Mathematical Literacy: Embedded content

LO	Grade 10	Grade 11	Grade 12
LO 1: Number and Operations in Context **The learner is able to use knowledge of numbers and their relationships to investigate a range of different contexts which include financial aspects of personal, business and national issues**			
	▪ Percentage, rate, ratio and proportion, simple and compound growth ▪ Positive exponents and surds ▪ Scientific notation	▪ Applying various formulae ▪ Positive exponents and surds ▪ Ratio and proportion	▪ Solving problems in contexts (e.g. interest rates, saving schemes, retirement options, various indexes, exchange rate, etc)
LO 2: Functional relationships **The learner is able to recognise, interpret, describe and represent various functional relationships to solve problems in real and simulated contexts**			
	▪ Rate of change, dependant/independent variable in the context of linear, inverse proportion and compound increase relationships ▪ Various graphs ▪ Interpreting graphs and tables	▪ Linear, quadratic, inverse proportion and compound growth relationships ▪ Simultaneous equations ▪ Various graphs ▪ Interpreting graphs and tables	▪ Design and planning problems (Linear programming) ▪ Compound increase and decrease ▪ Interpreting graphs and tables
LO 3: Space, Shape and Measurement **The learner is able to measure using appropriate instruments, to estimate and calculate physical quantities, and to interpret, describe and represent properties of and relationships between 2D shapes and 3D objects in a variety of positions and orientations**			
	▪ Units of measurement ▪ Angle sizes ▪ Perimeter and area of polygons and circles ▪ Volumes of right prisms ▪ Theorem of Pythagoras: solving 2D and 3D problems ▪ Scale drawings and views ▪ Basic transformation geometry – tessellation and symmetry	▪ Units of measurement ▪ Angle sizes ▪ Perimeter and area of polygons ▪ Volumes of right prisms and cylinders ▪ Theorem of Pythagoras: solving 2D and 3D problems ▪ Scale drawings and views ▪ Grids and compass directions ▪ Basic trig ratios – solving heights and distance problems ▪ Basic transformation geometry – tessellation and symmetry	▪ Units of measurement ▪ Angle sizes ▪ Perimeter and area of polygons ▪ Volumes of right prisms, cylinders, cones and spheres ▪ Theorem of Pythagoras: solving 2D and 3D problems ▪ Scale drawings and views ▪ Grids and compass directions ▪ Basic trig ratios – solving heights and distance problems ▪ Trig formulae ▪ Basic transformation geometry – tessellation and symmetry and proportion
LO 4: Data Handling **The learner is able to collect, summarise, display and analyse data and apply knowledge of statistics and probability to communicate, justify and critically interrogate findings and draw conclusions**			
	▪ Methods of collecting data: interviews, surveys, questionnaires and use of data bases ▪ Methods for summarising and displaying data: tallies, tables, pie-charts, histograms, bar graphs (simple and compound), line and broken line graphs ▪ Measures of central tendencies: mean, median and mode, ▪ Range ▪ Probability concepts: relative frequency, probability	▪ Methods of collecting data: interviews, surveys, questionnaires and use of data bases ▪ Representative samples ▪ Comparing data from different sources and samples ▪ Methods for summarising and displaying data: tallies, tables, pie-charts, histograms, bar graphs (simple and compound), line and broken line graphs, ogives and cumulative frequencies ▪ Measures of central tendencies ▪ Measures of spread: range, variance, standard deviation, quartiles ▪ Probability concepts: relative frequency, probability ▪ Tree diagrams and contingency tables	▪ Methods of collecting data: interviews, surveys, questionnaires and use of data bases ▪ Representative sample ▪ Comparing data from different sources and samples ▪ Appropriate methods for summarising and displaying data including scatter plots and intuitively placed lines of best fit ▪ Describe trends ▪ Measures of central tendencies ▪ Measures of spread: variance, standard deviation, quartiles, percentiles ▪ Use of probability values in making predictions

Western Cape Education Departement: http://curriculum.wcape.school.za/resource_files/46150044_Mathematical_Literacy_content.doc