|  | Monday | Tuesday | Wednesday | Thursday | Friday |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Area of Learning | LC: Can you Subtract two 4-digit numbers - one exchange ? | LC:Can you Subtract two 4-digit numbers with more than one exchange? | LC: Can you choose a more efficient subtraction method? | LC: Can you estimate answers ? | LC: Can you use checking strategies? |
| Activity | Starter: <br> Times Table Rockstars <br> Main: <br> Go to the following website: https://whiterosemaths.com/ <br> Find and watch Subtract two 4-digit numbers one exchange video. Pause if you need to take notes or replay sections to help with understanding. Independent Task: <br> Children to complete worksheet found in resources. | Starter: <br> Times Table Rockstars <br> Main: <br> Go to the following website: https://whiterosemaths.com/ <br> Find and watch Subtract two 4-digit numbers (more than one exchange) video. Pause if you need to take notes or replay sections to help with understanding. <br> Independent Task: Children to complete worksheet found in resources. | Starter: <br> Times Table Rockstars <br> Main: <br> Go to the following websit <br> https://whiterosemaths.com// <br> Find and watch Efficient subtraction video. Pause if you need to take notes or replay sections to help with understanding. <br> Independent Task: Children to complete worksheet found in resources. | Starter: <br> Times Table Rockstars <br> Main: <br> Go to the following website: <br> https://whiterosemaths.com/ <br> Find and watch Estimate answers video. Pause if you need to take notes or replay sections to help with understanding. <br> Independent Task: <br> Children to complete worksheet found in resources. | Times Table Rockstars <br> Main: <br> Go to the following website: https://whiterosemaths.com/ <br> Find and watch Checking strategies video. Pause if you need to take notes or replay sections to help with understanding. <br> Independent Task: Children to complete worksheet found in resources. |


|  | Answers can be found in <br> resources. | Answers can be found in <br> resources. | Answers can be found in <br> resources. | Answers can be found in <br> resources. |
| :--- | :--- | :--- | :--- | :--- |
| Answers can be found in <br> resources. |  |  |  |  |

## Where can I complete further work?

Twinkl - Subscription service used by schools is offering a free premium service for teachers, parents and children to use whilst schools are closed. Enter the code UKTWINKLHELPS for access to worksheets, powerpoints and interactive games to support all areas of learning.

Classroom Secrets - Free Maths, Reading and Grammar home learning packs and interactive resources for all ages.
White Rose Maths - Free Maths home learning resources for all ages. Watch the videos and try the questions.
Primary Stars - Free Maths home learning packs for Year I and 2.
BBC Bitesize Primary - Free learning resources available for KSI and KS2 across all subjects.
I See Maths - Free daily home maths lessons hosted by Gareth Metcalfe. Follow the link for videos, information and resources.
Top Marks - Free educational resources and games for English and Maths.Games - Free educational resources and games for English and Maths.

## Subtract two 4-digit numbers -

 one exchange
a) Use the place value chart to complete the calculation.

$$
5,435-3,215=\square
$$

b) Use the place value chart to complete the calculation.

$$
5,435-3,216=
$$

$\square$
c) Which calculation was easier? Talk about it with a partner.
d) What happens when you don't have enough counters in a column to take away?
$\qquad$
$\qquad$

2 Complete the sentences.
1 ten can be exchanged for $\square$ ones.

1 hundred can be exchanged for 10 $\qquad$ —.

1 thousand can be exchanged for $\square$
$\qquad$


3
Complete the calculations.
a)

c)

b)
Complete the calculations.
a)

c)

b)


## Complete the calculations.

a)

b)


Annie is calculating 3,467-2,148
Here are her workings.

|  |  | Th | H | T | 0 |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | 3 | 4 | 6 | 7 |  |
|  | - | 2 | 1 | 4 | 8 |  |
|  |  | 1 | 3 | 2 | 1 |  |
|  |  |  |  |  |  |  |

Do you agree with Annie? $\qquad$
Explain your answer.

7
A car costs $£ 8,716$
A motorbike costs $£ 2,341$ less than the car. How much does the motorbike cost?

8 Jack is thinking of two 4-digit numbers.


What is the sum of the two numbers?

## Subtract two 4-digit numbers - more than one exchange

Kim has made a number using base 10

a) Subtract 8 from Kim's number.

b) Explain the method you used.
$\qquad$
c) Subtract 20 from Kim's number.

d) Subtract 900 from Kim's number. $\square$
e) Complete the subtractions.

$$
1,702-28=\square
$$

$\square$
(2) Use the place value chart to complete the subtractions.

| H | T | O |
| :---: | :---: | :---: |
| 100 | 100 | 10 |
| 100 | 100 | 10 |
| 100 |  | 10 |

a) $564-354=$ $\square$
c) $564-365=$ $\square$
b) $564-355=$ $\square$
Look at your calculations in parts a), b) and c).
What is the same? What is different?
(3) Use the place value chart to complete the subtractions.

| Th | H | T | 0 |
| :---: | :---: | :---: | :---: |
| 1,000 | 10000 | 100 | 100 |
| 1,000 | 1000 | 10 | 1 |
| 1000 |  |  | 1 |

a) $5,435-2,036=$ $\square$
b) $5,436-2,036=$ $\square$
c) $5,437-2,036=\square$

Look at your calculations in parts a), b) and c).
What is the same? What is different?
(4) Complete the calculations.
a)

c)

b)

d)


A jug contains $1,500 \mathrm{ml}$ of juice.


The juice is poured into 2 glasses. Each glass holds 258 ml of juice. How much juice is left in the jug?

6) Work out the missing digits.
a)

b)


7 Arrange all the digit cards to make a possible subtraction for each description.

a) There are two exchanges.

The answer is
less than 2,000

b) There are two exchanges.

The answer is
greater than 4,000


## Efficient subtraction

a) Use the column method to work out 704-696

b) Count on the number line to work out 704-696

c) Which method do you prefer? $\qquad$
Why?
$\qquad$
$\qquad$
2) Complete the subtractions by counting on.
a) $902-897=$ $\square$
c) $2,027-1,999=$ $\square$
b) $1,902-1,894=\square$
c) Amir's method


Use Amir's method to work out 6,000-2,145

d) Whose method do you prefer, Rosie's or Amir's?

Use the column method to work out the subtractions.
a) $500-341$

c) $£ 3,000-£ 2,782$

b) 1,000-729
d) $10,000 \mathrm{~mm}-7,302 \mathrm{~mm}$


A theme park has 3,002 light bulbs.
1,785 of the light bulbs are blue.
How many bulbs are not blue?
Use a method where you subtract 3 from each number.
$\square$

6 Eva is working out 7,385-1,999

a) Explain why Eva's method works.
b) Explain a different method that Eva could have used.

The method should involve changing each number before subtracting
c) Work out the subtractions mentally.
$4,512-2,999=$ $\square$
$3,704-2,998=$ $\square$
$\square$

$$
5,147-997=
$$

## Estimate answers

Filip is working out $607+395$He rounds his numbers to the nearest hundred to estimate the answer.
a) Complete the sentences.

607 rounded to the nearest hundred is $\square$
395 rounded to the nearest hundred is $\square$
Filip's estimate for the answer is

b) Use column addition to work out the actual answer.

|  |  | Th | $\mathbf{H}$ | $\mathbf{T}$ | $\mathbf{O}$ |  |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- |
|  |  |  | 6 | 0 | 7 |  |
|  | + |  | 3 | 9 | 5 |  |
|  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |

The actual answer is $\square$
(2) Alex is working out 7,958-6,103

Alex rounds her numbers to the nearest thousand to estimate the answer.
a) Complete the sentences.

7,958 rounded to the nearest thousand is $\square$
6,103 rounded to the nearest thousand is $\square$
Alex's estimate is
$\square$
b) Use column subtraction to work out the actual answer

|  |  | Th | H | T | O |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | 7 | 9 | 5 | 8 |  |
|  | - | 6 | 1 | 0 | 3 |  |
|  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |

The actual answer is


3 Mr Howell writes a subtraction on the board.


Write a better estimate.
$\qquad$
$\qquad$
a) Tom is estimating an addition calculation.

His estimate is $3,000+1,000=4,000$
Write three possible additions Tom could be estimating.

b) Dani is estimating a subtraction calculation.

Her estimate is $£ 600-£ 100=£ 500$
Write three possible subtractions Dani could be estimating.

5) Complete the table. Show your workings.

| Question | Estimated answer | Accurate answer |
| :---: | :---: | :---: |
| $3,970 \mathrm{~km}-1,850 \mathrm{~km}$ |  |  |
| $7,076-852$ |  |  |
| $7,076-652$ |  |  |
| $1,994 \mathrm{ml}+1,994 \mathrm{ml}$ |  |  |

(6) Whitney and Dexter are estimating the answer to $2,706-1,394$

Whitney's estimate is $3,000-1,000=2,000$
Dexter's estimate is $2,700-1,400=1,300$
Whose estimate is more accurate?
Why?
$\qquad$
$\qquad$
(7)

A forest has 2,638 trees.


1,172 more trees are planted.
a) Use rounding to estimate the number of trees in the forest now.

b) Work out the actual number of trees in the forest.

c) How accurate was your estimate?

## Checking strategies

(1)

Circle the subtractions that can be used to check the addition $271+516=787$
787-271
516-271
271-787
787-516
(2) Circle the additions that can be used to check the subtraction $2,364-1,202=1,162$
$2,364+1,202 \quad 1,162+1,202 \quad 2,364+1,162 \quad 1,202+1,162$
(3) Use an inverse operation to check these calculations.
a)


b)

c)

(4)

Complete the fact family for the bar model.

(5)

Teddy is working out 5,671 +325


Teddy checks his calculation using the same addition. Is this a good idea? What mistake has Teddy made?

6
Match the inverse calculations.


$$
2,483-623=1,860
$$

$1,860+1,240=3,100$

$$
2,483+617=3,100
$$

b) $1,372+450=$ $\qquad$

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
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c) $6,572-2,320=$ $\square$

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |

$$
2,483-617=1,866
$$

$$
1,863-1,240=623
$$

Complete the calculations.
Use inverse operations to check your answers.
a) $372+405=$ $\square$

$$
617+1,866=2,483
$$

```
3,100-2,483=617
```

$$
3,100-1,860=1,240
$$

$$
1,860+623=2,483
$$

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |
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 (continued)

| Question | Answer |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | a) |  | Th | H | T | O |  |
|  |  |  | 7 | 1 | 9 | 4 |  |
|  |  | - | 1 | 2 | 3 | 6 |  |
|  |  |  | 5 | 9 | 5 | 8 |  |
|  |  |  |  |  |  |  |  |
|  | b) |  | Th | H | T | 0 |  |
| 6 |  |  | 4 | 0 | 8 | 3 |  |
|  |  | - |  | 2 | 3 | 8 |  |
|  |  |  | 3 | 8 | 4 | 5 |  |
|  |  |  |  |  |  |  |  |
| 7 | multiple possible answers, e.g.: <br> a) $2,353-1,064$ <br> b) $7,640-2,351$ <br> c) 7,420-6,531 |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |


| Question | Answer |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
| 1 | a) <br> b) <br> c) The method in part b) is easier because the column subtraction involves lots of exchanges. |  |  |  |
| 2 | a) 5 <br> b) 8 <br> c) 28 |  |  |  |
| 3 | a) <br> We have to make lots of exchanges in both calculations. <br> b) $\begin{aligned} & 5,999-2,145=3,854 \\ & 3,854+1=3,855 \\ & \text { so } 6,000-2,145=3,855 \end{aligned}$ <br> c) $5,999-2,144=3,855$ so 6,000-2,145=3,855 <br> d) Children need to explain why they prefer one particular method. |  |  |  |
| 4 | Children can choose the method they prefer. <br> a) 159 <br> b) 271 <br> c) $£ 218$ <br> d) $2,698 \mathrm{~mm}$ |  |  |  |
| 5 | 1,217 |  |  |  |
| 6 | a) Eva is subtracting 1 less than 2,000 so she subtracts 2,000 than adds 1 back on. <br> b) She could add 1 to each number, so the difference does not change, and calculate 7,386 - 2,000 <br> c) $\begin{aligned} & 4,512-2,999=1,513 \\ & 3,704-2,998=706 \\ & 5,147-997=4,150 \end{aligned}$ |  |  |  |



| Question | Answer |
| :---: | :---: |
| 1 | a) 607 rounded to the nearest hundred is 600 395 rounded to the nearest hundred is 400 Filip's estimate for the answer is $600+400=1,000$ <br> b) <br> The actual answer is 1,002 |
| 2 | a) 7,958 rounded to the nearest thousand is 8,000 6,103 rounded to the nearest thousand is 6,000 Alex's estimate is $8,000-6,000=2,000$ <br> b) <br> The actual answer is 1,855 |
| 3 | Dora has rounded 795 to 700 instead of 800 $800-500=300$ |
| 4 | a) multiple possible answers, e.g.: $\begin{aligned} & 2,999+999=3,998 \\ & 3,076+1,200=4,276 \\ & 2,621+1,334=3,955 \end{aligned}$ <br> b) multiple possible answers, e.g.: $\begin{aligned} & £ 601-£ 107=£ 494 \\ & £ 649-£ 130=£ 519 \\ & £ 550-£ 72=£ 478 \end{aligned}$ |

## Y4 - Autumn - Block 2 - Step 9 - Estimate answers Answers (continued)

| Question | Answer |  |  |
| :---: | :---: | :---: | :---: |
| 5 | Question | Estimated answer | Accurate answer |
|  | 3,970 km - 1,850 km | $\begin{gathered} 4,000-2,000 \\ =2,000 \mathrm{~km} \end{gathered}$ | 2,120 km |
|  | 7,076-852 | $\begin{gathered} 7,000-1,000 \\ =6,000 \end{gathered}$ | 6,224 |
|  | 7,076-652 | $\begin{gathered} 7,000-1,000 \\ =6,000 \end{gathered}$ | 6,424 |
|  | 1,994 ml + 1,994 ml | $\begin{gathered} 2,000+2,000 \\ =4,000 \mathrm{ml} \end{gathered}$ | 3,988 ml |
| 6 | Dexter <br> He has rounded to the nearest hundred, which is more accurate than rounding to the nearest thousand. |  |  |
| 7 | a) Answers will vary depending on whether rounding to nearest thousand or nearest hundred. $3,000+1,000=4,000 \text { or } 2,600+1,200=3,800$ <br> b) 3,810 <br> c) Comments will vary depending on whether children rounded to the nearest thousand or the nearest hundred. |  |  |



## Y4 - Autumn - Block 2 - Step 10 - Checking strategies Answers (continued)

| Question | Answer |
| :---: | :--- |
|  | a) 777 |
| 7 | b) 1,822 |
| c) 4,252 |  |
|  | d) 5,275 |

