Mathematics Revised Annual Teaching Plans 2023/24

PRESENTED BY: Alena Coetzee

DATE: 2 February 2023





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THE CHANGE IN EDUCATION

Presentation Outline

1. Purpose

2. Curriculum

- Principles
- Overview
- Annual Teaching Plan 2023 2024
- Teaching Approach
- Diagnostic
- Classroom management
- Programme of Assessment

3. Conclusion



1. Purpose



- To assist teachers with guided pacing and sequencing of curriculum content (core skills and knowledge) and assessment during each of the 4 terms via suggested mapping of content and assessment for approx. 10 weeks.
- To assist teachers with the different forms of assessment. (oral, practical and written)
- To ensure that learners are adequately prepared for the subsequent years in terms of acquiring the skills, knowledge, attitudes and values.



Guiding Principles for the R-ATP



- Retain core content in each grade i.e. content that will serve as the building block for the next grade/phase.
- Process of review is preceded by a content mapping across grades and the phase.
- Remove content that is a duplication, irrelevant or does not support the core.
- Process may also have involved re-organisation of the curriculum content.
- Ensure coherence and progression of content within and across phases. This is paramount.



- It is essential that the content in each grade adequately prepares learners for the subsequent grades and is adequately supported by content in previous grades.
- Current prescribed textbooks and DBE workbooks (LTSM) should remain relevant and usable as a primary resource.
- Based on the nature of the subject, collaboration across phases may be required, to ensure that there is coherence and progression across phases.



- A light review process, not a curriculum redesign process.
- Interim measure- not an end in itself.
- Intended to address weaknesses in the current RATP, not to create something entirely new.
- Remain in place until strengthened curriculum is implemented (2025), and so changes made should be workable for 2023 - 2024



Overview



Grade 1 Grade 2 Grade 3

Grade R – 3 Phase Overview shows progression of the Topics with the grade specific skills and knowledge.

Grade specific Term 1 -4 OVERVIEW that features the following:

- Management plan and time allocation for the 7 hours of Maths per week.
- Suggested fortnightly scripted skills and knowledge to teach for a 10 week term. The onus is strictly on the teacher's professional judgement to manage the content well and to ensure that the learners understand and can master the required grade specific content. The teacher must plan for good consolidation and revision of the work taught for understanding and mastery.
 - -Content areas
 - -Core skills and knowledge
 - -Previous knowledge
 - -Resources
 - DBE Workbook
 - Assessment

Summary: Content

No	R-ATPs	What changed?
1	Provision of 4 terms in one document	One complete document for the year instead of one per term.
2	Phase Overview	Strengthened, to ensure building blocks are in place across phases.
3	Grade Overview Term 1 - 4	Strengthened, filled the gaps to ensure substantial pathways for good teaching within and across content areas.
4	Classroom management plan	Unchanged
5	Content area weightings	Unchanged
6	Resources	Unchanged
7	Suggested DBE workbook Activities	Strengthen with more details for consolidation and deep teaching practice.
8	Assessment: Formative: AfL Summative: AoL	More emphasis on AfL that takes place alongside teaching that the teacher must be vigilant of actual learning happening.



Summary: Topics

Grade	R-ATPs	More Explicit
1-3	1.16 Mental Maths	Link with meaningful counting activities and consolidation of concepts taught.
1-3	3.1 Space and Shape (Position, Orientation and view)	Reintroduce – Math vocabulary for Geometry and this also relates to NOR
1-3	 4.1 Time is taught every term as well as one of the following Measurement topics per grade Length Mass Capacity 	Unchanged (Time throughout the year and other topics per term)
3	4.5 Perimeter and4.6 Area	Unchanged. Referred to grade 4
1-3	Data Handling skills 5.4 Collect and organise data 5.5 Represent data 5.6 Analyse and interpret data	Unchanged



Annual Teaching Plan 2023-2024



Phase Overview

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		GRADE R	GRADE 1	GRADE 2	GRADE 3
CONTENT AREA	NUMBERS, OPERATIONS AND RELATIONSHIPS	Estimate and count to at least 10 objects reliably Count forwards and backwards in 1s up to 10	Estimate and count to at least 50 objects reliably, encourage grouping Count forwards, backwards in 1s, between 0-100 Count forwards in multiples of 10, 5, 2 up to 100 Recognise, identify, read number symbols from 1-100 Write number symbols and number names to 20 Describe, compare and order objects (most, least, the same as, up to 20 Describe, compare and order numbers up to 20 using:	Estimate and count to at least 200 objects reliably, encourage grouping Count forwards and backwards in: 1s, between 0-200 10s, 5s, 2s, ,3s, 4s in each of these multiples to 200 Recognise, identify, read, write number symbols and number names from 1-200 Describe, compare and order numbers up to 99 using: greater than, smaller than, more than, less than, equal to smallest to greatest, greatest to smallest Use ordinal numbers to show order, place or position to 20 th Recognise place value of 2-digit numbers up to 99 decompose 2-digit numbers into multiples of tens and ones (37 as 30 + 7) identify and state the values of each digit Solve problems in context and explain solutions to problems addition and subtraction (+, -, =, □) repeated addition leading to multiplication equal sharing and grouping that may include remainders equal sharing leading to unitary fractions Recognise SA currency, solve problems with totals & change Do context free calculations to 99 (+, -, =, □) Practise number bonds to 20 Practise number bonds to 20 Practise rapid recall+, - & efficient Mental Maths techniques Add the same number, repeated + leading to × (+, ×, =, □) Use unitary fractions; recognise fractions in diagrammatic form; write fractions as a half	grouping Count forwards and backwards in: 1s, between 0-1000 10s, 5s, 2s, ,3s, 4s, 20s, 25s, 50s, 100s in each of these multiples to 1000 Recognise, identify, read and write number symbols and number names from 0-1000
	PATTERNS, FUNCTIONS AND ALGEBRA	Geometric patterns	Geometric patterns Number patterns up to 100	Geometric patterns Number patterns up to 200	Geometric patterns Number patterns up to 1 000
	SPACE AND SHAPE	Language of position, direction and views 3-D objects - features 2-D shapes - names	Language of position, direction and views Recognise, know a range and features of 3-D objects Recognise and know a range and features of 2-D shapes	Language of position, direction and views Recognise and know a range and features of 3-D objects Recognise and know a range and features of 2-D shapes	Language of position, direction, views and informal maps Recognise and know a range and features of 3-D objects Recognise and know a range and features of 2-D shapes Symmetry
	MEASUREMENT	Time: Passing of time Mass: informal: compare and order Length Capacity / Volume	Time: passing and telling of time Mass: informal use non-standard measures: compare, order, estimate, record, describe; talk about heavy and light Length: measure, compare order, record use informal measurements e.g. hand spans, paces, paperclips, etc. Capacity / Volume: measure, compare, order and record	Time: telling time and calculate length of time Mass: informal use non-standard measures: estimate, compare, order, record, describe, introduce formal measuring (kg. g) Length: informal use non-standard measures: estimate, compare, order, record, describe, introduce formal measuring (cm, m) Capacity / Volume: informal use non-standard measures: estimate, compare, order, record, describe, introduce formal measuring (l, ml)	Time: telling time and calculate length of time Mass: informal use non-standard measures: estimate, compare, order, record, describe, introduce formal measuring (kg, g) Length: informal use non-standard measures: estimate, compare, order, record, describe, introduce formal measuring (cm, m) Capacity / Volume: informal use non-standard measures: estimate, compare, order, record, describe, introduce formal measuring (l, ml)
	DATA HANDLING	Collect and sort objects Represent sorted objects Discuss sorted collections, integrated with Time; Birthday calendar; Helper's chart; Height chart, Weather chart	Collect, sort and represent, discuss sorted objects Integrate with Birthday calendar, Weather chart Collect, organise and represent data (limited pictographs with one-to-one correspondence) Analyse and interpret data: answer questions about data	Collect, organise and represent data (limited pictographs with one-to-one correspondence) Analyse and interpret data: answer questions about data	 Collect, organise and represent data. (lists, tallies, tables-limited to pictographs, bar graphs) Discuss sorted collections (pictographs with one-to-one correspondence) Analyse, interpret data and answer questions about data in (pictographs, bar graphs)



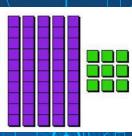
Grade Overview NOR

TERM 1	WEEK 1 and 2 Readiness Assessment	WEEK 3 and 4	WEEK 5 and 6	WEEK 7 and 8	WEEK 9 and 10			
	NUMBERS, OPERATIONS AND RELATIONSHIPS							
	Counting – integrate with Number Patterns and Mental Maths							
	 Count forwards and backwards in 1s, from any 	 Count forwards and backwards in 1s, from any 	 Count forwards and backwards in 1s, from any 	 Count forwards and backwards in 1s, from any 	 Count forwards and backwards in 1s, from any 			
	number between 1 –10 and describe the	number between 1 –10 and describe the	number between 1 -20 and describe the	number between 1 –20 and describe the	number between 1 –20 and describe the			
	sequence	sequence	sequence	sequence	sequence			
		 link addition when counting forwards/ add 	 link addition when counting forwards/ add 	 link addition when counting forwards and 	 link addition when counting forwards/ add 			
		one more and subtraction when counting	one more and subtraction when counting	subtraction when counting backwards, also	one more and subtraction when counting			
CONTENT AREAS		backwards/ make one less	backwards/ make one less	add one more/ make one less	backwards/ make one less			
AND TOPICS	Mental Maths number range 5. Ask quick maths questions to promote quick thinking. (Techniques: put large number first in order to count on; number line; doubling and halving; build up and break down)							
	 Order a given set of numbers 1-5 	 Order a given set of numbers 1-5 	 Order a given set of numbers 1-5 	 Order a given set of numbers 1-5 	 Order a given set of numbers 1-5 			
	 first, last, in the middle 	 first, last, in the middle 	 first, last, in the middle 	 first, last, in the middle 	 first, last, in the middle 			
	 Compare numbers to 5 say which is more, less 	 Compare numbers to 5 say which is more, less 	 Compare numbers to 5 say which is more, less 	 Compare numbers to 5 say which is more, less 	 Compare numbers to 5 say which is more, less 			
	 use relationship between adding on, taking 	 use relationship between adding on, taking 	 use relationship between more and less (+, -) 	 use relationship between more and less (+, -) 	 use relationship between more and less (+, -) 			
	away	away	 one more/ one less; two more/ two less 	 one more/ one less; two more/ two less 	 one more/ one less; two more/ two less 			
	 subitize (immediate recognition of dot 	 subitize (immediate recognition of dot 	 subitize (immediate recognition of dot 	 subitize (immediate recognition of dot 	 what number comes after, before, between 			
	formation 1-5)	formation 1-5)	formation 1-5)	formation 1-5)	 subitize (immediate recognition of dot 			
		 big, small 	 what number comes after, before, between 	 what number comes after, before, between 	formation 1-5)			
			 position: after, before, between 	 position: after, before, between 				
	Count objects reliably to 10							
NUMBER	 Give a reasonable estimate, check by counting 	 Give a reasonable estimate, check by counting 	 Give a reasonable estimate, check by counting 	 Give a reasonable estimate, check by counting 	 Give a reasonable estimate, check by counting 			
CONCEPT	out objects reliably encourage group counting	out objects reliably encourage group counting	out objects reliably encourage group counting	out objects reliably encourage group counting	out objects reliably encourage group counting			
DEVELOPMENT	Number symbols and number names							
Building Number								
Sense	 Write number symbols and number names to 10 							
	Describe, compare and order objects to 5							
	 Describe, compare collection of objects 	 Describe, compare collection of objects 	 Describe, compare collection of objects 	 Describe, compare collection of objects 	 Describe, compare collection of objects 			
	 many, fewer, more, less 	 more than, less than, the same as, different 	 more than, less than; the same as, just as 	 more than, less than; the same as, is equal 	 more than, less than 			
	 Order collection of objects according 	 Order objects from most to least; least to most 	many, different Order objects from most to least, least to most	to, just as many	 Order objects from most to least, least to most 			
	 most, least, least and most 		Order objects from most to least, least to most.	 Order objects from most, least; least to most 				
	Describe, compare and order numbers to 5 (use a r	number line)						
	 Describe compare numbers 	 Describe and compare numbers 	 Describe and compare numbers 	 Describe and compare numbers 	 Compare numbers- which is more, less 			
	 smaller than, greater than 	 more than, less than; 1 more, 1 less 	 greater than, smaller than 	 one more, one less 	 1, 2 more; 1, 2 less 			
			 more than, less than, is equal to 	 2 more, 2 less than 	 Identify, read, write numbers symbols and 			
	 Order numbers 	 Order numbers 	Order numbers	 Order numbers 	number names up to 5			
	 smallest to greatest, greatest to smallest 	 use the number line 1-5; first, last 	 before, after, between, in the middle 	 use the number line, show position 	 on the number line, (1st – 5th) 			
		 greatest to smallest; smallest to greatest 	 use the number line; position first and last 	 ascending, descending order – link to more 	 Describe, compare numbers 			
	Sala Ballana la contrata de contrata de la contrata de		A	and less				
		problems. Techniques: use concrete counters; draw pic						
	 Practically solve problems in context and 	 Practically solve problems in context and 	 Practically solve problems in content and 	 Practically solve problems in content and 	 Practically solve problems in context and 			
	explain solutions to problems involving	explain solutions to problems involving	explain solutions to problems involving	explain solutions to problems involving addition and subtraction	explain solutions to problems involving			
	 addition and subtraction 	 addition and subtraction 	 addition and subtraction 		 addition and subtraction 			
	 equal sharing and grouping that may include remainders 	 equal sharing and grouping that may include remainders 	 equal sharing and grouping that may include remainders 	 equal sharing and grouping that may include remainders 	 equal sharing and grouping that may include remainders 			
	Induce remainders	Induce remainders	Induce remainders	ECODE INTERIORS	FOUGE RETIGITOR'S			
		oncrete counters; draw pictures; number lines with concr						
	 Addition and subtraction up to 3 	 Addition and subtraction up to 3 	 Addition and subtraction up to 4 	 Addition and subtraction up to 5 	 Do context free calculations up to (*, -, =, □) 			
	 Practise number bonds up to 3 (*, -, =, □) 	 Practise number bonds up to 3 (*, -, =, ::) 	 Practise number bonds up to 4 (+, -, =, □) 	 Practise number bonds up to 5 (+, -, =, □) 	 Practise number bonds up to 5 			



Day 3	Addition linked	with counting
1.	6 + 1 =	7 – 1 =
2.	6 + <u>2 =</u>	7 – 2 =
3.	6 + <u>3 =</u>	7 – 3 =
4.	6 + 4 =	7 – 4 =
5.	5 + 3 =	8 – 3 =
6.	5 + 4 =	8 – 4 =
7.	5 + 5 =	8 – 5 =

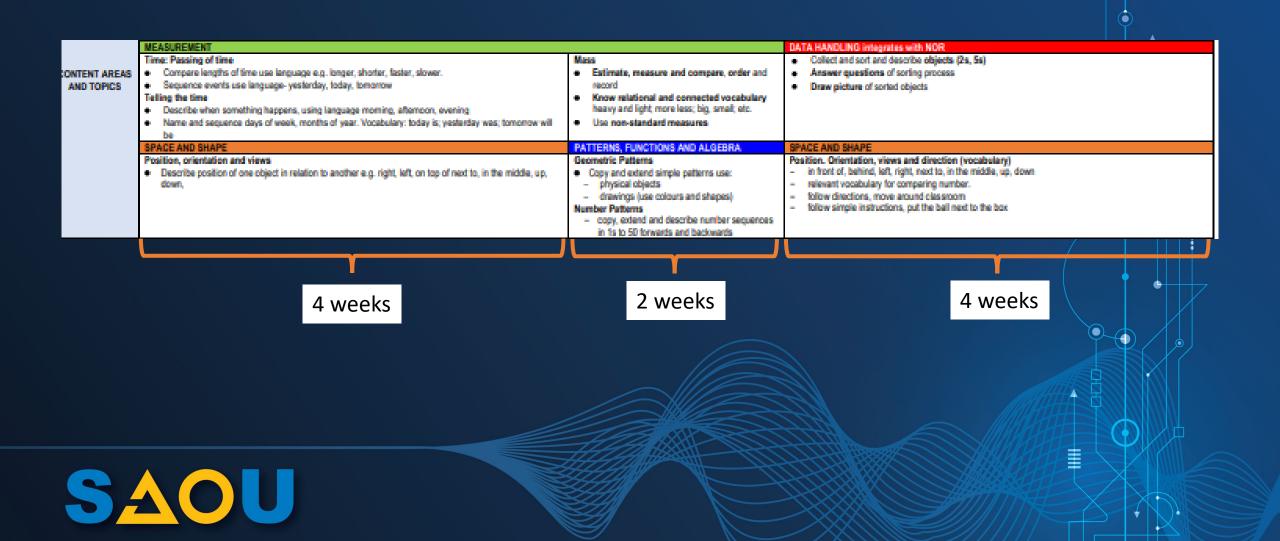








Grade Overview Other content areas



Teaching and learning approach and Style



How do we improve our performance in Mathematics?

Teacher agency

Teachers are centre of all teaching

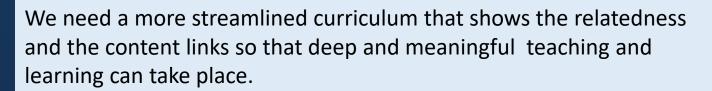
Teachers are encouraged to use their professional judgement and available resources in order to achieve goals set.

Teaching approach

Deeper learning is enabled when the planned concepts are taught, the links recognised and practise enabled for mastery.

Teachers must use their professional judgement when they plan for and do the assessments.

Time



Collaboration

Curriculum planning will involve the whole Mathematics education community to ensure that it is of the highest possible standard and aligned with the needs of learners and teachers.

Assessment

Assessment must inform the way forward.

Teachers must do an error analysis on the immediate recognition of the learning gaps (informal and formal, oral practical and written) Question: How do we address these and aim to use alternative methods for understanding.

Resources

The use of concrete apparatus are strongly advocated.



Diagnostic



Diagnostic assessments

Baseline assessment

Term 2 & 3 assessment

Endline assessment

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Classroom management



Classroom management

Mathematics time allocation per day: 1 hr. 24 min × 5 = 7 hours per week OR 1hr 30 min x 4 days plus one 1hour lesson per week = 7hours

Whole Class Activity

- . Counting, Mental Maths (consolidation of concepts already taught)
- New Concept teaching
- Classroom Management (allocation of independent activities)

Independent group guided teaching and independent work

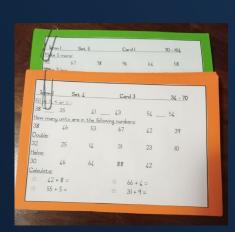
(inclusive of the differentiated teaching of new concepts - oral, practical and written activities daily)

The teacher is also mindful to plan well for effective teaching and assessment for learning, to inform any remediation and further teaching.

Suggested group teaching plan:

and described and an arrange breath				
MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY
Group 1 and 3	Group 2 and 3	Group 1 and 3	Group 2 and 3	Whole class teaching







- ✓ Teach the new concept/skill
- ✓ Workbooks are close Don't teach the worksheet
- ✓ Verify through assessment for learning strategies if learners understood.
- ✓ If they did not understand, reteach in small group with different or same strategy.









Third group does substantial independent

5 min +10 min 20 min

written work.

24 × 2 groups = 48 min

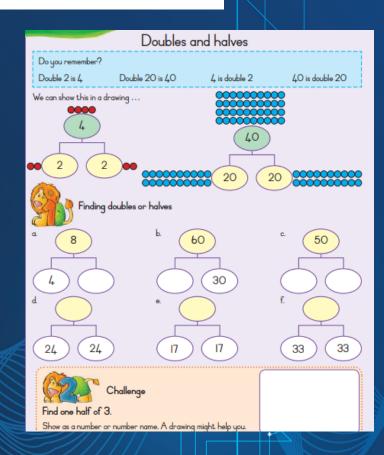
DBE workbook activities

- Suggested DBE work book activities are carefully scripted in the RATPs for each term.
- These activities support deeper learning.
- It is incumbent on the teacher to plan well for quality teaching and learning.
- A teacher that understands the content knowledge well will be able to teach so that the learner can understand and master the Maths skills and knowledge.

Addition and subtraction to 80 (ATP)

Linking halves and doubles to fractions, using multiples of 10, 2, pp.14 (ATP)

What must learners know, understand and be able to do before they can attempt to complete this worksheet on their own?





Programme of Assessment



				• • • • • • • • • • • • • • • • • • • •				
	REMEDIATION		CONSOLIDATIO			REVISION		
	Supporting learning gaps.		Reinforcing more	of the same (practise) to embed knowledge and skills. Provide	opportunity for the	Repeat of the knowledge and skills taught to establish if learning has taken place and understood.		
	Reteaching using another strategy for improved learning. Reco	ord all findings in the event of further	learner to ask que	stions.		This Practise takes place before any new concepts can be taught. Revision of work strengthens		
	support required.					the learner's knowledge and supports further learning.		
INFORMAL	Assessment for Learning (AfL) is strategically planned for an	nd completed alongside teaching. The tea	acher is always c	ognisant of the learning taking place and keeps a record o	f the learner's progress	l.		
ASSESSMENT	ORAL, PRACTICAL, WRITTEN: Assess Core Concepts, Skills and Values above. Continuous assessment prevails. The onus is on the teacher to teach well and to observe if meaningful learning has occurred; Can the learner communicate his / her understanding of the concepts learnt and can the learner apply his / her knowledge of the concepts learnt aptly. The teacher is vigilant and records the observations made; this is integrated in the lesson time as per DBE directive.							
(AfL)						cepts learnt and can the learner apply his / her knowledge of the concepts learnt aptly.		
		ORAL & PRACTICAL		WRITTEN	ORAL & PRACTICAL			
SBA		 SPACE AND SHAPE 		 PATTERNS, FUNCTIONS AND ALGEBRA 	 MEASUREMEN 	Т		
(Formal		PRACTICAL		ORAL, PRACTICAL, WRITTEN	WRITTEN			
Assessment)	DIFFERENCE CHINATIANA AND ALGEBRA					IG .		
(AoL)	 Formal Assessment must be fair, reliable and valid. The assessment must reveal what the learner knows, the onus is on the teacher to: 							
A PARK I								

- Teach and assess well for learning gains. (AfL)
 Use an appropriate form of assessment so that the learner's knowledge and skills can be gauged and the evidence of the learner's achievement can be justified at all times.



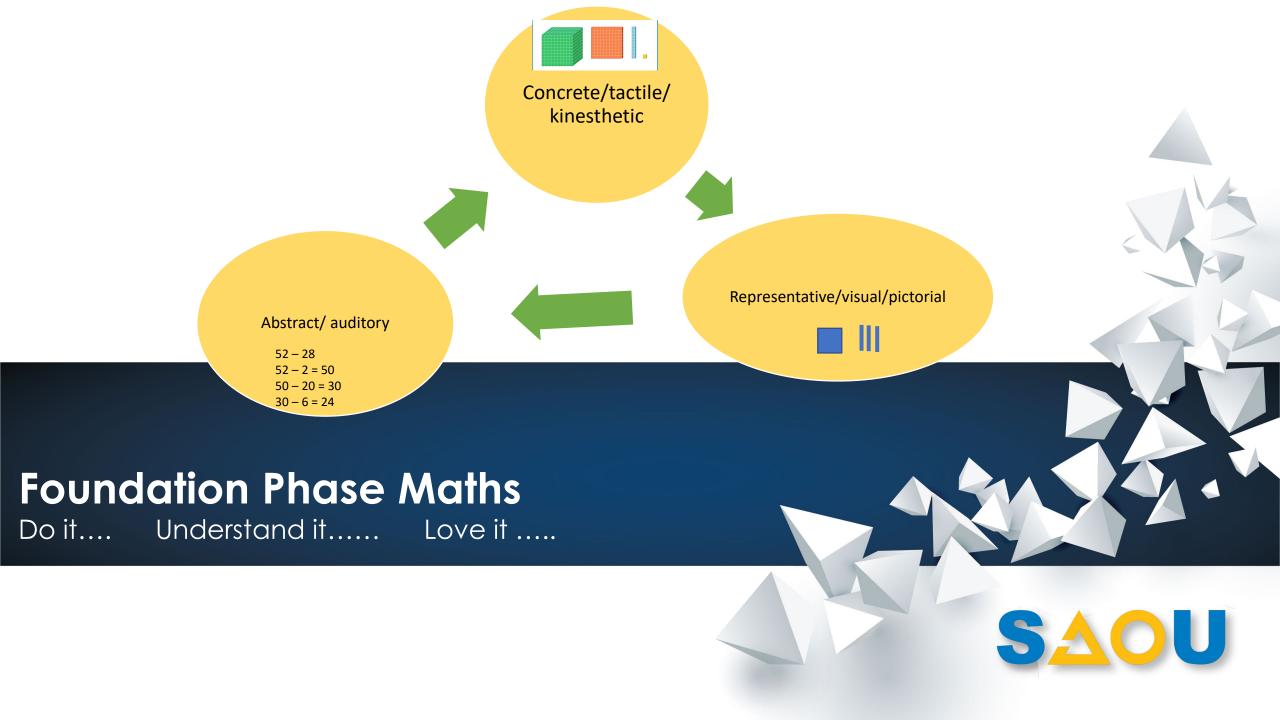
- Assessment for Learning (AfL) is strategically planned for and completed alongside teaching.
- The teacher is always cognisant of the learning taking place and keeps the record for the learner's progress.
- Continuous assessment prevails.
- The onus is on the teacher to teach well and to observe if meaningful learning has occurred.
- Can the learner communicate his/her understanding of the concepts learnt and can the learner apply his /her knowledge of the concepts learnt properly.
- The teacher is vigilant and records the observations made.



SBA

- **Formal assessment** must be fair, reliable and valid. The assessment must reveal what the learner knows, the onus is on the teacher to:
- Teach and assess well for learning gains. (AfL)
- Use and appropriate form of assessment so that the learner's knowledge and skills can be gauged and the evidence of the learner's achievement can be justified at all times.





3. Conclusion



- Cognisance is taken of the holistic development of the teacher.
- Teaching time lends itself to the integration of concepts across and within the content areas.
- If taught well this will support deeper insight of the Maths concepts.
- Good number sense is the key building block for further Mathematics development in the primary school.
- Number sense is and intuitive process that is internalised by the learner once the learner understands the concepts taught.
- Learners must be encouraged to do/demonstrate, talk about and record" their mathematical thinking.













