

MATHEMATICS AND NUMERACY: Mathematics with Financial Capability

The minimum content is set out below

<i>Developing pupils' Knowledge, Understanding and Skills</i>	<i>(Objective 1) Developing pupils as Individuals</i>	<i>(Objective 2) Developing pupils as Contributors to Society</i>	<i>(Objective 3) Developing pupils as Contributors to the Economy and the Environment</i>
<p>Pupils should have opportunities, through the contexts opposite, to develop:</p> <p>knowledge and understanding of</p> <ul style="list-style-type: none"> • Number • Algebra • Shape, Space and Measures • Handling Data; <p>knowledge and understanding of personal finance issues; and skills to enable competent and responsible financial decision making;</p> <p>the application of mathematical skills to real life and work situations;</p> <p>the creative use of technology to enhance mathematical understanding;</p> <p>by demonstrating:</p> <ul style="list-style-type: none"> • creative thinking in their approach to solving mathematical problems; • increasing competence in mental mathematics skills; • increasing competence in pencil and paper methods; • increasing confidence in the use of mathematical language and notation; • practical skills using technology. 	<p>Young people should have opportunities to :</p> <p>Investigate a personal and class lifestyle study of time, for example, <i>time spent in school, doing homework, watching TV, taking exercise.</i></p> <p>Personal Understanding</p> <p>Work collaboratively in problem solving, taking account of others' viewpoints to reach consensus.</p> <p>Mutual Understanding</p> <p>Demonstrate an ability and willingness to develop logical arguments, for example, <i>justify how they arrived at a conclusion or solution to a problem.</i></p> <p>Moral Character</p> <p>Explore issues related to Personal Health</p> <p>Investigate aspects of health and healthy living, for example, <i>body temperature, heart rate, breathing rate, nutritional requirements, food choices, special diets, road safety, substance misuse, life expectancy.</i> Investigate incidence of diseases and recovery rates, for example, <i>heart disease, cancers, chicken-pox, influenza.</i></p> <p>Personal Health</p> <p>Explore issues related to Spiritual Awareness</p> <p>Be aware of the infinite nature of number and space and the prevalence of pattern,</p>	<p>Young people should have opportunities to:</p> <p>Analyse and interpret information patterns relating to local and global trends, for example, <i>population profile (including age, gender, religion, ethnicity), indices of development, voting patterns, crime rates etc.</i></p> <p>Citizenship</p> <p>Critically examine the use and misuse of mathematics to justify/support particular attitudes/opinions in different media, and the interpretation of data, for example, <i>investigate the use of numbers in marketing strategies, advertising, opinion polls.</i></p> <p>Media Awareness</p> <p>Explore issues related to Cultural Understanding</p> <p>Explore how mathematics have been used and developed in other parts of the world, for example, <i>Egyptian fractions, Russian multiplication, Roman numerals, how European digits derived from Arabian numbers.</i> Explore elements of geometry using patterns from different cultures, for example, <i>Amish quilt designs and Islamic patterns.</i> Apply mathematical problem solving skills to contexts faced by developing countries, including mathematical games from these cultures.</p> <p>Cultural Understanding</p>	<p>Young people should have opportunities to:</p> <p>Examine the role of mathematics as a “key” to entry for future education, training and employment.</p> <p>Explore how the skills developed through mathematics will be useful to a range of careers, for example, <i>jobs involving computation, checkout operation, data analysis, education, financial services, quantitative problem solving, research, surveying and construction etc.</i></p> <p>Employability</p> <p>Apply mathematical skills in everyday financial planning and decision making, for example, <i>cash and non-cash methods of payment for goods and services, to include relevant examples such as mobile phone tariffs and e-shopping; the role of banks, building societies, credit unions and the post office; sources of income; savings; dealing with debt and credit; exchange rates.</i></p> <p>Economic Awareness</p> <p>Explore issues related to Education for Sustainable Development</p> <p>Understand the need to manage renewable and non-renewable resources, for example, <i>investigate the savings and benefits of energy conservation measures etc.</i> Investigate the various costs and benefits of waste management, for</p>

	<p>for example, <i>the Fibonacci series in the natural world, harmonics in music, 'golden ratio', Islamic tiles etc</i></p> <p>Spiritual Awareness</p>	<p>Explore issues related to Ethical Awareness</p> <p>Research and interpret statistics in relation to social and economic issues, for example, <i>compare and contrast aid versus arms expenditure or aid versus debt repayments, hospital waiting lists, child labour etc.</i></p> <p>Ethical Awareness</p>	<p>example, <i>by analysing the cost/benefit of recycling glass, paper, garden waste and other waste etc.</i></p> <p>Education for Sustainable Development</p>
<p>Learning Outcomes</p> <p>The Learning Outcomes require the demonstration of skills and application of knowledge and understanding of Mathematics.</p> <p>Pupils should be able to:</p>	<ul style="list-style-type: none"> • demonstrate mental mathematical capability with simple problems; • decide on the appropriate method and equipment to solve problems—mental, written, calculator, mathematical instruments or a combination of these; • demonstrate financial capability in a range of relevant everyday contexts; • research and manage information effectively to investigate and solve mathematical problems, using ICT where appropriate; • show deeper mathematical understanding by thinking critically and flexibly, solving problems and making informed decisions, using ICT where appropriate; • demonstrate creativity and initiative when developing ideas and following them through; • work effectively with others; • demonstrate self management by working systematically, persisting with tasks, evaluating and improving own performance; • communicate effectively in oral, visual, written, mathematical and ICT formats, showing clear awareness of audience and purpose. 		