ESF Measurement

Phase 1		Phase 2		Phase 3		Phase 4
K1	K2	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6

IBO Overall Expectation	Learners will develop an understanding of how measurement involves the comparison of objects and the ordering and sequencing of events. They will be able to identify, compare and describe attributes of real objects as well as describe and sequence familiar events in their daily routine.	Learners will understand that standard units allow us to have a common language to measure and describe objects and events, and that while estimation is a strategy that can be applied for approximate measurements, particular tools allow us to measure and describe attributes of objects and events with more accuracy. Learners will develop these understandings in relation to measurement involving length, mass, capacity, money, temperature and time.	Learners will continue to use standard units to measure objects, in particular developing their understanding of measuring perimeter, area and volume. They will select and use appropriate tools and units of measurement, and will be able to describe measures that fall between two numbers on a scale. The learners will be given the opportunity to construct meaning about the concept of an angle as a measure of rotation.	Learners will understand that a range of procedures exists to measure different attributes of objects and events, for example, the use of formulas for finding area, perimeter and volume. They will be able to decide on the level of accuracy required for measuring and using decimal and fraction notation when precise measurements are necessary. To demonstrate their understanding of angles as a measure of rotation, the learners will be able to measure and construct angles.
IBO Conceptual Understanding	Measurement involves comparing objects and events. Objects have attributes that can be measured using non-standard units. Events can be ordered and sequenced.	Standard units allow us to have a common language to identify, compare, order and sequence objects and events. We use tools to measure the attributes of objects and events. Estimation allows us to measure with different levels of accuracy.	Objects and events have attributes that can be measured using appropriate tools. Relationships exist between standard units that measure the same attributes.	Accuracy of measurements depends on the situation and the precision of the tool. Conversion of units and measurements allows us to make sense of the world we live in. A range of procedures exists to measure different attributes of objects and events.

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K1	K2	Year 1	Year 2	Year 3	Year 4	Year 5		Year 6
Measurement of Shape and Space		Compare , describe and begin to measure the length, mass and capacity of objects using nonstandard units	Estimate, compare, describe and measure the length, mass and capacity of objects using nonstandard units	Estimate, compare and measure the length with standard units Estimate, compare and measure mass, capacity and volume of objects using nonstandard units	Estimate, compare and measure objects using standard units of measurement: length, mass, volume and capacity Estimate, compare and measure area of objects nonstandard units Identify and describe relationships between units of measure (eg: 10mm is the same as 1cm)	Estimate, compare and measure objects using standard units of measurement: length, perimeter, area, mass, capacity, volume and temperature Convert between units using whole numbers (e.g. 1 metre to 100 centimetres)	Estimate, compare and measure objects using standard units of measurement: length, perimeter, mass, capacity, area, volume and temperature Calculate and develop rules for determining area and perimeter of rectangles Identify and describe the relationships between area and perimeter Convert between units using decimals to at least one place (e.g. change 2.6 kg to 2600 g)	Estimate, compare and measure objects using standard units of measurement: length, perimeter, mass, capacity, area, volume and temperature Calculate and develop rules for determining area and perimeter of triangles Calculate and develop rules for determining volume of cubes and cuboids Identify and describe the relationships between area and volume, and between volume and capacity Convert between units using decimals to at least two places (e.g. change 2.75 litres to 2750 ml, or vice versa)

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Measurement of Time	Identify, describe and sequence events in their daily routine, for example, before, after, bedtime, storytime, today, tomorrow	Identify, describe and sequence events in their daily routine, for example, before, after, bedtime, storytime, today, tomorrow	Read and write the time to the hour Name and order the days of the week Compare and order the duration of events using the every day language of time Connect days of the week to familiar events and actions	Read and write the time to the hour and half hour Name and order the months of the year and seasons Describe duration using months, weeks, days, hours and minutes Identify and record dates of events on a calendar	Read and write the time to the quarter-hour and 5 minute intervals (past, to) Estimate and compare lengths of time: second, minute, hour, day, week, months and years Connect times to events in a day	Read and write the time to the minute and investigate the relationship between units of time Convert between units of time Describe time and duration using am and pm	Read, write and compare 12 and 24 hour time systems and convert between them Connect 12 and 24 hour time to timetables Solve problems involving difference in time	Calculate time across time zones Solve problems involving difference in time
Angles					Identify angles as measures of turn and compare angle sizes in everyday situations	Compare and classify angles using the language of right angle, acute and obtuse	Estimate, compare, classify, measure and construct angles	Estimate, compare, measure and construct angles within shapes Calculate and develop rules to find unknown angles within shapes, around a point and on a straight line