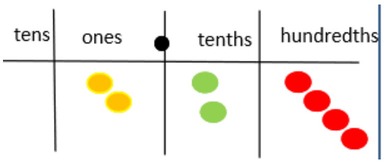
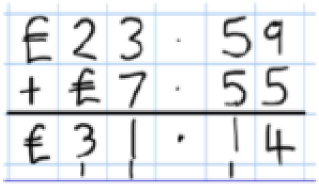
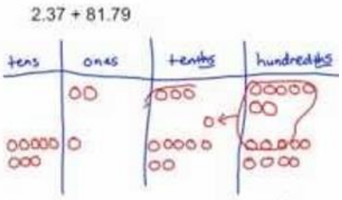
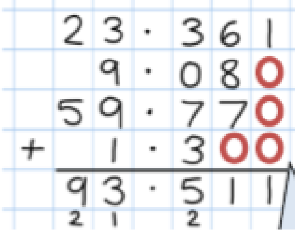
RAF Benson Community Primary School

ADDITION

Children in Year 6 need to be able to:

- solve addition multi-step problems in contexts, deciding which operations and methods to use and why
- solve problems involving addition, subtraction, multiplication and division

STRATEGIES	EXAMPLES
Add decimals with 2 decimal places, including money	 Children can use decimal place value counters to help with understanding.   It is important for children to recognise that the decimal point does not move to help setting out in columns.
Add several numbers of increasing complexity	 Include adding money, measures and decimals with different numbers of decimal points.

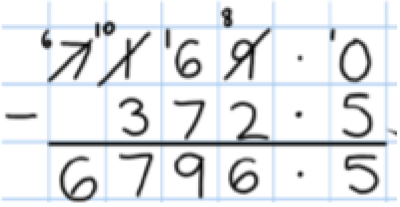
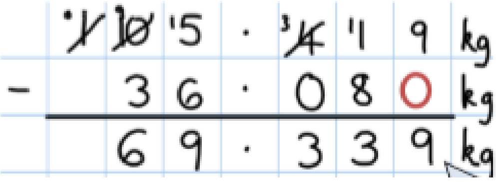
KEY LANGUAGE

Add, equals, greater/more than, parts, whole, partition, bonds, hundreds, tens, ones, tenths, hundredths, column addition, place value, exchange.

SUBTRACTION

Children in Year 6 need to be able to:

- solve subtraction multi-step problems in contexts, deciding which operations and methods to use and why
- solve problems involving addition, subtraction, multiplication and division
- use estimation to check answers to calculations and determine, in the context of a problem, an appropriate degree of accuracy

STRATEGIES	EXAMPLES
Subtract with at least 4 digits, including money and measures	 Ensure they have place value understanding of decimals to ensure numbers are in correct place value columns.
Subtract with increasingly large and more complex numbers and decimal values	 Remind children to consider the unit they are working in (eg kilograms) and to use zeros as place holders for numbers with different numbers of decimal places.

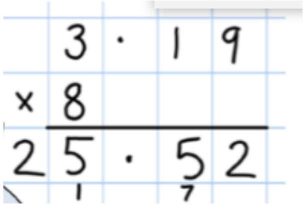
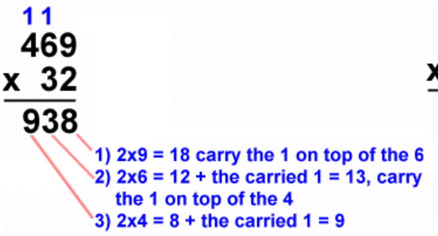
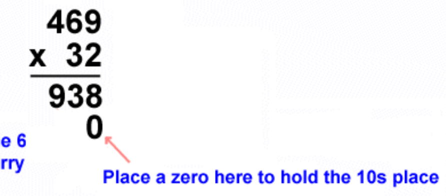
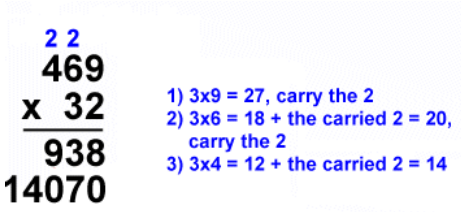
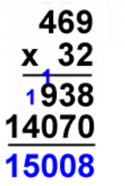
KEY LANGUAGE

Subtract, take-away, minus, equals, less than, parts, whole, hundreds, tens, ones, tenths, hundredths, column subtraction, place value, regroup, exchange, decimal.

MULTIPLICATION

Children in Year 6 need to be able to:

- multiply numbers up to 4 digits by a two-digit number using long multiplication
- solve problems involving addition, subtraction, multiplication and division
- use estimation to check answers to calculations and determine, in the context of a problem, an appropriate degree of accuracy

STRATEGIES	EXAMPLES
Multiplying decimals up to 2 decimal places by a single digit	 Remind children that the single digit belongs in the units column. Line up the decimal points in the question and the answer.
Long multiplication	 1) 2x9 = 18 carry the 1 on top of the 6 2) 2x6 = 12 + the carried 1 = 13, carry the 1 on top of the 4 3) 2x4 = 8 + the carried 1 = 9  Place a zero here to hold the 10s place  1) 3x9 = 27, carry the 2 2) 3x6 = 18 + the carried 2 = 20, carry the 2 3) 3x4 = 12 + the carried 2 = 14 

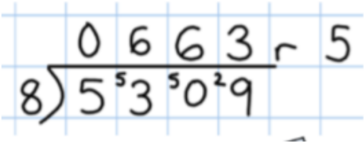
KEY LANGUAGE

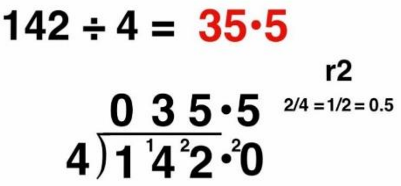
Multiply, times, groups of, multiple, equal, partition, inverse, grid, tenths, hundredths, digits, short/long multiplication, place holder.

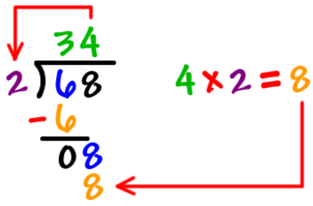
DIVISION

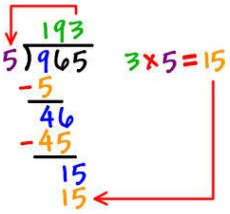
<u>Children in Year 6 need to be able to</u>:

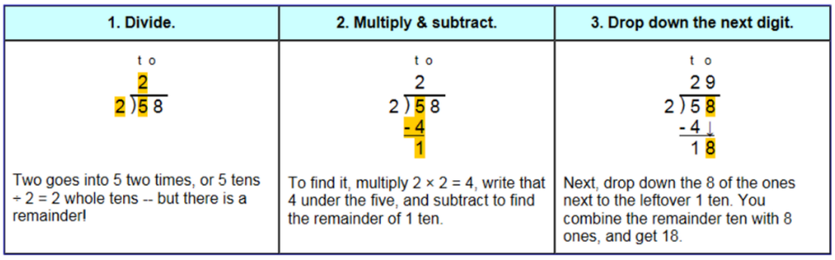
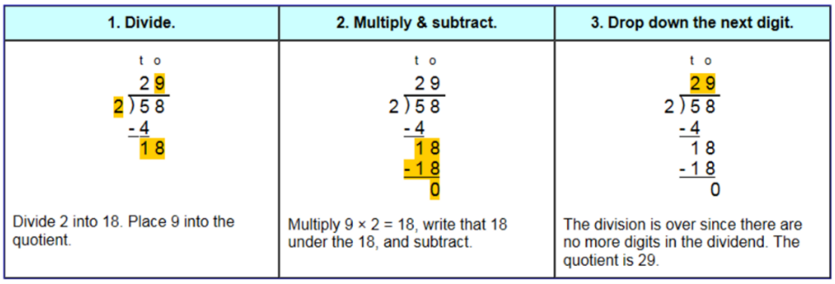
- divide numbers up to 4 digits by a two-digit whole number using long division, and interpret remainders as whole number remainders, fractions, or by rounding
- divide numbers up to 4 digits by a two-digit number using short division where appropriate, interpreting remainders according to the context

<table>
<tr><th>STRATEGIES</th><th>EXAMPLES</th></tr>
<tr><td>Short division</td><td>




Encourage them to count in multiples to divide efficiently.
Remind them that remainders get carried onto the next digit.
</td></tr>
<tr><td>Long division</td><td>





<table>
<tr><th>1. Divide.</th><th>2. Multiply & subtract.</th><th>3. Drop down the next digit.</th></tr>
<tr><td>t o
2
2) 5 8
Two goes into 5 two times, or 5 tens ÷ 2 = 2 whole tens -- but there is a remainder!</td><td>t o
2
2) 5 8
- 4
1
To find it, multiply 2 × 2 = 4, write that 4 under the five, and subtract to find the remainder of 1 ten.</td><td>t o
2 9
2) 5 8
- 4 ↓
1 8
Next, drop down the 8 of the ones next to the leftover 1 ten. You combine the remainder ten with 8 ones, and get 18.</td></tr>
</table>

<table>
<tr><th>1. Divide.</th><th>2. Multiply & subtract.</th><th>3. Drop down the next digit.</th></tr>
<tr><td>t o
2 9
2) 5 8
- 4
1 8
Divide 2 into 18. Place 9 into the quotient.</td><td>t o
2 9
2) 5 8
- 4
1 8
- 1 8
0
Multiply 9 × 2 = 18, write that 18 under the 18, and subtract.</td><td>t o
2 9
2) 5 8
- 4
1 8
- 1 8
0
The division is over since there are no more digits in the dividend. The quotient is 29.</td></tr>
</table>
</td></tr>
</table>

KEY LANGUAGE

Divide, equal, decimal, remainder, inverse, short/long division, multiply, subtract, bring down, fraction, round.

USEFUL WEBSITES

Times Tables:

www.multiplication.com/games/all-games

www.bbc.co.uk/teach/skillswise/maths

http://gamequarium.com/multiplication

All Maths:

https://www.mathplayground.com

https://login.mathletics.com

https://www.oxfordowl.co.uk/for-home/kids-activities/fun-maths-games-and-activities

https://www.topmarks.co.uk/maths-games