Spiritual, Moral, Social & Cultural (SMSC) Development in Mathematics

**SPIRITUAL** – The awe and wonder of mathematics is shared with the children and helps to explain the world and the mathematical patterns that occur such as the symmetry of snowflakes or the stripes of a zebra. We talk about the wow factor when the pupils make connections in maths. Examples are when we investigate different number sequences and in particular the Fibonacci sequence which is evident in nature all around us. Further mathematical ideas consider the idea of infinity. There is also a sense of wonder in the exactness of mathematics as well as a sense of personal achievement in solving problems.

**MORAL** – We look at the use of statistics and how people manipulate them to promote their own (biased) opinions. Pupils are encouraged to discuss the use and misuse of data in all issues including those supporting moral argument.

Examples of how we use this in school is with the use of questionnaires to conduct an opinion survey.

The pupils are also taught how to word questionnaires so as not to embarrass people such as conducting surveys on how much money people have, have they ever been in trouble with police and how much they weigh.

**SOCIAL** – At the beginning of lessons the hook is used to engage pupils and to show how maths is used in the real world.

Social education in Maths gives the greatest opportunity for pupils to work together collaboratively during experimental and investigative work.

We also look at statistics, in particular how the census is used by governments to plan ahead for health, education and social requirements. E.g. do we have enough doctors for the population? Infrastructure and road use, a high number of accidents on certain roads can result with new roads being built and altering speed limits. Birth rates – will there be enough school places for all the children when they reach the age of 5?

**CULTURAL** – We encourage the pupils to appreciate the wealth of mathematics in all cultures throughout history.

We look at the history of maths and its development. Examples of this are how the different number and measuring systems have evolved.

Pupils also look at the number systems used by other countries such as Chinese numbers and how Roman numerals are used particularly on clocks.

Pupils consider the development of shape patterns around the world in particular tessellations and the symmetry of buildings.

Pupils discuss the use of Mathematical language and how it is a universal language used worldwide.