



All mathematicians share a sense of amazement over the infinite depth and the mysterious beauty and usefulness of mathematics - Martin Gardner (father of recreational mathematics)

Vision

At The Leys, our goal is for children to leave as confident, skilled and resilient mathematicians, who understand that maths is a fundamental part of everyday life and the world we live in.

Aim

In alignment with the 2014 national curriculum for mathematics, we aim to ensure that all children:

- Become **fluent** in the fundamentals of mathematics
- Are able to **reason** mathematically
- Can **solve problems** by applying their mathematics to a variety of problems

At The Leys, these attributes are embedded within all Maths lessons and developed consistently over time. We follow White Rose Maths to ensure that children develop sequentially mathematical skills, building a depth of understanding as they progress.

Our curriculum supports children with 'bridging the gap' between abstract mathematical concepts and concrete representations that they can manipulate and draw up, accessing concrete, pictorial and abstract mathematical learning alongside rich language.

Delivery

Scheme of Work

Year groups follow the relevant White Rose scheme of learning which is based on the national curriculum. Lessons may be personalised to address the individual needs and requirements for a class, but coverage is maintained.

A range of other resources are used to support learning including those provided by NRICH to enhance the experience.

Calculation policy

Concrete Pictorial Abstract (CPA)

We implement our approach through high quality teaching delivering appropriately challenging work for all individuals. To support us, we have a range of mathematical resources in classrooms including Numicon, base ten blocks and counters (concrete equipment). When children have grasped a concept using concrete equipment, images and diagrams are used (pictorial) prior to moving to abstract questions. Abstract maths relies on the children understanding a concept thoroughly and being able to use their knowledge and understanding to answer and solve maths without equipment or images.

Online Maths Tools

In order to advance individual children's maths skills in school and at home, we utilise Times Tables Rock Stars for multiplication practice, application and consolidation.

Whole school events

We arrange on a termly basis, curricular STEAM (Science, Technology, Engineering, Art & Mathematics) activities. These bring the whole school together to share and learn from each other.

Continuing Professional Development (CPD)

We continuously strive to better ourselves and frequently share ideas and things that have been particularly effective. We take part in local training opportunities (Herts for Learning) and have access to a wide range of high-quality training webinars from the National College.

Outcomes

Pupil Voice

Through discussion and feedback, children talk enthusiastically about their maths lessons and speak about how they love learning about maths. They can articulate the context in which maths is being taught and relate this to real life purposes.

Children show confidence and believe they can learn about a new maths area and apply the knowledge and skills they already have.

Evidence in knowledge & skills

Pupils know how and why maths is used in the outside world and in the workplace. They know about different ways that maths can be used to support their future potential.

Mathematical concepts or skills are mastered with children showing this in multiple ways, using the mathematical language to explain their ideas, and can independently apply the concept to new problems in unfamiliar situations.

Children demonstrate a quick recall of facts and procedures. This includes their recollection of the times tables.

Pupils also show a high level of pride in the presentation and understanding of the work. The development of the ability to recognise relationships and make connections in maths lessons.

Assessment

Through our teaching we continuously monitor pupils' progress against expected attainment for their age, making formative assessment notes where appropriate and using these to inform our teaching and the updating of our assessment grids. This feeds into discussions in termly Pupil Progress Meetings. The main purpose of all assessments is to always ensure that we are providing excellent provision for every child.

Subject overview

Maths overview 2021-22

<https://docs.google.com/document/d/10zU8tayC3bXskUr5TNd0VSimBtWtSReV26WJhJaVQfc/edit?usp=sharing>

Pupil voice

We learn something new every day - Isabella

We get loads of support from teacher and pupils around us - Lily

Whether it's number bonds to 10 in Year 1 or fractions in Year 6 it's always fun to learn - Regan

I really like maths as the difficulty level is perfect and it makes you very determined. Phoebe

If you want to go deeper then there are always questions for you to do - Oliver

Photos

To insert photos found in the following folder:

https://drive.google.com/drive/folders/1d-jIEmIGXE2ZMI5i96S_5YsadXRSZ4wJ?usp=sharing

Enrichment

- STEAM week (termly)
- Year 5 Maths Challenge (Herts for Learning)

Useful website / documents

1-Minute Maths app

Helps children build greater number confidence and fluency. It's all about targeted practice in engaging, one-minute chunks. Children can choose any topic they want to try. If they're struggling with a question, a 'Hint' button will give a helpful clue by showing the question in a different but familiar way. When the one minute's up, they'll see a feedback screen telling them how they've done.

<https://whiterosemaths.com/1-minute-maths>

Times Tables Rock Stars

Times tables are the absolute bedrock of maths learning; mastering them can have a direct impact on how well children get to grips with the more complex maths further up the curriculum, so it's important to learn them at an early age.

<https://ttrockstars.com/home>

NRICH

A free maths site which encourages children to think like mathematicians and generally develop curiosity about the world around them. There's a particular focus on problem solving and reasoning, key principles of the new national curriculum for KS1 and KS2.

<https://nrich.maths.org/>

BBC Bitesize

All topics on the Bitesize website are organised by year group and curriculum, so you'll be secure in the knowledge that your child will be working at the right level. Short videos make the learning enjoyable and accessible.

<https://www.bbc.co.uk/bitesize/primary>

Primary Games Arena

A free website that encourages children to play online maths games linked to their homework. The games on the site are broken down by both age (school year group) and by topic. This gives parents the ability to pair up the maths game with whatever topic their child is learning in school.

<https://primarygamesarena.com/Subjects/Maths>

Hit The Button

Perfect for helping children get their heads round the basics of maths in an engaging way. A range of interactive maths games, which work against the clock so great for developing children's mental maths skills.

<https://www.topmarks.co.uk/maths-games/hit-the-button>

Maths Zone

Absolutely jam-packed with fun ways to learn more about maths, this site is ideal for children that like task-based learning and are motivated by tech, as the games are fast paced and full of action.

<https://mathszone.co.uk/>