple
Numbers that round to 10 000: orange


## Rounding 4-Digit Numbers to the Nearest 1000

To round 4-digit numbers to the nearest 1000.

Beginning at the start line, round each number on the racetrack to the nearest 1000.

$\qquad$ rounded to the nearest 1000 is $\qquad$

| rounded to the nearest 1000 is |
| :---: |
| rounded to the nearest 1000 is |
| rounded to the nearest 1000 is |
| rounded to the nearest 1000 is |
| rounded to the nearest 1000 is |
| rounded to the nearest 1000 is |
| rounded to the nearest 1000 is |

## Rounding 4-Digit Numbers to the Nearest 1000

To round 4-digit numbers to the nearest 1000.

Start at the start line. For each number on the racetrack, give a number that rounds down to the multiple of 1000 and a number that rounds up to the multiple of 1000 . Challenge yourself by using different tens, hundreds and ones digits each time.


| Number that <br> rounds up to <br> this multiple | Multiple of <br> 1000 | Number that <br> rounds down to <br> this multiple |
| :--- | :---: | :---: |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |


| Number that <br> rounds up to <br> this multiple | Multiple of <br> 1000 | Number that <br> rounds down to <br> this multiple |
| :--- | :---: | :---: |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |

## Rounding 4-Digit Numbers to the Nearest 1000 Answers

5387 rounded to the nearest 1000 is 5000.
8263 rounded to the nearest 1000 is 8000 . 6534 rounded to the nearest 1000 is 7000 . 9327 rounded to the nearest 1000 is 9000 . 5585 rounded to the nearest 1000 is 6000 . 8472 rounded to the nearest 1000 is 8000 . 4371 rounded to the nearest 1000 is 4000 . 8593 rounded to the nearest 1000 is 9000 . 3382 rounded to the nearest 1000 is 3000.

3958 rounded to the nearest 1000 is 4000 . 4598 rounded to the nearest 1000 is 5000 . 7484 rounded to the nearest 1000 is 7000 . 2485 rounded to the nearest 1000 is 2000. 5925 rounded to the nearest 1000 is 6000 .

| Number that <br> rounds up to <br> this multiple | Multiple of <br> 1000 | Number that <br> rounds down to <br> this multiple |
| :---: | :---: | :---: |
| any number <br> $500-1000$ | 1000 | any number <br> $1000-1499$ |
| any number <br> $1500-2000$ | 2000 | any number <br> $2000-3499$ |
| any number <br> $2500-3000$ | 3000 | any number <br> $3000-3499$ |
| any number <br> $3500-4000$ | 4000 | any number <br> $4000-4499$ |
| any number <br> $4500-5000$ | 5000 | any number <br> $5000-5499$ |


| Number that <br> rounds up to <br> this multiple | Multiple of <br> 1000 | Number that <br> rounds down to <br> this multiple |
| :---: | :---: | :---: |
| any number <br> $5500-6000$ | 6000 | any number <br> $6000-6499$ |
| any number <br> $6500-7000$ | 7000 | any number <br> $7000-7499$ |
| any number <br> $7500-8000$ | 8000 | any number <br> $8000-9499$ |
| any number <br> $8500-9000$ | 9000 | any number <br> $9000-9499$ |
| any number <br> $9500-10000$ | 10000 | any number <br> $10000-10499$ |

1) $1000=1255,1419,1181$
$2000=1705,1828,1563$
2) 3471 round to 3000 .

1539 rounds to 2000.

1) I disagree with Mrs Conway because she hasn't rounded correctly. She has rounded up when she should have rounded down. The hundreds place digit is a zero which means you round down and so the thousands digit doesn't change.

I agree with Mr Macfarlane because he has rounded correctly. 2064 is closer to 2000 than 3000 on the number line.
2) Jack's throw rounds to 3000 metres.

Brenda's throw rounds to 4000 metres.

1) Red team $=\mathbf{4 7 1 5}$

Green team = 7012
Yellow team = 1909
Blue team = 8046

1) Use the number line to sort the sports balls into whether they are closest to the previous multiple of 1000 or the next multiple of 1000.


| Previous multiple of 100 | Next multiple of 100 |
| :--- | :--- |
| Balls: | Balls: |

2) Round the 4-digit numbers represented on the sports balls to the nearest 1000 .

$\square$

$\square$
3) The pupils have been busy raising money for The Twinkl Academy Sports Day. So far, they have raised £2064. Mrs Conway and Mr Macfarlane are discussing where to place the arrow on the totalizer if they round the amount to the nearest thousand. Who do you agree with and who do you disagree with? Explain your answer.

4) Mrs Johnston is recording each of the children's javelin throws on the chart. Can you explain which ones are incorrectly placed?

| Jack $=\mathbf{3 0 4 5}$ | Maeve $=\mathbf{9 9 4}$ | Patrice $=\mathbf{3 9 9 9}$ |
| :---: | :---: | :---: |
| Brenda $=\mathbf{4 4 7 0}$ | Bruno $=\mathbf{1 5 5 0}$ | Dominique $=\mathbf{2 0 0 1}$ |


| Throw rounds to <br> 1000 metres | Maeve |
| :--- | :--- |
| Throw rounds to <br> 2000 metres | Bruno <br> Dominique |
| Throw rounds to <br> 3000 metres | Throw rounds to <br> 4000 metres |
| Throw rounds to <br> 5000 metres | Brenda |



1) The rain has washed away the sports day scoreboard. Every team's score was a 4-digit number. Use the clues to discover the number of points each team has scored.


## Red Team Score:

$\qquad$

- rounds up to 5000 when rounded to the nearest thousand
- has 7 hundreds
- is a multiple of 5
- digits add up to 17


## Yellow Team Score:

$\qquad$

- rounds up to 2000 when rounded to the nearest thousand
- has 0 tens
- digits add up to 19
- is an odd number


## Green Team Score:

$\qquad$

- rounds down to 7000 when rounded to the nearest thousand
- has 0 hundreds
- digits add up to 10
- is an even number but not a multiple of 5


## Blue Team Score:

$\qquad$

- rounds down to 8000 when rounded to the nearest thousand
- has 4 tens
- has 0 hundreds
- digits add up to 18

2) The teacher team also compete. Choose how many points they score. Write rounding and place value clues for $a$ friend to see if they can solve your clues.

Clue 1: $\qquad$

Clue 2: $\qquad$

Clue 3: $\qquad$

Clue 4: $\qquad$


1) Use the number line to sort the sports balls into whether they are closest to the previous multiple of 1000 or the next multiple of 1000 .


| Previous multiple of 100 | Next multiple of 100 |
| :---: | :---: |
|  |  |

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|  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1000 | 1100 | 1200 | 1300 | 1400 | 1500 | 1600 | 1700 | 1800 | 1900 |
| 2000 |  |  |  |  |  |  |  |  |  |


| Previous multiple of 100 | Next multiple of 100 |
| :---: | :---: |
|  | 200 |

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| :--- | :--- |
| Throw rounds to <br> 2000 metres | Bruno <br> Dominique |
| Throw rounds to <br> 3000 metres | Back <br> Throw rounds to <br> 4000 metres <br> Throw rounds to <br> 5000 metres |

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