ST JOHN LLOYD CATHOLIC COMPREHENSIVE SCHOOL

School Mission Statement

"Learning and Growing Together in Christ"

"A Christian community which recognises the dignity and value of the individual and in which all members are encouraged to develop their potential in terms of knowledge, understanding, spiritual, moral, social and cultural awareness*".*

ST JOHN LLOYD
CATHOLIC SCHOOL

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LEARNING AND GROWING TOGETHER IN CHRIST

WHOLE-SCHOOL NUMERACY POLICY

Approved: 30th November 2016
Reviewed: 10th December 2020

Mission Statement

St John Lloyd Catholic Comprehensive School is committed to raising the standards of numeracy of all its pupils, so that they develop the ability to use numeracy skills effectively in all areas of the curriculum and the skills necessary to empower them to deal with the demands of further education, employment and adult life.

This is in keeping with the whole school mission statement of growing and learning together.

A numerate student is able to:

1. Have a sense of the size of a number and where it fits into the number system.
2. Recall mathematical facts confidently.
3. Calculate accurately and efficiently, both mentally and with pencil and paper, drawing on a range of calculation strategies.
4. Use proportional reasoning to simplify and solve problems.
5. Use calculators and other ICT resources appropriately and effectively to solve mathematical problems, and select from the display the number of figures appropriate to the context of a calculation.
6. Use simple formulae and substitute numbers in them.
7. Measure and estimate measurements, choosing suitable units, and reading numbers correctly from a range of meters, dials and scales.
8. Calculate simple perimeters, areas and volumes, recognising the degree of accuracy that can be achieved.
9. Understand and use measures of time and speed, and rates such as £ per hour or miles per litre.
10. Draw plane figures to given specifications and appreciate the concept of scale in geometrical drawings and maps.
11. Understand the difference between the mean, median and mode and the purpose for which each is used.
12. Collect data, discrete and continuous, and draw, interpret and predict from graphs, diagrams, charts and tables.
13. Have some understanding of the measurement of probability and risk.
14. Explain methods and justify reasoning and conclusions, using correct mathematical terms.
15. Judge the reasonableness of solutions and check them when necessary.
16. Give results to a degree of accuracy appropriate to the context.

<u>Definition of Numeracy</u>

"…an 'at-homeness' with numbers and an ability to cope with the mathematical demands of everyday life… An ability to have some appreciation and understanding of information which is presented in mathematical terms, for instance, graphs, charts or tables or by reference to percentage increase or decrease."

(Cockcroft Report, 1982)

"Numeracy is a proficiency which involves confidence and competence with numbers and measures. It requires an understanding of the number system, a repertoire of computational skills and an inclination and ability to solve number problems in a

variety of contexts. Numeracy also demands practical understanding of the ways in which information is gathered by counting and measuring, and is presented in graphs, diagrams, charts and tables"

(National Framework for teaching Mathematics, DfES 1999)

'Numeracy is not the same as mathematics. Numeracy is a proficiency with number……although pupils usually learn their numeracy skills during mathematics lessons, to be fully numerate they must be able to apply these skills in other subject areas and real-life contexts.'

(Estyn Report: Improving numeracy in KS2 and KS3, April 2010)

The purposes of our whole-school numeracy policy:

- To develop, maintain and improve standards in numeracy across the school;
- To ensure consistency of practice including methods, vocabulary, notation, etc.;
- To indicate areas for collaboration between subjects;
- To assist the transfer of pupils' knowledge, skills and understanding between subjects.
- To use a range of strategies to support pupils with numeracy difficulties.

The Management

The role of the Senior Leadership Team is to:

- participate in the planning, implementation and evaluation of the numeracy strategy;
- determine the role of the Head of Mathematics who is the Numeracy Co-ordinator;
- specify expectations to be made of all teachers;
- support the further development and implementation of a whole school numeracy policy;
- provide additional training for all teachers and other staff who work directly with pupils in the school, see Numeracy Toolkit.
- provide opportunities for effective communication between the Numeracy Co-ordinator, the Senior Leadership Team, the Mathematics Department and other departments;
- consider and implement a strategy for involving parents in the support of numeracy competency.

The role of the Numeracy Co-ordinator is to:

- work with the senior leadership team to review, implement and monitor a strategy for numeracy across the curriculum and to ensure the effective development and implementation of a whole school numeracy policy;
- establish lines of communication and ensure that there is constructive liaison between the mathematics teachers and teachers of other subjects;
- establish lines of communication and ensure that there is constructive liaison between the mathematics teachers and feeder primary schools;
- monitor the implementation of the whole school numeracy strategy;

- evaluate the effectiveness of the strategy and make modifications where necessary; and
- facilitate amendments to the numeracy strategy in the light of evaluation and curriculum changes.

Parents are asked to:

1. Make their children aware when they as parents are faced with mathematical demands in their everyday lives, and display a positive attitude when faced with these demands.

2. Ask their children to explain their mathematical thinking when doing maths homework or performing everyday mathematical tasks.

Equal Opportunities

Numeracy is an outcome of the programs of study and is therefore a right for all pupils, not a privilege for some. At St. John Lloyd Catholic Comprehensive School, we believe that pupils have entitlement to a numeracy rich learning environment in school, regardless of perceived ability and that pupils' self-confidence and beliefs in both themselves and mathematics need to be high if success is to be maximised.

Aims and Objectives

Numeracy should be promoted throughout all areas of the curriculum in a consistent and efficient manner. Also it should be noted that learning, teaching and assessment of numeracy should be appropriate to pupils' needs.

- To developing mental strategies as well as pencil and paper methods;
- To develop a confidence and competence in using and applying mathematics, recognising that skills are transferable across different subject areas and in a variety of contexts;
- To understand and use the correct mathematical language;
- To promote enjoyment and enthusiasm for learning through practical activities, exploration and discussion;
- To promote confidence and competence with numbers and number systems and so raise standards;
- To develop the ability to solve problems through decision making and reasoning in a range on contexts;
- To develop a practical understanding of the ways information is gathered and presented;
- To understand the importance of mathematics and numeracy in everyday life.

Raising Standards

Raising Standards in Numeracy across our school cannot be solely judged in increased test percentages. There is a need to evaluate the pupils' ability to transfer mathematical skills into other subject areas, applying techniques to problem solving. Their confidence in attempting this is initially as important as achieving the correct

solution. Pupil interviews and work sampling will be the main processes for evaluating the success of our practice.

Consistency of Practice

The Mathematical Association recommend that teachers of Mathematics and teachers of other subjects co-operate on agreed strategies. In particular that:

Teachers of mathematics should:

1. Be aware of the mathematical techniques used in other subjects and provide assistance and advice to other departments, so that a correct and consistent approach is used in all subjects.

2. Provide information to other subject teachers on appropriate expectations of students and difficulties likely to be experienced in various age and ability groups.

3. Through liaison with other teachers, attempt to ensure that students have appropriate numeracy skills by the time they are needed for work in other subject areas.

4. Seek opportunities to use topics and examination questions from other subjects in mathematics lessons.

Teachers of subjects other than mathematics should:

1. Ensure that they are familiar with correct mathematical language, notation, conventions and techniques, relating to their own subject, and encourage students to use these correctly.

2. Be aware of appropriate expectations of students and difficulties that might be experienced with numeracy skills.

3. Provide information for mathematics teachers on the stage at which specific numeracy skills will be required for particular groups.

4. Ensure schemes of work have opportunities to embed numeracy wherever possible, and teachers promote the use of numeracy seeing it as an essential life skill.

5. Use planner page to raise pupil awareness of when and where numeracy is used across the curriculum.

The role of other staff who work with pupils is to:

1. Ensure that they are familiar with correct mathematical language, notation, conventions and techniques, particularly at Key Stage 3 (this does not expect specialist mathematical knowledge);

2. Encourage pupils to use these;

3. To be aware of difficulties that the pupils they work with might be experienced with numeracy skills; and

4. Provide information for the class teacher when specific numeracy skills difficulties are observed in pupils that may not currently be supported.

Data to support intervention

The school will use the data available from CATS, Key Stage Two and Three, NFER testing and internal testing through the maths department to identify pupils needing additional support with numeracy difficulties.

Intervention and Support

Number Work out managed by the maths department in Year 7
Springboard 7 in Year 8
Matchwatch 3-5 in Year 9

MONITORING

Pupil interviews and work sampling will be key processes for evaluating the impact of numeracy and this together with other data evidence from NFER tests and national numeracy tests will provide a measure of the success of our practice in relation to numeracy.

REVIEW

The Numeracy Policy to be reviewed annually by the Numeracy Coordinator.