

How to help at home: Year 6

Maths

We would like the children to continue practising and developing their skills in using fractions. Below are a number of different strategies we have used, along with links to online games and other resources you can use to practise these skills.

Simplifying fractions

You can simplify a fraction if the numerator (top number) and denominator (bottom number) can both be divided by the same number.

Six twelfths can be simplified to one half, or 1 over 2 because both numbers are divisible by 6.
6 goes into 6 once and 6 goes into 12 twice.

In order to simplify a fraction into its simplest form, it is simply a case of dividing the numerator/ denominator by the highest common factor.

Converting from improper fractions to mixed numbers and then the other way

Converting between improper fractions and mixed numbers is an important skill. The following website gives a clear guide on how to do this.

[Mixed Numbers & Improper Fractions \(solutions, examples, videos\) \(onlinemathlearning.com\)](http://www.onlinemathlearning.com/mixed-numbers-and-improper-fractions.html)

Equivalence between fractions, decimals and percentages

Children should be fluent when converting between fractions, decimals and percentages.

See the website below to read further and for some activities for the children to have a go at.

[Order and compare fractions, decimals and percentages by converting them - Maths - Learning with BBC Bitesize - BBC Bitesize](http://www.bbc.com/bitesize/maths/learning-with-bbc-bitesize/order-and-compare-fractions-decimals-and-percentages-by-converting-them)

Finding a fraction or a percentage of a number

To find a fraction of a number, divide that number by the denominator and multiply the result by the numerator.

$$\begin{array}{l} \text{Step 2} \quad \left(\frac{2}{7}\right) \text{ of } 35 \\ 5 \times 2 = 10 \\ \text{Step 1} \\ 35 \div 7 = 5 \\ = 10 \end{array}$$

To find percentages, knowing key facts will really help with our understanding:

- To find 50%, half the number
- To find 25%, divide the number by 4 (half and half again)
- To find 10%, divide the number by 10
- To find 1%, divide the number by 100

Find 45% of 440

$$45\% = 25\% + 10\% + 10\%$$

By breaking up 45% as seen above we can calculate the smaller percentages and add them together

$$25\% \text{ of } 440 = 440 \div 4 = 110$$

$$10\% \text{ of } 440 = 440 \div 10 = 44$$

So,

$$45\% = 25\% + 10\% + 10\% = 110 + 44 + 44 = 198$$

Adding Fractions

$$\frac{1}{2} + \frac{1}{3} = ?$$

$$\frac{1}{2} \times \frac{3}{3} = \frac{3}{6} \quad \frac{1}{3} \times \frac{2}{2} = \frac{2}{6}$$

$$\frac{3}{6} + \frac{2}{6} = \frac{5}{6}$$

Subtracting Fractions

$$\begin{array}{r} \frac{1}{4} - \frac{1}{5} \\ = \frac{5}{20} - \frac{4}{20} \\ = \frac{5-4}{20} = \frac{1}{20} \end{array}$$

Multiplying Fractions

$$\frac{4}{5} \times \frac{3}{7} = \frac{4 \times 3}{5 \times 7} = \frac{12}{35}$$

Dividing Fractions

Unit Fraction by a Whole Number

How many $\frac{1}{4}$ I have $\div 3$ \rightarrow How many groups?

Solve with a Number Line

What fraction of the whole does each group receive?
 $\frac{1}{12}$ of the whole

Solve with a Model!

This is how many I have $\div 3$ \rightarrow Divide into 3 groups

What fraction of the whole does each group receive?
 $\frac{1}{12}$ of the whole

How many I have $\div 3 = \frac{1}{12}$ How many groups

LEARNING

Mental Fluency

Knowing their times table facts is essential for children, as these are needed to be successful in various areas of the maths curriculum, such as multiplication, division, fractions, and area.

Tips

Use the facts you know to work out the ones you don't. For example, if you know $4 \times$ then you are also able to work out $8 \times$.

Furthermore, it's essential children are able to use times tables they know in order to work out other unknown tables. For example, if you know the $6 \times$ table you are then able to work out the $60 \times$ table and the $0.6 \times$ table.

TT Rockstars

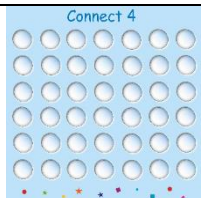
<https://play.ttrockstars.com>

All the children have logins and this offers a fun and engaging way for the children to develop the speed of their times tables.

The more fluent the children are then the easier it is for them to access other areas of the curriculum.

The Memory Game

Create a series of cards with multiplication sums and a separate card for their answers. All the cards are placed face down. Each player then takes it in turn to turn two cards over and must match up the times table with their answers. If a player successfully matches two cards, then they win the cards. The player with the most cards at the end wins.



This is a 2 player game. Each player takes it in turn to answer a multiplication question. If they get it right then they can insert a piece onto the board. The winner is the first person who gets 4 in a row. Numbers can be generated using dice.



This is a two-player game. The two players take turns to flip over two cards. The player who gets the highest total from multiplying the two numbers together wins the cards. The person with the most cards at the end of the game wins.

Counting

Try counting up and down the different times tables. Choose different starting points to allow the children to become more fluent and challenge the children counting in decimal numbers/fractions etc.

The Four operations

We are always talking to the children about using the most efficient method in order to solve different problems. As part of this, the children are taught written methods for the four operations. Below are examples of these.

Addition

Vertical layout, contracting the working to a compact efficient form:

$$\begin{array}{r} 368 \\ +493 \\ \hline 861 \\ \hline \end{array}$$

Note: The numbers 'carried' will be shown under the line.

Subtraction

$$\begin{array}{r} 563 \\ -241 \\ \hline 322 \end{array} \quad \text{and} \quad \begin{array}{r} 4513 \\ -278 \\ \hline 285 \end{array}$$

Note: We are not 'borrowing'. We are exchanging. Eg. I am exchanging one ten for ten ones.

Multiplication

Vertical format, compact working

$$\begin{array}{r} 58 \\ \times 27 \\ \hline 392 \\ 4 \\ \hline 1120 \\ 1 \\ \hline 1512 \\ \hline \end{array}$$

Division

Short division:

$$\begin{array}{r} 035 \\ 5 \overline{) 1725} \end{array}$$

Spelling

It is important that the children are practicing their spellings on www.spellingshed.com. The children know their logins and can practice all the different spelling rules they have learnt in school.

Spelling Shed

In year 6, all children need to be able to spell accurately and confidently to meet the end of year expectation. This must be demonstrated in their writing and in a formal test of 20 words and includes:

- High frequency words and homophones which they may frequently make mistakes in
- All of the words in the year 3/4 and year 5/6 word list (from the national curriculum)
- Make plausible attempts at more complex words by applying the rules they know.

Below are the words from the Y5/Y6 spelling list which the children should be able to spell:

| | | | | | |
|-------------|-------------|-------------|-------------|---------------|-------------|
| accommodate | communicate | equip | immediately | physical | sincerely |
| accompany | community | equipped | individual | prejudice | soldier |
| according | competition | equipment | interfere | privilege | stomach |
| achieve | conscience | especially | interrupt | profession | sufficient |
| aggressive | conscious | exaggerate | language | programme | suggest |
| amateur | controversy | excellent | leisure | pronunciation | symbol |
| ancient | convenience | existence | lightning | queue | system |
| apparent | correspond | explanation | marvellous | recognise | temperature |
| appreciate | criticise | familiar | mischievous | recommend | thorough |
| attached | curiosity | foreign | muscle | relevant | twelfth |
| available | definite | forty | necessary | restaurant | variety |
| average | desperate | frequently | neighbour | rhyme | vegetable |
| awkward | determined | government | nuisance | rhythm | vehicle |
| bargain | develop | guarantee | occupy | sacrifice | yacht |
| bruise | dictionary | harass | occur | secretary | |
| category | disastrous | hindrance | opportunity | shoulder | |
| cemetery | embarrass | identity | parliament | signature | |
| committee | environment | immediate | persuade | sincere | |

Some additional activities to support your child with their spellings

| | | | |
|--|---|--|--|
| <p>Backwards words Spell a word aloud, backwards. The child must visualise the letters and recognise patterns to figure out what the word is. You can easily create scoring systems to make this more competitive.</p> | <p>Have commonly misspelt words displayed around the house and randomly test your child on them. For example, which/witch; were/where; there/their/they're.</p> | <p>Find the definition of each word in your spelling list and use them in sentences. Explore synonyms and antonyms of each word. Create a competition: who can use the words the most during the week?</p> | <p>Ask your child what pattern/rule they are looking at this week. How many other words can they remember from their booklet page? Create your own list at home from</p> |
| <p>Create a graffiti board of this week's spelling list – use fancy pens!</p> | <p>Play classic games such as hangman and anagrams</p> | | |



Grammar

Children demonstrate their grammatical knowledge through the construction of their writing. Different genres and levels of formality in writing require different grammatical structures to be effective in meeting their purpose. In writing, all children's work must be correctly punctuated and aligned with the purpose of the task. Children are required to demonstrate their understanding of grammatical terminology and its application to writing through a grammar, punctuation, and spelling test paper, which they will sit as part of SATs week.

Suggested workbooks:

- Rising stars
- CGP

<https://www.teachwire.net/news/7-of-the-best-online-grammar-games-for-ks2>

A selection of excellent online games for addressing different areas of grammar

Always ensure the children take time to edit their writing; this could be notes, letters or even emails. Editing is an essential part of the writing process. In class we edit, looking for the following things:

- Vocabulary
- Spellings
- Handwriting
- Punctuation

Play the 5 word game.

Select 5 random words (a mix of nouns and verbs). The aim of the game is to create one sentence which uses all 5 words and is as random and crazy as possible. Of course, it must be grammatically correct and correctly punctuated.

Reading

We encourage all children to read independently and monitor what they are reading, as well as how frequently they are completing books. Quizzes help us assess their understanding of the books they have read. If your child is struggling to find a book they enjoy, please encourage them to speak to us. As Year 6 teachers, we have read hundreds of fantastic books and can make recommendations based on their interests and preferences.

All children read for 10-15 minutes in school each day and listen to the teacher read daily. We encourage all children to read independently for at least 20 minutes at home every day. It is important to establish a routine where this is consistent, such as reading before bed.

Reading is proven to improve confidence and mental well-being. Children who read are more understanding of others and have a more comprehensive understanding of the world. Additionally, improving reading has shown to have a positive impact on progress in other subjects, particularly writing and mathematics.

Children are explicitly tested on their reading ability in a 1-hour exam at the end of Year 6. This requires reading fluency and the skills needed to answer questions about the texts.

The best way to support your child's reading is to show enthusiasm for reading. Discuss with them what they are reading and ask questions about the book. Read with them and experience the story together. Make time for reading and ensure that books and reading are valued.

