

Maths at St Joseph the Worker

Our Vision in Maths at St Joseph the Worker

Every day is a maths day. Children at our school participate in a maths lesson/ mathematical activity EVERY DAY.

We believe maths is essential to everyday life, critical to science, technology and engineering, and necessary for financial literacy and most forms of employment. A high-quality mathematics education therefore provides a foundation for understanding the world, the ability to reason mathematically, an appreciation of the beauty and power of mathematics, and a sense of enjoyment and curiosity about the subject. As a school, we aim to inspire a real love for maths.

In line with the national curriculum for mathematics, our aims are to ensure that all pupils:

- become **fluent** in the fundamentals of mathematics, including through varied and frequent practice with increasingly complex problems over time, so that pupils develop conceptual understanding and the ability to recall and apply knowledge rapidly and accurately.
- **reason mathematically** by following a line of enquiry, conjecturing relationships and generalisations, and developing an argument, justification or proof using mathematical language
- can **solve problems** by applying their mathematics to a variety of routine and non-routine problems with increasing sophistication, including breaking down problems into a series of simpler steps and persevering in seeking solutions.

At St Joseph the Worker we believe in deepening understanding not accelerated teaching. We focus on depth rather than breadth and we believe that pupils who grasp concepts rapidly should be challenged through being offered rich and sophisticated problems before any acceleration through new content. Those who are not sufficiently fluent with earlier material should consolidate their understanding, including through additional practice, before moving on.

Planning

EYFS:

Continue to use Development Matters document alongside Numbers and Patterns: laying foundations in mathematics.

Y1-Y6:

Alongside the Liverpool Maths Plans, we also use the White Rose mastery materials to enable us to fulfil our focus on further developing our children's reasoning and problem solving skills.

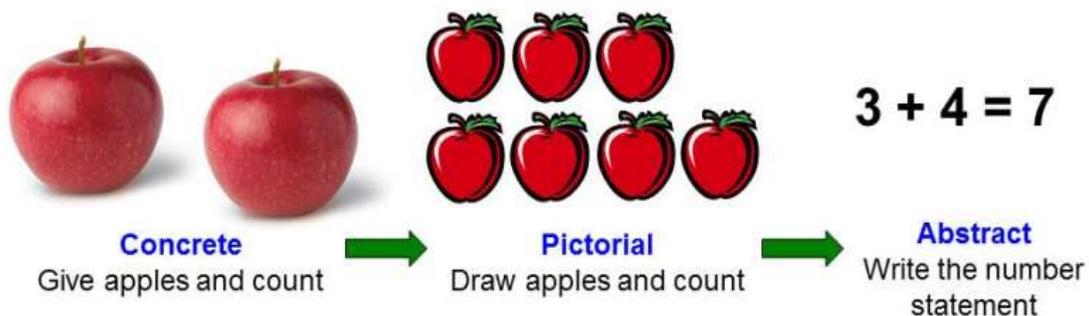
Plans are to be annotated (not just dated) with how the objective will be taught, what resources are being used, groupings (if any) and apparatus being used or available to the children. The children decide when/ when not to use them.

In line with the white rose materials, all children should have access to the same objectives and differentiation will be through support and/or the use of concrete materials.

CPA Approach	
Stage	Characteristics
Concrete	Refers to the use of manipulatives, measuring tools or objects that the student handles.
Pictorial	Refers to the use of drawings, diagrams, charts or graphs that the student draws
Abstract	Refers to abstract representations such as numbers and letters that the student writes

Example:

Tom had 3 apples. His mother gave him 4 more apples. How many apples did he have altogether?



Assessment

- Y2 and Y6 use the 2017 Maths Papers as a baseline - practise tests throughout the year - Summer tests.
- Y3, Y4 and Y5 NFER tests as a baseline - repeat in Spring - Summer tests.
- Teacher mark books allow teachers to assess every child against objectives taught.

- Twinkle assessments may be used at the end of each topic to provide further evidence of achievement and / or identify any gaps in learning.

Interventions:

Interventions are planned for any class making slow progress or not achieving their full potential. The impact of these is measured by class teachers and discussed during pupil progress meetings.

Roles and responsibilities:

Head Teacher and Governing Body

- supports the use of appropriate teaching strategies by allocating resources effectively
- monitor the effectiveness of teaching and learning strategies in terms of raising pupil attainment
- ensure staff development and performance management policies promote good quality teaching

Subject Leader

- manages the subject through monitoring and support to ensure the correct implementation of the National Curriculum for Mathematics is being delivered
- ensures a regular and effective programme of analysis of children's work and short term planning (as appropriate) is in place
- takes responsibility for the purchasing and organisation of resources
- keeps up to date with developments in mathematical education and disseminate information to colleagues through INSET days and staff development meetings

Class Teachers

- ensure the effective implementation of the Statutory National Curriculum for Mathematics
- ensure learning is differentiated to enable all children to reach their full potential
- make effective use of assessment for learning within mathematics
- committed to raising standards for all children

Parents/Carers

- are encouraged to assist their children with the regular homework given (see Homework Policy)
- are asked to encourage their child to attend after school Mathematics clubs on offer
- are asked to encourage children to use 'Mathletics' at home

Reviewed - July 2018 S. Bradshaw (subject leader)

Appendix A - Progression in Calculations

Appendix B - End of Year expectations