

# Ryders Hayes School

A Primary Learning Academy



## Maths Guidance

Ryders Hayes School  
Gilpin Crescent  
Pelsall  
Walsall  
WS3 4HX  
01922 683008  
[postbox@ryders-hayes.co.uk](mailto:postbox@ryders-hayes.co.uk)

Alison Jackaman

Maths Leader

**Mission: At Ryders Hayes School, children and staff will strive to:**

*"Do the right thing to be the best you can be" ...*

**Vision:** *To nurture and facilitate the growth of our pupils and their learning; equipping them with the skills and attributes to embrace the challenges of a rapidly changing world. To enjoy success for today and be prepared for tomorrow, by instilling the values of:*

**Character:** *qualities of the individual essential for being personally effective in a complex world including: grit, tenacity, perseverance, resilience, independence, reliability and honesty.*

**Citizenship:** *upholding British Values, thinking like global citizens, considering global issues based on deep understanding of diverse values with genuine interest in engaging with others to solve complex problems that impact human and environmental sustainability*

**Collaboration:** *the capacity to work interdependently and synergistically in teams with strong interpersonal and team-related skills including effective management of team dynamics, making substantive decisions together, and learning from and contributing to the learning of others.*

**Communication:** *entailing mastery of three fluencies: digital, writing and speaking tailored for a range of audiences, through early, high-quality back and forth interaction.*

**Creativity:** *having an 'entrepreneurial eye' for economic and social opportunities, asking the right questions to generate novel ideas and explore possibilities, demonstrating leadership to pursue those ideas into practice.*

**Critical Thinking:** *critically evaluating information and arguments, reflecting upon them, seeing patterns and connections, constructing meaningful knowledge and applying it in the real world.*

Ryders Hayes is a Gold Rights Respecting School and as such strongly believes in and promotes the United Nations Convention on the Rights of the Child. All our policies exemplify these rights and our practise aims to ensure that the following rights are adhered to.

Article 3: The best interests of the child must be a top priority in all things that affect children. Article 12: Every child has the right to have a say in all matters affecting them, and to have their views taken seriously.

Article 13: Every child must be free to say what they think and seek and receive all kinds of information, as long as it is within the law.

Article 14: Every child has the right to think and believe what they want and to practice their religion, as long as they are not stopping other people from enjoying their rights. Governments must respect the rights of parents to give their children information about this right.

Article 19: Governments must do all they can to ensure that children are protected from all forms of violence, abuse, neglect and bad treatment by their parents or anyone else who looks after them.

Article 28: Every child has the right to an education. Primary education must be free. Secondary education must be available for every child. Discipline in schools must respect children's dignity. Richer countries must help poorer countries achieve this.

Article 29: Education must develop every child's personality, talents and abilities to the full. It must encourage the child's respect for human rights, as well as respect for their parents, their own and other cultures, and their environment.

Article 30: Every child has the right to learn and use the language, customs and religion of their family, regardless of whether these are shared by the majority of the people in the country where they live.

Article 36: Governments must protect children from all other forms of bad treatment.

## INTRODUCTION

1.1 The School seeks to promote behaviour based on mutual respect between all members of the School community. Ryders Hayes aims to:

*...nurture and facilitate the growth of our pupils and their learning; equipping them with the skills and attributes to embrace the challenges of a rapidly changing world. To enjoy success for today and be prepared for tomorrow, by instilling the values of: enquiry; adaptability; resilience; morality; effective communication; thoughtfulness; collaboration; respect; international /open mindedness and a growth mind-set.*

1.2 This guidance outlines the learning, teaching, organisation and management of Maths at Ryders Hayes School.

1.3 The implementation of this guidance is the responsibility of all teaching staff. The responsibility for monitoring and review rests with the Maths Leader- Jack Phillips.

1.4 The curriculum is designed to build a schema by developing knowledge and vocabulary through a range of topics and deliberate practice.

## 2. Our Intent

### 2.1 Ryders Hayes Curriculum Model



2.2 At Ryders Hayes each subject holds threshold concepts; the key disciplinary mastery aspects of each subject. They are chosen to build conceptual understanding within subjects and are repeated many times in a variety of experiences.

2.3 The threshold concepts in Maths are:

Mathematical Reasoning  
Mathematical Fluency

2.4 The threshold concepts are divided into three milestones. We expect pupils in year 1 of the milestone to develop a secure understanding of the concepts and a deeper understanding in year 2 of the milestone. Phase one (Yr1, Yr3, Yr5) in a Milestone is the knowledge building phase that provides the fundamental foundations for later application. Learning at this stage must not be rushed and will involve a high degree of repetition so that knowledge enters pupils' long-term memory. If all the core knowledge is acquired quickly, teachers create extended knowledge.

2.5 The curriculum at Ryders Hayes has three drivers chosen specifically to permeate the curriculum to meet the needs of our children and their local context.

2.6 The Curriculum Drivers for Ryders Hayes School are to:

Explore possibilities  
Create independence  
Build resilience

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2.7 Through our teaching of Maths, we intend to:

Develop children's fluency with basic number facts  
Develop children's fluency in mental calculation  
Develop children's fluency in the use of written methods  
Develop children's understanding of the = symbol  
Teach inequality alongside teaching equality  
Don't count, calculate  
Look for pattern and make connections  
Use intelligent practice  
Use empty box problems  
Expose mathematical structure and work systematically  
Move between the concrete and the abstract  
Contextualise the mathematics  
Use questioning to develop mathematical  
Expect children to use correct mathematical terminology and speak in full sentences  
Identify difficult points

2.8 Through Maths we can also:

Improve pupils' skills in English, Maths and ICT  
Develop pupils' thinking skills  
Promote pupils' awareness and understanding of gender, cultural, spiritual and moral issues  
Develop pupils as active citizens

## 2.9 Entitlement and Equal Opportunities

We are committed to providing a teaching environment conducive to learning.

All pupils are entitled to access the Maths curriculum at a level appropriate to their needs arising from race, gender, ability or disability, religion, social background and culture. Class work may have to be adapted to take into account individual requirements. We work to ensure that each child

Achieves the best possible academic standards in Mathematics regardless of starting point or ability

## 2.10 Organisation of Maths within the Curriculum

Maths is linked to all subjects including Computing, Science, Maths and D&T.

Additionally, Maths is part of the Sciences Focus for learning. This enables Computing, Science, Maths and D&T to work together sharing best practice, modelling and support excellence and holding each other to account of our Subject Lead responsibilities.

# 3. Our Implementation

3.1 We have developed and reviewed the national scheme of guidelines for Maths as the basis for our curriculum planning.

3.2 Supporting our Curriculum Drivers, we have our knowledge categories which provide the key knowledge within subjects and help us to grow our cultural capital; making links where appropriate to our children and their learning.

3.3 The Knowledge Categories for Ryders Hayes School are:

- Location
- Settlement
- Culture and pastimes
- Significant events
- Food and farming
- Number
- Self-expression
- Career related
- Beliefs
- Innovation
- Language and oracy
- Peace and war

3.4 Within each year group key concepts are taught at stages throughout the school year. These again focus on the need, and importance, of repetition in our curriculum.

Autumn Term	Spring Term	Summer Term
Number Career related Innovation Language and oracy	Number Career related Innovation Language and oracy	Number Career related Innovation Language and oracy

3.5 Teaching and Learning in Maths will be in line with the school's *Behaviours for Learning Policy*, where provision is made for all learning styles.

The Maths curriculum at Ryders Hayes School is designed to provide children with learning opportunities that reflect the breadth and balance of contexts outlined in the National Curriculum, as well as well-planned repetition to ensure secure foundation of Maths knowledge and skills.

3.6 As an integral part of the teaching and learning of Mathematics children will be given the opportunity to undertake purposeful problem solving, communicating their findings in a variety of ways.

3.7 We hold a yearly Science Focus Day which is an integral part of our Maths teaching which contributes to our development of number sense. Each year group is delegated a specific focus relating to Maths where Computing, Science, Maths and D&T come together to provide experience for our learners.

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3.9 We display and share the characteristics of a Mathematics Learner, as well as investigating career opportunities, with children at every available opportunity.



**3.10 Key Experiences:**

Ryders Hayes Maths curriculum is a bespoke model to cater for the needs of the children and key experiences have been carefully selected to ensure that they allow children to explore/create/ build: possibilities, resilience and independence. The Key experiences include:

EYFS	
Year 1	
Year 2	
Year 3	
Year 4	
Year 5	

### 3.11 The role of the Maths Leader is to:

Support colleagues in teaching the subject content and developing their skills in planning, teaching and assessing Maths

Renew, update and oversee the audit of resources needed to deliver the curriculum Monitor and evaluate the learning and teaching of Maths through learning walked and month book trawls

Develop assessment and record keeping ensuring progression and continuity

Communicate findings, ideas and resources and have an open-door guidance for suggestion and questions

Design the Medium- Term Plans for teachers to use and annotate for weekly lessons 8

## 4. Impact

4.1 The curriculum design and planning will lead to outstanding progress for all pupils, regardless of their starting points, over time. Learning is progressive and builds on prior knowledge and understanding and supports children in producing outcomes of the highest quality. Teaching and learning is adapted to cater for the needs of all pupils; providing support for children with special educational needs and enrichment and challenge for more able children.

4.2 Assessing the impact of the teaching will be completed half termly by teachers and this will be used to assess curriculum overviews for each age group, and these will be based on PUMA assessments/arithmetic tests of key skills and essential knowledge and understanding within Maths.

4.3 Methods of assessment will vary as appropriate to the learning in lessons. A book sample will be carried out regularly to gain an idea of children's starting points and to show the progress made in the term.

4.4 In Maths the use of technology is also used to record and gain evidence of children's Mathematical knowledge and understanding. Children will be set small tasks in order to demonstrate the knowledge and skills they have learnt during their learning journey and as part of end of Year Milestones. These tasks will be completed regularly to monitor and evidence progression and attainment. Pupil voice will be used by the Subject leader to assess the progress in understanding and applying skills needed to become a Mathematician.

### Resources

4.5 Maths resources are stored in the designated area (HUB). Children will have the opportunity to use the following resources: globes, atlases, visual media (including aerial photographs), information books, maps, graphs, compasses, measuring equipment and ICT.

4.6 If new or additional resources are required this is the responsibility of the Maths Leader to source as well as replenish necessary resources. The Maths Leader is the curator of the subject and will update and provide medium term plans to each year group, whilst acting as a curator for the Maths.

### Health and Safety

4.7 This guidance needs to be read alongside our *Health and Safety Policy*. Consideration needs to be given to conducting appropriate Risk Assessments and ensuring the safeguarding of children and staff when planning and carrying out Maths activities.

### **Monitoring and Evaluation**

4.8 The teaching and learning of Maths will be monitored through the analysis of medium-term planning, pupil voice interviews, analysis of assessment data, scrutiny of work samples, completion and recording of Maths tasks to assess skills and knowledge and learning walks, in line with the School Development Plan.

4.9 The Maths leader will evaluate progress that has been made and the impact of the curriculum to ensure all pupils have been taught the knowledge and skills they need to deepen their mathematical understanding.