MATHEMATICS CONTENT KNOWLEDGE		
Content area	**General content focus**	**Intermediate Phase specific content focus**
Numbers, Operations and Relationships	Development of number sense that includes: • the meaning of different kinds of numbers • relationship between different kinds of numbers • the relative size of different numbers • representation of numbers in various ways • the effect of operating with numbers • the ability to estimate and check solutions.	• The range of numbers developed by the end of the Intermediate Phase is extended to at least 9-digit whole numbers, decimal fractions to at least 2 decimal places, common fractions and fractions written in percentage form. • In this phase, the learner is expected to move from counting reliably to calculating fluently in all four operations. The learner should be encouraged to memorise with understanding ,multiply fluently, and sharpen mental calculation skills. • Attention needs to be focused on understanding the concept of place value so that the learner develops a sense of large numbers and decimal fractions. • The learner should recognize and describe properties of numbers and operations, including identity properties, factors, multiples, and commutative, associative and distributive properties.
Patterns, Functions and Algebra	Algebra is the language for investigating and communicating most of Mathematics and can be extended to the study of functions and other relationships between variables. A central part of this content area is for the learner to achieve efficient manipulative skills in the use of algebra. It also focuses on the: • description of patterns and relationships through the use of symbolic expressions, graphs and tables • identification and analysis of regularities and change in patterns, and relationships that enable learners to make predictions and solve problems.	• Numeric and geometric patterns are extended with a special focus on the relationships: - between terms in a sequence - between the number of the term (its place in the sequence) and the term itself. • The study of numeric and geometric patterns develops the concepts of variables, relationships and functions. The understanding of these relationships will enable learners to describe the rules generating the patterns. • This phase has a particular focus on the use of different, yet equivalent, representations to describe problems or relationships by means of flow diagrams, tables, number sentences or verbally.
Space and Shape (Geometry)	The study of Space and Shape improves understanding and appreciation of the pattern, precision, achievement and beauty in natural and cultural forms. It focuses on the properties, relationships, orientations, positions and transformations of two-dimensional shapes and three-dimensional objects.	• The learner's experience of space and shape in this phase moves from recognition and simple description to classification and more detailed description of characteristics and properties of two-dimensional shapes and three-dimensional objects. • Learners should be given opportunities to: - draw two-dimensional shapes and make models of three-dimensional objects - describe location, transformations and symmetry.

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Content area	**General content focus**	**Intermediate Phase specific content focus**

Measurement	Measurement focuses on the selection and use of appropriate units, instruments and formulae to quantify characteristics of events, shapes, objects and the environment. It relates directly to the learner's scientific, technological and economic worlds, enabling the learner to:
	
	• make sensible estimates
	
	• be alert to the reasonableness of measurements and results.
		• Learners should be exposed to a variety of measurement activities.
		
		• Learners should be introduced to the use of standardised units of measurement and appropriate instruments for measuring. They should be able to estimate and verify results through accurate measurement.
		
		• Learners should be able to select and convert between appropriate units of measurement.
		
		• Measurement in this phase should also enable the learner to:
		
		  - informally measure angles, area, perimeter and capacity/volume;
		
		  - discuss and describe the historical development of measuring instruments and tools
		
		• Measurement provides a context for learners to use common fractions and decimal fractions.

Data handling	Data handling involves asking questions and finding answers in order to describe events and the social, technological and economic environment.
	
	Through the study of data handling, the learner develops the skills to collect, organize, represent, analyze, interpret and report data.
	
	• The study of probability enables the learner to develop skills and techniques for making informed predictions, and describing randomness and uncertainty. It develops awareness that
	
	  - different situations have different probabilities of occurring
	
	  - for many situations, there are a finite number of different possible outcomes.
		• Learners should focus on all the skills that enable them to move from collecting data to reporting on data..
		
		• Learners should be exposed to:
		
		  - a variety of contexts for collecting and interpreting data
		
		  - a range of questions that are posed and answered related to data
		
		• Learners should begin to analyse data critically through exposure to some factors that impact on data such as from whom, when and where data is collected.
		
		• The focus of probability is to perform repeated events in order to list, count and predict outcomes..
		
		• Learners are *not* expected to calculate the probability of events occurring