

# **Foundations For Learning**

**Foundation Phase  
Numeracy  
Lesson plans**

**First term**

**Grade 1**

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## INTRODUCTION

### BACKGROUND

The Foundations for Learning Assessment Framework which was distributed to all schools during 2008 contained “milestones” for each grade. These milestones explain the content (knowledge, concepts and skills) embedded in the Learning Outcomes and Assessment Standards of the NCS, and indicate the expected level of achievement of learners at the end of each term. This document contains **Lesson Plans** based on the milestones.



**How do these Lesson Plans link to the Curriculum and the Foundations for Learning Campaign?**

These **Lesson Plans** have been developed using:

- The NCS Learning Outcomes and Assessment Standards as the starting point
- The Milestones and
- Government Gazette 30880 of 14 March 2008, which outlines the Foundations for Learning Campaign, details the minimum expectations for the teaching of Literacy and Numeracy (Languages and Mathematics) as well as providing timetabling and resourcing suggestions.

The following **table** provides an example of how these three documents are linked for Grade 1 Numeracy:

<b>Learning Outcomes</b>	<b>Milestones for Numeracy Grades 1- 3</b>	<b>Government Gazette: Daily Teacher Activities for Numeracy Grade 1</b>	<b>Grade 1 time allocation in Gazette</b>
LO 1 Numbers, Operations and Relationships	All Learning Outcomes covered each term	• Counting with whole class every day, usually at the beginning of the lesson	5 minutes
LO 2 Patterns, Functions and Algebra		• Oral Mental maths and Number Sense development	10 minutes
LO 3 Space and Shape (Geometry)		• Group teaching:	25 minutes per group :- 10 minutes and 15 minutes
LO4 Measurement		- Concept development - Problem solving and investigation	
LO 5 Data Handling		• Classroom organisation, supervision of independent work	15 minutes



**How do I use the time allocated for Numeracy?**

The Government Gazette No 30880 provides the following breakdown of the formal teaching allocations for Numeracy and Literacy in the Foundation Phase per day in line with the NCS Policy:

Grade	Daily total for Numeracy	Daily total for Literacy	Home Language Literacy	First Additional Language Literacy	Allowance should be made for reading for enjoyment for 30 minutes per day
Grade 1	1 hour 30 minutes	1 hour 50 minutes	1 hour 40 minutes	10 minutes	
Grade 2	1 hour 30 minutes	1 hour 50 minutes	1 hour 30 minutes	20 minutes	
Grade 3	1 hour 45 minutes	2 hours	1 hour 30 minutes	30 minutes	

The Gazette further guides teachers by providing examples of the activities that can be done in each section contained in the Daily Teacher Activities, together with a time allocation.

However in practice:

- Although this is Numeracy time, language development is vital – particularly mathematical language. It is for this reason that basic concepts (colour, shape, size, etc.) - which in the past were always associated with Mathematics – now appear in the Language Learning Area under LO 5: Thinking and Reasoning. Learners need language in order to develop concepts. Nevertheless, these concepts have been included in the Numeracy milestones as they link with many of the Mathematical Assessment Standards e.g. patterns.
- Counting is extremely important in the development of number concepts and learners should count with physical objects (rational counting) and without physical objects (rote counting) every day.
- Because numeracy concepts need to be developed and consolidated in a variety of contexts, certain activities often go together. For example, counting and patterns are interrelated and learners need to be given the opportunity to develop this understanding through the activities provided.
- While the teacher is working with a group of learners developing new concepts at their level of understanding, the rest of the learners will be working on their own doing consolidation and revision activities of concepts learnt. This means that the independent and written work and the work done with the teacher in the group may not be the same.

- It is unnecessary to “*teach to the clock*” and stick rigidly to the times on a daily basis. On some days for example you may want to spend longer on a counting activity and less time on mental work. On another day you might shorten the written activities in favour of a longer oral session. However over the week you should try to balance the times to cover the allocations.
- Activities can be done in a different order. For example, counting can be linked with the group sessions and may take place after the mental maths time. It is good to also vary the lessons.
- Look for opportunities to integrate, both within Numeracy (Mathematics) and across the other two Learning Programmes (Literacy and Life Skills). A number of the activities can be linked to a theme / context so there are many overlaps with the other Learning Programmes. Integration then takes place naturally.



How, then can these lesson plans help teachers?  
What do they provide?

These Lesson Plans are intended to assist teachers to pace their teaching, give them guidance when planning their assessment tasks and provide suggestions to enrich teaching practice. If you follow these lessons systematically you will cover the curriculum and reach the milestones for Grade 1.

**However they are not intended to be prescriptive and teachers are not expected to abandon good practice in order to blindly follow the plans.**

### The Plans provide:

- **An overview of the term**, together with an **Assessment Overview**, broken into weekly units. The overview covers 10 weeks of work and provides a useful termly checklist. (You might want to compare this with your Work Schedule and your Phase Learning Programme and ask yourself questions such as: *Does your Work Schedule include similar content? Do you reach approximately the same point at the end of each term? How does this compare to your Assessment Plan?*) .
- **An overview for each week** This helps you to see the content covered in the week’s lesson plans, to see how it is paced and to make use of specific lesson plans. Learning Outcomes and Assessment Standards have been included. The latter have been numbered as AS1, 2, 3 etc. No sub-bullets are indicated.

- **Individual lesson plans for each week** There are **10 weekly Lesson Plans** for each term. Each week's Plan provides **Daily Activities** for the **different components of Numeracy**, corresponding to the milestones. These are.
  - **Counting**
  - **Mental maths and Number sense development**
  - **Group teaching : concept development and problem solving**

The lessons for the week are broken down into daily steps providing teachers with a breakdown of content and suggestions for implementation. *However the plans are not prescriptive and allow you to use your own way of presenting the lesson. They are rich in practical ideas drawn from best practice and as such can enrich implementation in the classroom.*

- **Suggestions for the Assessment Tasks** for each term are shown at the end of Week 3 (Assessment Task 1), Week 6 (Assessment Task 2) and Week 9 (Assessment Task 3)

### ADAPTING THE LESSON PLANS

Remember: Every class and learner is unique. There can be no “one size fits all”. Learners progress at different rates and learn in different ways, and you, as the class teacher, are best able to pace teaching and learning to the needs of your learners. **You can introduce new material in another order as long as you reach all the milestones for Grade 1.** This means that you are free to follow your own sequence as long as it is systematic and thorough.



**How do teachers marry the activities in the Learner's Books and their own material with these Lesson Plans? Do the Lesson Plans replace the Learner's Books and Teacher's Guides?**

These Lesson plans should be used together with approved Teacher's Guides, Learner's Books and Work Books. They are not intended to replace the Teacher's Guides and Learner's Books or the material you have developed yourself. The Lesson Plans do not provide actual worksheets, workcards or other material for learners. They may, however, provide examples of the kind of work that can be done

Approved Teacher's Guides should pace the work for the year so that all the Learning Outcomes and Assessment Standards are covered. There will therefore be similarities between the Teacher's Guides and Learner's Books and these Lesson Plans. However the order of content may be presented somewhat differently so you will need to compare and marry the content. **Remember that ultimately you are the decision maker.**





## NUMERACY

This section explains the key points of each component.

### COUNTING

Most learners come to school at the beginning of grade 1 already able to rote count to at least 10. This does not mean, however, that the child understands the value numbers to 10. Rote counting, that is counting without objects, is important in Grade 1 as it teaches the learners the sequence and language of the numbers. Do not limit the learners in their rote counting exercises – let them count as far as they can. At the same time you need to expose your learners to rational counting – that is counting with objects. This counting out of objects is an essential skill and entails co-ordinating a number word with an object to be counted. Learners with eye-hand co-ordination difficulties, or those not able to do one-to-one correspondence easily, might battle at first with counting out objects. Therefore the objects to be counted are very important as a learner can only make sense of counting if he or she finds it sensible to count the objects. In other words, objects that do not belong together naturally can be the cause of counting difficulties early in the year. For example, if your counters are a mixture of shapes and colours, a learner may say there are 4 red counters and 3 blue counters rather than counting 7 counters. Counting out should always be in context. It is also a good idea to ask the question “How many” when starting a counting out exercise e.g. how many steps from the table to the door? How many birds are in this picture? How many counters are in this packet? Etc. An essential part of counting is to first estimate and then to count and verify the number.

Remember, the attention span of young learners is very short. Therefore, although counting is done daily, limit the time for this activity. Rather than one long session of counting, spend a few minutes throughout the day counting – count the number of steps to the toilet, how far can you count before everyone is lined up, count the number of boys in the line, and so on. Counting rhymes are wonderful and learners enjoy this type of activity.

### MENTAL AND NUMBER SENSE ACTIVITIES

What is the meaning of number sense? And what is numerosity?



Before starting to teach mathematical concepts, learners need to follow an **emergent numeracy programme** to develop listening skills, auditory / visual discrimination and memory, gross / fine motor and eye-hand coordination, body image, laterality and figure-ground perception. Annexure 1 explains these terms and provides examples of activities. You will find learners at different levels of readiness in your class. Your programme should meet the needs of all the learners i.e. learners who

are ready to move on should not be kept at the same level as learners who are still developing these essential skills.

Many teachers are in a hurry for their learners to know facts 'off by heart'. However, knowing facts 'off by heart' is no indication that the learners understand what they are doing, or that they will be able to use these facts in different contexts. It is much, much more important that you design activities which will help your learners develop a **sense of number** because it is this sense of number that learners use when trying to build up an understanding of computational strategies. You cannot teach number sense, you can only help learners acquire it by exposing them to various activities which allow learners to construct knowledge for themselves. Encouraging learners to reflect on what they are doing and then talking about it, helps these learners to develop a sense of number.

Different kinds of knowledge (physical, social and logico-mathematical) form part of one's number sense and so it is important that these are clearly reflected in your teaching programme.

- *Physical* knowledge is the knowledge that the learner acquires from physical objects – so you can see how important it is to use counters and objects and to count out, and not to just rote count!
- *Social* knowledge can only be learnt through interaction with people - and number names and symbols are an example of social knowledge acquired by learners.
- *Logico-mathematical* knowledge refers to the type of knowledge that learners construct for themselves e.g. noticing the pattern of the number names (forty-one follows on forty) goes beyond social knowledge of the number names. The most important aspect of *logico-mathematical* knowledge which the young learner has to construct regarding numbers is **numerosity**. This means to have a feeling for the “how many” of a number – to build up a profile of the number so as to know as much as possible about a number.

Learners pass through three developmental levels – counting all, counting on and breaking up numbers. Again, you cannot teach these levels, you can only support the learners' development by providing appropriate activities. By doing this, mental arithmetic skills will develop naturally as learners start shortening their methods for solving problems – fewer steps will be written down as more calculation is done mentally. Do not neglect geometry and measurement – geometrical activities and word problems with geometrical contexts are very much part of number sense development and problem-solving.

## PROBLEM SOLVING



Do I have to teach my learners to solve problems?

There are many different ideas as to what problem solving is and its value for young children. However, one of the focal points of the Mathematics Learning Area is that learners be exposed to problems on a regular basis. It also states that in the Foundation Phase:-

*“the number concept of the learner is developed through working with physical objects in order to count collections of objects, partition and combine quantities, skip count in various ways, solve contextual (word) problems and build up and break down numbers.” (p8)*

But what exactly is a problem? A definition is “A problem is a task that requires the person solving the problem to use knowledge, understanding and skills that he/she has acquired from other activities and to apply these to the new and unfamiliar situation and come up with a solution”.

When you read the Assessment Standards you will notice that it is stated that ‘learners can perform calculations ...**to solve problems**’, and ‘**solves money problems**’, and ‘**solves and explains solutions to practical problems** that involve equal sharing and grouping..’ By placing information in context, problem solving becomes a powerful activity and is one of the main vehicles for developing number sense. Therefore you need to constantly challenge learners with realistic, real-life problems without first teaching prerequisite tools or operations. You will never again teach that “the word ‘altogether’ means you must add, and that ‘how many are left’ means you must take away”! This means learners should be able to solve problems using all four operations before they even know what they are! In order to fulfill the purpose of word problems, learners should regularly be given problems which are new to them and for which they do not possess routine methods of finding the answer. The objective of giving word problems is to enable your learners to develop new knowledge, take note of how others solve the problem and to reflect on their own thinking.



How do I give my learners sufficient practice in problem solving?

No one can become a proficient problem solver if they are only exposed to problems once a term! Learners need to be exposed to problems as often as possible. The lesson plans give an indication

as to how you can manage this every second day. Care must be taken not to concentrate on one particular type of problem, or problems relating to only one operation. Each problem must be interpreted on its own. Exposing learners to a variety of problems enables them to develop their ability to interpret problems, and this helps to give meaning to the concept of the operations. Annexure 2 provides a list of the different problem types. You will need to adapt the names and the numbers to suit your learners. Use the list as a guide and make up your own problems which suit your context. Although you can ask the whole class the same problem at the same time, most teachers have found that it is more manageable to do problem solving during Group teaching time.

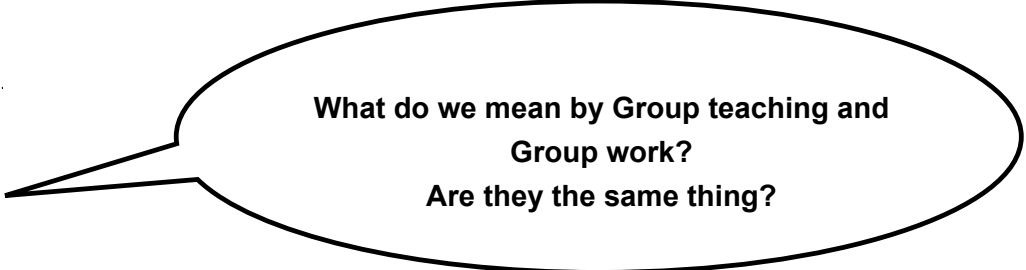


**What do the rest of the class do during Group teaching time?**



Taking two or more groups will take at least half an hour for each group every day, perhaps a bit longer. Learners not busy with the teacher need to be involved in independent written or practical activities. These activities need to be such that learners know what they have to do and be able to do it without interrupting the teacher, asking for help. Training learners to get on with work on their own takes considerable time and patience. The learners need to know which tasks they have to do and, possibly, the order in which they have to complete them. The level of difficulty of the tasks should be such that they don't need help from you. If you think your learners will battle with a particular task – wait until you have time to help them or your group sessions will be continually interrupted.

During the first term the tasks have been kept simple, short and quite repetitive. Often learners will be expected to complete 2 or at the most 3 tasks per day, copying numbers from the board and drawing a picture, completing a readiness activity, or doing a dot-to-dot activity. It helps to have some routine initially so that the order of tasks remains the same and learners gain confidence in working through more than one activity independently, rather than having to continually ask the teacher, “What do I do next?”

**What do we mean by Group teaching and Group work?  
Are they the same thing?**

### **GROUP TEACHING OR GROUP WORK**

Learners come to school with very different levels of readiness for formal teaching and learning due to variations in age, sex, ability and attendance at a grade R or pre-school. Some children have special needs that should be identified in the first years of school so that differentiated learning can take

place at an early age. Teaching and working in groups is a powerful tool to cater for all these diverse needs. Group teaching and group work are also ideal for multi-grade and multi-phase classes.

**Group teaching** means different things to different people. However, it is not just rearranging the desks into groups. You can either:

- teach learners in same ability groups so that they are taught at a pace that is comfortable for them and their learning is scaffolded. The quicker learners can be challenged and extended and the weaker learners can benefit from more time, support and attention in a small group situation. The learners do not all need to be at the same stage of learning and the activities given to the learners can be varied to meet their needs. Those with special needs can be supported in this way.

To do this you will need to divide the learners into same-ability groups for certain activities. This works very well as it accommodates the range of abilities in a class – specially large classes. Most teachers find that they can comfortably work with 3 or 4 groups in the class

OR

- teach the whole class the same lesson BUT differentiate the activities by giving DIFFERENT tasks to either individuals or groups of learners; these tasks can either be at the same level or at varying levels of difficulty. This works well for collaborative learning, small classes and where there are not huge differences between the levels of learners.

Many teachers do not differentiate between the learners' ability levels and do group teaching because they think that they will now have to plan three lessons instead of only one! However, group teaching offers great benefits for everyone in the classroom. You deal only with a group of about 10 learners at one time, while the learners learn self-discipline and take responsibility for their own learning. For group teaching to be successful, you will have to be well organized and know exactly what outcome you are expecting for each group that day. The lesson plans will guide you if you have never attempted group teaching before.

### **Group work**

Group work differs from group teaching in that during group work the whole class is engaged in the same activity at the same time. Groups for these lessons are generally randomly chosen and are mixed ability groups. The idea is that each group will work on one aspect related to the main topic and at the end of the lesson they will present their findings to the rest of the class. As each group adds their information, a whole picture of the topic emerges. This type of work is suited to aspects such as measurement and data handling.

**RESOURCES**

The Government Gazette No 30880 gives a list of recommended resources for Numeracy which schools should endeavour to provide. In addition to exercise books, Learner's Books, Workbooks and basic stationery which most schools already provide, the following are highlighted as being especially important for Grade 1:

- Counters
- Number squares/grids
- Number dice
- Small individual abacus
- Small white boards and pens, or small chalk boards and chalk
- Coloured sticks, beads and threads
- Shapes









During the first term there will be a focus on developing learners' number skills through participating in a short Readiness programme to establish basic concepts, the teaching of numbers and number names, developing number sense and exposing learners to problem solving. By the end of the term aim for all your learners to be able to:

- Know the numbers, number names and relationship of the numbers 1 to 6
- Recognise the symbols for addition, subtraction and 'is equal to'
- Participate in problem solving activities

**NB:** Addition and plus use the sign  $+$  and mean the same thing.

Subtraction, minus and 'take away' use the sign  $-$  and mean the same thing

'Is equal to' uses the sign  $=$  and means that what is on the one side of the sign balances with what is on the other side. It DOES NOT mean that the answer is coming!

**OVERVIEW OF ASSESSMENT TASKS**

<b>ACTIVITIES THAT WILL BE USED FOR ASSESSMENT</b>	
<b>WEEK 1</b>	
<b>WEEK 2</b>	Recorded activity recognizing colours Practical activity recognizing size
<b>WEEK 3</b>	Practical activity recognizing shape Whole class development of a graph using colours
<b>ASSESSMENT TASK 1 COMPLETED</b>	
<b>WEEK 4</b>	
<b>WEEK 5</b>	
<b>WEEK 6</b>	Practical activity counting out objects to 10  Practical activities dealing with shape, size, colour and vocabulary Oral and practical activity dealing with position Practical activity dealing with recognition of 3-D objects Whole class development of a graph Recorded activity dealing with one to one correspondence
<b>ASSESSMENT TASK 2 COMPLETED</b>	
<b>WEEK 7</b>	
<b>WEEK 8</b>	
<b>WEEK 9</b>	Oral and practical activity using a number line for counting  Written and practical activities dealing with ordinal value Practical activity counting out objects Written activity dealing with numbers, number names and the relationship between the numbers 1-6
<b>ASSESSMENT TASK 3 COMPLETED</b>	
<b>WEEK 10</b>	Practical activity dealing with estimation Problem solving activities during Group teaching including recognition of the signs +, - and =

The criteria for the assessment are drawn from the Learning Outcomes, the Assessment Standards and the Milestones

## **Suggestions for orientating learners entering school for the first time**

Grade 1 is such an exciting year for young children. They enter school with great expectations – they are going to learn! However, the first few days at school are crucial. During the first week the tone is set for the rest of the child's school life. You need to make sure that this first school experience is a really good one.

One of the ways to do this is to ensure that teaching and learning starts on the very first day. Each child must go home after the first day and be able to say "I learnt to read today!" and then proudly read the one word s/he learnt that day. They must also say "I learnt maths today" and show the parents how for example they can write the numeral "1".

It is also very important that school beginners are orientated towards school before starting formal education. For example, you need to make sure that the child's dominance is established, that basic perceptual skills are developed, and so on. Please read the page on the basic skills used in a Readiness programme. There you will find a brief description of what a child should be able to do before being ready to cope with the demands of formal schooling. Therefore in the first two weeks you should be using a School Readiness Programme to establish the emotional, social and cognitive levels of your learners. You will then know which children are ready to move on to more formal lessons and which children need a longer orientation to school. This is especially important for those children who have been disadvantaged by social, emotional and political circumstances so as to release their potential. For example, children learn to distinguish between sounds, forms, colours and sizes long before they come to school. This is the beginning of mathematics. Playing with a ball, for example, helps the child to develop knowledge of that particular shape and its properties. In the same way, by helping to set the table the child is learning one-to-one correspondence. By spending time now (possibly more than just two weeks) ensuring that all learners have the basic concepts and skills necessary to begin formal learning, you make sure that your educational outcomes are achieved. All concept formation is based on language and so we can say that by learning language, the child is beginning to form concepts.

A school readiness programme on its own is not enough to ensure the learning occurs. You also need to consider:

- the physical aspects of your classroom – Is it clean? Is it safe? Is the furniture suitable? Are there pictures on the wall? Is the classroom welcoming? etc.
- a child's name is important to them – it identifies who they are. All children should have their own name card at the place where they must sit, as well as their name on a piece of cardboard which can be hung around their necks. Then, when you talk to a child, you can call him/her by his/her name.
- having clearly identifiable areas in the room – book-shelves, place to keep school bags, a nature/interest table, a place where books and pencils are kept, a carpet or mat (or space) where children can sit as a group (for example, when they do oral work at the beginning of the day, or when you read a story at the end of the day)
- establishing a classroom routine during the first week. This means that although there are lessons for Literacy and Numeracy, the focus will be on helping children develop a routine. Lessons should be short and cognisance must be taken of the limited attention span of children at this time of the year.
- keeping a balance between whole class and small group activities. Learning to work as a group is an essential skill and should be introduced on the first day i.e. seating the children in groups and letting them work in a group.
- looking at the child holistically – physical development (e.g. gross and fine motor muscle development), social and emotional development (e.g. does the child make friends?), language development and cognitive development.

**DEFINITIONS OF SOME CORE TERMS FOR SCHOOL READINESS**

<b>Word</b>	<b>Definition</b>
1. Perception	Using the senses to acquire information about the surrounding environment or situation
2. Visual perception	Acquiring and interpreting information through the eyes. Accurate visual perception enables the child to read, write and do mathematics.
3. Visual discrimination	The ability to see similarities, differences and details of objects accurately
4. Visual memory	The ability to remember what the eyes have seen and the correct sequence in which things have been perceived
5. Auditory perception	Acquiring and interpreting information through the ears. Accurate auditory perception enables the child to give meaning to what is heard
6. Auditory discrimination	The ability to hear similarities and differences in sounds
7. Auditory memory	The ability to remember what the ears have heard and the correct sequence in which things have been perceived
8. Gross motor movements	Movements of the large muscles of the body e.g. walking, kicking, throwing
9. Fine motor movements	Movements of the small muscles of the body e.g. tasks that involve using the fingers like holding a pencil or tying bows
10. Eye-hand co-ordination	The hands and eyes working together when performing a movement e.g. catching a ball
11. Body image	A complete awareness of one's own body i.e. how it moves and how it functions
12. Laterality	Showing an awareness of each side of the body e.g. which hand is waving
13. Dominance	Preferring to use one hand or side of the body i.e. either right or left dominant
14. Crossing the mid-line	Being able to work across the vertical mid-line of the body e.g. being able to draw a line from one side of the page to the other without changing the tool from one hand to the other
15. Figure-ground perception	Being able to focus attention on a specific object or aspect while ignoring all other stimuli. The object of the attention is therefore in the foreground of the perceptual field while all the rest is in the background e.g. being able to read one word in a sentence
16. Form perception	The ability to recognise forms, shapes, symbols, letters, etc. regardless of position, size, background, etc. e.g. can recognise a circle because of its unique shape
17. Spatial orientation	The ability to understand the space around the body, or the relationship between the object and the observer e.g. the hat is on my head

Your time table for the first three days of school may look something like this:

7.30 – 8.30	Welcoming learners as they arrive, showing them where to sit, giving them their name cards to wear. Make sure there is a picture for them to colour in while you are busy with new arrivals.
8.30 – 9:00	<b>Oral:</b> <ul style="list-style-type: none"> <li>• Class discussion: day, date.</li> <li>• Focused listening activity (practical using action songs and fun games)</li> </ul>
9:00 – 9:15	<b>Toilet routine:</b> <ul style="list-style-type: none"> <li>• Line up the learners and take them to the toilet</li> </ul>
9:15 – 9:30	<b>Handwriting:</b> <ul style="list-style-type: none"> <li>• Fine motor coordination activities</li> </ul>
9:30 – 10:00	<b>Numeracy:</b> <ul style="list-style-type: none"> <li>• Weather chart</li> <li>• Discuss the routines and “rules” of the classroom – toileting, eating, play etc. and why there is a need for rules.</li> <li>• Readiness activity : visual discrimination</li> </ul>
10:00 – 10:30	PLAY TIME Learners go outside and eat their food
10:30 – 10:40	<b>Toilet routine</b> <ul style="list-style-type: none"> <li>• Take the learners to the toilet and let them wash their hands.</li> <li>• Line up girls and boys, shortest to tallest</li> </ul>
10:40 – 10:55	<b>Phonics:</b> <ul style="list-style-type: none"> <li>• Singing/acting out repetitive action rhyme/song</li> </ul>
10:55 – 11:30	<b>Reading:</b> <ul style="list-style-type: none"> <li>• Teach one or two sight words per day using flashcards and games</li> <li>• Readiness activities :visual discrimination</li> </ul>
11:30 – 12:15	<b>Life Skills- Outdoors:</b> <ul style="list-style-type: none"> <li>• Physical development : gross motor movements</li> </ul>
12:15 - 12:45	<b>Tidy up and Story:</b> <ul style="list-style-type: none"> <li>• Tell / read / reread short stories</li> </ul>

For the first two weeks the learners are settling into the school and adapting to the formal routine. Therefore specific Literacy, Numeracy and Life Skills times may not be adhered to during this period. This time-table will help you to plan activities for the first 3 days, looking at the learner holistically. You will find that both the Literacy as well as the Numeracy Lesson Plans for Week 1 have included activities which can be done in these three days, although this Timetable provides a guide as to what to do.

Your time table for the first full week will look something like this:

8.00 – 8:30	<p><b>Oral:</b></p> <ul style="list-style-type: none"> <li>• Class discussion: day, date, special happenings</li> <li>• Learners tell daily news/teacher records either class or one learner’s news on the board</li> <li>• Informal revision of sight words taught so far</li> <li>• Focused listening activity (practical using action songs and fun games)</li> </ul>
8:30 – 8:40	<p><b>Toilet routine:</b></p> <ul style="list-style-type: none"> <li>• Line up the learners and take them to the toilet</li> </ul>
8:40– 9:10	<p><b>Handwriting:</b></p> <ul style="list-style-type: none"> <li>• Patterns and fine motor coordination activities</li> </ul>
9:10 – 10:00	<p><b>Numeracy:</b></p> <ul style="list-style-type: none"> <li>• Weather chart, birthday chart</li> <li>• Marking the register</li> <li>• Oral : counting, concept development</li> <li>• Readiness activity: visual discrimination</li> </ul>
10:00 – 10:30	<p>PLAY TIME</p> <p>Learners go outside and eat their food</p>
10:30 – 10:40	<p><b>Toilet routine</b></p> <ul style="list-style-type: none"> <li>• Take the learners to the toilet and let them wash their hands.</li> <li>• Line up girls and boys, shortest to tallest</li> </ul>
10:40 – 10:50	<p><b>Phonics:</b></p> <ul style="list-style-type: none"> <li>• Phonemic awareness activity: initial sound recognition</li> <li>• Singing/acting out repetitive action rhyme/song</li> </ul>
10:50 – 11:30	<p><b>Reading:</b></p> <ul style="list-style-type: none"> <li>• Readiness activities: figure-ground perception</li> <li>• Teach / revise 5 – 10 words using flashcards and games</li> <li>• Show and discuss around theme: <i>Me, Myself</i> possibly using a conversation poster, writing key words, sentences on card</li> </ul>
11:30 – 11:50	<p><b>Life Skills - Outdoors:</b></p> <ul style="list-style-type: none"> <li>• Physical development: gross motor movements/body image</li> </ul>
11:50 – 12:15	<p><b>Writing:</b></p> <ul style="list-style-type: none"> <li>• Readiness activities</li> <li>• “My Body” worksheet</li> <li>• Drawing myself and writing “I am...”</li> </ul>
12:15 - 12:45	<p><b>Tidy up and Story:</b></p> <ul style="list-style-type: none"> <li>• Read and discuss a Big Book, using it to demonstrate reading</li> <li>• Tell / read / reread short stories</li> </ul>

For the first 2 weeks the learners are settling into the school and adapting to the formal routine. Therefore specific Literacy, Numeracy and Life Skills times are not adhered to during this period. This time-table will help you to plan integrated activities for the second week to ensure that teaching and learning takes place. You will use the lesson plans for Week 1 from both Literacy and Numeracy during these first eight days.





**FIRST TERM: WEEK 1**

<b>COMPONENT</b>	<b>MILESTONES</b>	<b>DAY 1</b>	<b>DAY 2</b>	<b>DAY 3</b>	<b>DAY 4</b>	<b>DAY 5</b>
<b>COUNTING</b> LO 1 AS 2,	<ul style="list-style-type: none"> <li>Counts to 20</li> </ul>	Daily: <ul style="list-style-type: none"> <li>Rote count to at least 20</li> <li>Count body parts</li> </ul>				
<b>NUMBER SENSE AND MENTAL</b> LO 1 AS 3, 7 LO 2 AS 1	<ul style="list-style-type: none"> <li>Basic concept : colour</li> <li>Knows, reads and writes number names and symbols from 1-6 and explores their relationship</li> <li>Solves problems, and explains solutions, using concrete objects and drawings using numbers to 10</li> </ul>	Daily: <ul style="list-style-type: none"> <li>Mark the register</li> <li>Weather chart</li> <li>Basic concept : colour</li> <li>Readiness activities : visual discrimination</li> <li>Oral word problems</li> </ul>				

## Week 1 : Whole Class

WEEK 1	WHOLE CLASS COMPONENT (Counting and Mental/Number sense)
<p><b>Notes to the teacher:</b></p> <ul style="list-style-type: none"><li>• <b>Daily activities</b> indicate activities that should be done every day. The specific concepts being developed are indicated every day e.g. Day 1.</li><li>• Marking the register and talking about the Weather chart and Birthday chart are daily activities involving incidental learning and are usually part of the Literacy Oral component. They are placed here as Numeracy concepts are also being dealt with.</li><li>• Although this is Week 1, lessons have been prepared specifically for the first few days at school leading into the 2<sup>nd</sup> week.</li><li>• <b>In the first months of school it is better to do numeracy in a number of small chunks of time throughout the day. This is because children cannot concentrate for long periods at a time. It is very important that learners do not come to think that “maths” is uncomfortable, tiring or boring. This is why you will find a number of numeracy times indicated for each day. The activities for the first few days set the pattern for the whole year.</b></li><li>• <b>As well as the daily activities, introduce the basic concept of colour. This week you will deal with the three primary colours. Do each colour on a different day and then revise all three colours together. You will still be working with the whole class at once.</b></li></ul>	
<b>DAILY ACTIVITIES</b>	
<b>COUNTING AND MENTAL/NUMBER SENSE</b>	
<p><b><u>Daily Activities.</u></b> <i>(Done at different times during the day)</i></p> <ul style="list-style-type: none"><li>• Once you have taken the register, and each child has stood up and said “present”, let the learners count the number of learners that are present.</li><li>• Ask either all the girls or all the boys to come to the front of the classroom and make a line .Who is first in the line? Who is last? Let the learners help you count the number of girls/ boys.</li><li>• Count different body parts on different days e.g. how many eyes? How many ears? What else are there two of? (hands, feet, etc.)</li><li>• Discuss the weather and let learners change the pictures prepared by the teacher on the weather chart.</li><li>• If possible, have a set of pictures representing the different times of the day e.g. play, toilet, numeracy, reading, story, and so on. Choose three or four different learners each day to sequence the pictures according to the routine of the day.</li><li>• Do an activity where learners have to write the number 1 and draw one picture. Gradually introduce the word “one”. Once learners know the numeral, picture and word for 1, provide different activities where they match them.</li><li>• Do a different written activity each day focusing on either visual discrimination or hand-eye co-ordination</li></ul>	

**DAY 1** (to take no more than 30 minutes)

- Most children come to school already being able to count by saying the numbers, so for the first 2 weeks let the whole class simply count as far as they can. It develops the learners' counting vocabulary.
- Ask each learner to say their name and, as they do, you mark the register. Ask if they think there are more boys or more girls in the class.

**Tip:** *Many children come to school not knowing the name on their birth certificate. Parents call them by another name, or a nick-name, and tell them a different name which is to be their school name! Make sure the name you call them is the name they know to be theirs.*

- Explain that every day they will record the weather on a weather chart. Once the learners have decided what the weather is and a learner has put up the correct picture for the day, the learners say what day of the week it is. Talk briefly about what the weather is like at this time of the year. Is it hot or cold now? Do we need to put on warm clothes at this time of the year? Ask if the learners know the season (summer).
  - Discuss the general order of the day.
  - Discuss the routines and 'rules' of the classroom.
- Tip:** *It is necessary to establish a routine from the first day as this makes the child secure. It is also important that right from the beginning learners know what is expected of them and how they are to behave.*
- Ask learners to show you 1 finger, 1 head, 1 leg and so on. Write the number 1 on the board, discussing the starting and ending point. Using their fingers, learners write the number 1 in the air, on the desk, on their leg, and so on. Give them a piece of paper on which they practise writing the number 1.
- Tip:** *This piece of paper can be taken home to show what they learnt on their first day at school.*
- Give each learner a dot-to-dot picture which they complete and colour in.

**DAY 2** (to take no more than 30 minutes)

- Ask the learners if they can find anything red in the classroom. Choose children to go to the red items and name them. Do the learners have anything red on or in their bodies? Encourage learners to identify blood as being red. What happens to our eyes when they are sore or tired or when we have been crying? What colour do they go? You can broaden your questioning by asking, for example: *What red things can we see in the garden? Do you have red things in your home? What red things can we see in the street? When can the sky be red? (sunset and sunrise).*

Encourage learners to talk of their feelings about red: *What red things do you like very much?*

*What red things do you not like? How does red make you feel? Do you feel happy or sad when you look at red? Does red make you feel hot or cold?*

Ask learners to take a red crayon out of their crayon box and hold it up. Tell them they are going to draw a picture only using the colour red. Give each learner a piece of paper on which to draw their red picture.

Remember to write each child's name on the top of the left hand corner of the page. Print the word 'red', using a red koki on a piece of cardboard and prestik this on the wall. Display the learners' pictures under this word.

*Tip: Detail is provided for the colour "red" and you can follow the same format when dealing with yellow and blue.*

**DAY 3** (to take no more than 30 minutes)

- Expose learners to oral word problems every day. Put the learners into groups of 4. Give each group a pile of counters, a piece of paper and crayons. Give them an oral word problem. Let the group discuss the problem and work out the solution. Encourage them to draw the way in which they came to an answer.

*Tip: Do not be afraid to ask learners to solve a problem. They come to school already being good problem solvers! You are not asking them to write down sums. You are giving them a situation and asking them to solve it through talking to each other, using concrete apparatus, drawing pictures and then explaining how they solved the problem and what their solution is. Ask **one** of the following each day :*

- *There were 10 fish in the bowl. 2 died and 1 jumped out. How many fish were left?*
- *Jack and his two friends each had a bicycle. How many wheels were there?*
- *Mom bought six sweets and gave them to her three children. How many did they each get?*
- *Granny baked some cakes. She sold 2. Now she has 4 cakes. How many cakes did she bake?*
- *Dad has 2 blue shirts and 2 red shirts. How many shirts does Dad have?*

**DAY 4** (to take no more than 30 minutes)

- Play a game. Make sure that you have a picture with red in it, near the front of the classroom. You also need a picture with something red in it, near the back of the classroom. Tell the learners that you can see something red near the front of the classroom. Ask a volunteer to go and point to this. Now tell the learners that you can see something red near the back of the classroom. A volunteer can go and point to this.

**DAY 5** (to take no more than 30 minutes)

- Arrange about 6 learners in the front of the classroom: boy/girl/boy/girl/boy/girl. Explain that these learners make a pattern. Who would come next if we wanted to make the pattern longer? Let the learners suggest the answer- boy/girl/boy/girl. Choose more learners to make the pattern longer. Get the learners to say the pattern: boy/girl/boy/girl etc. Arrange a further 6 learners to make the following pattern: tall/ short/ tall/ short/ tall/ short. Ask what pattern can they see. If the learners cannot see the pattern, you may need to help them a little. Once the pattern has been identified, ask the learners to help make the pattern longer....tall/ short/ tall/ short.

<b>ASSESSMENT</b>	<p><b>Formal</b> : No formal, recorded Assessment</p> <p><b>Informal</b>: Unrecorded assessment of learners oral responses and ability to participate.</p>
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### Tips

#### **1. Counters**

- A variety of things can be used as counters in the classroom e.g. plastic bottle tops, metal tags off soft drink cans, dried beans, matchsticks, stones, bread tags, buttons, etc.
- For at least the first four weeks in *Grade 1*, the counters for counting activities should all be the same in colour and size e.g. child 1 has red plastic bottle tops, child 2 may have white bread tags, child 3 may have metal tags from cans. This allows the learner to count all the objects and not to categorise objects before counting e.g. 3 red bottle tops and 2 metal tags.
- It is useful to store counters in groups of 10 in small bags e.g. bank bags, material bags, envelopes, etc. This helps when handing out counters. Once the activity has been completed, learners count the objects as they put them back into the container. This simply provides another chance to practise counting as well as making sure no counters are on the floor!

#### **2. Waste/found material**

- Collect empty boxes, toilet roll holders, magazines, etc. throughout the year. At the first parent meeting you can provide parents with a list of items to be collected. This gives parents an opportunity to become involved in their child's education, and helps you to collect useful items for apparatus.



**FIRST TERM: WEEK 2**

<b>COMPONENT</b>	<b>MILESTONES</b>	<b>DAY 1</b>	<b>DAY 2</b>	<b>DAY 3</b>	<b>DAY 4</b>	<b>DAY 5</b>
<b>COUNTING</b> LO 1 AS 1,2,	<ul style="list-style-type: none"> <li>Counts out objects to 10</li> <li>Counts to 20 on number line</li> </ul>	<b>DAY 1</b> Daily: <ul style="list-style-type: none"> <li>Rote count to 20</li> <li>Rote count to any number beyond 20</li> <li>Count fingers and toes</li> <li>Count concrete objects</li> </ul>				
<b>NUMBER SENSE AND MENTAL</b> LO 1 AS 1,3 LO 2 AS 1	<ul style="list-style-type: none"> <li>basic concepts: colour, size</li> <li>one-to-one correspondence</li> <li>vocabulary</li> <li>Knows, reads and writes number names and symbols from 1-6 and explores their relationship</li> </ul>	<b>DAY 1</b> Daily: <ul style="list-style-type: none"> <li>Teach necessary vocabulary for basic concepts</li> <li>One-to-one correspondence</li> <li>Revise number 1</li> <li>Readiness activities</li> </ul>	<b>DAY 2</b> Introduce yellow Size Teach number 2	<b>DAY 3</b> Introduce green Activities with number 2	<b>DAY 4</b> Introduce orange Activities with number 2	<b>DAY 5</b> Introduce black and white Revise numbers 1 and 2
<b>GROUP TEACHING</b> LO 1 AS 7	<ul style="list-style-type: none"> <li>Solves problems, and explains solutions, using concrete objects and drawings using numbers to 10</li> </ul>			Introduce group work. Work with 1 group.	Work with 2 groups	

## Week 2 : Whole Class

WEEK 2	WHOLE CLASS COMPONENT (Counting and Mental/Number sense)
<p><b>Notes to the teacher:</b></p> <ul style="list-style-type: none"><li>• Daily activities indicate activities that should be done every day. The specific concepts being developed are indicated every day e.g. Day 1.</li><li>• Marking the register and talking about the Weather chart and Birthday chart are daily activities involving incidental learning and are usually part of the Literacy Oral component. They are placed here as Numeracy concepts are also being dealt with.</li></ul>	
<b>DAILY ACTIVITIES</b>	
<b>COUNTING AND MENTAL/NUMBER SENSE</b>	
<p><b><u>Daily Activities.</u></b> (to take no more than 10 minutes)</p> <ul style="list-style-type: none"><li>• Vary the way in which you take the register every day. One idea is as follows: let everyone stand behind their chair. As you call their name they answer then sit down. Once everyone is sitting down learners count the number of learners that are present. Ask how many learners are absent.</li><li>• Discuss the weather and let learners change the pictures on the weather chart.</li><li>• Let the learners rote count up to 30</li></ul> <p><b><u>DAY 1</u></b> (to take no more than 30 minutes)</p> <ul style="list-style-type: none"><li>• Give each learner a packet/envelope/bag containing 10 counters. The counters in one container must be the same – the same size, colour, shape. Bread tags, plastic bottle tops, used matches are some ideas for counters. Ask each learner to count out the objects in their bag. Swap the bags and count again. Ask them to show you 1 counter, put it away, then 2 counters, put it away and so on up to 5. Now ask them to take out 1 counter and point to the numeral “1” on the number line. Let them take out another counter, count how many there are (2) and ask if anyone knows what a 2 looks like. Using their fingers, let them write the 2 in the air, on their desks, on their arms and so on. Give them their books (or a piece of paper) where they can practice writing a 2 and drawing two pictures. Do this activity every day.</li><li>• Each day give the learners a different written activity focusing on either visual discrimination or eye-hand co-ordination to do on their own.</li></ul> <p><b><u>DAY 2</u></b> (to take no more than 30 minutes)</p> <ul style="list-style-type: none"><li>• Give each learner a packet/envelope/bag containing 10 counters. The counters in one container must be the same – the same size, colour, shape. Bread tags, plastic bottle tops, used matches are some ideas for counters. Ask each learner to count out the objects in their bag. Swap the bags and count again. Ask them to show you 1 counter, put it away, then 2 counters, put it away and so on up to 5. Now ask them to take out 1 counter and point to the numeral “1” on the number line. Let them take out another counter, count how many there are (2) and ask if anyone knows what a 2 looks like.</li></ul>	



Using their fingers, let them write the 2 in the air, on their desks, on their arms and so on. Give them their books (or a piece of paper) where they can practice writing a 2 and drawing two pictures. Do this activity every day.

- Show the learners a big box and a small box. Ask: *What is the difference between these boxes?* They may give you many different answers and many of these answers may be correct, for example, one box has colours on, one box is white and black. Accept these answers, but once a learner says that one box is big and one is small, you can start your discussion on **size**. Show the learners a few more examples of big and small objects. For example, a big jersey (your jersey) and a small jersey (a learner's jersey). Ask questions that help the learners to identify the big and the small jersey. Ask the learners to place their hands in front of them. Show your hand as well. Ask the learners to look and see which hand is the biggest, which hand is the smallest. Your hand is probably the biggest. Ask the learner with the smallest hand to come and stand next to you. Compare the size of your hand with the learner's. Ask the learners if there is a hand bigger than yours. Are their hands smaller than yours? Ask the learners to show you whose hands are smaller than yours. These will probably be all of the learners. On other days do the same by using different objects e.g. with shoes.

**Tip:** *This activity forms part of Assessment Task 1. You need to make sure you give all the learners a chance to answer questions in order to assess their understanding of size.*

### **DAY 3** (to take no more than 30 minutes)

- Give each learner a packet/envelope/bag containing 10 counters. The counters in one container must be the same – the same size, colour, shape. Bread tags, plastic bottle tops, used matches are some ideas for counters. Ask each learner to count out the objects in their bag. Swap the bags and count again. Ask them to show you 1 counter, put it away, then 2 counters, put it away and so on up to 5. Now ask them to take out 1 counter and point to the numeral "1" on the number line. Let them take out another counter, count how many there are (2) and ask if anyone knows what a 2 looks like. Using their fingers, let them write the 2 in the air, on their desks, on their arms and so on. Give them their books (or a piece of paper) where they can practice writing a 2 and drawing two pictures. Do this activity every day.
- Show the learners the small box and the big box and ask them if they can remember what the difference between the boxes is - one box is **big** and one box is **small**. Give each learner a piece of paper. Show them to place their hand on the piece of paper, with their fingers spread out. Demonstrate to the learners how to draw around the outline of their hand with a crayon. Encourage the learners to draw around the outline of their hand with a crayon.
- Once the learners have drawn around their hand, they need to cut it out and colour it in. Write the learners' names at the back of their hands so that you will be able to identify who the 'hand' belongs to. Collect the cut out hands for an activity next week.

**DAY 4** (to take no more than 30 minutes)

- Give each learner a packet/envelope/bag containing 10 counters. The counters in one container must be the same – the same size, colour, shape. Bread tags, plastic bottle tops, used matches are some ideas for counters. Ask each learner to count out the objects in their bag. Swap the bags and count again. Ask them to show you 1 counter, put it away, then 2 counters, put it away and so on up to 5. Now ask them to take out 1 counter and point to the numeral “1” on the number line. Let them take out another counter, count how many there are (2) and ask if anyone knows what a 2 looks like. Using their fingers, let them write the 2 in the air, on their desks, on their arms and so on. Give them their books (or a piece of paper) where they can practice writing a 2 and drawing two pictures. Do this activity every day.
- Give each learners a piece of paper with a 3x5 block drawn on it


Ask learners to point to the first row and then tell them to colour 1 square red. In the second row they must colour 2 squares green. In the next row they must colour 1 square yellow, etc. until they have coloured squares in each row using the colours they have learnt.

**Tip:** *This activity forms part of Assessment Task 1. You must walk around the room observing the learners as you give the instructions in order to assess their knowledge of the colours they have learnt. You can make the block bigger if you have taught more than 5 colours.*

- Each day give the learners a different recorded activity focusing on either visual discrimination or eye-hand co-ordination to do on their own.

**DAY 5** (to take no more than 30 minutes)

- Give each learner a packet/envelope/bag containing 10 counters. The counters in one container must be the same – the same size, colour, shape. Bread tags, plastic bottle tops, used matches are some ideas for counters. Ask each learner to count out the objects in their bag. Swap the bags and count again. Ask them to show you 1 counter, put it away, then 2 counters, put it away and so on up to 5. Now ask them to take out 1 counter and point to the numeral “1” on the number line. Let them take out another counter, count how many there are (2) and ask if anyone knows what a 2 looks like.

<p>Using their fingers, let them write the 2 in the air, on their desks, on their arms and so on. Give them their books (or a piece of paper) where they can practice writing a 2 and drawing two pictures. Do this activity every day.</p> <ul style="list-style-type: none"> <li>• Each day give the learners a different written activity focusing on either visual discrimination or eye-hand co-ordination to do on their own.</li> </ul>	
<b>ASSESSMENT</b>	<p><b>Formal</b> : No formal, recorded Assessment</p> <p><b>Informal</b> : Unrecorded assessment of learners oral responses and ability to participate.</p>

### Week 2 : Group Teaching

<b>Week 2</b>	<b>GROUP TEACHING COMPONENT (Concept Development and Problem Solving)</b>
<p><b>Notes to teacher:</b></p> <ul style="list-style-type: none"> <li>• On Wednesday introduce the class to group work. Randomly divide your class into 3 groups, not more than 12 learners in a group. If you have a large class you may need 4 groups. For the first part of the lesson (about 20 minutes) do the counting and number sense activities with the whole class. Then explain the activities they will do while you are busy with a group (cutting and colouring the hands they drew and the written activity). Get up and walk around the class between each group. Have extra activities, such as threading beads, ready for the quick workers. Work with 1 group at a time for about 10 minutes and do the following activities with each of the groups. <b>Work with 1 group on Wednesday and 2 groups on Thursday.</b></li> <li>• While you are working with a group, the rest of the class will be working independently. You need to provide them with a variety of activities which reinforce and consolidate concepts already learnt. Try to vary the activities e.g. giving a practical activity (counting counters in counting bags), a written activity (filling in numbers, sequencing, etc.) and a fun activity (dot-to-dot pictures, puzzles, etc.)</li> </ul>	
<b>DAILY ACTIVITIES</b>	
<p><b><u>Examples of activities to be done independently.</u></b> <i>Work from a Learner’s Book, worksheets, etc.</i></p> <ul style="list-style-type: none"> <li>• Cutting and colouring hands made earlier.</li> <li>• Sorting objects – buttons, beads, coloured sticks, etc, - according to colour.</li> <li>• Match two different objects with the same colour.</li> <li>• Threading beads.</li> <li>• Dot-to dot pictures.</li> </ul>	

**Working with the group**

**GROUP 1**

*On Wednesday this group works with the teacher for 10 minutes.*

- Give each learner some counters and a number line to 10. Ask them to place a counter on the number you say. You will be able to assess who recognizes numbers to 10.
- Make sure each learner has access to paper, writing tools, counters and a number line. Ask them one word problem which they solve by talking about it, drawing pictures and so on. Let each learner tell the group how he or she solved the problem.

**GROUP 2**

*On Thursday this group works with the teacher for 10 minutes.*

- Give each learner some counters and a number line to 10. Ask them to place a counter on the number you say. You will be able to assess who recognizes numbers to 10.
- Make sure each learner has access to paper, writing tools, counters and a number line. Ask them one word problem which they solve by talking about it, drawing pictures and so on. Let each learners tell the group how they solved the problem.

**GROUP 3**

*On Thursday this group works with the teacher for 10 minutes.*

- Give each learner some counters and a number line to 10. Ask them to place a counter on the number you say. You will be able to assess who recognizes numbers to 10.
- Make sure each learner has access to paper, writing tools, counters and a number line. Ask them one word problem which they solve by talking about it, drawing pictures and so on. Let each learners tell the group how they solved the problem.

**Assessment**

**Formal:** No formal, recorded Assessment

**Informal:** Unrecorded assessment of learners oral responses and ability to solve problems.

**FIRST TERM: WEEK 3**

COMPONENT	MILESTONES	DAY 1	DAY 2	DAY 3	DAY 4	DAY 5
<b>COUNTING</b> LO 1 AS 1,2,4	<ul style="list-style-type: none"> <li>Orders numbers (1<sup>st</sup> – 6<sup>th</sup>)</li> <li>Counts out objects to 10</li> <li>Counts to 20 on number line</li> </ul>	<p>Daily:</p> <ul style="list-style-type: none"> <li>Rote count to 20 or more</li> <li>Count to 10 while pointing to a number line</li> <li>Count concrete objects</li> <li>Identify first, second and last</li> </ul>				
<b>NUMBER SENSE AND MENTAL</b> LO 1 AS 1,3 LO 2 AS 1 LO 3 AS 1 LO 5 AS 1	<ul style="list-style-type: none"> <li>basic concepts: colour, size, vocabulary</li> <li>one-to-one correspondence</li> <li>Knows, reads and writes number names and symbols from 1-6 and explores their relationship</li> <li>Identifies 3D objects – boxes and balls</li> <li>Completes simple sequencing activities</li> <li>Collects and sorts objects according to one attribute - introduction to graphs</li> </ul>	<p>Daily:</p> <ul style="list-style-type: none"> <li>Revise colours and size</li> <li>Teach necessary vocabulary for basic concept</li> </ul>				
<b>GROUP TEACHING</b> LO 1 AS 7	<ul style="list-style-type: none"> <li>Solves problems, and explains solutions, using concrete objects and drawings using numbers to 10</li> </ul>	<p>DAY 1</p> <p>Introduce a box (3-D) and a circle (2-D)</p>	<p>DAY 2</p> <p>Teach number 3</p>	<p>DAY 3</p> <p>Sequencing activities</p>	<p>DAY 4</p> <p>One-to-one correspondence activities</p>	<p>DAY 5</p> <p>Collect objects according to one attribute</p>
		<p>Ask each group the same problems. They can be solved using counters, drawings, etc. Ask 1 addition and 1 subtraction problem.</p>			<p>Group 3 works with teacher</p> <p>Groups 1 and 2 work on their own</p>	<p>All groups work on same activity collecting objects according to one attribute.</p>

## AFTER THE FIRST 2 WEEKS

1. The first two to three weeks are used to orientate learners to the formal school situation. All lessons are short so as to accommodate the learners' attention span during this time. **Remember, although these lesson plans are for Week 3, the learners have already been at school for 3 weeks so you are actually in the fourth week of the term if you look at a school calendar. Remember, the first 8 days (2 weeks) of school have been called Week 1 for convenience.**
2. Much of the Numeracy during the first few weeks is incidental. For example, both the Literacy and the Numeracy lesson plans give direction for dealing with a Weather Chart. While this oral activity certainly falls into the Literacy component, many numeracy skills are being developed at the same time e.g. days of the week, temperature, sequencing and so on.
3. After these first few weeks you need to carry on developing numeracy skills incidentally – when learners line up it is according to height (size), letting learners help you hand out books, papers, pencils and so on deals with one-to-one correspondence, writing the date and discussing what day of the week it is develops vocabulary (what is tomorrow? What day was yesterday?). When there are a few minutes while waiting for play time, say a number rhyme. This incidental learning is extremely valuable.
4. During Week 2 you introduced your class to working in groups during Numeracy. From this week - Week 3 - the structure of your Numeracy lessons will generally be the same. Each day you will start the lesson by doing a counting activity with the whole class. You will then work with a concept, developing it with the whole class. All this will take about half the lesson. You will then give the learners relevant work to do on their own while you take a different group every day. During the time with the group you will work with them to establish their level – for example, can everyone count out objects to 5, to 6, to 10? You will then set them a problem to solve, allowing them to talk to each other and then explain how they solved the problem. **Use this time with a small group to establish at least your quick group – those learners who can count out to 10 or 20, can recognise numbers up to 10 or 20 and who can solve the problems confidently.** From Week 4 you will begin to work with ability groups.

Although learners will be put in groups during this first term it does not mean they will stay in these groups for the whole year. As they grow and develop the composition of the groups will also change.

5. **During Week 3 you will do the first Assessment Task. Use this as your baseline assessment.**

**Week 3 : Whole Class**

<b>WEEK 3</b>	<b>WHOLE CLASS COMPONENT (Counting and Mental/Number sense)</b>
<p><b>Notes to the teacher:</b></p> <ul style="list-style-type: none"> <li>Counting at the beginning of the day helps learners focus on numbers. Every day you will let your learners do rote counting (to develop the vocabulary of numbers) as well as rational counting (thinking what they are doing) activities. Counting at the beginning of the lesson is done with the whole class every day.</li> <li>Daily activities indicate activities that should be done every day. The specific concepts being developed are indicated every day e.g. Day 1.</li> <li>Marking the register and talking about the Weather chart and Birthday chart are daily activities involving incidental learning and are usually part of the Literacy Oral component. They are placed here as Numeracy concepts are also being dealt with.</li> <li><b>ASSESSMENT TASK 1 will be done during this week. Use it as your baseline assessment.</b></li> </ul>	
<b>DAILY ACTIVITIES</b>	
<p><b>COUNTING AND MENTAL/NUMBER SENSE</b></p> <p><b><u>Daily Activities</u></b>.(to take no more than 10 minutes)</p> <ul style="list-style-type: none"> <li>Play some counting games with the learners. The learners will have to listen to and count the sounds that you make: Knock 5 times on the classroom door. Ask the learners how many knocks they heard. Now tap your pencil 4 times on your desk. How many taps did you hear? Tap a pencil against a glass or cup. How many taps were there? You can make up some further sounds for the learners to listen to and count.</li> <li>Line up the girls in one line and the boys in another. Ask who is <b>first</b> in the girls' line. Who is <b>last</b> in the girls' line? Who is <b>second</b> in the girls' line? Ask the same questions about the boys' line. Ask if the person who is <b>last</b>, comes to the front of the line, where would they be? Take the person who is last in the girls' line and place her first. The learners should answer 'first'.</li> </ul> <p><b><i>These can be done at any time during the day:</i></b></p> <ul style="list-style-type: none"> <li>Once the learners have decided what the weather is and a learner has put up the correct picture for the day, the learners need to say what day of the week it is. Say the days of the week in order and then ask the learners to repeat them. If the day of the week is a 'Tuesday', ask the learners to clap when they say the day 'Tuesday' when repeating the order of the days.</li> <li>Your birthday chart will be displayed in the classroom and you need to discuss this with the learners. Show the learners that there is a picture for each month of the year. You can name the months of the year, pointing to each picture as you go from January to December. Ask the learners if they know how old they are. Some may be 5 years old and some may be 6 years old. Ask them to hold up the correct number of fingers. Ask how old they will be on their next birthday.</li> </ul>	

**DAY 1** (to take no more than 30 minutes)

- Hold up a circle and a ball. Ask: *What can you tell me about these?* Listen to their answers. Ask: *Are these the same or different? In what way are they different?* Pass a few circle shapes and the ball around the class and encourage the learners to feel the shape/ball. Ask: *How does the circle shape feel? Does the circle/ball have any corners?* Discuss the curved line of the circle. Ask learners to find a way to make a circle with a part of their body. Let the learners experiment with different parts of their bodies. Ask them to make their bodies round like a ball, and then to bounce like a ball. Now ask learners if they can find a circle shape in the classroom. Ask where else we see circles e.g. wheels. Give each learner a piece of wool and ask them to make a circle with the wool.

**Tip:** Use this activity as part of Assessment Task 1 to assess learners recognition of shape.

**DAY 2** (to take no more than 30 minutes)

- Let learners work in pairs. Each pair has a packet/envelope/bag containing 10 counters. The counters in one container must be the same – the same size, colour, shape. Bread tags, plastic bottle tops, used matches are some ideas for counters. One learner counts the objects as they are taken out of the packet and the other learners counts them as they are put back into the packet. Ask them to show you 1 counter, put it away, then 2 counters, put it away and so on up to 5. Now ask them to take out 1 counter and point to the numeral “1” on the number line. Let them take out another counter, count how many there are (2) and point to it on the number line. Let them take out another counter, count how many there are (3) and ask if anyone knows what a 3 looks like. Using their fingers, let them write the 3 in the air, on their desks, on their arms and so on. Give them their books (or a piece of paper) where they can practice writing a 3 and drawing three pictures. Do this whole activity every day.
- Revise the properties of a ball and a circle.

**DAY 3** (to take no more than 30 minutes)

- Ask the learners to give you some words that tell you about the weather, eg. hot, cold, windy, cloudy, etc. Choose 2 of the words e.g., hot, cold. Make a word pattern out of these such as, ‘hot, cold, hot, cold, hot, cold.’... Learners say this pattern with you. They might like to clap as they say the words. Make a pattern of 3 words, e.g. “hot, cloudy, windy”
- Call learners to come and stand in the front of the class and make the pattern tall/short/tall/short. As soon as someone recognizes the pattern ask them who should be called next and so on.
- Revise the number 3



**DAY 4** (to take no more than 30 minutes)

- You will need magazines or newspapers and a drum for this lesson. Take the learners outside and spread the magazines (newspapers) over a demarcated area. There should be one for every learner. Tell the learners to find a magazine and stand on it. Ask them to hold the magazine above their heads, behind their backs, next to their ear and so. Now tell them that when you beat the drum (or play music, or clap your hands) they will walk around but as soon as the drum stops they must find a magazine and stand on it. Ask if everyone has a magazine to stand on. For the first round there will be a magazine for each child. From the second round, remove one magazine each time so that one learner will not have a magazine to stand on. Each time talk about why there is one learner left over. This is a fun way to deal with one-to-one correspondence.
- Revise the number 3

**DAY 5** (to take no more than 30 minutes)

- Today you are going to introduce a bar graph to the learners. The bar graph will show how many learners like the colour red and how many like the colour yellow. Prepare your A3 piece of paper to use as a bar graph the day before: Draw two vertical columns, about 10 cms wide. Divide each column into equal blocks. Each column represents a colour. One will represent the colour red and one will represent the colour yellow. The blocks in each column will represent the learners. Show the learners a red object and a yellow object. Tell them they may choose the colour they like best. Learners who like red, put up their hands. Everyone counts the hands. Do the same for yellow. Some learners may not be able to count all the hands, but that does not matter. Now tell the learners that they are going to record those who like red the best. Ask the learners who like red the best, to come to the front of the room. Each learner will then, one at a time, quickly colour a block in the red column red. Do the same for those choosing yellow. Once the recording has been completed, let the learners look at the bar graph. Ask them if more learners like red or if more learners like yellow. How can they tell if more like one colour or not? Discuss the number of blocks in each column and whether the specific columns are taller or shorter.

**Tip:** This lesson forms part of the first assessment task.

<b>ASSESSMENT</b>	<p><b>Formal: Recorded Assessment Task 1</b></p> <p>Use the whole class lesson 5 to assess learners against the following milestones</p> <ul style="list-style-type: none"> <li>Readiness : basic concepts including colour, size, shape</li> <li>Collects and sorts objects according to one attribute - introduction to graphs</li> </ul>
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## Week 3 : Group Teaching

Week 3	GROUP TEACHING COMPONENT (Concept Development and Problem Solving)
<p><b>Notes to teacher:</b></p> <ul style="list-style-type: none"><li>• In Week 2 you introduced the class to group work. You will work with these groups every day this week. Keep the same groups that you had in Week 2 and assess each learner. The purpose of this assessment is to help you establish a group of quicker learners who are at the same level now. For the first part of the lesson (about 30 minutes) do the counting and number sense activities with the whole class. Then explain the activities the learners will do on their own while you are busy with a group. Have extra activities, such as threading beads, ready for the quick workers. Work with 1 group a day for about 15 minutes. You will assess learners during this group time as you are able to give these few learners your complete attention.</li><li>• While you are working with a group, the rest of the class will be working independently. You need to provide them with a variety of activities which reinforce and consolidate concepts already learnt. Try to vary the activities e.g. giving a practical activity (counting counters in counting bags), a written activity (filling in numbers, sequencing, etc.) and a fun activity (dot-to-dot pictures, puzzles, etc.)</li></ul>	
<p><b><u>Examples of activities to be done independently.</u></b> <i>Work from a Learner's Book, worksheets, etc.</i></p> <ul style="list-style-type: none"><li>• Write the numbers 1, 2, and 3 in their books, drawing the correct number of pictures/dots next to each number.</li><li>• Learners draw a big object and a small object.</li><li>• Provide a matching activity e.g. matching coloured objects.</li><li>• Provide a sorting activity e.g. sorting buttons into sizes and colours.</li><li>• Find the odd one out.</li></ul> <p><b><u>Working with the group</u></b></p> <p><b><u>GROUP 1</u></b></p> <p><i>On Tuesday this group works with the teacher for 20 minutes.</i></p> <ul style="list-style-type: none"><li>• Give each learner some counters and a number line to 10. Ask them to place a counter on the number you say. You will be able to see who recognizes numbers to 10.</li><li>• Place some circles and some small balls in a packet. Each learner has a chance, without looking, to feel the objects in the packet. They must describe what they feel and say if it is a ball or a circle. <b><i>Tip: This activity forms part of Assessment task 1 to assess learners recognition of shape.</i></b></li><li>• Using the cut out hands from Week 2 and a long piece of paper, put the hands of the learners in this group around the edge of the paper. Let the learners look at the cut-out hands and decide which is the biggest. Through the learners' suggestions, grade the hands from biggest to smallest on the frieze. Mix the hands up and do this activity a few times until you have assessed all the learners understanding of size. <b><i>Tip: This activity forms part of Assessment task 1 to assess learners recognition of size.</i></b></li><li>• Make sure each learner has access to paper, writing tools, counters and a number line. Ask them one word problem which they solve by talking about it, drawing pictures and so on. Let each learner tell the group how s/he solved the problem.</li></ul>	

**GROUP 2**

*On Wednesday this group works with the teacher for 20 minutes.*

- Give each learner some counters and a number line to 10. Ask them to place a counter on the number you say. You will be able to see who recognizes numbers to 10.
- Place some circles and some small balls in a packet. Each learner has a chance, without looking, to feel the objects in the packet. They must describe what they feel and say if it is a ball or a circle.

**Tip:** *This activity forms part of Assessment task 1 to assess learners recognition of shape*

- Using the cut out hands from Week 3 and a long piece of paper, put the hands of the learners in this group around the edge of the paper. Let the learners look at the cut-out hands and decide which is the biggest. Through the learners' suggestions, grade the hands from biggest to smallest on the frieze. Mix the hands up and do this activity a few times until you have assessed all the learners understanding of size. Finally, glue the hands in place.

**Tip:** *This activity forms part of Assessment task 1 to assess learners recognition of size.*

- Make sure each learner has access to paper, writing tools, counters and a number line. Ask them one word problem which they solve by talking about it, drawing pictures and so on. Let each learner tell the group how s/he solved the problem.

**GROUP 3**

*On Thursday this group works with the teacher for 20 minutes.*

- Give each learner some counters and a number line to 10. Ask them to place a counter on the number you say. You will be able to see who recognizes numbers to 10.
- Place some circles and some small balls in a packet. Each learner has a chance, without looking, to feel the objects in the packet. They must describe what they feel and say if it is a ball or a circle.

**Tip:** *This activity forms part of Assessment task 1 to assess learners recognition of shape*

- Using the cut out hands from Week 3 and a long piece of paper, put the hands of the learners in this group around the edge of the paper. Let the learners look at the cut-out hands and decide which is the biggest. Through the learners' suggestions, grade the hands from biggest to smallest on the frieze. Mix the hands up and do this activity a few times until you have assessed all the learners understanding of size. Finally, glue the hands in place.

**Tip:** *This activity forms part of Assessment task 1 to assess learners recognition of size.*

- Make sure each learner has access to paper, writing tools, counters and a number line. Ask them one word problem which they solve by talking about it, drawing pictures and so on. Let each learner tell the group how s/he solved the problem.

<b>Assessment</b>	<p><b>Formal: Recorded Assessment Task 1</b></p> <p>Use the group sessions and the whole class lesson 5 to assess learners against the following milestones</p> <ul style="list-style-type: none"> <li>• Readiness : basic concepts: colour, size, shape</li> <li>• Collects and sorts objects according to one attribute - introduction to graphs</li> </ul>
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## SUGGESTED ASSESSMENT TASKS : GRADE 1 NUMERACY FIRST TERM

### TASK 1 : WEEK 3

COMPONENT	MILESTONES	WKS	TASKS
<b>COUNTING AND MENTAL/NUMBER SENSE</b>	<ul style="list-style-type: none"> <li>• Readiness : basic concepts including colour, size, shape</li> <li>• Collects and sorts objects according to one attribute - introduction to graphs</li> </ul>	Wk 3	<ul style="list-style-type: none"> <li>• Use the learners' responses on Day 5 to assess their understanding of collecting data as well as their knowledge of colours.</li> <li>• Use the learners' oral and practical responses during Group Teaching to assess their understanding of size.</li> </ul>
<b>PROBLEM SOLVING</b>	<ul style="list-style-type: none"> <li>• Readiness : basic concepts including colour, size, shape</li> <li>• Collects and sorts objects according to one attribute - introduction to graphs</li> </ul>	Wk 3	<ul style="list-style-type: none"> <li>• Use the learners' practical and oral responses on Day 1 to assess their recognition of shape.</li> <li>• Use the learners' oral and practical responses during Group Teaching to assess their understanding of shape.</li> </ul>

**FIRST TERM: WEEK 4**

COMPONENT	MILESTONES	DAY 1	DAY 2	DAY 3	DAY 4	DAY 5
<b>COUNTING</b> LO 1 AS 1,2,4	<ul style="list-style-type: none"> <li>Orders numbers (1<sup>st</sup> – 6<sup>th</sup>)</li> <li>Counts out objects to 10</li> <li>Counts to 20 on number line</li> </ul>	Daily: <ul style="list-style-type: none"> <li>Rote count to 20 or more</li> <li>Count to 10 while pointing to a number line</li> <li>Count concrete objects</li> <li>Identify first, second and last</li> </ul>				
<b>NUMBER SENSE AND MENTAL</b> LO 1 AS 1,3 LO 2 AS 1 LO 3 AS 1 LO 4 AS 5	<ul style="list-style-type: none"> <li>basic concepts: colour, size, shape, measurement</li> <li>vocabulary</li> <li>one-to-one correspondence</li> <li>Knows, reads and writes number names and symbols from 1-6 and explores their relationship</li> <li>Identifies 3D objects – boxes and balls</li> <li>Completes simple sequencing activities</li> </ul>	Daily: <ul style="list-style-type: none"> <li>Revise colours and size.</li> <li>Teach necessary vocabulary for basic concept</li> <li>Revise numbers 1, 2 and 3</li> </ul>				
<b>GROUP TEACHING</b> LO 1 AS 7	<ul style="list-style-type: none"> <li>Solves problems, and explains solutions, using concrete objects and drawings using numbers to 10</li> </ul>	Teach basic concept of measurement	Sequencing using : Measurement Shape	One-to-one correspondence	3-D : box, ball 2-D: circle, rectangle	3-D : box, ball 2-D: circle, rectangle
		Ask each group the same problems. They can be solved using counters, drawings, etc. Ask 1 multiplication and 1 sharing problem			Chosen group works with teacher Groups work on their own	WHOLE CLASS ACTIVITY Practical activity about rectangles

## Week 4 : Whole Class

WEEK 4	WHOLE CLASS COMPONENT (Counting and Mental/Number sense)
<p><b>Notes to the teacher:</b></p> <ul style="list-style-type: none"><li>Counting at the beginning of the day helps learners focus on numbers. Every day you will let your learners do rote counting (to develop the vocabulary of numbers) as well as rational counting (thinking what they are doing) activities. Counting at the beginning of the lesson is done with the whole class every day.</li><li>Daily activities indicate activities that should be done every day. The specific concepts being developed are indicated every day e.g. Day 1.</li><li>Marking the register and talking about the Weather chart and Birthday chart are daily activities involving incidental learning and are usually part of the Literacy Oral component. They are placed here as Numeracy concepts are also being dealt with.</li></ul>	
<b>DAILY ACTIVITIES</b>	
<b>COUNTING AND MENTAL/NUMBER SENSE</b>	
<p><b><u>Daily Activities</u></b> (to take no more than 15 minutes)</p> <p><b><i>These must be done daily:</i></b></p> <ul style="list-style-type: none"><li>Learners rote count to at least 30 and further if they can.</li><li>As learners count, point to the numbers on a number line.</li><li>Use an abacus (or counters) and learners count as the beads are pushed across.</li></ul> <p><b><i>Choose from the following (to make up the 15 mins.):</i></b></p> <ul style="list-style-type: none"><li>Mark the register, then count the number of girls and the number of boys. Learners clap each number as they count.</li><li>Complete the weather chart and birthday chart.</li><li>Revise the colours and sizes dealt with so far.</li><li>Revise the numbers 1, 2, and 3, by doing matching and sorting activities.</li></ul> <p><b><u>DAY 1</u></b> (to take no more than 20 minutes)</p> <ul style="list-style-type: none"><li>Explain that the learners are going to measure with their feet. Show the learners how we measure with our feet. We place 1 foot in front of the other, with the heel touching the toe. <i>Ask: Do you think it will take <b>more</b> steps to get from your desk chair to the door or <b>more</b> steps to get from the teacher's table to the door?</i> Encourage the learners to guess/ estimate how many steps each will take. Choose learners to measure the distances. The rest of the class must count the number of steps. Ask which distance took more steps. Do this a few times choosing different objects to move to.</li><li>Tell the learners that they are going to measure their tables/desks with their hands. Explain and demonstrate how to measure with hands: Stretch your hand wide and use the distance from the tip of your little finger to the tip of your thumb to measure. Ask the learners how many hands they think it would take to measure table/ desk.</li></ul>	

Choose a learner to measure a table/desk with a handspan. The handspans need to touch each other all the way along the desk/table. Ask the learners if their guess/estimation was different from the number of handspans that it took. Did they estimate more or less handspans? Sort the learners into pairs. Let them each take a turn to measure the length of the desk with a handspan. Let them compare their number of handspans.

**Tip:** Ask learners to bring a box to school. You will need it for the lesson on Day 4.

**DAY 2** (to take no more than 20 minutes)

- Give each learner 3 strips of paper of varying lengths. Tell them to arrange the strips from longest to shortest. They need to place the longest strip first and arrange the remaining strips above this in the correct order. Walk around the class, as the learners are busy with this. If a learner has not placed the strips in the correct order do not tell him/her how to correct the sequence. Rather question the learner in order to assist him/her to correct his/her sequence. Now ask them to arrange the strips from shortest to longest. Check they have done it correctly. Now let the learners arrange the strips in any order they like and they tell you what they have done. Finally ask the learners to put the strips from longest to shortest and glue them in place on a piece of paper. Encourage the learners to decorate their strips with patterns using their crayons.
- Call 6 learners to the front of the class. Give 3 of them a circle of paper to hold, and 3 of them a ball to hold. Let them arrange themselves in a pattern. Ask if they can make another pattern. Repeat the activity with different learners.

**DAY 3** (to take no more than 20 minutes)

- Give each group a container e.g. yoghurt carton with 2 types of objects – buttons, little stones, beads, etc. The group must first sort the objects and then match them through one-to-one correspondence. They must say which objects there are more of, and which fewer.
- Swap the containers around and do the activity again with different objects.

**DAY 4** (to take no more than 20 minutes)

- Take the learners outside and let them observe different shapes – trees, cars, buildings, etc. Ask them to look for objects like a ball, and shapes like a circle. Let them make their bodies into these shapes. Let them make circles using their fingers, then circles using their bodies. Sitting in a circle, put all the boxes the learners have collected in the middle. Ask different learners to take a box until there are none left. Ask the learners to sort themselves in two groups according to the shape of the box – a square box or a rectangular box. Ask learners to describe the boxes, saying which features are the same and which are different. Now put a ball in the middle and ask learners what is the same and what is different between the boxes and the ball. Develop an understanding of the properties of the different objects.

**DAY 5** (to take no more than 30 minutes)

- Show the learners a **rectangle**. You can either draw the rectangle on the blackboard, or draw it on a piece of paper. Ask the learners if this shape is the same as the circle. Ask them to tell you how it is different from the circle. Do not tell the learners the properties of a rectangle, but rather, through your open-ended questioning, elicit the information from the learners. Ask the learners if they can find any rectangles in the classroom. Let a few volunteers show the class where they can see a rectangle. They may, for example, see a rectangle on the top part of the desk or table, or they may see a rectangle on the side or top of a box. They may also find a rectangle in the shape of the classroom door and window. Make sure learners know that a rectangle has 2 long sides and 2 short sides. Give each learner 2 short strips of paper and 2 long strips of paper. Ask them to show how they will assemble a rectangle from the 4 strips. Learners make rectangles and glue them into their workbooks. Then they can decorate them with crayons.

<b>ASSESSMENT</b>	<b>Formal :</b> No formal, recorded Assessment <b>Informal:</b> Unrecorded assessment of learners' oral responses and ability to participate.
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**FIRST TERM : LESSON PLAN**

<b>Week 4</b>	<b>GROUP TEACHING COMPONENT (Concept Development and Problem Solving)</b>
<b>Notes to teacher:</b> <ul style="list-style-type: none"><li>• In Week 2 and 3 you started working in groups. In Week 4 you will take the learners you have identified as being ready to move on and work at a quicker pace at their own level. Divide the rest of the class into 2 equal groups. Work with one group every day for about 15 minutes and do the activities following with each of the groups. During the week you will try to identify learners still needing a readiness programme and these learners will be put in one group in Week 5. For the first part of the lesson (about 35 minutes) do the counting and number sense activities with the whole class. Then explain the activities they will do while you are busy with a group. Have extra activities, such as threading beads, ready for the quick workers.</li><li>• While you are working with a group, the rest of the class will be working independently. You need to provide them with a variety of activities which reinforce and consolidate concepts already learnt. Try to vary the activities e.g. giving a practical activity (counting counters in counting bags), a written activity (filling in numbers, sequencing, etc.) and a fun activity (dot-to-dot pictures, puzzles, etc.)</li></ul>	
<b>DAILY ACTIVITIES</b>	
<b><u>Examples of activities to be done independently.</u></b> <i>Work from a Learner's Book, worksheets, etc.</i>	



- Write the numbers 1, 2, and 3 in their books, drawing the correct number of pictures next to each number.
- Match the number, word and picture.
- Complete a sequencing activity e.g. red, green, red, green.
- Provide a matching activity e.g. matching coloured objects.
- Provide a sorting activity e.g. sorting buttons into sizes and colours.
- Find the odd one out.
- Draw circles using a template. Cut them out and develop pictures with the circles.
- Worksheet with different shapes. Colour the circles yellow and the rectangles blue.

### **Working with the group**

#### **GROUP 1**

On **Monday** *this group works with the teacher for 15 minutes.*

- Give each learner some counters and a number line to 10. Ask them to place a counter on the number you say. You will be able to see who recognizes numbers to 10.
- Learners count out to 10, placing a counter in the number as they say it.
- Show them a number line to 20. Ask one learner at a time to point to the number you call out. Assess who knows these numbers.
- Teach the number 4.
- Give each learner a circle. Ask them to fold the circle - what shape do they get? How many times must they fold the circle to give 4 children the same size piece of paper.
- Make sure each learner has access to paper, writing tools, counters and a number line. Ask them two different word problems which they solve by talking about them, drawing pictures and so on. Let each of the learners tell the group how s/he solved the problem. You will ask 1 multiplication and 1 sharing problem.

**Tip:** *It is important that all learners solve word problems every day but only ask two problems if the learners are ready for it.*

#### **GROUP 2**

On **Wednesday** *this group works with the teacher for 15 minutes.*

- Give each learner some counters and a number line to 10. Ask them to place a counter on the number you say. You will be able to see who recognizes numbers to 10.
- Learners count out to 10, placing a counter in the number as they say it.
- Give each learner a circle. Ask them to fold the circle - what shape do they get? Discuss.
- Make sure each learner has access to paper, writing tools, counters and a number line. Ask them two different word problems which they solve by talking about them, drawing pictures and so on. Let each of the learners tell the group how s/he solved the problem. You will ask 1 multiplication and 1 sharing problem.

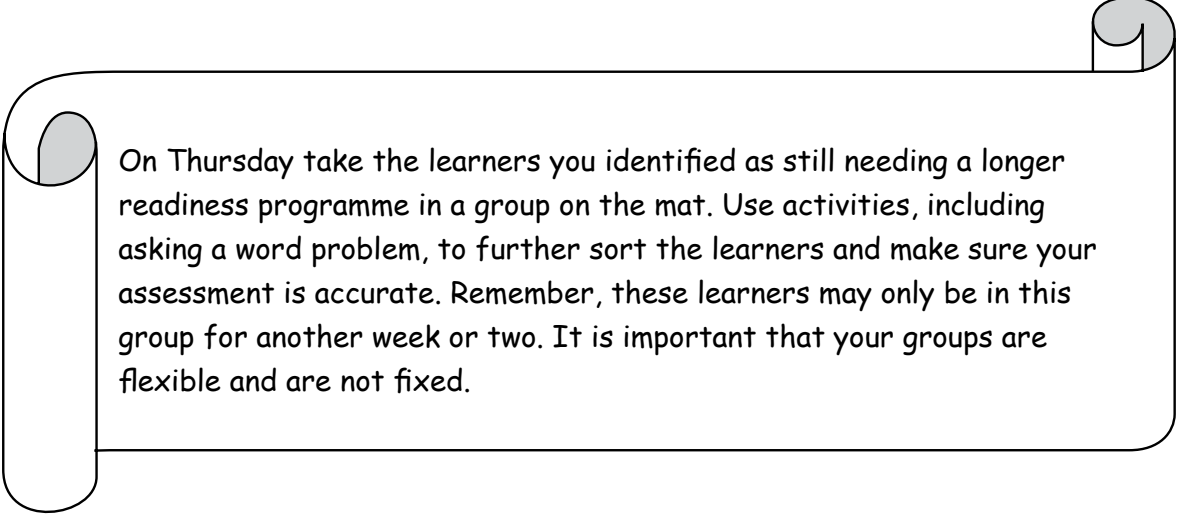
**Tip:** *While working with this group you will be assessing which learners are not yet ready for the more formal aspects of Numeracy. You will take these learners in a group on Thursday.*

### **GROUP 3**

On **Tuesday** this group works with the teacher for 15 minutes.

- Give each learner some counters and a number line to 10. Ask them to place a counter on the number you say. You will be able to see who recognizes numbers to 10.
- Learners count out to 10, placing a counter in the number as they say it.
- Give each learner a circle. Ask them to fold the circle - what shape do they get? Discuss.
- Make sure each learner has access to paper, writing tools, counters and a number line. Ask them two different word problems which they solve by talking about them, drawing pictures and so on. Let each learner tell the group how s/he solved the problem. You will ask 1 multiplication and 1 sharing problem.

**Tip:** While working with this group you will be assessing which learners are not yet ready for the more formal aspects of Numeracy. You will take these learners in a group on Thursday.



On Thursday take the learners you identified as still needing a longer readiness programme in a group on the mat. Use activities, including asking a word problem, to further sort the learners and make sure your assessment is accurate. Remember, these learners may only be in this group for another week or two. It is important that your groups are flexible and are not fixed.

#### **Assessment**

**Formal :** No formal, recorded Assessment

**Informal:** Unrecorded assessment of learners oral responses and ability to solve problems.

**FIRST TERM: WEEK 5**

COMPONENT	MILESTONES	DAY 1	DAY 2	DAY 3	DAY 4	DAY 5
<b>COUNTING</b> LO 1 AS 1,2,	<ul style="list-style-type: none"> <li>Counts out objects to 10</li> <li>Counts to 20 on number line</li> </ul>	<p>Daily:</p> <ul style="list-style-type: none"> <li>Rote count to 30</li> <li>Count while teacher points to numbers on the number line</li> <li>Each learner counts out objects to 10</li> </ul>				
<b>NUMBER SENSE AND MENTAL</b> LO 1 AS1,3 LO 2 AS 1 LO 3 AS 1, 5 LO 5 AS 1	<ul style="list-style-type: none"> <li>basic concepts: shape, measurement, position more and less</li> <li>vocabulary</li> <li>one-to-one correspondence</li> <li>Knows, reads and writes number names and symbols from 1-6 and explores their relationship</li> <li>Completes simple sequencing activities</li> <li>Collects and sorts objects according to one attribute</li> </ul>	<p>Daily:</p> <ul style="list-style-type: none"> <li>Revision of numbers taught so far :1, 2, 3</li> <li>Revision of ordinal value 1<sup>st</sup>, 2<sup>nd</sup> and 3<sup>rd</sup></li> <li>Revision of basic concepts: colour, size, shape (circle, rectangle)</li> </ul>				
<b>GROUP TEACHING</b> LO1 AS 7	<ul style="list-style-type: none"> <li>Solves problems, and explains solutions, using concrete objects and drawings using numbers to 10</li> </ul>	<p><b>DAY 1</b></p> <p>Position</p> <p>1-1 correspondence activity</p>	<p><b>DAY 2</b></p> <p>Teach number 4</p> <p>Make groups more and less</p>	<p><b>DAY 3</b></p> <p>Activity recognizing numbers 1-4</p> <p>Shape: triangle</p>	<p><b>DAY 4</b></p> <p>Activity recognizing numbers 1-4</p> <p>Position</p>	<p><b>DAY 5</b></p> <p>Collects and sorts objects according to one attribute.</p>
		<p>Ask each group the same problems. They can be solved using counters, drawings, etc. Number range: Group 1 works in 1-20; Group 2 works in 1-10; Group 3 works in 1-10</p>				<p><b>NO GROUP WORK.</b></p> <p><b>WHOLE CLASS COLLECTS AND SORTS OBJECTS</b></p>
		<p>Groups 1 and 3 work with teacher, one group at a time.</p> <p>Ask 1 addition and 1 subtraction word problem</p> <p>Group 2 works on their own.</p>	<p>Groups 2 and 3 work with teacher, one group at a time.</p> <p>Ask 1 addition and 1 subtraction word problem</p> <p>Group 1 works on their own.</p>	<p>Groups 1 and 3 work with teacher, one group at a time.</p> <p>Ask 1 addition and 1 multiplication word problem</p> <p>Group 2 works on their own.</p>	<p>Groups 2 and 3 work with teacher, one group at a time.</p> <p>Ask 1 addition and 1 multiplication word problem</p> <p>Group 1 works on their own.</p>	

## Week 5 : Whole Class

WEEK 5	WHOLE CLASS COMPONENT (Counting and Mental/Number sense)
<p><b>Notes to the teacher:</b></p> <ul style="list-style-type: none"><li>Counting at the beginning of the day helps learners focus on numbers. Every day you will let your learners do rote counting (to develop the vocabulary of numbers) as well as rational counting (thinking what they are doing) activities. Counting at the beginning of the lesson is done with the whole class every day.</li><li>Daily activities indicate activities that should be done every day. The specific concepts being developed are indicated every day e.g. Day 1.</li><li>Marking the register and talking about the Weather chart and Birthday chart are daily activities involving incidental learning and are usually part of the Literacy Oral component. They are placed here as Numeracy concepts are also being dealt with.</li></ul>	
<b>DAILY ACTIVITIES</b>	
<p><b>COUNTING AND MENTAL/NUMBER SENSE</b></p> <p><b><u>Daily Activities.</u></b> (to take no more than 10 minutes)</p> <p><b><i>These must be done daily:</i></b></p> <ul style="list-style-type: none"><li>Begin lessons by letting learners rote count to 30.</li><li>Learners count to 20 while you point to the numbers on the number line.</li></ul> <p><b><i>Choose from the following (to make up the 10 mins.):</i></b></p> <ul style="list-style-type: none"><li>Each day choose different learners to count out objects by touching the object as they say the number. e.g. windows in the classroom, number of books, boys/girls in a group, etc.</li><li>Each day do a different one-to-one correspondence activity e.g. matching fingers to fingers, shoes to feet, books to children, etc.</li><li>Write the numbers 1, 2 and 3 on a few pieces of paper. Put them somewhere in the classroom where they can be seen but not where learners expect to see them. Let the learners find the “hidden” numbers – when a learner finds the number they take it and hold the paper. Once all the numbers have been found, ask the learners to get into the correct group (all the 1’s together, etc.). Learners count the number of children in each group, saying which group has the most and which the least learners. You can also use this as a one-to-one correspondence activity by letting the learners match 1, 2, and 3 together. See which numbers are left over. This will depend on how many pieces of paper you put up.</li><li>Revise the colours, shapes and sizes learnt.</li></ul> <p><b><i>Tip: It is important that learners develop a sense of number. This happens as learners are exposed to numbers in a variety of ways as well as thinking about what they are doing.</i></b></p>	

**DAY 1** (to take no more than 30 minutes)

- If possible, take the learners outside. Ask them to make their bodies look like the number you say – 1 or 2 or 3. To make your body into the shape of a 3 is difficult, but fun! Let them write the number in the air as big as they can.
- As you say a number, learners must get into groups of that number. Each time they must count the number to make sure they are correct.

**Tip:** *This can be done in the classroom, but it is better to do it outside where there is more space to move.*

- Do this activity outside. Ask a few learners to help you carry a table and a chair outside to use in this lesson. Place the chair and the table next to each other, but a little apart. Divide the learners into groups of 3 or 4. Explain that you are going to play games using the table and the chair. The groups will work one at a time. Tell them that when you give the group a command, all the members of the group must do what you tell them, as quickly as possible. Remember to use the vocabulary that you want the learners to learn. If you wish, you can write some of the positional words on cards. You can then hold them up while you give your commands, so that the learners can read the words incidentally. Some of the commands could be as follows:

- Climb under the table
- Sit on top of the chair
- Stand between the two pieces of furniture
- Stand next to the chair
- Stand in front of the table
- Stand behind the table
- Put your hand on the table
- Put your hand under the table
- Climb over the table (Let the learners in the group do this one at a time)

Repeat this with the other groups, until each group has had a turn. Take the learners back to the classroom and settle them by asking them to touch the back of their bodies, the front of their bodies, then different parts of the body.

- Call 5 boys and 5 girls to the front of the class. Make 2 lines – 1 line of boys and 1 line of girls. Now let the learners match the boys to the girls, one by one. Ask who is first in the boys line and who is first in the girls line. Repeat the activity a few times using different learners and different numbers. Do not always call out the same number of girls and boys – sometimes call out more or fewer boys than girls. Always discuss what happens when the learners are matched up. You need to continually draw the learners' attention to these positional words of first/ second /third and last. Try to find at least 1 opportunity a day to reinforce this concept.

**DAY 2** (to take no more than 30 minutes)

- Call 4 children to the front of the class. Ask the class how you can make this group bigger. Call another child to join the group. Count the number in the group. Ask how you can make the group smaller. Send 2 children back to their desks. Discuss what is happening i.e. the group is made bigger or smaller.
- Give the learners counters and ask them to make a group of 4 objects. Now ask them to make a group which is bigger, then smaller. Do this a few times using different numbers.
- Write the numbers 1, 2 and 3 on the board. Ask different learners to come and draw the correct number of dots next to the numbers.
- Introduce the number 4 by letting learners show you 4 fingers. Ask them to show you a different 4 fingers. Each time count the number of fingers. Ask who can show you a 4 on the number line. Demonstrate how a 4 is written. Let the learners write the number in the air, on their desks, on their feet, etc. Let them open their books and practice writing the number 4 and drawing the correct number of pictures next to the numeral.

**DAY 3** (to take no more than 30 minutes)

- Call 8 learners to the front of the class. Give each of these learners a piece of paper on which you have written a number - 1, 2, 3 or 4. They must not show the class their number until you tell them to. As you indicate to them they show the class their number and the rest of the learners clap the number then write it in the air.
- Call 8 learners to the front of the class and give them the pieces of paper with numbers written on them. Ask them to put themselves in the correct order. There will be two lines. As you point to the numbers, learners say the number and click their fingers according to the number shown. Ask who is first, second, third and last.
- Give each learner a piece of paper. Ask them to draw 1 house, 2 trees, 3 flowers and 4 clouds in the sky.
- Put a small pile of matches in the middle of each group. Tell the learners to count out 6 matches each. Ask them to make a shape with 3 sides. Now make a shape with 3 corners. What do you find? Discuss what this shape is called – a triangle (tri means three and angle means corner). Ask if they can make a rectangle (rect means right, a 90% angle) or a circle – why not?
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**DAY 4** (to take no more than 30 minutes)

- Give each group a container with objects. Tell the learners you are going to tap a number on the table and they must take out that number of counters. If you tap twice, they will put out 2 counters. Let the learners count the counters each time.
- Repeat the activity but this time they must put out more counters than the number you tap. If they get this correct, they must put out fewer counters than the number you tap.
- Ask the learners to get out their crayons. Hold up the number 1 number card, and tell the learners to get out the number of crayons that you are showing, e.g. 1.

Then show them your 2 number card and ask them to show you that number of crayons. The learners can now use their crayons to follow your instructions:

- Put the red and the yellow crayons next to each other on your table.
- Put the blue crayon between the red and the yellow crayons.
- Wave your blue crayon above your head.
- Hold your yellow crayon in front of your body.
- Now put it behind your body.
- Hold the red crayon under your chair.
- Hold the blue crayon over the red one.
- Put the yellow crayon on your chair.

The learners need to get as many opportunities as possible to count. You could now get them to count their crayons.

**DAY 5** (to take no more than 30 minutes)

- Choose 5 girls and 5 boys and ask them to come and stand in front of the class. Ask: *How can we sort these learners into 2 groups?* Listen to the learners' suggestions. They will probably suggest that the learners be sorted into 1 group of girls and 1 group of boys. However, if the learners give you another suggestion that makes sense, you must accept this. For example, they might sort the groups according to whether they are wearing jerseys or not.
- Repeat with a group of 4 tall learners and a group of 4 short learners, and then with a group of 6 girls only. In each case, ask the learners to sort them into 2 groups.
- Play word games about groups. Say: *Let's play a game. I am going to tell you the names of some objects that belong to one group, or family. What family do they belong to?*
  - porridge, meat, pumpkin, mealies (food).
  - dress, shirt, trousers, shoes (clothes).

Say: *Now I will give you the names of things that belong to the same family, but I will say one thing that does not belong to that family. Which thing does not belong?*

  - cow, goat, horse, **sun**, hen;
  - mother, father, grandmother, **tree**, grandfather.
- Give learners a worksheet to complete where they find the odd one out.

<b>ASSESSMENT</b>	<p><b>Formal</b> : No formal, recorded Assessment</p> <p><b>Informal</b>: Unrecorded assessment of learners oral responses and ability to participate.</p>
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## Week 5 : Group Teaching

Week 5	GROUP TEACHING COMPONENT (Concept Development and Problem Solving)
<p><b>Notes to teacher:</b></p> <ul style="list-style-type: none"><li>• By now you have established 3 groups. Every day you will work with 2 different groups in a small group situation e.g. sitting on the mat together. During this time you will do activities to develop number concepts at the level of the learners in the group. A number of types of activities are provided and you should do ALL the types each time you work with that group; but remember, although examples are provided, you should look for your own examples that will suit your learners. You will also give the learners <u>at least 2 different word problems to solve every time you work with them</u>. It is through solving problems and discussing the solutions that learners develop a sense of number, an understanding of the operations and the ability to reflect on their thinking.</li><li>• While you are working with a group, the rest of the class will be working independently. You need to provide them with a variety of activities which reinforce and consolidate concepts already learnt. Try to vary the activities e.g. giving a practical activity (counting counters in counting bags), a written activity (filling in numbers, sequencing, etc.) and a fun activity (dot-to-dot pictures, puzzles, etc.)</li></ul>	
<b>DAILY ACTIVITIES</b>	
<p><b><u>Examples of activities to be done independently.</u></b> <i>Work from a Learner's Book, worksheets, workcards, etc.</i></p> <ul style="list-style-type: none"><li>• Write the numbers 1, 2, 3 and 4 in their books, drawing the correct number of pictures next to each number.</li><li>• Match the number, word and picture (practical or written).</li><li>• Worksheet where learners colour the number of squares indicated.</li><li>• Complete a sequencing activity e.g. circle, triangle, circle, triangle.</li><li>• Provide a matching activity e.g. matching coloured objects.</li><li>• Provide a sorting activity e.g. sorting buttons into sizes and colours.</li><li>• Find the odd one out.</li><li>• Count out counters from a counting bag.</li><li>• Complete a written sequencing activity.</li><li>• Fill in the numbers on a number line.</li><li>• Make groups of pictures more and less by drawing more pictures or fewer pictures.</li></ul> <p><b><u>Working with the group</u></b></p> <p><b><u>GROUP 1</u></b></p> <p><i>On Monday and Wednesday this group works with the teacher for 20 minutes.</i></p> <ul style="list-style-type: none"><li>• Do an <b>estimation activity</b> using length e.g. Put a ruler and a pencil next to each other in the middle of the group. Ask "How many pencils do you think it will take for them to be the same length as the ruler?" Or place a number of counters (up to 5) in the middle of the group. Cover the counters and ask each child in the group how many they think there are. Once everyone has said what they think, uncover the counters and count them. Ask who estimated too many or too few.</li><li>• Do a <b>sequencing activity</b> using size e.g. call all the 5/6/7 year olds to the front. Let them arrange themselves from shortest to tallest, biggest to smallest, etc.</li></ul>	



- Begin to **introduce the number 5**. Give each learner a pile of counters and a number line to 10. Ask them to count out 3, or 2, or 5 counters. Each time they point to the correct numeral on the number line. Let them trace over the “5” with their fingers, then write the number in the air, then write the number with their fingers on their leg. Let them write the number on a piece of paper or in their books and draw 5 pictures next to the number.
- Introduce the **vocabulary ‘more’ and ‘less’** as you do practical activities where each learner makes groups more and less using concrete objects.
- Give learners **2 word problems** to solve using the number range 1-20. Learners have access to concrete objects and number lines. They may solve the problem any way they like – drawings, practical, etc. On Monday the word problems will be 1 addition and 1 subtraction and on Wednesday you will ask 1 addition and 1 multiplication problem.

### **Group 2:**

*On **Tuesday** and **Thursday** this group works with the teacher for 20 minutes.*

- Do an **estimation activity** using length e.g. Put a ruler and a pencil next to each other in the middle of the group. Ask “How many pencils do you think it will take for them to be the same length as the ruler?” Or place a number of counters (up to 5) in the middle of the group. Cover the counters and ask each child in the group how many they think there are. Once everyone has said what they think, uncover the counters and count them. Ask who estimated too many or too few.
- Do a **sequencing activity** using size e.g. call all the 5/6/7 year olds to the front. Let them arrange themselves from shortest to tallest, biggest to smallest, etc.
- Begin to **introduce the number 5**. Give each learner a pile of counters and a number line to 10. Ask them to count out 3, or 2, or 5 counters. Each time they point to the correct numeral on the number line. Let them trace over the “5” with their fingers, then write the number in the air, then write the number with their fingers on their leg. Let them write the number on a piece of paper or in their books and draw 5 pictures next to the number.
- Introduce the **vocabulary ‘more’ and ‘less’** and do practical activities making groups more and less
- Give learners **2 word problems** to solve using the number range 1 – 10. Learners have access to concrete objects and number lines. They may solve the problem any way they like – drawings, practical, etc. On Tuesday the word problems will be 1 addition and 1 subtraction and on Thursday you will ask 1 addition and 1 multiplication problem.

### **Group 3:**

*This group works with the teacher **every day** for 20 minutes.*

- Do a **sequencing activity** using size and shape e.g. put a set of big and small circles in the middle of the group. Ask the first learner to find a big circle and put it in front of him/her. Ask the second learner to find a small circle and put it in front of him/her. Ask the third learner to find a big circle and put it in front of him/her. Ask the fourth learner what they must find to continue the sequence. Carry on till everyone has had a turn. Discuss the sequence. Do the same using circles and rectangles of the same size.

- Explore the **properties of length and height**. Give each learner a number of blocks which join e.g. unifix blocks, Lego, etc. Ask them to make a long 'train' by joining the blocks together. When everyone has completed their 'train', put them next to each other and discuss which is the longest and which the shortest, etc. Now ask them to turn the row of blocks upwards and balance the blocks as a tower. Again discuss which is the longest, shortest, etc. Ask questions such as "was the longest train the same as the tallest tower?". Another activity is to give each of the learners a piece of string and a pair of scissors and ask them to make their piece of string a different length.
- Match objects/pictures using **one-to-one correspondence** e.g. match shoes to feet, fingers to fingers, etc.
- Give learners **2 word problems** to solve using the number range 1-5. Learners have access to concrete objects and number lines. They may solve the problem any way they like – drawings, practical, oral etc. On Monday and Tuesday the word problems will be 1 addition and 1 subtraction and on Wednesday and Thursday you will ask 1 addition and 1 multiplication problem.

**Assessment**

**Formal** : No formal, recorded Assessment.

**Informal**: Unrecorded assessment of learners oral responses and ability to solve problems.

**FIRST TERM: WEEK 6**

COMPONENT	MILESTONES	DAY 1	DAY 2	DAY 3	DAY 4	DAY 5
<b>COUNTING</b> LO 1 AS 1,2,	<ul style="list-style-type: none"> <li>Counts out objects to 10</li> <li>Counts to 20 on number line</li> <li>Orders numbers (1<sup>st</sup> to 3<sup>rd</sup>)</li> </ul>	<p>Daily:</p> <ul style="list-style-type: none"> <li>Rote count to at least 40</li> <li>Count to 20 while pointing to a number line and using an abacus</li> <li>Count concrete objects to 10</li> <li>Ask questions e.g. what number comes next?</li> </ul>				
<b>NUMBER SENSE AND MENTAL</b> LO 1 AS 1,3 LO 2 AS 1 LO 3 AS 1 LO 4 AS 5 LO 5 AS 1	<ul style="list-style-type: none"> <li>basic concepts: shape, position, measurement (quantity)</li> <li>vocabulary</li> <li>one-to-one correspondence</li> <li>more and less</li> <li>Knows, reads and writes number names and symbols from 1-6 and explores their relationship</li> <li>Identifies 3D objects – boxes and balls</li> <li>Completes simple sequencing activities</li> <li>Collects and sorts objects according to one attribute – introduction to graphs</li> </ul>	<p>Daily:</p> <ul style="list-style-type: none"> <li>Revision of numbers taught so far : 1, 2, 3, 4</li> <li>Revision of ordinal value 1<sup>st</sup>, 2<sup>nd</sup> and 3<sup>rd</sup></li> <li>Revision of basic concepts: colour, size, shape (circle, rectangle, triangle), measurement (length, height)</li> <li>One-to-one correspondence</li> </ul>				
<b>GROUP TEACHING</b> LO1 AS 6, 7	<ul style="list-style-type: none"> <li>Solves problems, and explains solutions, using concrete objects and drawings using numbers to 10</li> </ul>	<p>DAY 1</p> <p>3-D objects – boxes and balls</p> <p>2-D shapes</p>	<p>DAY 2</p> <p>Teach number 5</p> <p>Make groups more and less</p>	<p>DAY 3</p> <p>Activity recognizing 5</p> <p>Make groups more and less</p>	<p>DAY 4</p> <p>Activity recognizing 5</p> <p>Quantity</p>	<p>DAY 5</p> <p>Collects and sorts objects according to one attribute.</p>
		<p>Ask each group the same problems. They can be solved using counters, drawings, etc. Number range: Group 1 works in 1-20; Group 2 works in 1-10; Group 3 works in 1-10</p>				<p>NO GROUP WORK.</p> <p>WHOLE CLASS COLLECTS AND SORTS OBJECTS AND BUILDS A GRAPH.</p>
		<p>Groups 1 and 3 work with teacher, one group at a time.</p> <p>Ask 1 subtraction and 1 sharing word problem</p> <p>Group 2 works on their own.</p>	<p>Groups 2 and 3 work with teacher, one group at a time.</p> <p>Ask 1 subtraction and 1 sharing word problem</p> <p>Group 1 works on their own.</p>	<p>Groups 1 and 3 work with teacher, one group at a time.</p> <p>Ask 1 multiplication and 1 grouping word problem</p> <p>Group 2 works on their own.</p>	<p>Groups 2 and 3 work with teacher, one group at a time.</p> <p>Ask 1 multiplication and 1 grouping word problem</p> <p>Group 1 works on their own.</p>	

## Week 6 : Whole Class

WEEK 6	WHOLE CLASS COMPONENT (Counting and Mental/Number sense)
<p><b>Notes to the teacher:</b></p> <ul style="list-style-type: none"><li>Counting at the beginning of the day helps learners focus on numbers. Every day you will let your learners do rote counting (to develop the vocabulary of numbers) as well as rational counting (thinking what they are doing) activities. Counting at the beginning of the lesson is done with the whole class every day.</li><li>Daily activities indicate activities that should be done every day. The specific concepts being developed are indicated every day e.g. Day 1.</li><li>Marking the register and talking about the Weather chart and Birthday chart are daily activities involving incidental learning and are usually part of the Literacy Oral component. They are placed here as Numeracy concepts are also being dealt with.</li><li><b>ASSESSMENT TASK 2</b> will be done this week. The activities forming this task are indicated.</li></ul>	
<b>DAILY ACTIVITIES</b>	
<p><b>COUNTING AND MENTAL/NUMBER SENSE</b></p> <p><b>Daily Activities.</b> (to take no more than 10 minutes)</p> <p><b>These must be done daily:</b></p> <ul style="list-style-type: none"><li>Learners rote count to at least 40 and further if they can.</li><li>Learners count to 20 while you point to the numbers on a number line.</li><li>Use an abacus (or counters) and learners count out up to 10 as the beads are pushed across. Let a learner indicate the number on the number line.</li></ul> <p><i>Tip: This activity is part of Assessment Task 2. You will do this activity every day, observing different learners until every learner has had a chance to count out objects.</i></p> <p><b>Choose from the following (to make up the 10 mins.):</b></p> <ul style="list-style-type: none"><li>Mark the register, then count the number of girls and the number of boys. Ask questions such as “If 13 boys are present at school and 3 boys are not here, how many boys would there be if all the boys were at school?”</li><li>Complete the weather chart and birthday chart every day, using the time to develop basic concepts e.g. colour, sequencing days and months, etc.</li><li>Use opportunities throughout the day to revise order – 1<sup>st</sup>, 2<sup>nd</sup>, etc.</li><li>Revise numbers 1 to 4. Do activities where learners match the numeral, picture and word.</li></ul> <p><b>DAY 1</b> (to take no more than 30 minutes)</p> <ul style="list-style-type: none"><li>Cut drinking straws into different lengths and put a pile in the middle of each group. Ask learners to make a shape with 3 sides. They may need to trim a straw in order to do this. Discuss the different triangles – Do they all have 3 sides? Do they all have 3 angles? Why are they all not exactly the same? (because the sides are different lengths). Now ask learners to make a rectangle. Can rectangles be different? Can a rectangle have sides that are different lengths?</li><li>Using modeling clay (or playdough), learners make a ball and a box. Use the vocabulary you want learners to learn. Ask questions such as “How did you make the ball? Can you make a box by rolling the clay?”</li></ul>	

Discuss the different size objects learners make e.g. is it a ball if it is the size of a pea, or is it only a ball if it is the size of a golf ball?

**Tip:** You will need to observe the learners and record what they know during this lesson as this is the first activity in Assessment Task 2.

**DAY 2** (to take no more than 30 minutes)

- Give each group a pile of counters. Ask the learners to count out counters according to the number you write on the board. Write numbers 1 to 4 in a random order. Make sure everyone counts out correctly. Each time ask them to make the group 1 more, then 1 less and discuss what the number is. E.g. Write the number 1 and learners take 1 counter. Ask what number they would have if they had 1 more. Let them take 1 more counter and count how many they have.

**Tip:** You need to observe the learners as some will just know the answer, while others will need to count the counters each time. Learners who just know the answer should be in Group 1.

- Ask learners to count out 4 counters. What comes after 4? Ask the learners to show you 5 fingers. What else do the learners have 5 of on their bodies? Let the learners count their fingers on their other hand. If the learners are wearing sandals and their toes are visible, encourage them to count their toes. Ask learners if anyone can point to the numeral 5. Demonstrate how the number is written. Write the word 'five' next to the numeral and ask learners to read it. Place cards that have different numbers of objects drawn on them, on the board. Get one volunteer at a time to select a card with pictures of 5 objects on, and place this next to the numeral and word. Learners write the number 5 in the air with their fingers. Repeat this several times and then write the numeral 5 on the floor in front of them, on their arm, etc.
- Tell the learners that you need volunteers to do special number 5 exercises for you. Choose 3-4 volunteers to jump 5 times while their classmates count the jumps. Different volunteers can be asked to hop 5 times, etc. Now ask the whole class to clap 5 times and to click their fingers 5 times.

**DAY 3** (to take no more than 30 minutes)

- Ask two groups of learners, one made up for example, of three learners and one of four learners, to come to the front of the classroom. Try and use both boys and girls if possible. Ask the class which group has more learners. How do the learners know this? Encourage the learners to tell you that you can check this by matching the groups. (through one-to-one correspondence). Which group has fewer children? How do you know this? How can I change this group so that it is made up of the most children/ the least children? How can I make these groups the same size as each other?
- Tell the learners to close their eyes and listen to the number of sounds you make. As soon as they know the number they must hold up the same number of fingers. Working with numbers to 5, stamp on the floor, knock on the door, click your fingers, etc.

- Do the activity again, but this time give each learner a number line to 10 and tell the learners they must put a counter on the correct number. You can also let learners have a turn to make the sounds.
- Get 5 or 6 learners to come to the front of the class with their chairs. Whisper a different instruction to each learner and learners follow the instructions. Ask the class questions such as *Who is standing behind the chair? Who is sitting on the chair? Who is lying in front of the chair? Who is sitting under the chair? Who is kneeling next to the chair?*  
**Tip:** *This activity forms part of Assessment Task 2.*

**DAY 4** (to take no more than 30 minutes)

- Learners make a book all about 5. Give each learner an A5 piece of paper and give each group some magazines, scissors and glue. Give each group a different instruction e.g. find 5 blue things, or find 5 people, or find 5 flowers, or find 5 triangles to cut out and paste. Each learner in the group works on their own, but finding the same thing. When all the learners have completed the activity, collect the papers, staple them together with a cover which says "All about five". Put this book in the book corner.  
**Tip:** *This activity forms part of Assessment Task 2. You will be assessing learners understanding of colour, shape, size and counting to 5.*

**DAY 5** (to take no more than 30 minutes)

- During this lesson, you will draw up another bar graph with the learners. With this bar graph you are going to see how the learners come to school and how many learners use each mode of transport. You need to prepare the bar graph on the A3 sheet of paper beforehand. The columns running vertically represent the different modes of transport. The blocks running horizontally represent the learners.

Kombi	Walk	Car	Other

In a discussion with your learners, establish how they come to school. Some learners might walk, some might come by kombi, etc. Let all those who walk stand in one group, all those who come by kombi in another group, etc. Once you have done this, draw a little picture of the different modes of transport at the top of each vertical column. Ask your learners to each colour in a block to represent how they come to school. The learners need to colour their block quickly and one at a time. Remind the learners that they must each only colour in one block. Once the graph has been completed, you can discuss it with your learners. What mode of transport is there the most of, the least of? Are there any ways of coming to school that are used by an equal number of learners? etc.

**Tip:** *This activity forms part of Assessment Task 2.*

<b>ASSESSMENT</b>	<p><b>Formal:Recorded Assessment Task 2:</b> During both the Class and Group time rate the learners, recording specific problems against the following milestones</p> <ul style="list-style-type: none"> <li>• Counts out objects to 10</li> <li>• basic concepts: colour, size, shape, position, measurement</li> <li>• vocabulary</li> <li>• one-to-one correspondence</li> <li>• Identifies 3D objects – boxes and balls</li> <li>• Completes simple sequencing activities</li> <li>• Collects and sorts objects according to one attribute – introduction to graphs</li> </ul>
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### Week 6 : Group Teaching

<b>Week 6</b>	<b>GROUP TEACHING COMPONENT (Concept Development and Problem Solving)</b>
<p><b>Notes to teacher:</b></p> <ul style="list-style-type: none"> <li>• In Weeks 2 and 3 you started working in groups. In Weeks 4 and 5 you established 3 ability groups. Every day you will work with 2 different groups in a small group situation e.g. sitting on the mat together. During this time you will do activities to develop number concepts at the level of the learners in the group. A number of types of activities are provided and you should do ALL the types each time you work with that group; but remember, although examples are provided, you should look for your own examples that will suit your learners. You will also give the learners <u>at least 2 different word problems to solve every time you work with them.</u> It is through solving problems and discussing the solutions that learners develop a sense of number, an understanding of the operations and the ability to reflect on their thinking.</li> <li>• While you are working with a group, the rest of the class will be working independently. You need to provide them with a variety of activities which reinforce and consolidate concepts already learnt. Try to vary the activities e.g. giving a practical activity (counting counters in counting bags), a written activity (filling in numbers, sequencing, etc.) and a fun activity (dot-to-dot pictures, puzzles, etc.)</li> </ul>	
<b>DAILY ACTIVITIES</b>	
<p><b><u>Examples of activities to be done independently.</u></b> <i>Work from a Learner’s Book, worksheets, workcards, etc.</i></p> <ul style="list-style-type: none"> <li>• Write the numbers 1 to 5 in their books, drawing the correct number of pictures next to each number and writing the correct word.</li> <li>• Complete a sequencing activity e.g. fill in the missing numbers on a number line.</li> <li>• Provide a matching activity e.g. matching coloured objects.</li> <li>• Provide a sorting activity e.g. sorting buttons into sizes, colours, shapes, etc.</li> <li>• Learners draw around their hand and write the numerals 1-5 on the different fingers.</li> <li>• Provide a worksheet with different shapes. Learners colour then cut out the shapes and make their own picture, pasting the shapes into their workbooks.</li> <li>• Give each learner 3 pictures, each showing a different number of the same object.(e.g.5 balls, 4 balls, 3 balls) Ask them to paste them in the correct order from most to least and write the number under each picture. <i>Tip: This sequencing activity forms part of Assessment Task 2.</i></li> </ul>	



- Provide worksheets where learners have to match the objects on one side with the objects on the other (one-to-one correspondence).

**Tip:** This activity forms part of Assessment Task 2.

- Learners copy a table from the board and complete it by drawing the number required e.g.

<input type="checkbox"/> <input type="checkbox"/>	5
<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	4
<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	5

### Working with the group

#### GROUP 1

On **Monday** and **Wednesday** this group works with the teacher for 20 minutes.

- Do an **estimation activity** using shape. Put an assortment of different shapes (in total about 8) in the middle of the group. Let the learners look at the shapes then cover them. Ask learners to estimate how triangles there are. Give each learner a chance to say how many s/he thinks there are. Uncover the shapes and count the triangles. Ask who estimated too many and who estimated too few. Did anyone estimate the correct number?
- Clap a pattern and ask one learner to clap it back. Do this until everyone in the group has had a turn. Make sure you clap different patterns.

**Tip:** This sequencing activity forms part of Assessment Task 2.

- Give each learner some counters. Learners take it in turns to clap any number up to 10, and the rest of the group count out the correct number of counters.
- Hand out the cards with the numerals, the dots and the words 1-6 to each learner in this group. Ask the learners who has the numeral 6. The learner will show this card. Who has the word three? Who has 4 dots? Etc. Now ask who has a number that is more than 3? That is less than 4? Etc.
- Make sure each learner has access to paper, writing tools, counters and a number line. Ask them two different word problems which they solve by talking about them, drawing pictures and so on. This group will work in the number range 1 to 20. Let each learner tell the group how s/he solved the problem. On Monday the word problems will be 1 subtraction and 1 sharing and on Wednesday you will ask 1 multiplication and 1 grouping problem.

#### GROUP 2

On **Tuesday** and **Thursday** this group works with the teacher for 20 minutes.

- Do an **estimation activity** using shape. Put an assortment of different shapes (in total about 8) in the middle of the group. Let the learners look at the shapes then cover them. Ask learners to estimate how triangles there are. Give each learner a chance to say how many s/he thinks there are. Uncover the shapes and count the triangles. Ask who estimated too many and who estimated too few. Did anyone estimate the correct number?



- Clap a pattern and ask one learner to clap it back. Do this until everyone in the group has had a turn. Make sure you clap different patterns.  
*Tip: This sequencing activity forms part of Assessment Task 2.*
- Hand out the cards with the numerals, the dots and the words 1-5 to each learner in this group. Ask the learners who has the numeral 5. The learner will show this card. Who has the word three? Who has 4 dots? Etc. Now ask who has a number that is more than 3? That is less than 4? Etc.
- Give each learner some counters and a number line to 10. Ask them to place a counter on the number you say. You will be able to see who recognizes numbers to 10. Then let the learners count out the counters as they place them on the numbers 1 to 10.
- Make sure each learner has access to paper, writing tools, counters and a number line. Ask them two different word problems which they solve by talking about them, drawing pictures and so on. This group will work in the number range 1 to 10. Let each learner tell the group how s/he solved the problem. On Tuesday the word problems will be 1 subtraction and 1 sharing and on Thursday you will ask 1 multiplication and 1 grouping problem.

### **GROUP 3**

*This group works with the teacher every day for 20 minutes.*

- Do a **sequencing activity** using colour and shape e.g. put a set of blue circles, red triangles and yellow rectangles in the middle of the group. Ask the first learner to find a blue circle and put it in front of him/her. Ask the second learner to find a red triangle and put it in front of him/her. Ask the third learner to find a yellow rectangle and put it in front of him/her. Ask the fourth learner to find a blue circle and put it in front of him/her. Ask the fifth learner what they must find to continue the sequence. Carry on till everyone has had a turn. Discuss the sequence.  
*Tip: This activity forms part of Assessment Task 2.*
- Explore the **properties of length and height**. Give each learner a number of blocks which join e.g. unifix blocks, Lego, etc. Ask them to make a long 'train' by joining the blocks together. When everyone has completed their 'train', put them next to each other and discuss which is the longest and which the shortest, etc is. Now ask them to turn the row of blocks upwards and balance the blocks as a tower. Again discuss which is the longest, shortest, etc. Ask questions such as "was the longest train the same as the tallest tower?" Another activity is to give each of the learners a piece of string and a pair of scissors and ask them to make their piece of string a different length.
- Give each learner a packet/bag with counters. There will be a different number of counters in each packet and no packet will have more than 10 counters. Learners work in pairs and count out the number of counters in their packet.
- Give learners **2 word problems** to solve using the number range 1-5. Learners have access to concrete objects and number lines. They may solve the problems any way they like – drawings, practical, oral etc. On Monday and Tuesday the word problems will be 1 addition and 1 subtraction and on Wednesday and Thursday you will ask 1 addition and 1 multiplication problem.

<b>Assessment</b>	<p><b>Formal: Recorded Assessment Task 2:</b> During both the Class and Group time rate the learners, recording specific problems against the following milestones</p> <ul style="list-style-type: none"> <li>• Counts out objects to 10.</li> <li>• Basic concepts: colour, size, shape, position, measurement.</li> <li>• Vocabulary.</li> <li>• One-to-one correspondence.</li> <li>• Identifies 3D objects – boxes and balls.</li> <li>• Completes simple sequencing activities.</li> <li>• Collects and sorts objects according to one attribute – introduction to graphs.</li> </ul>
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**SUGGESTED ASSESSMENT TASKS : GRADE 1 NUMERACY FIRST TERM**

**TASK 2 : WEEK 6**

COMPONENT	MILESTONES	WKS	TASKS
<b>COUNTING AND MENTAL/NUMBER SENSE</b>	<ul style="list-style-type: none"> <li>• Counts out objects to 10.</li> <li>• Basic concepts: colour, size, shape, position, measurement.</li> <li>• Vocabulary.</li> <li>• One-to-one correspondence.</li> <li>• Identifies 3D objects – boxes and balls.</li> <li>• Completes simple sequencing activities.</li> <li>• Collects and sorts objects according to one attribute – introduction to graphs.</li> </ul>	Wk 6	<ul style="list-style-type: none"> <li>• Use the daily oral counting to assess learners' ability to count out.</li> <li>• Use the practical activity on Day 1 to observe learners' knowledge of 3-D objects.</li> <li>• Use the oral activity on Day 3 to assess sequencing, and the practical activity to assess position.</li> <li>• Use the practical activity on Day 4 to observe learners knowledge of colour, shape, size and counting to 5.</li> <li>• Use the oral and practical activity on Day 5 to assess learners understanding of collecting and sorting information.</li> <li>• Use written work to assess one-to-one correspondence.</li> </ul>
<b>PROBLEM SOLVING</b>	<ul style="list-style-type: none"> <li>• Counts out objects to 10.</li> <li>• Basic concepts: colour, size, shape, position, measurement.</li> <li>• Vocabulary.</li> <li>• One-to-one correspondence.</li> <li>• Identifies 3D objects – boxes and balls.</li> <li>• Completes simple sequencing activities.</li> <li>• Collects and sorts objects according to one attribute – introduction to graphs.</li> </ul>	Wk 6	<ul style="list-style-type: none"> <li>• During Group teaching observe learners ability to sequence and use of correct vocabulary.</li> </ul>

**FIRST TERM: WEEK 7**

COMPONENT	MILESTONES	DAY 1	DAY 2	DAY 3	DAY 4	DAY 5
<b>COUNTING</b> LO 1 AS 1,2,	<ul style="list-style-type: none"> <li>Counts out objects to 10</li> <li>Counts to 20 on number line</li> </ul>	Daily: <ul style="list-style-type: none"> <li>Rote count to at least 40</li> <li>Count to 20 while pointing to a number line and using an abacus</li> <li>Count out concrete objects to 10</li> <li>Ask questions e.g. what number comes before/after?</li> </ul>				
<b>NUMBER SENSE AND MENTAL</b> LO1 AS3,4, LO 2 AS 1 LO 3 AS 1 LO 4 AS 5 LO 5 AS 1	<ul style="list-style-type: none"> <li>basic concepts: shape, position, measurement (quantity)</li> <li>vocabulary</li> <li>one-to-one correspondence</li> <li>more and less</li> <li>Knows, reads and writes number names and symbols from 1-6 and explores their relationship</li> <li>orders numbers</li> <li>Identifies 3D objects – boxes and balls</li> <li>Completes simple sequencing activities</li> <li>Collects and sorts objects according to one attribute – introduction to graphs</li> </ul>	Daily: <ul style="list-style-type: none"> <li>Revision of numbers 1 to 5</li> <li>Revision of basic concepts: position, measurement, quantity</li> <li>One-to-one correspondence</li> <li>Sequencing shape, colour, size, numbers</li> </ul>	Exploring the relationship of numbers 1 to 5  Position  Make groups more and less	Exploring the relationship of numbers 1 to 5  Sequencing activities	Exploring the relationship of numbers 1 to 5  Ordering 1 <sup>st</sup> to 5 <sup>th</sup> .	Identifies 3-D objects  Introduce 2-D shape: square
<b>GROUP TEACHING</b> LO1 AS6, 7, 10	<ul style="list-style-type: none"> <li>Solves problems, and explains solutions, using concrete objects and drawings using numbers to 10</li> </ul>	Ask each group the same problems. They can be solved using counters, drawings, etc. Number range: Group 1 works in 1-20; Group 2 works in 1-10; Group 3 works in 1-10	Groups 1 and 3 work with teacher, one group at a time. Ask 1 grouping and 1 addition word problem Group 2 works on their own.	Groups 2 and 3 work with teacher, one group at a time. Ask 1 grouping and 1 addition word problem Group 1 works on their own.	Groups 1 and 3 work with teacher, one group at a time. Ask 1 addition and 1 subtraction word problem Group 2 works on their own.	Groups 2 and 3 work with teacher, one group at a time. Ask 1 addition and 1 subtraction word problem Group 1 works on their own.
						WORK IN RANDOMLY SELECTED GROUPS  Learn a square dance.

## Week 7 : Whole Class

WEEK 7	WHOLE CLASS COMPONENT (Counting and Mental/Number sense)
<p><b>Notes to the teacher:</b></p> <ul style="list-style-type: none"><li>Counting at the beginning of the day helps learners focus on numbers. Every day you will let your learners do rote counting (to develop the vocabulary of numbers) as well as rational counting (thinking what they are doing) activities. Counting at the beginning of the lesson is done with the whole class every day.</li><li>Daily activities indicate activities that should be done every day. The specific concepts being developed are indicated every day e.g. Day 1.</li><li>Marking the register and talking about the Weather chart and Birthday chart are daily activities involving incidental learning and are usually part of the Literacy Oral component. They are placed here as Numeracy concepts are also being dealt with.</li></ul>	
<p><b>COUNTING AND MENTAL/NUMBER SENSE</b></p>	
<p><b><u>Daily Activities.</u></b>(to take no more than 10 minutes)</p>	
<p><b><i>These must be done daily:</i></b></p>	
<ul style="list-style-type: none"><li>Learners rote count to at least 40 and further if they can. You can let the whole class count together, or just the boys (or girls), or all the 6 year olds. This should be fun for the learners so make sure you use a variety of strategies when doing rote counting.</li><li>Learners count to 20 while you point to the numbers on a number line. You can also ask different learners to point to the numbers as the class counts.</li></ul>	
<p><b><i>Choose from the following (to make up the 10 mins.):</i></b></p>	
<ul style="list-style-type: none"><li>Let a learner indicate a number on the number line and another learner uses an abacus (or counters) to push the correct number of beads across. Do this a few times.</li><li>Mark the register, boys and girls separately, and as the learner's name is called they line up at the door. Ask who is first. Why is that learner first? Who is last? Why is that learner last? Who is second? and so on. Ask if the learners are lined up shortest to tallest – and why they are not in that order. If they line up shortest to tallest who will be first?</li><li>Complete the weather chart and birthday chart every day, using the time to develop basic concepts e.g. colour, sequencing days and months, etc.</li></ul>	
<p><b>NB: Ask learners to bring waste material to school such as boxes, toilet roll holders, washed polystyrene trays, small blocks of wood, wool, string, etc. You will need these for Friday's lesson. Try to build up a stock of waste material as it is very useful in a Foundation Phase class.</b></p>	

**DAY 1** (to take no more than 30 minutes)

- Make sure each learner has a pencil. Tell them to put the pencil
  - Behind their back
  - Next to their cheek
  - On their shoulder
  - In front of their nose
  - Under their feetPlay this a few times giving different commands, using a book not a pencil, and so on.
- Take the learners outside and ask them to get into groups of 5, or 2, or 3, etc. Now tell them to make groups of one more than 2, or one less than 5, etc. Each time ask how many are in the group (if the command was one more than 2, the group should have 3 learners) and let the learners count the number in the group.
- Take the class outside if you do not have room in your classroom. Let the learners hold hands and make a circle before sitting down. Put a pile of jerseys (any number up to 10) in the middle of the ring. Ask learners how many children will be able to get a jersey from the pile. After a few guesses, let learners – one by one – take a jersey and sit in the middle. Count how many were able to get a jersey. Repeat the activity, but either remove some jerseys or add some to the pile so that there are a different number each time.

**DAY 2** (to take no more than 30 minutes)

- Give each group a pile of counters. Ask the learners to count out counters according to the number you write on the board. Write numbers 1 to 5 in a random order. Make sure everyone counts out correctly. Each time ask them to make the group 1 more, then 1 less and discuss what the number is. E.g. Write the number 1 and learners take 1 counter. Ask what number they would have if they had 1 more. Let them take 1 more counter and count how many they have.
- Each learner counts out 5 counters and places them on the desk. Ask learners to make two groups with their counters where one group is more than the other. After asking learners to tell you how they arranged their counters, ask how many counters they would need to make each side the same.
- Tell the learners that you need volunteers to do special number exercises for you. Choose 3-4 volunteers to jump 5 times while their classmates count the jumps. Different volunteers can be asked to hop 3 times, etc. Now ask the whole class to clap 4 times and to click their fingers 5 times.

**DAY 3** (to take no more than 30 minutes)

- Line up the learners, not more than 10 in a line. The learner at the back taps a number on the back of the learner in front of them. This learner taps the same number on the back of the learner in front of them. Carry on till the learner in front goes to the back and taps the number on the back of the learner who started. This learner has to say if it is correct or not.
- Give each learner a prepared piece of paper. There should be 8 squares and in each square a picture of something found in the school e.g. trees, windows, suitcases, doors, teachers, etc. Take the class for a walk around the school so that they find the objects and count how many there are. This number is recorded next to the right picture. Back in the classroom, ask questions such as *How many trees did you count? How many teachers did you see?* Always ask if the number is more than 5 or less than 5.
- Say a pattern, e.g. *boy, girl, woman, man, boy, girl, woman, man, boy, girl*. Pause in the series and let the learners tell you who is next. You can slip in an incorrect person, e. g. uncle, and see who notices. Do this with 1 or 2 more verbal patterns of your own.

**DAY 4** (to take no more than 30 minutes)

- Take the learners outside and make 4 lines. Give the first person in each line a bean-bag and place a hoop (piece of paper, bucket, etc.) 4 steps away. Each learner has 5 throws. They get one point for each time the bean-bag lands in the hoop. Encourage learners to discuss how many land in the hoop and how many outside e.g. Siphon had 5 throws. 3 landed in the hoop and 2 landed outside. Make sure everyone has a turn to throw the bean-bag into the hoop.
- When the game is finished, let the learners sit in a line. Ask who is first, second, third, etc. Now let them sit in the order of who got the most throws in the hoop. Ask who is 1<sup>st</sup>, 2<sup>nd</sup> etc. and discuss why they are now in that order. Is it possible to have 2 people first? Ask learners to think of another way they can be ordered.

**DAY 5** (to take no more than 30 minutes)

- Let each learner take one item from the pile of waste material and then take the class outside. Put learners into randomly selected groups of equal numbers for the activity. They find a slope (or put a plank as a ramp) where they investigate which items roll or slide. You can also provide balls and bean-bags to be used. Discuss why some objects roll and why other objects slide.
- Ask the groups to sort their objects. Leave them to choose their own way of sorting which they will explain when they have finished.
- Let the learners sit in a circle. Choose some square boxes and some rectangular boxes and let learners investigate the difference. Now show them a rectangular piece of paper and ask which box has a side like this. Then show them a square and through questioning let learners explore the similarities and differences between a square and a rectangle.

- Still outside, line the learners up in their groups. Tell them you are going to teach them a square dance. Give the following instructions, one at a time, making sure all the learners are able to do step one before doing the next step. Learners face to the front the whole time and move in their rows. The movement is step, together, step, together, etc each time.
    - Move 4 steps to the right (move sideways moving the right foot first: step, together etc).
    - Move 4 steps to the front (move forwards moving the right foot first).
    - Move 4 steps to the left (move sideways moving the left foot first).
    - Move 4 steps to the back (move backwards).
- Once the learners have mastered the steps, they do it while you clap a steady rhythm calling out the instructions. Discuss why it is a square dance!

<b>ASSESSMENT</b>	<p><b>Formal</b> : No formal, recorded Assessment</p> <p><b>Informal</b>: Unrecorded assessment of learners oral responses and ability to participate.</p>
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### Week 7 : Group Teaching

<b>Week 7</b>	<b>GROUP TEACHING COMPONENT (Concept Development and Problem Solving)</b>
<p><b>Notes to teacher:</b></p> <ul style="list-style-type: none"> <li>• By now you have established 3 groups. Every day you will work with 2 different groups in a small group situation e.g. sitting on the mat together. During this time you will do activities to develop number concepts at the level of the learners in the group. A number of types of activities are provided and you should do ALL the types each time you work with that group; but remember, although examples are provided, you should look for your own examples that will suit your learners. You will also give the learners <u>at least 2 different word problems to solve every time you work with them</u>. It is through solving problems and discussing the solutions that learners develop a sense of number, an understanding of the operations and the ability to reflect on their thinking.</li> <li>• While you are working with a group, the rest of the class will be working independently. You need to provide them with a variety of activities which reinforce and consolidate concepts already learnt. Try to vary the activities e.g. giving a practical activity (counting counters in counting bags), a written activity (filling in numbers, sequencing, etc.) and a fun activity (dot-to-dot pictures, puzzles, etc.)</li> </ul>	
<p><b><u>Examples of activities to be done independently.</u></b> <i>Work from a Learner's Book, worksheets, workcards, etc.</i></p> <ul style="list-style-type: none"> <li>• Write the numbers 1 to 5 in their books, drawing the correct number of pictures next to each number and writing the correct word.</li> <li>• Complete a sequencing activity e.g. fill in the missing numbers on a number line.</li> <li>• Fill in numbers on a number line.</li> <li>• Count out counters from a counting bag.</li> <li>• Give the learners number cards 1 to 5. They arrange them from smallest to biggest then copy the numbers into their books.</li> </ul>	



- Provide cards with a different number of pictures on each card. Learners count the number of pictures, then write the number in their books and draw the pictures.
- Provide worksheets where learners have to match the objects on one side with the objects on the other (one-to-one correspondence).
- Learners copy a table from the board where they have to draw more or less pictures.

Less		More
	3	
	4	
	5	

- Learners copy a table from the board and complete it by drawing the number of objects required e.g.

<input type="checkbox"/> <input type="checkbox"/>	5
<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	4
<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	5

### **Working with the group**

#### **GROUP 1**

On **Monday** and **Wednesday** this group works with the teacher for 20 minutes.

- Do an **estimation activity**. Put some objects in the middle of the group. Let the learners look at the objects then cover them. Ask learners to estimate how many objects there are. Give each learner a chance to say how many s/he thinks there are. Uncover the objects and count them. Ask who estimated too many and who estimated too few. Did anyone estimate the correct number?
- Show them some dice and discuss the various numbers on each side of a die. Throw the die and tell the learners to make a pile of objects the same as the number on the die. How many? Let the learners count their objects to check if they have the correct number. Can you make it more? How? Show me. How many “more” did you make your pile? Throw the die again and ask the learners to make their pile of objects the same as the number on the die. How many? Continue as you did above, but this time ask the learners to make their pile of objects “less”, etc. Repeat this with the learners making their pile of objects the same as the number on the die. They now need to make another pile of objects that is “the same as” or “equal to” this pile, etc.
- Introduce the number 7. Learners count out 7 counters then write the number 7 after you have shown them how to write it.
- Make sure each learner has access to paper, writing tools, counters and a number line. Ask them two different word problems which they solve by talking about them, drawing pictures and so on. This group will work in the number range 1 to 20. Let each learner tell the group how s/he solved the problem.



On Monday the word problems will be 1 grouping and 1 addition and on Wednesday you will ask 1 addition and 1 subtraction problem. On Wednesday, after the learners have told you how they worked out the answer, ask them if they can write the sum for the problem e.g.  $6+2=8$ . Discuss the different signs +, - and = and what they mean. Make sure learners are able to say that the sign = means 'the same' - it does not mean the answer! In  $6+2=8$  the 6+2 can be replaced by the 8 as they mean the same thing.

**Tip:** *Because this is a group of quick learners you will probably find that they can easily write a sum and will know the meaning of the different signs. Do not expect the same thing to happen with the other groups!*

## **GROUP 2**

On **Tuesday** and **Thursday** this group works with the teacher for 20 minutes.

- Do an **estimation activity**. Put some objects in the middle of the group. Let the learners look at the objects then cover them. Ask learners to estimate how objects there are. Give each learner a chance to say how many s/he thinks there are. Uncover the objects and count them. Ask who estimated too many and who estimated too few. Did anyone estimate the correct number?
- Give each learner some counters and a number line to 10. Ask them to place a counter on the number you say. You will be able to see who recognizes numbers to 10. Then let the learners count out the counters as they place them on the numbers 1 to 10.
- Give each learner a piece of paper and a crayon. Ask them to draw a circle. Then ask them to draw 5 stars inside the circle and 3 stars outside the circle. Ask if there are more stars in the circle or out. Repeat using other numbers.
- Make sure each learner has access to paper, writing tools, counters and a number line. Ask them two different word problems which they solve by talking about them, drawing pictures and so on. This group will work in the number range 1 to 10. Let each learner tell the group how s/he solved the problem. On Tuesday the word problems will be 1 grouping and 1 addition and on Thursday you will ask 1 addition and 1 subtraction problem.

## **GROUP 3**

This group works with the teacher **every day** for 20 minutes.

- Give each learner a packet/bag with counters. There will be a different number of counters in each packet and no packet will have more than 10 counters. Learners work in pairs and count out the number of counters in their packet
- Clap a pattern and ask one learner to clap it back. Do this until everyone in the group has had a turn. Make sure you clap different patterns.
- Give each learner some counters. Learners take it in turns to clap any number up to 10, and the rest of the group count out the correct number of counters.
- Put some small pictures in the middle of the group. Let each learner have a turn to take 2 pictures and say whether they are the same of if they are different. Then give each learner one picture and, taking turns, tell them to find a picture that is either the same or is different.

- Give learners **2 word problems** to solve using the number range 1-5. Learners have access to concrete objects and number lines. They may solve the problem any way they like – drawings, practical, oral etc. On Monday and Tuesday the word problems will be 1 grouping and 1 addition and on Wednesday and Thursday you will ask 1 addition and 1 subtraction problem.

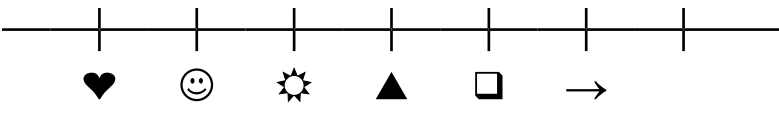
<b>Assessment</b>	<p><b>Formal</b> : No formal, recorded Assessment</p> <p><b>Informal</b> : Unrecorded assessment of learners oral responses and ability to solve problems.</p>
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Remember, although it is important to work with small groups of learners, these groups are very flexible and learners can move freely from one group to another, depending on their ability to master the concepts being dealt with. It is also important for you to remember that your reading groups and numeracy groups are usually different e.g. some learners learn to read very quickly yet develop numeracy concepts and skills slowly. This is not an indication of cognitive ability, but simply indicates the developmental stage the learner is at.

**FIRST TERM: WEEK 8**

COMPONENT	MILESTONES	DAY 1	DAY 2	DAY 3	DAY 4	DAY 5
<b>COUNTING</b> LO 1 AS 1,2,	<ul style="list-style-type: none"> <li>Counts out objects to 10</li> <li>Counts to 20 on number line</li> </ul>	<p>Daily:</p> <ul style="list-style-type: none"> <li>Rote count to at least 50</li> <li>Count to 20 while pointing to a number line and using an abacus</li> <li>Count out concrete objects to 10</li> <li>Ask questions e.g. what number comes between?</li> </ul>				
<b>NUMBER SENSE AND MENTAL</b> LO 1 AS3,4,7 LO 2 AS 1 LO4 AS 5	<ul style="list-style-type: none"> <li>basic concepts: position, measurement (capacity) vocabulary</li> <li>one-to-one correspondence more and less</li> <li>Knows, reads and writes number names and symbols from 1-6 and explores their relationship orders numbers (1<sup>st</sup> to 6<sup>th</sup>)</li> <li>Estimates up to 6 objects</li> <li>Completes simple sequencing activities</li> </ul>	<p>Daily:</p> <ul style="list-style-type: none"> <li>Revision of numbers 1 to 5</li> <li>Revision of basic concepts: position, measurement, quantity</li> <li>One-to-one correspondence</li> <li>Sequencing shape, colour, size, numbers</li> </ul>	<p><b>DAY 2</b></p> <p>Introduce 6</p> <p>More and less</p>	<p><b>DAY 3</b></p> <p>Consolidation of aspects of 6</p> <p>Sequencing activities</p>	<p><b>DAY 4</b></p> <p>Consolidation of aspects of 6.</p> <p>One-to-one correspondence</p>	<p><b>DAY 5</b></p> <p>Capacity</p>
<b>GROUP TEACHING</b> LO1 AS6,7,10	<ul style="list-style-type: none"> <li>Solves problems, and explains solutions, using concrete objects and drawings using numbers to 10</li> </ul>	<p>Ask each group the same problems. They can be solved using counters, drawings, etc.</p> <p>Number range: Group 1 works in 1-20; Group 2 works in 1-10; Group 3 works in 1-10</p> <p>Groups 1 and 3 work with teacher, one group at a time. Ask 1 subtraction and 1 sharing word problem Group 2 works on their own.</p>	<p>Groups 2 and 3 work with teacher, one group at a time. Ask 1 subtraction and 1 sharing word problem Group 1 works on their own.</p>	<p>Groups 1 and 3 work with teacher, one group at a time. Ask 2 different types of addition word problems Group 2 works on their own.</p>	<p>Groups 2 and 3 work with teacher, one group at a time. Ask 2 different types of addition word problems Group 1 works on their own.</p>	<p><b>WORK IN RANDOMLY SELECTED GROUPS</b></p> <p>Investigate capacity</p>

## Week 8 : Whole Class

WEEK 8	WHOLE CLASS COMPONENT (Counting and Mental/Number sense)
<p><b>Notes to the teacher:</b></p> <ul style="list-style-type: none"><li>Counting at the beginning of the day helps learners focus on numbers. Every day you will let your learners do rote counting (to develop the vocabulary of numbers) as well as rational counting (thinking what they are doing) activities. Counting at the beginning of the lesson is done with the whole class every day.</li><li>Daily activities indicate activities that should be done every day. The specific concepts being developed are indicated every day e.g. Day 1.</li><li>Marking the register and talking about the Weather chart and Birthday chart are daily activities involving incidental learning and are usually part of the Literacy Oral component. They are placed here as Numeracy concepts are also being dealt with.</li></ul>	
<b>DAILY ACTIVITIES</b>	
<b>COUNTING AND MENTAL/NUMBER SENSE</b>	
<p><b><u>Daily Activities</u></b> (to take no more than 10 minutes)</p>	
<p><b><i>These must be done daily:</i></b></p>	
<ul style="list-style-type: none"><li>Learners rote count to at least 50 and further if they can. You can let the whole class count together, or just the boys (or girls), or all the 7 year olds, etc. This should be fun for the learners so make sure you use a variety of strategies when doing rote counting.</li><li>Let a learner indicate a number on the number line and another learner uses an abacus (or counters) to push the correct number of beads across. Do this a few times.</li></ul>	
<p><b><i>Choose from the following (to make up the 10 mins.):</i></b></p>	
<ul style="list-style-type: none"><li>Learners individually count to 20 while you point to the numbers on a number line. You can also ask different learners to point to the numbers as the class counts.</li><li>Teach a number rhyme e.g. 1, 2, buckle my shoe.</li><li>Mark the register, complete the weather chart and birthday chart every day, using the time to develop basic concepts e.g. colour, sequencing days and months, ordering, etc.</li></ul>	
<p><b><u>DAY 1</u></b> (to take no more than 30 minutes)</p>	
<ul style="list-style-type: none"><li>Take the learners outside and ask them to get into groups of 5, or 2, or 3, etc. Now tell them to make groups of one more, or one less, etc. Each time ask how many are in the group (if the command was one more than 2, the group should have 3 learners) and let the learners count the number in the group.</li><li>Before going back to the classroom, randomly divide the class into two groups – boys and girls mixed. Tell them to line up according to height, smallest to biggest. Ask who is first, second, last, etc.</li><li>Draw a line on the board with evenly spaced sections (like a number line but with no numbers). Put simple pictures at each section</li></ul>	
	

Ask questions such as :

- What is third in the line?
- What is fifth in the line?
- Where is the arrow in the line?
- Where is the heart in the line? Etc.

Give each learner a copy of the line. Do this as a whole class where you read the statement, learners give a verbal answer, then write the missing ordinal number e.g.

- The ♥ is ..... (learners write 1<sup>st</sup>)
- The 😊 is ..... (learners write 2<sup>nd</sup>) and so on.

### **DAY 2** (to take no more than 30 minutes)

- Give each group a pile of counters. Show a card on which you have drawn a set of pictures - 1 to 5. Each time ask them to count out that number of counters, then to make the group 1 more, then 1 less. Each time discuss what the number is. E.g. When you show a picture of 4, learners count out 4 counters. Ask what number they would have if they had 1 more. Let them take 1 more counter and count how many they have. Do this with all the numbers from 1 to 5.
- Put the learners in random groups of 4. One learner will give the command and the others will do it e.g. jump one more than 3, or clap one less than 8, or blink your eyes 1 more than 4, etc. Learners take turns to give the command.
- Ask learners to show you 5 fingers in a number of different ways i.e. not just one hand. Now ask them to show you 6 fingers. Count them. Ask if anyone can recognize a 6 on the number line, or push 6 beads on the abacus. Show learners how to write a 6, emphasizing the starting and ending point. Let them stand up and try to make their bodies into the shape 6! Practise writing a 6 in the air, on their desk, on their leg etc. Now show them the word 'six' and let them read it. Learners write a 6 in their books (or on a piece of paper), draw six pictures and write the word six.

### **DAY 3** (to take no more than 30 minutes)

- Place a pile of shapes (either concrete objects or cut out of cardboard) on the desk in the middle of the groups (a group should not be more than 8). Learners take turns to make a pattern using the shapes e.g.



When everyone has had a turn, they start again and this time the learners copy the pattern into their books.

- Say a sequence of numbers and learners must clap when they hear a number which is not in the right place, e.g. 1 2 3 4 7 5 or 1 2 3 4 5 6 8 7 10. You can also pause in the series and let the learners tell you what the next number is.

- Show the number 6 and ask if anyone remembers what it is. Show the word six and let them read it. Let learners count out 6 counters. Draw a number of dots from 1 to 6 in random order on the board and ask different learners to come and write the correct number next to the dots. Have the words one to six on cards and let learners match the words to the numbers and dots.

**DAY 4** (to take no more than 30 minutes)

- Each learner counts out 6 counters and places them on the desk. Make the group 1 more then 1 less, discussing the numbers and their relationship. Do the same with all the numbers learnt so far.
- Write sets of numbers 1 to 6 on small pieces of paper or cardboard. Make enough sets so that everyone in the class gets a number. Give each learner a number then take them outside. Tell them to run around and when you blow the whistle (or clap your hands, or beat the drum, etc.) they must find one partner with the same number. If you have an even number of learners, everyone should have a partner, but if they don't, discuss why not. Do this a few times.
- Working in random groups of 6, give each group a piece of paper, some magazines and newspapers, scissors and glue. Each group makes a poster about 6.

**DAY 5** (to take no more than 30 minutes)

- Have an assortment of containers e.g. teaspoon, cup, bottle, mug and a bucket of water. This lesson should be done outside if possible! Let the learners investigate capacity according to your instructions. Make sure you use the relevant vocabulary e.g. full, empty, the same as, etc. Learners must have practical experience of pouring liquid from one container to another and talking about what they are doing. If possible, also provide straws, funnels, etc for learners to use.

<b>ASSESSMENT</b>	<p><b>Formal</b> : No formal, recorded Assessment</p> <p><b>Informal</b>: Unrecorded assessment of learners oral responses and ability to participate.</p>
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**Week 8 : Group Teaching**

<b>Week 8</b>	<b>GROUP TEACHING COMPONENT (Concept Development and Problem Solving)</b>
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**Notes to teacher:**

- By now you have established 3 groups. Every day you will work with 2 different groups in a small group situation e.g. sitting on the mat together. During this time you will do activities to develop number concepts at the level of the learners in the group. A number of types of activities are provided and you should do ALL the types each time you work with that group; but remember, although examples are provided, you should look for your own examples that will suit your learners. You will also give the learners at least 2 different word problems to solve every time you work with them. It is through solving problems and discussing the solutions that learners develop a sense of number, an understanding of the operations and the ability to reflect on their thinking.
- While you are working with a group, the rest of the class will be working independently. You need to provide them with a variety of activities which reinforce and consolidate concepts already learnt. Try to vary the activities e.g. giving a practical activity (counting counters in counting bags), a written activity (filling in numbers, sequencing, etc.) and a fun activity (dot-to-dot pictures, puzzles, etc.)

**DAILY ACTIVITIES**

**Examples of activities to be done independently.** *Work from a Learner’s Book, worksheets, workcards, etc.*

- Write the numbers 1 to 6 in their books, drawing the correct number of pictures next to each number and writing the correct word.
- Complete a sequencing activity e.g. fill in the missing numbers on a number line, dot-to-dot etc.
- Fill in numbers on a number line or number square.
- Count out counters from a counting bag.
- Give the learners number cards 1 to 6. They arrange them from smallest to biggest then copy the numbers into their books.
- Provide cards with a different number of pictures on each card. Learners count the number of pictures, then write the number in their books and draw the pictures.
- Provide worksheets where learners have to match the objects on one side with the objects on the other (one-to-one correspondence).
- Learners copy a table from the board which they have to complete.

		three
	6	
		four
	5	
		two

**Working with the group**

**GROUP 1**

*On **Monday and Wednesday** this group works with the teacher for 20 minutes.*

- Do an **estimation activity**. Put 6 objects in the middle of the group. Let the learners look at the objects then cover them. Ask learners to estimate how many objects there are. Give each learner a chance to say how many s/he thinks there are. Uncover the objects and count them. Ask who estimated too many and who estimated too few. Did anyone estimate the correct number?

- You need to prepare 7 boxes a day -or- two before this lesson. Label them clearly on their sides with 1-7. Place the boxes in random order in front of the group and ask the learners to help you put the boxes in the correct order. Place a container with counters in the middle of the group. Ask for volunteers to place the correct number of counters in a matching box. Make sure that each learner in this group gets a chance to participate. Ask the learners to show you:
  - a box that has the same number of counters as there are doors in the classroom
  - a box that has the same number of counters as the number of fingers on my one hand
  - a numeral that tells how many teeth are missing in the front of your mouth.
  - a numeral that tells me how many wheels there are on a kombi or a car.
 You can use many, varied examples, but you need to make sure that all of the learners get a chance to participate. Extend the learners' thinking by asking questions such as, "If you add 2 more counters to this box, how many counters will be in the box?" Let a learner do this and when giving the answer, s/he can point to the number on a number chart. Ask all the learners in the group if they can write a sum for this. Do this with several examples and then ask "If you take 3 counters out of this box, how many would be left?". Encourage learners to write a sum. If they are not able to write a subtraction sign, show them how it is written.
- Add another box with the number 8 written on the side. Ask learners to show you the correct number of fingers, then count out the correct number of counters. Let them practise writing 8 in the air, on the floor, etc.
- Make sure each learner has access to paper, writing tools, counters and a number line. Ask them two different word problems which they solve by talking about them, drawing pictures and so on. This group will work in the number range 1 to 20. Let each learner tell the group how s/he solved the problem. On Monday the word problems will be 1 subtraction and 1 sharing and on Wednesday you will ask 2 different addition problems. On Wednesday, after the learners have told you how they worked out the answer, ask them if they can write the sum for the problem e.g.  $6+2=8$ . Discuss the different signs +, - and = and what they mean.
 

*Tip: This group can start writing sums when doing work on their own (independent work).*

## **GROUP 2**

*On **Tuesday** and **Thursday** this group works with the teacher for 20 minutes.*

- Do an **estimation activity**. Put 5 objects in the middle of the group. Let the learners look at the objects then cover them. Ask learners to estimate how objects there are. Give each learner a chance to say how many s/he thinks there are. Uncover the objects and count them. Ask who estimated too many and who estimated too few. Did anyone estimate the correct number?
- Show them some dice and discuss the various numbers on each side of the die. Throw the die and tell the learners to make a pile of objects the same as the number on the die. How many? Let the learners count their objects to check if they have the correct number. Can you make it more? How? Show me. How many "more" did you make your pile? Throw the die again and ask the learners to make their pile of objects the same as the number on the die. How many?



Continue as you did above, but this time ask the learners to make their pile of objects “less”, etc. Repeat this with the learners making their pile of objects the same as the number on the die. They now need to make another pile of objects that is “the same as” or “equal to” this pile, etc.

- Make sure each learner has access to paper, writing tools, counters and a number line. Ask them two different word problems which they solve by talking about them, drawing pictures and so on. This group will work in the number range 1 to 10. Let each learner tell the group how s/he solved the problem. On Tuesday ask 1 addition problem. Once the learners have told you how they worked out the answer, ask them if they can write the sum for the problem e.g.  $6+2=8$ . Discuss the different signs +, - and = and what they mean. Make sure learners are able to say that the sign = means ‘the same’ - it does not mean the answer! In  $6+2=8$  the  $6+2$  can be replaced by the 8 as they mean the same thing. Ask another addition problem on Tuesday, and 2 subtraction problems on Thursday, always asking if the learners are able to write a sum indicating how the problem was solved.

**Tip:** By dealing with the terms more and less, learners will have built up an understanding of addition and subtraction. Writing a number sentence is using social knowledge to indicate that understanding. If no learner is able to write a sum, show the learners the signs +, - and = and ask if they have seen them before. Discuss the different signs then write a sum using the signs explaining what you are doing.

### **GROUP 3**

*This group works with the teacher every day for 20 minutes.*

- Give each learner a packet/bag with counters. There will be a different number of counters in each packet and no packet will have more than 10 counters. Learners work in pairs and count out the number of counters in their packet
- Give each learner some counters and a number line to 10. Ask them to place a counter on the number you say. You will be able to see who recognizes numbers to 10. Then let the learners count out the counters as they place them on the numbers 1 to 10.
- Give each learner a piece of paper and a crayon. Ask them to draw a circle. Then ask them to draw 5 stars inside the circle and 3 stars outside the circle. Ask if there are more stars in the circle or out. Repeat using other numbers.
- Give learners **2 word problems** to solve using the number range 1-10. Learners have access to concrete objects and number lines. They may solve the problem any way they like – drawings, practical, oral etc. On Monday and Tuesday the word problems will be 1 subtraction and 1 sharing and on Wednesday and Thursday you will ask 2 different addition problems. Show the group the signs +, - and = and ask if they know what they are. Discuss the different signs and what they mean.

#### **Assessment**

**Formal :** No formal, recorded Assessment

**Informal:** Unrecorded assessment of learners oral responses and ability to solve problems

Do not be in a hurry to introduce the signs for addition, subtraction and 'is equals to'. You need to make sure that the learners have developed the logico-mathematical knowledge of these concepts before introducing the signs as social knowledge.

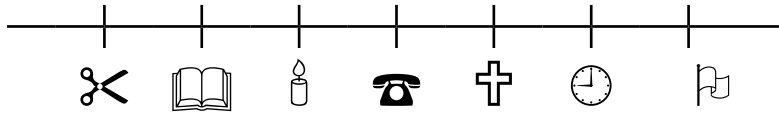
**FIRST TERM: WEEK 9 OVERVIEW**

COMPONENT	MILESTONES	DAY 1	DAY 2	DAY 3	DAY 4	DAY 5
<b>COUNTING</b> LO 1 AS 1,2,	<ul style="list-style-type: none"> <li>Counts out objects to 10</li> <li>Counts to 20 on number line</li> </ul>	Daily: <ul style="list-style-type: none"> <li>Rote count to at least 50</li> <li>Count to 20 while pointing to a number line and using an abacus</li> <li>Count out concrete objects to 10</li> <li>Ask questions e.g. what number is more/less than?</li> </ul>				
<b>NUMBER SENSE AND MENTAL</b> LO1 AS3,4,7 LO 2 AS 1 LO 4 AS 5	<ul style="list-style-type: none"> <li>basic concepts: measurement (mass)</li> <li>vocabulary more and less</li> <li>Knows, reads and writes number names and symbols from 1-6 and explores their relationship</li> <li>orders numbers (1<sup>st</sup> to 6<sup>th</sup>)</li> <li>Estimates up to 6 objects</li> <li>Completes simple sequencing activities</li> <li>Recognises addition, subtraction and equals signs (+, -, =)</li> </ul>	Daily: <ul style="list-style-type: none"> <li>Revision of numbers 1 to 6</li> <li>Revision of basic concepts: position, measurement, shape, size, colours</li> <li>Sequencing shape, colour, size, numbers</li> </ul>	Revision of numbers 1-6 Investigate balance	Investigate balance Sequencing activities	Revision of numbers 1-6 Estimation	Mass
<b>GROUP TEACHING</b> LO1 AS6,7,10	<ul style="list-style-type: none"> <li>Recognises addition, subtraction and equals signs (+, -, =)</li> <li>Solves problems, and explains solutions, using concrete objects and drawings using numbers to 10</li> </ul>	Ask each group the same problems. They can be solved using counters, drawings, etc. Number range: Group 1 works in 1-20; Group 2 works in 1-10; Group 3 works in 1-10  Groups 1 and 3 work with teacher, one at a time. Ask 1 addition and 1 sharing word problem Group 2 works on their own.	Groups 2 and 3 work with teacher, one at a time. Ask 1 addition and 1 sharing word problem Group 1 works on their own.	Groups 1 and 3 work with teacher, one at a time. Ask 2 different types of subtraction word problems Group 2 works on their own.	Groups 2 and 3 work with teacher, one at a time. Ask 2 different types of subtraction word problems Group 1 works on their own.	WORK IN RANDOMLY SELECTED GROUPS  Investigate mass

## Week 9 : Whole Class

WEEK 9	WHOLE CLASS COMPONENT (Counting and Mental/Number sense)
<p><b>Notes to the teacher:</b></p> <ul style="list-style-type: none"><li>Counting at the beginning of the day helps learners focus on numbers. Every day you will let your learners do rote counting (to develop the vocabulary of numbers) as well as rational counting (thinking what they are doing) activities. Counting at the beginning of the lesson is done with the whole class every day.</li><li>Daily activities indicate activities that should be done every day. The specific concepts being developed are indicated every day e.g. Day 1.</li><li>Marking the register and talking about the Weather chart and Birthday chart are daily activities involving incidental learning and are usually part of the Literacy Oral component. They are placed here as Numeracy concepts are also being dealt with.</li><li><b>ASSESSMENT TASK 3 will be done during this week.</b></li></ul>	
<b>DAILY ACTIVITIES</b>	
<b>COUNTING AND MENTAL/NUMBER SENSE</b>	
<p><b><u>Daily Activities</u></b> (to take no more than 10 minutes)</p>	
<p><b><i>These must be done daily:</i></b></p>	
<ul style="list-style-type: none"><li>Learners rote count to at least 50 and further if they can. You can let the whole class count together, or just the boys (or girls), or all the 7 year olds, etc. This should be fun for the learners so make sure you use a variety of strategies when doing rote counting.</li><li>Learners individually count to 20 while you point to the numbers on a number line. Choose a few learners every day until all learners have had a chance.</li></ul>	
<p><b><i>Tip: Use this activity as one of the Assessment Task activities</i></b></p>	
<p><b><i>Choose from the following (to make up the 10 mins.):</i></b></p>	
<ul style="list-style-type: none"><li>Learners close their eyes and listen to the number of taps/stamps/clicks etc. that they hear. They hold up the corresponding number of fingers E.g. stamp your foot four times – learners hold up 4 fingers and say 4.</li><li>Point to any number on the number line and ask questions such as : <i>What number is more than this number? What number is less than this number? What number is 1 more than this number? What number is 1 less than this number?</i></li><li>Teach a new number rhyme and let learners do the actions.</li><li>Mark the register, complete the weather chart and birthday chart every day, using the time to develop basic concepts e.g. colour, sequencing days and months, ordering, etc.</li></ul>	
<p><b><u>DAY 1</u></b> (to take no more than 30 minutes)</p>	
<ul style="list-style-type: none"><li>Randomly group the learners into 4 groups. Give each group a packet of objects (which you have prepared beforehand) of obviously light and obviously heavy objects e.g. paper clips, chalkboard duster, chalk, rock, bottle of juice, nail etc. Learners sort the objects into two groups – heavy and light. They need to be able to say why they have grouped the objects together.</li></ul>	



- Draw a line on the board with evenly spaced sections (like a number line but with no numbers). Put simple pictures at each section



Ask questions such as :

- What is third in the line?
- What is fifth in the line?
- Where is the cross in the line?
- Where is the flag in the line? Etc.

Give each learner a copy of the line. Do this as a whole class where you read the statement, learners write the missing ordinal number e.g.

- The  is ..... (learners write 1<sup>st</sup>)
- The  is ..... (learners write 2<sup>nd</sup>) and so on.




**Tip:** Observe the learners as they write their response because this is one of the Assessment Task activities.

**DAY 2** (to take no more than 30 minutes)

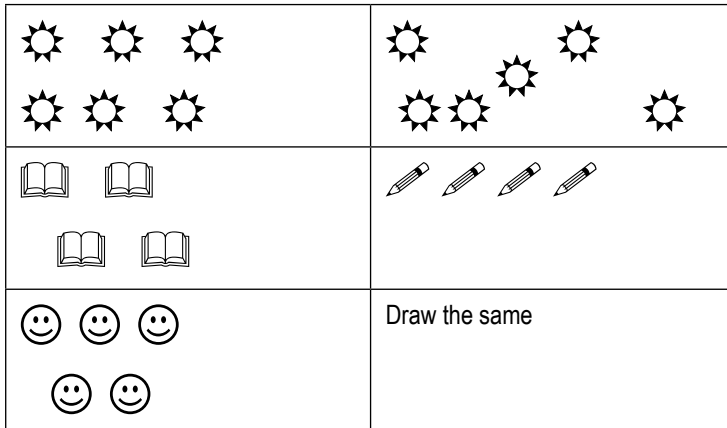
- Learners work in pairs with a container of counters. One learner counts out 10 counters on to the desk and the other learner counts the counters as they are put back in the container. Walk around and observe the learners to see who can manage and who is struggling.

**Tip:** This is one of the activities for the Assessment Task. You will need to record who is not able to count to 10.

- Give each learner a worksheet (or write the work on the board) which will allow you to assess the learners' understanding of the numbers 1 to 6. The following is an example :  
Fill in the missing parts.

	6	
		three
		four
	5	
		Two
		

Do these match?



**Tip:** This is one of the activities for the Assessment Task. You will need to record how each learner managed the activity.

**DAY 3** (to take no more than 30 minutes)

- Learners work in pairs with a container of counters. One learner counts out 10 counters on to the desk and the other learner counts the counters as they are put back in the container. Walk around and observe the learners to see who can manage and who is struggling.  
**Tip:** This is one of the activities for the Assessment Task. You will need to record who is not able to count to 10.
- Say a sequence of numbers and learners must clap when they hear a number which is not in the right place, e.g. 1 2 3 4 7 5 or 1 2 3 4 5 6 8 7 10. You can also pause in the series and let the learners tell you what the next number is.
- Randomly group the learners into 4 groups then take them outside. Give each group a piece of newspaper and a magazine to put in the middle of their group. Learners must find three light objects and put them on the newspaper, and three heavy objects and put them on the magazine. The first group to find all the objects and place them correctly is the winner.

**DAY 4** (to take no more than 30 minutes)

- Learners work in pairs with a container of counters. One learner counts out 10 counters on to the desk and the other learner counts the counters as they are put back in the container. Walk around and observe the learners to see who can manage and who is struggling.  
**Tip:** This is one of the activities for the Assessment Task. You will need to record who is not able to count to 10.
- Each learner counts out 6 counters and places them on the desk. Make the group 1 more then 1 less, discussing the numbers and their relationship. Do the same with all the numbers learned so far.
- Write sets of numbers 1 to 6 on small pieces of paper or cardboard. Make enough sets so that everyone in the class gets a number. Give each learner a number. Tell them to make lines of numbers in the correct order 1 to 6.  
**Tip:** This is one of the activities for the Assessment task which requires learners to order from 1<sup>st</sup> the 6<sup>th</sup>.

<p><b>DAY 5</b> (to take no more than 30 minutes)</p> <ul style="list-style-type: none"> <li>• Provide learners with playdough or plasticine. Ask them to divide each lump into two pieces which are the same mass. If you have a balance, learners can check their accuracy. Then ask learners to roll the two pieces into one sausage. Ask if the sausage has the same mass as when it was two pieces. Now divide it into three or four pieces of the same mass. Use open-ended questions to encourage learners to explore the concept of mass.</li> <li>• Bring a bathroom scale and weigh the learners, making a chart of their mass.</li> </ul>	
<p><b>ASSESSMENT</b></p>	<p><b>Formal: Recorded Assessment Task 2:</b> During the whole class and group teaching activities as indicated, rate the learners against the following milestones, recording specific problems :</p> <ul style="list-style-type: none"> <li>• Counts out objects to 10</li> <li>• Counts to 20 on number line</li> <li>• Knows, reads and writes number names and symbols from 1-6 and explores their relationship</li> <li>• orders numbers (1<sup>st</sup> to 6<sup>th</sup>)</li> <li>• Estimates up to 6 objects</li> <li>• Recognises addition, subtraction and equals signs (+, -, =)</li> <li>• Solves problems, and explains solutions, using concrete objects and drawings using numbers to 10</li> </ul>

**Week 9 : Group Teaching**

<p><b>Week 9</b></p>	<p><b>GROUP TEACHING COMPONENT (Concept Development and Problem Solving)</b></p>
<p><b>Notes to teacher:</b></p> <ul style="list-style-type: none"> <li>• By now you have established 3 groups. Every day you will work with 2 different groups in a small group situation e.g. sitting on the mat together. During this time you will do activities to develop number concepts at the level of the learners in the group. A number of types of activities are provided and you should do ALL the types each time you work with that group; but remember, although examples are provided, you should look for your own examples that will suit your learners. You will also give the learners <u>at least 2 different word problems to solve every time you work with them.</u> It is through solving problems and discussing the solutions that learners develop a sense of number, an understanding of the operations and the ability to reflect on their thinking.</li> <li>• While you are working with a group, the rest of the class will be working independently. You need to provide them with a variety of activities which reinforce and consolidate concepts already learnt. Try to vary the activities e.g. giving a practical activity (counting counters in counting bags), a written activity (filling in numbers, sequencing, etc.) and a fun activity (dot-to-dot pictures, puzzles, etc.)</li> <li>• <b>ASSESSMENT TASK 3 will be done during this week.</b></li> </ul>	
<p><b>DAILY ACTIVITIES</b></p>	
<p><b><u>Examples of activities to be done independently.</u></b> <i>Work from a Learner's Book, worksheets, workcards, etc.</i></p> <ul style="list-style-type: none"> <li>• Write the numbers 1 to 6 in their books, drawing the correct number of pictures next to each number and writing the correct word.</li> <li>• Complete a sequencing activity e.g. fill in the missing numbers on a number line, dot-to-dot etc.</li> <li>• Fill in numbers on a number line or number square.</li> </ul>	

- Give the learners number cards 1 to 6. They arrange them from smallest to biggest then copy the numbers into their books.
- Provide cards with a different number of pictures on each card. Learners count the number of pictures, then write the number in their books and draw the pictures.
- Provide worksheets where learners have to match the objects on one side with the objects on the other (one-to-one correspondence).

### **Working with the group**

#### **GROUP 1**

*On Monday and Wednesday this group works with the teacher for 20 minutes.*

- Do an **estimation activity**. Put 6 objects in the middle of the group. Let the learners look at the objects then cover them. Ask learners to estimate how many objects there are. Give each learner a chance to say how many s/he thinks there are. Uncover the objects and count them. Ask who estimated too many and who estimated too few. Did anyone estimate the correct number?

***Tip:** This is one of the activities for Assessment Task 3*

- Make sure each learner has access to paper, writing tools, counters and a number line. Ask them two different word problems which they solve by talking about them, drawing pictures and so on. This week the group will work in the number range 1 to 10 as you will be assessing the learners ability to solve problems. Let each learner tell the group how s/he solved the problem. On Monday the word problems will be 1 addition and 1 sharing and on Wednesday you will ask 2 different subtraction problems. After learners have told you how they worked out the answer, ask them if they can write the sum for the problem. Ask what the signs +, -, = mean.

***Tip:** This is one of the activities for the Assessment Task*

#### **GROUP 2**

*On Tuesday and Thursday this group works with the teacher for 20 minutes.*

- Do an **estimation activity**. Put 6 objects in the middle of the group. Let the learners look at the objects then cover them. Ask learners to estimate how many objects there are. Give each learner a chance to say how many s/he thinks there are. Uncover the objects and count them. Ask who estimated too many and who estimated too few. Did anyone estimate the correct number?

***Tip:** This is one of the activities for Assessment Task 3*

- Make sure each learner has access to paper, writing tools, counters and a number line. Ask them two different word problems which they solve by talking about them, drawing pictures and so on. This week the group will work in the number range 1 to 10 as you will be assessing the learners ability to solve problems. Let each learner tell the group how s/he solved the problem. On Tuesday the word problems will be 1 addition and 1 sharing and on Thursday you will ask 2 different subtraction problems. After learners have told you how they worked out the answer, ask them if they can write the sum for the problem. Ask what the signs +, -, = mean.

***Tip:** This is one of the activities for Assessment Task 3.*



**GROUP 3**

*This group works with the teacher every day for 20 minutes.*

- Do an **estimation activity**. Put 6 objects in the middle of the group. Let the learners look at the objects then cover them. Ask learners to estimate how many objects there are. Give each learner a chance to say how many s/he thinks there are. Uncover the objects and count them. Ask who estimated too many and who estimated too few. Did anyone estimate the correct number?

**Tip:** *This is one of the activities for Assessment Task 3.*

- Make sure each learner has access to paper, writing tools, counters and a number line. Ask them two different word problems which they solve by talking about them, drawing pictures and so on. This week the group will work in the number range 1 to 10 as you will be assessing the learners ability to solve problems. Let each learner tell the group how s/he solved the problem. On Monday and Tuesday the word problems will be 1 addition and 1 sharing and on Wednesday and Thursday you will ask 2 different subtraction problems. After learners have told you how they worked out the answer, display the different signs +, - and = and ask what they mean.

**Tip:** *This is one of the activities for Assessment Task 3.*

<p><b>Assessment</b></p>	<p><b>Formal : Recorded Assessment Task 3:</b> During the whole class and group teaching activities as indicated, rate the learners against the following milestones, recording specific problems :</p> <ul style="list-style-type: none"> <li>• Counts out objects to 10</li> <li>• Counts to 20 on number line</li> <li>• Knows, reads and writes number names and symbols from 1-6 and explores their relationship</li> <li>• Orders numbers (1<sup>st</sup> to 6<sup>th</sup>)</li> <li>• Estimates up to 6 objects</li> <li>• Recognises addition, subtraction and equals signs (+, -, =)</li> <li>• Solves problems, and explains solutions, using concrete objects and drawings using numbers to 10</li> </ul>
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## SUGGESTED ASSESSMENT TASKS : GRADE 1 NUMERACY FIRST TERM

### TASK 3 : WEEK 9

COMPONENT	MILESTONES	WKS	TASKS
<b>COUNTING AND MENTAL/ NUMBER SENSE</b>	<ul style="list-style-type: none"> <li>• Counts out objects to 10</li> <li>• Counts to 20 on number line</li> <li>• Knows, reads and writes number names and symbols from 1-6 and explores their relationship</li> <li>• Orders numbers (1<sup>st</sup> to 6<sup>th</sup>)</li> </ul>	Wk 9	<ul style="list-style-type: none"> <li>• Use the daily oral counting to assess learners' ability to count out.</li> <li>• Use the recorded activity on Day 1 to assess ordering.</li> <li>• Use the practical activity on Days 2 to 4 to observe learners' ability to count out objects.</li> <li>• Use the recorded activity on Day 2 to assess one-to-one correspondence.</li> <li>• Use written work to assess knowledge of numbers and number names.</li> </ul>
<b>PROBLEM SOLVING</b>	<ul style="list-style-type: none"> <li>• Estimates up to 6 objects</li> <li>• Recognises addition, subtraction and equals signs (+, -, =)</li> <li>• Solves problems, and explains solutions, using concrete objects and drawings using numbers to 10</li> </ul>	Wk 9	<ul style="list-style-type: none"> <li>• During Group teaching observe learners ability to estimate.</li> <li>• Problem solving is assessed during group teaching throughout the week.</li> <li>• Use the problem solving activities to assess understanding of the signs +, - and =</li> </ul>

**FIRST TERM: WEEK 10 OVERVIEW**

COMPONENT	MILESTONES	DAY 1	DAY 2	DAY 3	DAY 4	DAY 5
<b>COUNTING</b> LO 1 AS 1,2,	<ul style="list-style-type: none"> <li>Counts out objects to 10</li> <li>Counts to 20 on number line</li> </ul>	Daily: <ul style="list-style-type: none"> <li>Rote count to at least 50</li> <li>Count to 20 while pointing to a number line and using an abacus</li> <li>Count out concrete objects to 10</li> <li>Ask questions e.g. what number is more/less than?</li> </ul>				
<b>NUMBER SENSE AND MENTAL</b> LO1 AS 3,4,7 LO 2 AS 1 LO 3 AS 1 LO4 AS 5	<ul style="list-style-type: none"> <li>basic concepts: measurement vocabulary more and less</li> <li>Knows, reads and writes number names and symbols from 1-6 and explores their relationship</li> <li>orders numbers (1<sup>st</sup> to 6<sup>th</sup>)</li> <li>Estimates up to 6 objects</li> <li>Completes simple sequencing activities</li> <li>Identifies 3D objects – boxes and balls</li> <li>Recognises addition, subtraction and equals signs (+, -, =)</li> </ul>	Daily: <ul style="list-style-type: none"> <li>Revision of numbers 1 to 6</li> <li>Sequencing shape, colour, size, numbers</li> </ul>				
<b>GROUP TEACHING</b> LO 1 AS6,7,11	<ul style="list-style-type: none"> <li>Recognises addition, subtraction and equals signs (+, -, =)</li> <li>Solves problems, and explains solutions, using concrete objects and drawings using numbers to 10</li> </ul>	Revision of number 1-6  Revision of position	Revision of numbers 1-6  Measurement : capacity	Revision of numbers 1-6  Patterns using colour and shape	Revision of numbers 1-6  Measurement : length and height	3-D objects – boxes and balls
		Ask each group the same problems. They can be solved using counters, drawings, etc. Number range: Group 1 works in 1-20; Group 2 works in 1-10; Group 3 works in 1-10				WORK AS A WHOLE CLASS
		Groups 1 and 3 work with teacher, one group at a time. Ask 2 addition word problems Group 2 works on their own.	Groups 2 and 3 work with teacher, one group at a time. Ask 2 addition word problems Group 1 works on their own.	Groups 1 and 3 work with teacher, one group at a time. Ask 1 subtraction and 1 grouping word problem Group 2 works on their own.	Groups 2 and 3 work with teacher, one group at a time. Ask 1 subtraction and 1 grouping word problem. Group 1 works on their own.	Activity linking to Life Skills LO 4 Physical Development

## Week 10 : Whole Class

WEEK 10	WHOLE CLASS COMPONENT (Counting and Mental/Number sense)
<p><b>Notes to the teacher:</b></p> <ul style="list-style-type: none"><li>Counting at the beginning of the day helps learners focus on numbers. Every day you will let your learners do rote counting (to develop the vocabulary of numbers) as well as rational counting (thinking what they are doing) activities. Counting at the beginning of the lesson is done with the whole class every day.</li><li>Daily activities indicate activities that should be done every day. The specific concepts being developed are indicated every day e.g. Day 1.</li><li>Marking the register and talking about the Weather chart and Birthday chart are daily activities involving incidental learning and are usually part of the Literacy Oral component. They are placed here as Numeracy concepts are also being dealt with.</li></ul>	
<b>DAILY ACTIVITIES</b>	
<b>COUNTING AND MENTAL/NUMBER SENSE</b>	
<p><b><u>Daily Activities</u></b> (to take no more than 10 minutes)</p>	
<p><b><i>These must be done daily:</i></b></p>	
<ul style="list-style-type: none"><li>Learners rote count to at least 50 and further if they can. This should be fun for the learners so make sure you use a variety of strategies when doing rote counting.</li><li>Point to the numbers on a number line as learners count to 20. At the same time let a learner push the same number of beads across on the abacus.</li></ul>	
<p><b><i>Choose from the following (to make up the 10 mins.):</i></b></p>	
<ul style="list-style-type: none"><li>Learners close their eyes and listen to the number of taps/stamps/clicks etc. that they hear. They hold up the corresponding number of fingers E.g. stamp your foot four times – learners hold up 4 fingers and say 4.</li><li>Point to any number on the number line and ask questions such as : <i>What number is more than this number? What number is less than this number? What number is 1 more than this number? What number is 1 less than this number?</i></li><li>Revise the number rhyme taught during the term.</li><li>Mark the register, complete the weather chart and birthday chart every day, using the time to develop basic concepts e.g. colour, sequencing days and months, ordering, etc.</li></ul>	
<p><b><u>DAY 1</u></b> (to take no more than 30 minutes)</p>	
<ul style="list-style-type: none"><li>Use the sets of numbers 1-6 that you have made during the term and hand them out to the learners. Play some games and the learner with the correct number stands up and shows the number. Some examples of what you can do are:<ul style="list-style-type: none"><li>Play 'I spy' : I spy with my little eye a number that is more/less than 5</li><li>I am thinking of a number. It is more than 3 but less than 6</li><li>This number comes between 2 and 4 etc.</li></ul></li><li>Tell the learners that you are going to tell them a special story and that they are going to help you draw it. They need to listen to you carefully, so that they can draw the story:<ul style="list-style-type: none"><li><i>Once upon a time there was home that was very lonely. Nobody lived in it.</i> (Tell the learners to draw the home in the <b>middle</b> of the page.)</li></ul></li></ul>	

- *A blue bird flew by and asked the home if he could build a nest on top of the roof. (Ask the learners to draw a nest **on top of** the roof and put the **blue** bird **in** the nest.)*
  - *Then 2 little mice crept by and asked the home if they could build a nest inside of the home. The home was very pleased and said that they could. (Draw 2 mice **inside** the house.)*
  - *The yellow sun shone down on the home and made all the creatures warm. (Draw a yellow sun in the **top, left -hand** corner of the page.)*
  - *1 tall shady tree grew up next to the home. (Draw 1 tree **next to** the home.)*
  - *The home was no longer lonely as he now had friends to keep him company.*
- Learners write their names on the paper and the pictures are displayed in the classroom.

**DAY 2** (to take no more than 30 minutes)

- Learners work in pairs with a container of counters. One learner counts out 10 counters on to the desk and the other learner counts the counters as they are put back in the container. Walk around and observe the learners to see who can manage and who is struggling.
- Show the class 2 glasses the same size. Fill the 1<sup>st</sup> glass with water and leave the 2<sup>nd</sup> glass empty. Ask the learners:
  - *What is **the same** about the glasses?.* (They might say that the glasses are the same size, or that they are both made from glass, etc)
  - *What is **different** about the glasses?* (The learners will probably give several answers before they tell you that 1 glass is full of water and 1 is empty)
  - *How can we **make both glasses the same**?* Get a volunteer to make the glasses of water the same/ equal.
  - *How can we **make 1 glass emptier than the other glass**?* Let a volunteer demonstrate. You can get a variety of learners to make the glasses emptier or fuller than the other.
  - *How can we **make both glasses empty**?* If someone suggests that the water can be drunk, let 2 volunteers do so! Obviously this water must be tap water!

**DAY 3** (to take no more than 30 minutes)

- Make sure each learner has their own number line from 1 to 10. As you give the command they must place a counter on the correct number. Say things like : *This is the number before 3. This is the number between 5 and 7. This number is 1 more than 4. This number is 1 less than 2. Etc.* Walk around and check that the learners are putting the counter on the correct number. You can also let learners give the commands. Another activity would be for each learner to put their counter on a number and then tell the class where the number is e.g. put the counter on 4 and say 'this number is 1 less than 5 and 1 more than 3, etc.
- Give the learners a blank piece of paper and ask them to draw 4 of each of the shapes – circle, square, rectangle and triangle. Tell them to colour the shapes using any 4 colours. Learners then cut out the shapes and arrange them in a pattern on their desks. Discuss the different patterns. Let learners now work in pairs. One learner makes a pattern with the shapes and the other learner copies the pattern. They take turns to make the pattern.

**DAY 4** (to take no more than 30 minutes)

- Use the sets of numbers 1 to 6 written on small pieces of paper or cardboard. Give each learner a number. Tell them to make lines of numbers in the correct order 1 to 6. Tell them all the 1's must match, 2's must match etc. so that the lines are even.
- Ask learners to estimate how many giant steps from the back of the classroom to the front. Let them discuss their estimations, then choose a few learners to test their estimations. Discuss if the estimations were too many or too few steps. Do the same different measurements e.g. small footsteps, children (lying head to toe), board rulers, etc.
- Do a similar activity using other body parts to measure with e.g. hand spans.

**DAY 5** (to take no more than 30 minutes)

- Take the learners outside as well as some boxes and balls. Let the learners experiment to see which of the objects rolls and which slides. Let the learners experience rolling and sliding using their bodies.
- Tell all the learners to find their own space. They must pretend that they are a present in a big box. Let them stretch to feel the sides, corners, top and bottom of the box. Make sure you discuss what they are doing. Repeat the activity but this times the learners are in a ball not a box.

**ASSESSMENT**

**Formal** : No formal, recorded Assessment

**Informal**: Unrecorded assessment of learners oral responses and ability to participate.

**Week 10 : Group Teaching**

<b>Week 10</b>	<b>GROUP TEACHING COMPONENT (Concept Development and Problem Solving)</b>
<p><b>Notes to teacher:</b></p> <ul style="list-style-type: none"> <li>• By now you have established 3 groups. Every day you will work with 2 different groups in a small group situation e.g. sitting on the mat together. During this time you will do activities to development number concepts at the level of the learners in the group. A number of types of activities are provided and you should do ALL the types each time you work with that group; but remember, although examples are provided, you should look for your own examples that will suit your learners. You will also give the learners <u>at least 2 different word problems to solve every time you work with them</u>. It is through solving problems and discussing the solutions that learners develop a sense of number, an understanding of the operations and the ability to reflect on their thinking.</li> <li>• While you are working with a group, the rest of the class will be working independently. You need to provide them with a variety of activities which reinforce and consolidate concepts already learnt. Try to vary the activities e.g. giving a practical activity (counting counters in counting bags), a written activity (filling in numbers, sequencing, etc.) and a fun activity (dot-to-dot pictures, puzzles, etc.)</li> </ul>	
<b>DAILY ACTIVITIES</b>	
<p><b><u>Examples of activities to be done independently.</u></b> <i>Work from a Learner's Book, worksheets, workcards, etc.</i></p> <ul style="list-style-type: none"> <li>• Write the numbers 1 to 6 in their books, drawing the correct number of pictures next to each number and writing the correct word.</li> <li>• Complete a sequencing activity e.g. fill in the missing numbers on a number line, dot-to-dot etc.</li> <li>• Fill in numbers on a number line or number square.</li> <li>• Give the learners number cards 1 to 6. They arrange them from smallest to biggest then copy the numbers into their books.</li> <li>• Provide cards with a different number of pictures on each card. Learners count the number of pictures, then write the number in their books and draw the pictures.</li> <li>• Provide worksheets where learners have to match the objects on one side with the objects on the other (one-to-one correspondence).</li> </ul> <p><b><u>Working with the group</u></b></p> <p><b><u>GROUP 1</u></b></p> <p><i>On <b>Monday</b> and <b>Wednesday</b> this group works with the teacher for 20 minutes.</i></p> <ul style="list-style-type: none"> <li>• Do an <b>estimation activity</b>. Put up to 10 objects in the middle of the group. Let the learners look at the objects then cover them. Ask learners to estimate how many objects there are. Give each learner a chance to say how many s/he thinks there are. Uncover the objects and count them. Ask who estimated too many and who estimated too few. Did anyone estimate the correct number?</li> <li>• Introduce the number 9 by letting learners count 9 objects, show you 9 fingers, draw nine pictures etc. Show them the word 'nine' and let them read it.</li> </ul>	

- Make sure each learner has access to paper, writing tools, counters and a number line. Ask them two different word problems which they solve by talking about them, drawing pictures and so on. This group works in the number range 1 to 20. Let each learner tell the group how s/he solved the problem. On Monday the word problems will be 2 addition and on Wednesday you will ask 1 subtraction and 1 grouping problem. After learners have told you how they worked out the answer, ask them if they can write the sum for the problem. Ask what the signs +, -, = mean.

*Tip: Make sure the learners understand that the = sign does not mean **the answer**, but means that what is on each side of the sign means the same e.g.  $6 = 2+4$ .*

## **GROUP 2**

*On **Tuesday** and **Thursday** this group works with the teacher for 20 minutes.*

- Do an **estimation activity**. Put up to 6 objects in the middle of the group. Let the learners look at the objects then cover them. Ask learners to estimate how many objects there are. Give each learner a chance to say how many s/he thinks there are. Uncover the objects and count them. Ask who estimated too many and who estimated too few. Did anyone estimate the correct number?
- 
- Use 6 of the boxes you prepared for Group 1 in Week 8. Place the boxes in random order in front of the group and ask the learners to help you put the boxes in the correct order. Place a container with counters in the middle of the group. Ask for volunteers to place the correct number of counters in a matching box. Make sure that each learner in this group gets a chance to participate. Ask the learners to show you:
  - a box that has the same number of counters as there are doors in the classroom
  - a box that has the same number of counters as the number of fingers on my one hand
  - a numeral that tells how many teeth are missing in the front of your mouth.
  - a numeral that tells me how many wheels there are on a kombi or a car.
 You can use many, varied examples, but you need to make sure that all of the learners get a chance to participate. Extend the learners' thinking by asking questions such as, "If you add 2 more counters to this box, how many counters will be in the box?" Let a learner do this and when giving the answer, h/she can point to the number on a number chart. Ask all the learners in the group if they can write a sum for this. Do this with several examples and then ask "If you take 3 counters out of this box, how many would be left?" Encourage learners to write a sum. If they are not able to write a subtraction sign, show them how it is written.
- Ask if the learners know the next number after 6. Put the box with the 7 in the middle of the 6 boxes and ask if it is in the right place. Do this a few times, pretending you don't know where it belongs, till you finally put it in the right place – next to the 6. Let one of the learners put 7 counters in the box and another take them out while counting to see if there are the correct number. Show the learners the word "seven" and let them read it.



- Make sure each learner has access to paper, writing tools, counters and a number line. Ask them two different word problems which they solve by talking about them, drawing pictures and so on. This week the group will work in the number range 1 to 10. Let each learner tell the group how s/he solved the problem. On Tuesday the word problems will be 2 addition and on Thursday you will ask 1 subtraction and 1 grouping problem. After learners have told you how they worked out the answer, ask them if they can write the sum for the problem. Ask what the signs +, -, = mean.

**Tip:** *Make sure the learners understand that the = sign does not mean **the answer**, but means that what is on each side of the sign means the same e.g.  $6 = 2+4$*

### **GROUP 3**

*This group works with the teacher **every day** for 20 minutes.*

- Do an **estimation activity**. Put up to 6 objects in the middle of the group. Let the learners look at the objects then cover them. Ask learners to estimate how many objects there are. Give each learner a chance to say how many s/he thinks there are. Uncover the objects and count them. Ask who estimated too many and who estimated too few. Did anyone estimate the correct number?
- Make a set of numbers 1-6 on small pieces of cardboard, a set with matching pictures, and a set with the words one to six. Put these face down in the middle of the group. Learners take turns to turn 2 cards over. If they find a match e.g. 6 and six, they take the cards. If a learner already has 2 cards in the set e.g. 6 and six and they turn over the 3<sup>rd</sup> card in the set i.e. the picture of 6, they may take that card and put it with their set. The learner with the most cards wins.
- Make sure each learner has access to paper, writing tools, counters and a number line. Ask them two different word problems which they solve by talking about them, drawing pictures and so on. This week the group will work in the number range 1 to 10. Let each learner tell the group how s/he solved the problem. On Monday and Tuesday the word problems will be 2 addition and on Wednesday and Thursday you will ask 1 subtraction and 1 grouping problem. After learners have told you how they worked out the answer, display the different signs +, - and = and ask what they mean.

#### **Assessment**

**Formal :** No formal, recorded Assessment

**Informal :** Unrecorded assessment of learners oral responses and ability to participate



# **Annexures**

**Annexure 1: An example of one day's Numeracy lesson**

**Annexure 2: Quick reference**

**Annexure 3: Word problem types**

## Annexure 1 : An exemplar of one day's Numeracy lesson

This is an example of a single day's lesson from a teacher, showing how the different components can integrate with each other.

### 1. Oral work

At the beginning of each lesson the whole class should be involved in oral work. Oral work is essential for learning number facts and developing the ability to transform numbers. There are many activities that can be done as oral work

#### - **Counting**

This is probably the most essential skill of all. Learners can count using counters, a bead frame (or abacus), a number square, a number line, skip counting and so on. It does not matter if the counting is not at the level of all the learners - the slower learners will be learning the language of the numbers, while the quicker learners will be reinforcing known facts.

#### - **Doubling and halving**

Known facts are used to construct new knowledge e.g. if  $3+3$  is 6, what is  $4+3$ ? or  $3+4$ ?

#### - **Recognising number patterns**

This is done by counting, for example, in 2's then 20's then 200's.

#### - **Match the word and symbol**

#### - **Questioning around the counting**

Other than rote counting, learners should always think about what they are counting and this is best achieved when you ask questions. For example, when counting in 5's, stop during the counting at 25 and ask questions such as *how many 5's in 25? If five 5's are 25, how much are six 5's? If six fives are 30, how much are twelve fives?*

### 2. Organising the groups

Bring the group you want to work with to the mat and set the other groups activities to complete.

These activities must be designed to help learners explore number concepts **with which they are already familiar**. The activities can be practical, such as counting counters in a counting bag, or written, such as work from the board/worksheet/learner's book etc.. The activities should require the learners to actually do something and to learn from the doing.

### 3. Group teaching on the mat

If possible, have the group sit in a circle on a mat so that you can observe each individual. The mat session usually consists of

- *General number development* such as counting within the range and ability of the group

- *Specific number concept development activities*, such as doubling and halving, numerosity of numbers, adding and subtracting using a number chart, etc.

*Word problems* which are posed to the group to solve. The problems should be relevant and realistic and may be solved in any way the learner wishes. Encourage learners to discuss the problem as well as their solutions. Do not interfere with the learners' thinking.

**Annexure 2 : Quick reference**

## 1. Worksheets

- These are sheets of paper with activities on, and learners do the work on the piece of paper itself.
- Each worksheet can only be used once.
- Language must be simple, and as little as possible. Remember, learners are not yet able to read much by themselves.
- They are used for specific purposes e.g. to colour in a drawing, or do a dot-to-dot activity.
- They provide practice in essential skills.
- Learners must write their name and the date on every worksheet.

## 2. Work cards

- These usually contain sums which the learner must copy into their book and then write the answer.
- Cards can be used over and over, year after year. It is a good idea to cover them with plastic to keep them clean.
- Cards give the learner practice in work they can already do.
- Make sets of cards about the concept being taught.
- They need to be colourful and attractive.

## 3. Dot-to-dot

- Learners join the dots, always starting with the lowest number and joining the numbers in the correct order till the largest number is reached.
- It is a self-corrective activity because if the dots are joined correctly, a picture will appear.

## 4. Dice

- Use small blocks of wood, or foam rubber, as dice.
- Write your own numbers or signs to meet the needs of the learners.
- The learner throws two dice and writes the corresponding sum.
- Later add a die with signs and the learners use three dice and write the corresponding sum.

## 5. Number lines

- These provide practice in counting forwards and backwards as well as the ordinal value.
- They take many shapes and can start and end at any number.

## 6. Patterns

- These provide practice in sequencing.
- Shapes, size, numbers and so on can all provide practice in recognizing patterns. \* \*  
11\*
- Two or more numbers (shapes etc) are always given so that learners can work out the missing parts of the sequence. e.g. 1,2, ... , ... ,5, ... , ...
- Patterns also indicate relationships  
5+1=, 6+1=, 7+1= etc      5-1=, 4-1=, 3-1=, etc.

7. Number Sentences

- Addition:  $3+2=$      $5=3+$   $\square$                        $\square +2=5$                        $\square + \square + \square =9$
- Subtraction:  $7-2=$      $\square - 2=5$                        $7- \square =5$                        $7=9- \square$

8. Spider sums

- These consist of an input number, an operator and an output number.
- Start by providing the input number and the operator. Learners must find the output number.
- Once learners are familiar with this, provide the operator and the output number. Learners must find the input number.
- Then provide the input and output numbers and learners must find the operator.

9. Counting bags

- Use any container, or bag to keep the counters in.
- Each container has a different number of objects.
- Learners take one bag at a time, count the objects and record the number.
- If learners work in pairs they can check each other's counting.
- This activity can be extended in a number of ways e.g. estimate the number, then count, count out objects then add 5 count out objects then take away how old you are.

**Annexure 3 : Addition and Subtraction Problem Types.**

**Change**

**Join**

1. Mary has 5 marbles. Jim gave her 8 more. How many marbles does Mary have now?
3. Mary has 5 marbles. How many more marbles does she need to have 13 marbles?
5. Mary had some marbles. Jim gave her 8 more marbles. Now she has 13 marbles. How many marbles did Mary have to start with?

**Separate**

2. Mary had 13 marbles. She gave 5 marbles to Jim. How many marbles does she have left?
4. Mary had 13 marbles. She gave some to Jim. Now she has 8 marbles left. How many marbles did Mary give to Jim?
6. Mary had some marbles. She gave 5 to Jim. Now she has 8 marbles left. How many marbles did Mary have to start with?

**Combine**

7. Mary has 5 red marbles and 8 blue marbles. How many marbles does she have?

8. Mary has 13 marbles. Five are red and the rest are blue. How many blue marbles does Mary have?

**Compare**

9. Mary has 13 marbles. Jim has 5 marbles. How many more marbles does Mary have than Jim?
11. Jim has 5 marbles. Mary has 8 more than Jim. How many marbles does Mary have?
13. Mary has 13 marbles. She has 8 more marbles than Jim. How many marbles does Jim have?

10. Mary has 13 marbles. Jim has 8 marbles. How many fewer marbles does Jim have than Mary?
12. Jim has 5 marbles. He has 8 fewer marbles than Mary. How many marbles does Mary have?
14. Mary has 13 marbles. Jim has 8 fewer marbles than Mary. How many marbles does Jim have?

### Equalize

15. Mary has 13 marbles. Jim has 5 marbles. How many marbles does Jim have to get to have as many marbles as Mary?
16. Mary has 13 marbles. Jim has 5 marbles. How many marbles does Mary have to lose to have the same number of marbles as Jim?
17. Jim has 5 marbles. If he gets 8 marbles he will have the same number of marbles as Mary. How many marbles does Mary have?
18. Jim has 5 marbles. If Mary loses 8 marbles, she will have the same number of marbles as Jim. How many marbles does Mary have?
19. Mary has 13 marbles. If Jim gets 8 marbles, he will have the same number of marbles as Mary. How many marbles does Jim have?
20. Mary has 13 marbles. If she loses 8 marbles she will have the same number of marbles as Jim. How many marbles does Jim have?

### Multiplication and Division Problem Types

#### Repeated Addition

21. Mother buys 4 bags of apples. Each bag contains 8 apples. How many apples did she buy?  
I fill 10 cups with 200ml cool-drink each. How much cool-drink did I have before filling the cups?
22. Mother buys 32 apples that are packed in 4 bags. If each bag contains the same number of apples, how many apples are in each bag?  
2l of cool-drink is poured into 10 cups so that each cup holds the same amount. How many millilitres of cool-drink is in each cup?
23. Mother buys 32 apples. She wants to pack them into plastic bags, with 8 apples in each bag. How many bags does she need?  
How many cups each holding 200ml can be filled from a 2l bottle of cool-drink?



**Rate**

24. A man walks at 6km per hour. How far does he walk in 3 hours?  
Tomatoes are sold at R12 per kilogram. If I buy 3 kilograms of tomatoes, how much will I have to pay?
25. A man walks at 6km per hour. How long will it take him to walk 18 kilometres?  
The price of tomatoes is R12 per kilogram. If I have R36, how many kilograms can I buy?
26. A man must walk 18 kilometres in 3 hours. How many kilometers per hour must he walk to achieve this?  
I buy 3 kilograms of tomatoes for R36. What is the price per kilogram?

**Comparison (Times as many as)**

27. Mary has 4 marbles. Jim has 3 times as many marbles as Mary. How many marbles does Jim have?  
The length of a car in a photograph is 4cm. If the photograph is enlarged 3 times, what will the length of the car be on the enlargement?
28. Jim has 12 marbles, which is 3 times as many marbles as Mary has. How many marbles does Mary have?  
If a photograph is enlarged 3 times, the length of a car on the enlargement is 12cm. How long is the car in the original photograph?
29. Mary has 4 marbles. Jim has 12 marbles. How many times are Jim's marbles more than Mary's?  
The length of a car on a photograph is 4cm. On the enlargement of the photograph the car is 12cm long. How many times has the photograph been enlarged?

**Arrays (Arrangements)**

30. A slab of chocolate has 4 pieces along the shorter side and 6 pieces along the longer side. How many pieces does the slab contain?  
A vegetable patch has 12 rows of onion plants, with 6 plants in each row. How many onion plants are there in the patch?

31. A slab of chocolate has 24 pieces. There are 4 pieces along the shorter side of the slab. How many pieces are along the longer side?  
A vegetable patch has 12 rows of onion plants, with an equal number of plants in each row. If there are a total of 48 plants, how many plants are in each row?

### **Combinations**

32. Mary has 3 skirts of different colours and 4 tops of different colours. All the colours match. In how many different ways can she dress?
33. Mary is on holiday for 12 days. She wants to dress differently on each day. She has 3 different skirts. How many different tops that match with the skirts should she pack?
34. Mary has 4 tops. How many skirts does she need for 12 different outfits?

### **Sharing – with and without remainders, leading to fractions**

35. My brother and I found 5 marbles. We each took the same number. How many did we each take?
36. Mom bought 8 sausages and her 4 children shared them equally. How many sausages did each child eat?
37. Mom bought 10 sausages and her 4 children shared them equally. How many sausages did each child eat?

### **Grouping – with and without remainders**

38. I have 12 apples and put them into 3 baskets. How many apples are in each basket?
39. Mom bought 14 apples. How many packets of 4 apples can she make?

### **Repeated addition and subtraction.**

40. How many wheels do 4 bicycles have?
41. Father has R20. He gives R5 to each of his three children. How much money will he have left?