Key Instant Recall Facts (KIRFs)

What's changed?

This year, we are changing the way that we set maths home learning. As a school, we recognise the importance of fluency and mental skills in mathematics and this new approach will support children at Studley St Mary's CofE Academy in becoming more secure in their recall of the key facts for their year group, enabling them to approach more complex maths with confidence and flexibility. Children will still be sent home with weekly homework and Times Table Rock Stars (TTRS).

What are KIRFs and why are they important?

KIRFs are the 'Key Instant Recall Facts' that children need to secure during their primary years. They include facts such as number bonds and times tables. They are particularly useful when calculating, adding, subtracting, multiplying and dividing but also underpin many other areas of mathematics. For example, in order to find equivalent fractions in year 6, children need to be able to rapidly recall their knowledge of common multiples (numbers in particular times tables). When children have quick access to a bank of facts, which incur little cost to working memory, they have more capacity to think about more complex problems that draw on these facts. We have noticed that without regular rehearsal, these facts are forgotten so it is essential they are practised regularly and embedded in children's long-term memory so they can be recalled quickly and accurately.

How will KIRF home learning work?

Every half term, your child will be set home learning which focuses on a particular set of KIRFs. This will be shared via Class Dojo but will also be available on our school website under the maths section. You will see that each KIRF home learning sheet explains what the focus is for the half term and gives examples of the key facts that need to be learnt, as well as key vocabulary and questions to ask your child and top tips for learning them. Learning KIRFs shouldn't be time-consuming. In fact, KIRFs can be practised anywhere: in the car, walking to school, at the dinner table. The most important thing is facilitating regular practice. Little and often will support your child in retaining these facts for the long term! Please send photos or even videos of the KIRF work that you have been working on via Class Dojo.

We thank you for supporting your child in developing as a confident mathematician. We strongly believe that with factual fluency, your child will become much more confident when working with number and be able to access the curriculum year-on-year with more confidence and enjoyment.

Key Instant Recall Facts (KIRFs)
Year 5: Autumn 2

Target: Recall the prime numbers within 100.

By the end of this half term, children in Year 5 should know the following facts and be able to recall them instantly:

2, 3, 5, 7, 11, 13, 17, 19, 23, 29, 31, 37, 41, 43, 47, 53, 59, 61, 67, 71, 73, 79, 83, 89, 97.

Prime numbers are numbers greater than one that cannot be divided by any number except themselves and one.

7 is a prime number because it can only be divided by 7 and 1.

70 is not a prime number because it can be divided by 70, 35, 14, 10, 7, 5, 2 and 1.

Key Questions

- What are the factors of…?
- Which of these numbers are prime/composite?
- How do you know?

Vocabulary

- Prime
- Composite
- Factors

Top Tips

The secret to success? Practise little and often! Can you learn these on your way to school? On a car journey? Or even at the breakfast table? You don't need to learn them all at once: start with those you are more confident with before tackling the rest. Why not practise whilst keeping active? You could throw and catch or kick a ball whilst learning them!

Play games!

- Create a board game or a treasure hunt related to prime numbers.
- Make some flashcards and ask a family member to test you- how quickly can you identify which are prime and which are composite?
- Make up a song about the prime numbers. Perhaps you could sing the prime numbers to the tune of 'Twinkle Twinkle Little Star'?
- Play 'Ping Pong' with a partner: Take it in turns to count up in prime numbers

Useful websites (games and information):

Prime Numbers Rap Song Typography (Math) – YouTube
What is a prime number? Definition and examples - BBC Bitesize
What is a prime number? | TheSchoolRun (For parents and carers)
Pick The Primes (transum.org)
Factor Trees (transum.org)
Number Ninja - Prime Numbers • ABCya!
Online Prime Composite Math Games for Kids (mathnook.com)