



GRADE 3 MATHS LESSON STARTERS

MAGIC CLASSROOM COLLECTIVE

TEACHER MANUAL





NELSON MANDELA
Institute for
**EDUCATION AND
RURAL DEVELOPMENT**

This book is proudly presented to you by the
MAGIC CLASSROOM COLLECTIVE.

We appreciate hearing from teachers. Please share your experiences using these materials and any suggestions you have with the Magic Classroom Collective design team.

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Qhama (QNgcobo@ufh.ac.za).



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Nelson Mandela Institute, University of Fort Hare. East London.



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The Magic Classroom Collective is a group of teachers and educationists working together over a long time. We work together to develop strategies and materials that really work in our African language dominant classrooms. We hold the bar high for our learners, knowing they will be the creative thinkers that take this country into the future.

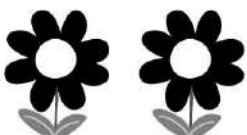
This book presents Lesson Starters for Grade 3 mathematics. The book is organized into two parts. The first half of the book presents weekly LESSON STARTERS. The second half of the book presents a manual explaining how to use the Lesson Starters.

What is a Lesson Starter?

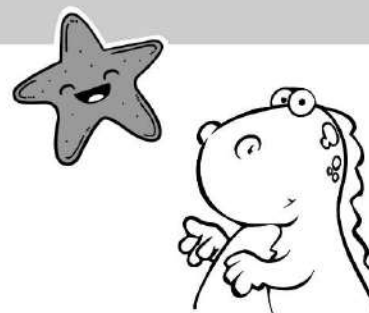
Lesson Starters are a high impact way of starting your daily maths lesson. Lesson Starters provide week by week suggestions for:

- **MENTAL MATHS:** We start each of our lessons with 10-15 minutes of mental maths. Each morning we play Fizz Pop!, we count strategically, and we play games in pairs.
- **BIG IDEA of the WEEK:** Each week we present one BIG IDEA. This is a mini lesson to emphasise a **key concept**. We explain the idea and we suggest a method for presenting the idea to learners. We spend 10-15 minutes each day teaching this idea, doing problems with learners, and asking learners to do problems on their own. By the end of the week the vast majority of our children are truly confident with this big idea!

Look at the diagram on the following page. It shares the way we organise our lessons. Remember, when you are prepared, lesson starters take between 20 and 30 minutes per day. We remain with 50 minutes or more for our normal daily maths lesson. There are 12 weeks of Lesson Starters in this booklet. That gives you time to carefully work through each week of Lesson Starters, and still have time to review before the end of the year.



INTRODUCTION



Who is Zibalo?

Zibalo is a dinosaur. She is very interested in mathematics. She is learning to think and act like a mathematician. Her best friend is a star in the sky named Infinity. Infinity is a mathematician. She is so high in the sky that she sees things very clearly. She always helps her friend to look, talk and think mathematics. In these Lesson Starters, Zibalo shows us the mathematics she has learned.

Getting Prepared

Making these Lesson Plans work well for you takes a bit of preparation. We recommend you take the following steps to prepare:

1. **Read the Manual:** A manual for how to use these lesson starters is presented in the second half of this book, starting from Page 51. We recommend pouring yourself a cup of tea, putting in an extra spoon of sugar, and carefully reading through this manual.
2. **Study the Week:** Each week, we present ideas for Fizz Pop, strategic counting, games in pairs and the idea of the week.
 - **Visualise and Practice the Games:** For each game, spend some time imagining how the game works. Practice playing the game with a colleague or a family member.
 - **Visualise and Prepare the Lesson of the Week:** Spend some time with the idea of the week. First, make sure you understand the big idea that is presented. We suggest some ways of introducing the idea. Study the ideas, and think about how to make them work for you in your classroom. How will you prepare the chalk board? What problems will you work through? What problems will learners try?



3. **Practice "PAIRS PREPARE":** One of the most important things we do in mental maths is to support children to work IN PAIRS to build their mathematical fluency. The first game we play is a game simply to practice our children getting into and out of pairs quickly and quietly. Practice "Pairs Prepare!". Check out Page 5, 70 - 71.
4. **Cut Number Cards:** Many of the games we play with number cards. Each child should have a set of number cards from 1 to 20. Go to Page 101 - 105. Photocopy enough sheets for children in your classroom. Support children to cut out the cards carefully. Store cards in sandwich bags.



Optional Preparation - Desk Number Lines: Children benefit from looking at number lines and jumping along number lines with their fingers. We recommend cutting out the number lines on Page 93 - 99 and taping them down on learners' desktops.

Let's Go!

We know that trying new things in our classrooms is never easy. We hope that you will try these out. We have found that our learners improve their mathematics and begin to enjoy mathematics - many for the first time!

Please share your experiences, stories and any suggestions to make the Lesson Starter work better. Send any communication for the Magic Classroom Collective Maths Design Team to Qhama Ngcobo (QNgcobo@ufh.ac.za).

Best of luck for the remainder of the 2024 year!

The Magic Classroom Collective Maths Design Team



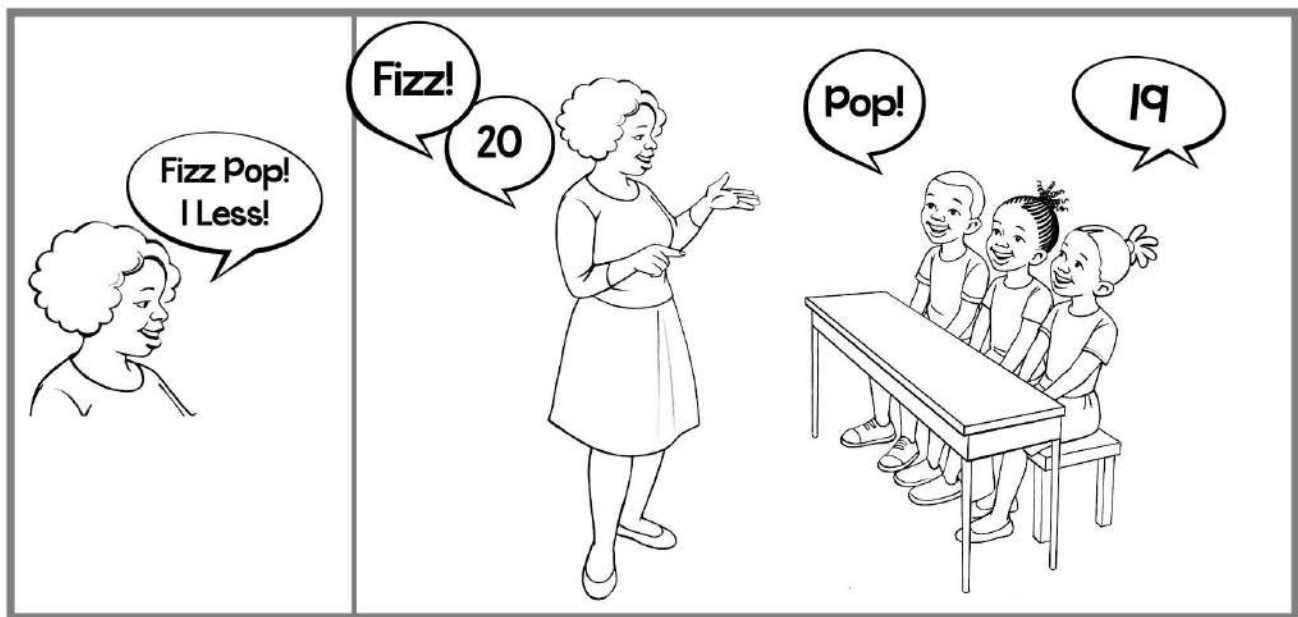
LESSON STARTERS

Week 1: Mental Maths

Fizz Pop

1 MORE and 1 LESS

- Start with numbers from 0 to 20, go to 100.
- Can you go higher?



Counting

Forwards in 1s

- Count forwards in 1s, starting and ending at any number from 0 to 100.
- Clap on the 10s.
- Extend to 200. Can you go higher?
- Can you go to 1000?



Week 1: Mental Maths

Games in Pairs

PREPARE FOR PAIRS

- Before trying pair games, spend some time preparing.
- Play "Pairs Prepare!" as many times as it takes to get good at getting into pairs quickly and quietly. See page 70 -71.
- Photocopy cut-out pages for all of your learners. See Pages 101 to 105. Learners must cut out the number cards. Find a safe place to store them.



Subtract from 10

- This game focuses on bonds of 10.
- Children take turns subtracting the number from 10.
- Learners may start slow.
- When they are ready, encourage learners to go faster!



Subtract from 10

- Play in pairs.
- Use one pile of cards from 0 to 10.
- Flip a card.
- Subtract from 10.
- Do it again! Faster!

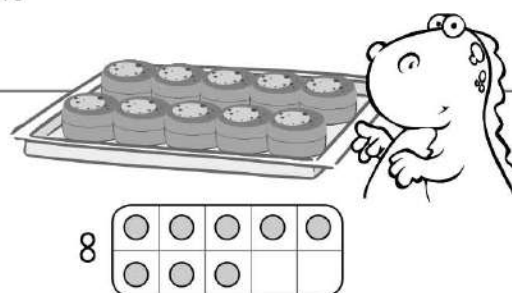
Week 1: Big Idea of the Week

Big Idea of the Week

Draw numbers from 0 to 10

In this lesson, Zibalo teaches learners a cool way to draw numbers from 0 to 10. She uses her drawing to write two number sentences. Work through the number 8 with learners on the board.

Zibalo loves to bake. She bakes scones to sell. She ALWAYS bakes scones in rows of 5. She never places more than 10 scones on one baking tray.

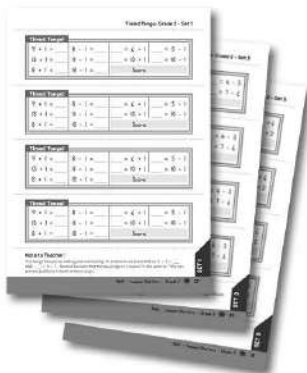


STEP 1: Draw the number.	8 ○○○○○ ○○○
STEP 2: Think about 5 - The drawing helps Zibalo think about how the number relates to 5. - Write a number sentence using the number 5.	$8 = 5 + \underline{3}$
STEP 3: Think about 10 - The drawing helps Zibalo think about how this number relates to 10. How many more scones to complete the pan? - Write a number sentence using the number 10.	$10 = 8 + \underline{2}$

Write 7 scones, 5 scones and 9 scones on the board. For each number, ask learners to:

- Draw the number
- Write a number sentence using the number 5;
- Write a number sentence using the number 10.





FRIDAY: Timed Tango

At the end of each week remember to photocopy the correct Timed Tango (see page 82 - 91) and cut into 4. Distribute face down on desks during the break. Time 60 seconds (1 minute). Ask children to put their pencils down. Talk through answers. Children mark their own work and record their score on the Timed Tango Marking Sheet (see page 81).

MATHS LESSON STRATEGY

1

SETTLE QUICKLY

**5 Min
SPEED**

Settle quickly into quiet work.

2

MENTAL MATHS

**15 Min
SPEED**

Fizz Pop
Strategic Counting
Game in Pairs

3

BIG IDEA OF THE WEEK

**20 Min
SLOW IT DOWN**

Short clear lesson, using board, with practice.

4

DAILY MATHS CLASS WORK

**50 Min
SLOW IT DOWN**

Daily Maths Lesson.
NECT / DBE



Week 2: Mental Maths

Fizz Pop

2 MORE and 2 LESS

- Start with numbers 1 to 50.
- Extend to 100. Extend to 200.
- Can you get to 1000?



Counting

Backwards in 1s

Count backwards in 1s. Start and end at any number from 0 to 150. Clap on the 10s. Extend to 200.

Example:

- Count backwards in ones starting at 63 and ending at 48.
- Count backwards in ones from 110 to 90.
- Clap on the 10s.

When we count backwards in ones, we subtract ones.

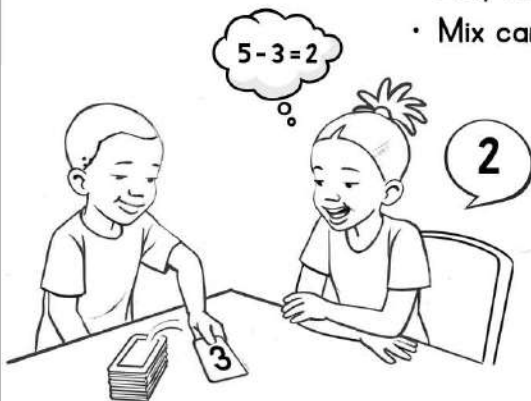


Week 2: Mental Maths

Games in Pairs

Bonds of 5

- Play in pairs with one pile of cards.
- Mix cards from 0 to 5.



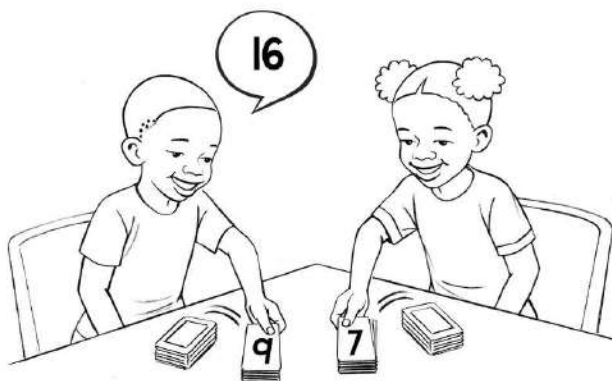
Subtract

- Flip a card.
- Subtract the number from 5.



How many more to reach 5?

- Flip a card.
- How many more to reach 5?



1-2-3 Add

- Play in pairs with cards 0 to 10.
- Each child has a set of cards.
- Say together, "1-2-3" and each child flips a card.
- Take turns adding the cards quickly.
- Do it again. Faster!

- Each learner has a pile of cards, with cards 0 to 10. Learners mix their cards. Learners say together, "1! 2! 3!" and flip a card. Learners take turns adding up the total. When learners are ready, encourage learners to move faster.

- For struggling learners, start with piles of cards from 0 to 5. Slowly add more cards.
- For stronger learners, give them cards to 20.

LESSON STARTERS

Week 2: Big Idea of the Week

Big Idea of the Week

Draw numbers from 10 to 20

In this lesson we will help children to draw number pictures from 10 to 20. The big idea is that from now on, WE DO NOT WANT our learners to draw ten showing the ten ones . We want them to draw the ten as a 10! 

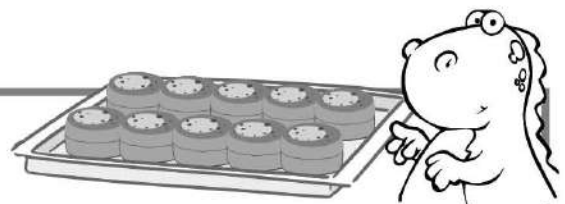


Let's put on our 10 glasses!
When we wear our 10 glasses, we think in 10s!

Zibalo decides to start a scone business.

She starts to bake more scones. Her friend

Infinity suggests that she writes down how many scones she bakes every day. Zibalo likes to draw the numbers.

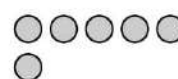
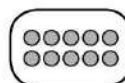


Today she baked 16 scones.

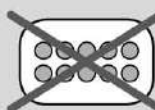


She drew 16:

16

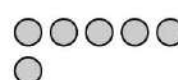


Infinity explains to Zibalo that she does not have to draw every scone. She can record ten scones like this:



Zibalo likes this suggestion. She draws 16 like this:

16





LESSON STARTERS

Week 2: Big Idea of the Week

Work through Zibalo's new way of drawing numbers. When she draws numbers over 10, she does not spend the time to draw each and every one. We draw a ten like this: . We are thinking in 10s!

Each day this week, write numbers from 10 to 20 on the board. Ask learners to draw using the  as a ten. Then ask them to write a sentence using the number 10.

STEP 1: Draw the number.	16  
STEP 2: Think about 10 The drawing helps Zibalo think about how the number relates to 10. She writes a number sentence.	$16 = 10 + \underline{6}$
STEP 3: Think about 20 - The drawing helps Zibalo think about how this number relates to 20. - How many more scones to complete the second tray? Write a number sentence.	$20 = 16 + \underline{4}$

Write 3 numbers between 10 and 20 on the board. For each number, ask learners to:

- Draw the number.
- Write a number sentence using the number 10;
- Write a number sentence using the number 20.



Don't forget to do the Timed Tango on Friday!



Week 3: Mental Maths

Fizz Pop

10 More!

- Start with numbers 1 to 50. Extend to 100. Extend to 200.
- Practice crossing the 100. For example, use 94!



Counting Forwards in 10s

Count forwards in 10s, starting and ending at any number between 0 and 100. Extend numbers to 250.

Example:

- Count forwards in 10s from 3.
Stop before you reach 100.
- Count forwards in 10s from 63.
Stop before you reach 220.

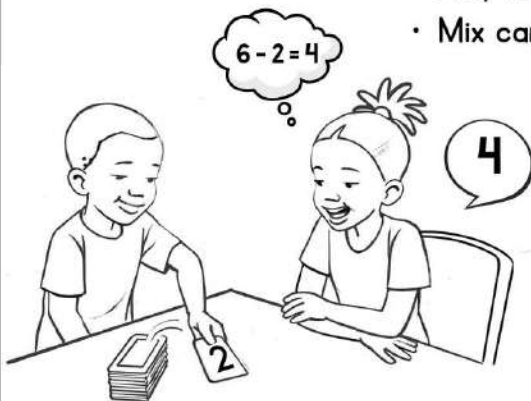


Week 3: Mental Maths

Games in Pairs

Bonds of 6

- Play in pairs with one pile of cards.
- Mix cards from 0 to 6.



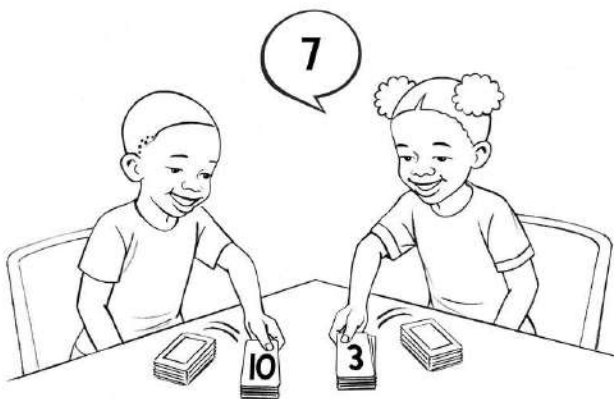
Subtract

- Flip a card.
- Subtract the number from 6.



How many more to reach 6?

- Flip a card.
- How many more to reach 6?



1-2-3 Difference

- Play in pairs with cards 0 to 10.
- Each child has a set of cards.
- Say together, "1-2-3" and each child flips a card.
- Take turns finding the difference.
- Do it again. Faster!

- For struggling learners, start with cards 0 to 5 and build up to 10.
- For stronger learners, use more cards, working up to 20.

LESSON STARTERS

Week 3: Big Idea of the Week

Big Idea of the Week

Draw numbers to 100!

In this lesson we continue to support children to understand place value. Numbers are organised by 10!

We use Zibalo's new method of drawing numbers to draw any number between 10 and 100! We write a number sentence using 10s.



Let's put on our 10 glasses!
When we wear our 10 glasses, we think in 10s!

Zibalo's scone business is growing! She continues to draw the number of scones she bakes each day. She thinks about the numbers in trays of 10! Today she baked 37 scones! She drew the number:



37 (10) (10) (10) ●●●●●●

She uses the picture to think about 10s.

STEP 1: Draw the number.	37 (10) (10) (10) ●●●●●●
STEP 2: Write a number sentence using 10s. • I have three trays and some more.	$37 = 10 + 10 + 10 + 7$
STEP 3: Think about 40 • I almost have 4 trays. • I have 3 less than 4 full trays.	$37 = 40 - \underline{3}$



LESSON STARTERS

Week 3

Write 3 numbers between 10 and 100 on the board. Ask learners to draw the number using Zibalo's method. Ask learners to write a number sentence using the number 10s.

- For example, use numbers:

38, 26, 57, 39, 43, 75



Dont forget to do the Timed Tango on Friday!



Week 4: Mental Maths

Fizz Pop

10 Less!

- Use numbers from 0 to 100. Extend to 200.
- Practice crossing the 100. For example, use 107.
- Can you go to 1000?



Counting

Backwards in 10s

Count backwards in 10s. Start and end at any number between 0 and 150. Extend numbers to 250.

Example:

- Count backwards in 10s from 95.
- Count backwards in 10s from 234.
Stop before you reach 90.

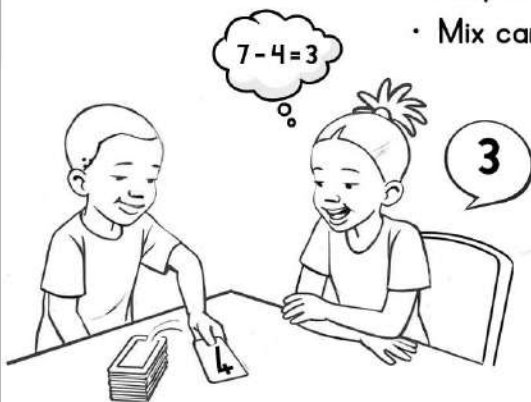


Week 4: Mental Maths

Games in Pairs

Bonds of 7

- Play in pairs with one pile of cards.
- Mix cards from 0 to 7.



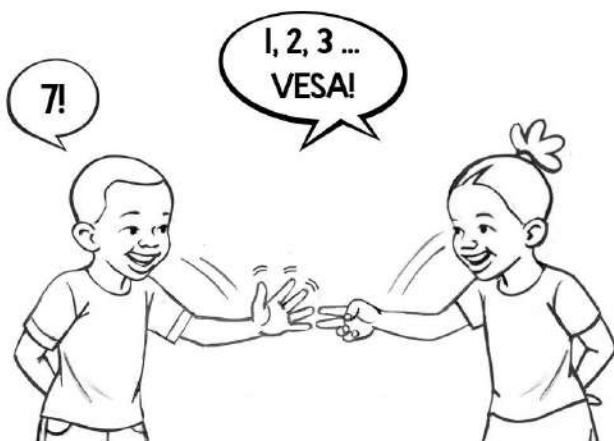
Subtract

- Flip a card.
- Subtract the number from 7.



How many more to reach 7?

- Flip a card.
- How many more to reach 7?



123 VESA

Addition: One Handed

- Play in pairs.
- Put hands behind back.
- Say together, "1, 2, 3! Show!" (Vesa)
- Both children show fingers on one hand.
- Add together! Take turns!
- Do again! Faster!

- Two children face each other, with their hands behind their backs. They say together, "1! 2! 3! Vesa!" At the same time, they both show fingers on one hand. Take turns adding up the fingers quickly. When children are ready, one child can use two hands.

LESSON STARTERS

Week 4: Big Idea of the Week

Big Idea of the Week

Add By Counting Forward Subtract by Counting Backwards

In this lesson we make sure that learners can add by counting forwards in 1s and subtract by counting backwards in 1s.

Zibalo loves to add and subtract. When she puts the first number in her head. She taps to make sure it is in there. She counts forwards to add.

$$34 + 5 =$$



34 35 36 37 38 39

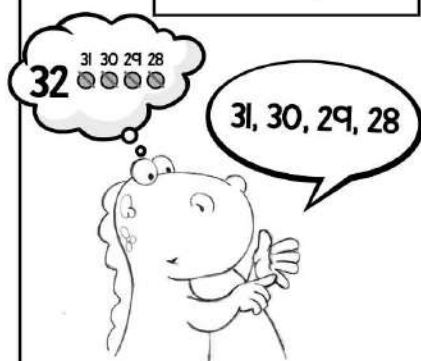
35, 36, 37, 38, 39

- When we add, numbers get bigger!
- I put the biggest number in my head.
- I tap to make sure it is in there.
- I add by counting forwards.
- I use my fingers to keep track.



When she subtracts, she puts the first number in her head. She taps to make sure it is in there. She counts backwards to subtract!

$$32 - 4 =$$



32 31 30 29 28

31, 30, 29, 28

- When we subtract, numbers get smaller!
- I put the first number in my head.
- I tap my head to make sure it is in there.
- I count backwards in ones to take away ones.
- I use my fingers to keep track.





LESSON STARTERS

Week 4: Big Idea of the Week

Write addition and subtraction sums on the board each day.
Ask children to solve in their counter books.

$22 - 3 = \underline{\quad}$	$38 + 3 = \underline{\quad}$	$18 - 5 = \underline{\quad}$	$31 - 6 = \underline{\quad}$
$26 + 4 = \underline{\quad}$	$48 - 8 = \underline{\quad}$	$62 + 3 = \underline{\quad}$	$48 + 3 = \underline{\quad}$
$38 - 4 = \underline{\quad}$	$52 - 5 = \underline{\quad}$	$48 - 6 = \underline{\quad}$	$95 + 5 = \underline{\quad}$
$66 + 4 = \underline{\quad}$	$68 + 3 = \underline{\quad}$	$64 - 4 = \underline{\quad}$	$79 + 3 = \underline{\quad}$
$51 - 3 = \underline{\quad}$	$78 - 9 = \underline{\quad}$	$82 - 4 = \underline{\quad}$	$86 - 7 = \underline{\quad}$



Dont forget to do the Timed Tango on Friday!



Week 5: Mental Maths

Fizz Pop

Subtract from 10!

- Call any number between 0 and 10.
Learners must subtract from 10.
- Try subtract from 20! Try subtract from 30!
Try subtract from 100!



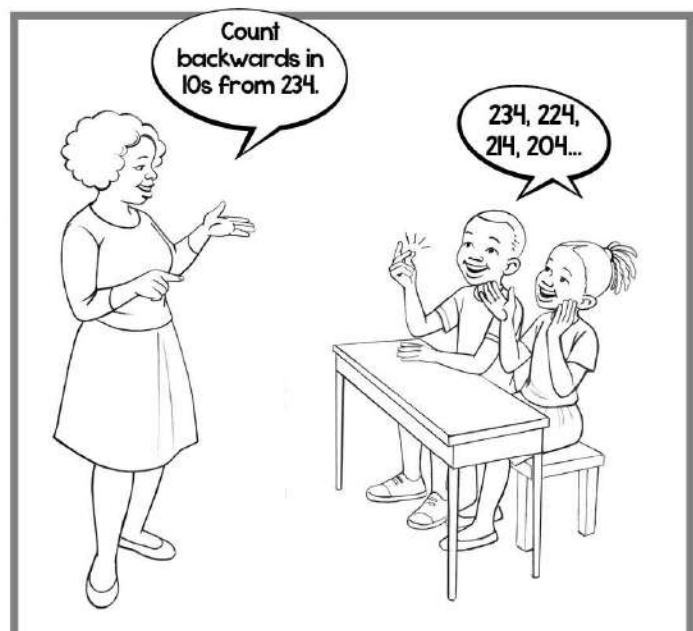
Counting

Backwards in 10s

Count backwards in 10s. Start and ending at any number between 0 and 150. Extend numbers to 250.

Example:

- Count backwards in 10s from 95.
- Count backwards in 10s from 234.
Stop before you reach 90.

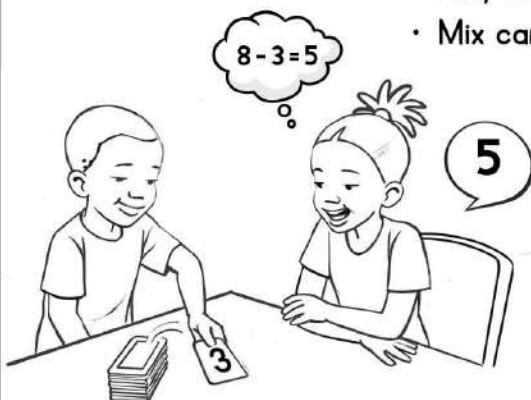


Week 5: Mental Maths

Games in Pairs

Bonds of 8

- Play in pairs with one pile of cards.
- Mix cards from 0 to 8.



Subtract

- Flip a card.
- Subtract the number from 8.



How many more to reach 8?

- Flip a card.
- How many more to reach 8?



Race to 100!

- Play in pairs.
- Take number cards from 0 to 10.
- Mix up and place in a pile face down.
- First learner draws a card. Add to 0.
- Second learner draws a card. Add on.
- Keep adding on until you reach 100!
- Do it again! Faster!

- Pairs work with one pile of cards. Start with a pile using cards 0 to 10. Mix the cards. The game starts at 0. When they flip a card, they add it to the total. They keep flipping and adding until they

reach 100!

- Try playing with cards from 0 to 20.
- Stronger learners can start at 100 and race to 200!



Week 5: Big Idea of the Week

Big Idea of the Week

Add and Subtract 10

In this lesson, we make sure learners can add and subtract 10 from any number between 0 and 100. This is the beginning of place value!

At first, children may still be counting forwards and backwards in ones. We want learners to learn to **add and subtract a 10** without having to count in ones. There are many ways we can help children:

1. Number Charts:

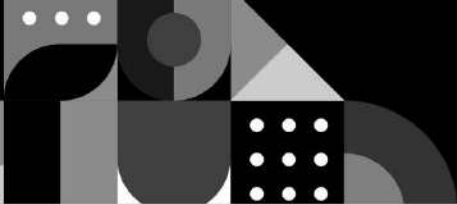
Number charts help children visualise the number system. Charts help us see place value, how numbers are organised by tens.

The number chart we show on the next page starts from the bottom. We find it easier to talk about numbers becoming bigger when bigger numbers are above the smaller numbers. (You may be using number charts that start from the top. This is also fine. Make sure you help your children see the *direction* of numbers increasing and decreasing.)

Help children see how adding and subtracting 10s works using a number chart:

- With your children, examine a **COLUMN** in the chart.
- Start at the **bottom** of a column, for example at 3. Count forward 10 ones. Where did we arrive? When we count forward by 10 we go UP one row! What changes? What remains the same? Add 10 again...
- Work up the column. What changes? What remains the same?





Week 5: Big Idea of the Week

- This time, start at the **top** of a column, for example at 97. Subtract 10. When we count backwards by 10, we go **DOWN** one row! What changes? What stays the same? Subtract 10 again...
- Work down the column. What changes? What remains the same?

2. Strategic Counting:

One of the most important things we can do is to practice counting **forwards and backwards in 10s**.

- Count forwards in 10s from any number between 0 and 10.
- Count backwards by 10 from any number between 0 and 100. Try starting in the 90s, for example from 93, or 97.
- At the beginning you may want to point to the number chart. Over time we want children to be able to count forwards and backwards in tens easily without a number chart. We want counting backwards in 10s to be in our bones! 😊

3. Reinforce:

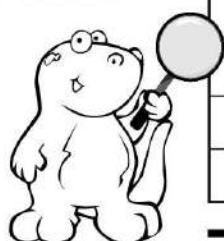
Some children may continue to count forwards and backwards in ones.

$36 + 10 = \underline{\hspace{2cm}}$	When a child counts forward from 36 to 46 in ones, our job as a teacher is to help the child SEE and FEEL her answer. Yes, THIRTY six add 10 is FORTY six! Point to the chart. Ask, "We know that $36 + 10 = 46$. So, what is $46 + 10$?"
$39 - 10 = \underline{\hspace{2cm}}$	When a child counts backwards from 39 to 29 in ones, our job as a teacher is to help the child SEE and FEEL her answer. Yes, THIRTY nine subtract 10 is TWENTY nine! Point to the chart. Ask, "We know that $39 - 10 = 29$. So, what is $49 - 10$?"

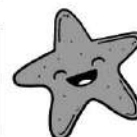
LESSON STARTERS

Week 5: Big Idea of the Week

When we add 10, numbers get bigger. We move one row up on this number chart. Can you see that the units stay the same. The tens increase by one ten. What happens when we go UP one column?



91	92	93	94	95	96	97	98	99	100
81	82	83	84	85	86	87	88	89	90
71	72	73	74	75	76	77	78	79	80
61	62	63	64	65	66	67	68	69	70
51	52	53	54	55	56	57	58	59	60
41	42	43	44	45	46	47	48	49	50
31	32	33	34	35	36	37	38	39	40
21	22	23	24	25	26	27	28	29	30
11	12	13	14	15	16	17	18	19	20
1	2	3	4	5	6	7	8	9	10



When we subtract 10, numbers get smaller. We move one row down on this number chart. Can you see that the units stay the same? The tens decrease by one ten. What happens when we go DOWN a column?

Write "Add 10" and "Subtract 10" sums on the board each day. Ask children to solve in their counter books. You can start with addition and subtraction separate. Then you will want to mix them up. See examples.

For struggling learners, start with sums between 0 and 20. Then provide sums on the 10. Then provide sums that have a place value pattern. Study the examples.

Examples of Daily Board Sums			Examples: Struggling Learners		
Add 10	Subtract 10	Mixed	Teens	On the tens	Patterns
$15 + 10 = \underline{\quad}$	$18 - 10 = \underline{\quad}$	$18 - 5 = \underline{\quad}$	$3 + 10 = \underline{\quad}$	$30 + 10 = \underline{\quad}$	$3 + 10 = \underline{\quad}$
$26 + 10 = \underline{\quad}$	$53 - 10 = \underline{\quad}$	$62 + 3 = \underline{\quad}$	$9 + 10 = \underline{\quad}$	$60 + 10 = \underline{\quad}$	$13 + 10 = \underline{\quad}$
$38 + 10 = \underline{\quad}$	$41 - 10 = \underline{\quad}$	$48 - 6 = \underline{\quad}$	$7 + 10 = \underline{\quad}$	$50 + 10 = \underline{\quad}$	$23 + 10 = \underline{\quad}$
$66 + 10 = \underline{\quad}$	$68 - 10 = \underline{\quad}$	$64 - 4 = \underline{\quad}$	$14 - 10 = \underline{\quad}$	$50 - 10 = \underline{\quad}$	$54 - 10 = \underline{\quad}$
$51 + 10 = \underline{\quad}$	$95 - 10 = \underline{\quad}$	$82 - 4 = \underline{\quad}$	$17 - 10 = \underline{\quad}$	$80 - 10 = \underline{\quad}$	$44 - 10 = \underline{\quad}$
$97 + 10 = \underline{\quad}$	$105 - 10 = \underline{\quad}$	$89 + 10 = \underline{\quad}$	$16 - 10 = \underline{\quad}$	$60 - 10 = \underline{\quad}$	$34 - 10 = \underline{\quad}$

Don't forget to do the Timed Tango on Friday!



MATHS LESSON STRATEGY

1

**SETTLE
QUICKLY**

**5 Min
SPEED**

*Settle quickly
into quiet
work.*

2

**MENTAL
MATHS**

**15 Min
SPEED**

Fizz Pop
Strategic
Counting
Game in
Pairs

3

**BIG IDEA OF
THE WEEK**

**20 Min
SLOW IT
DOWN**

*Short clear lesson,
using board,
with practice.*

4

**DAILY MATHS
CLASS WORK**

**50 Min
SLOW IT
DOWN**

*Daily Maths
Lesson.*
NECT / DBE

Week 6: Mental Maths

Fizz Pop

Double!

Start with numbers 0 to 10. Extend to 20. Double 10, 20, 30...

- I know that double 3 is 6.
Therefore I know that double 30 is 60.

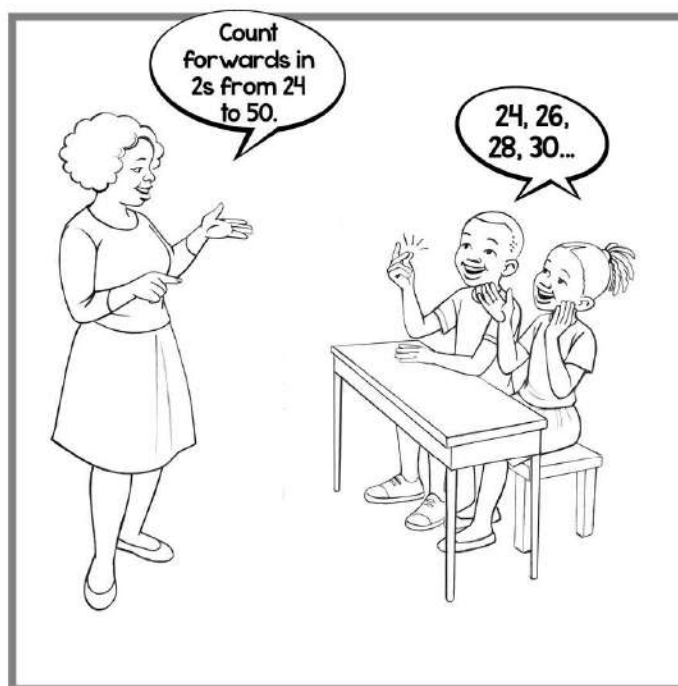


Counting Forwards in 2s

Count forwards in 2s. Start and end with any number between 0 and 100. Start with both even and odd numbers.

Example:

- Count forwards in 2s from 0 to 20.
- Count forwards in 2s from 24 to 50.
- Count forward in 2s from 1 to 31.

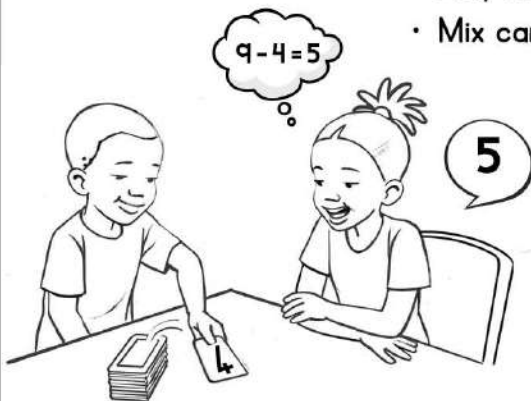


Week 6: Mental Maths

Games in Pairs

Bonds of 9

- Play in pairs with one pile of cards.
- Mix cards from 0 to 9.



Subtract

- Flip a card.
- Subtract the number from 9.



How many more to reach 9?

- Flip a card.
- How many more to reach 9?



123 VESA

Addition: 2 hands each

- Play in pairs.
- Put hands behind back.
- Say together, "1, 2, 3! Vesa!" (Show)
- Each child shows some fingers using TWO hands.
- Add together! Take turns!
- Do again! Faster!

- Two children face each other, with their hands behind their backs. They say together, "1! 2! 3! Vesa!" At the same time, they both show fingers on both hands. They take turns adding

up the fingers quickly. If children struggle, ask one child to only use one hand, so that they are only adding fingers on three hands.

Week 6: Big Idea of the Week

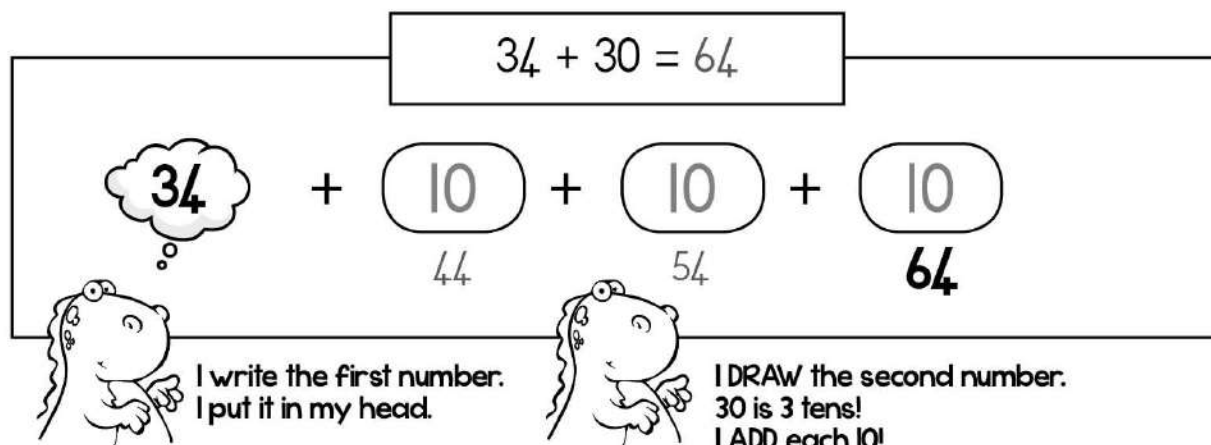
Big Idea of the Week

Add Tens

In this lesson we support learners to **add** 10s from any number between 0 and 100. For example: $46 + 30 = 76$. Before we take this step, learners should be comfortable adding a 10 to any number between 0 and 100! See previous lesson!

Zibalo explains a good method for adding tens. She writes down the first number and puts it in her head. She breaks down the second number by drawing the number. She adds each ten, ten by ten 😊.

Zibalo baked 34 scones in the morning. In the afternoon she baked 30 more. How many scones did she bake altogether?





LESSON STARTERS

Week 6: Big Idea of the Week

Work through the method with children on the board

to solve: $34 + 30 = \underline{\quad}$

$46 + 20 = \underline{\quad}$

$56 + 40 = \underline{\quad}$

Write 4-5 problems on the board each day. Ask learners to solve them using Zibalo's method in their counter books. Make sure they show their work!

Start with adding 20s and 30s. Increase the number range. Then add bigger numbers (40s, 50s, 60s!). Strong students can add tens across the 100!

Example Set 1	Example Set 2	Example Set 3	Example Set 4
Add 20s and 30s	Higher Range	Bigger Numbers	Cross the 100
$24 + 20 = \underline{\quad}$	$52 + 30 = \underline{\quad}$	$32 + 50 = \underline{\quad}$	$84 + 30 = \underline{\quad}$
$15 + 20 = \underline{\quad}$	$75 + 20 = \underline{\quad}$	$54 + 40 = \underline{\quad}$	$95 + 40 = \underline{\quad}$
$36 + 30 = \underline{\quad}$	$61 + 30 = \underline{\quad}$	$25 + 60 = \underline{\quad}$	$72 + 40 = \underline{\quad}$



Don't forget to do the Timed Tango on Friday!

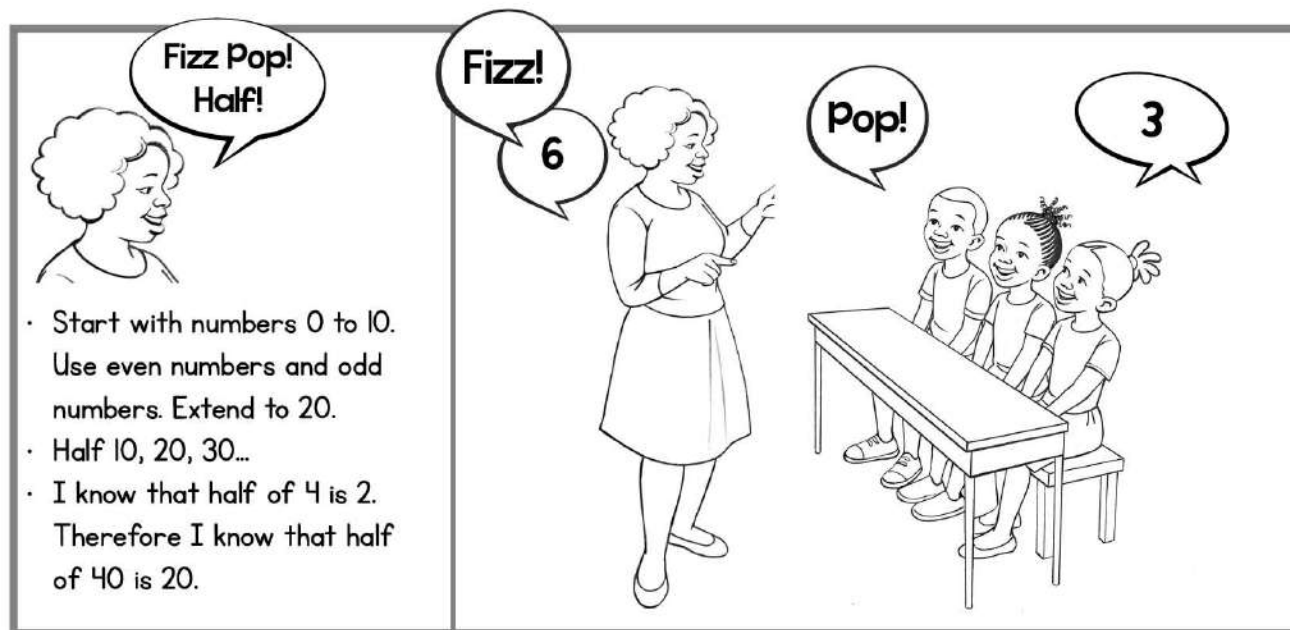


Week 7: Mental Maths

Fizz Pop

Half!

When we share equally between two children, each child receives half. Lets share marbles between 2 children. How many marbles does each child receive? How many are left over? Fizz Pop Half!



Fizz Pop! Half!

- Start with numbers 0 to 10. Use even numbers and odd numbers. Extend to 20.
- Half 10, 20, 30...
- I know that half of 4 is 2. Therefore I know that half of 40 is 20.

Fizz! 6

Pop! 3

Counting

Backwards in 2s

Count backwards in 2s. Start and end with any number between 0 and 100. Start with both even and odd numbers.

Example:

- Count backwards in 2s from 20 to 0.
- Count backwards in 2s from 60 to 40.
- Count backwards in 2s from 31 to 11.



Count backwards in 2s from 31 to 11.

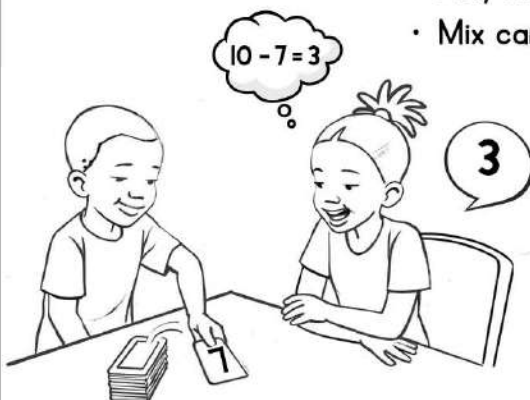
31, 29, 27, 25...

Week 7: Mental Maths

Games in Pairs

Bonds of 10

- Play in pairs with one pile of cards.
- Mix cards from 0 to 10.



Subtract

- Flip a card.
- Subtract the number from 10.



How many more to reach 10?

- Flip a card.
- How many more to reach 10?



Race Back from 100!

- Play in pairs.
- Take number cards from 0 to 10.
- Mix up and place in a pile face down.
- First child picks card. Subtracts from 100.
- Second child draws a card. Subtract again.
- Keep subtracting until you reach 0!
- Do it again! Faster!

- Pairs work with one pile of cards. Start with a pile from 0 to 10. Mix the cards. The game begins at 100. When they flip a card, they subtract it from their total. They keep flipping and subtracting until they reach 0.
- Try playing with cards from 0 to 20.

Week 7: Big Idea of the Week

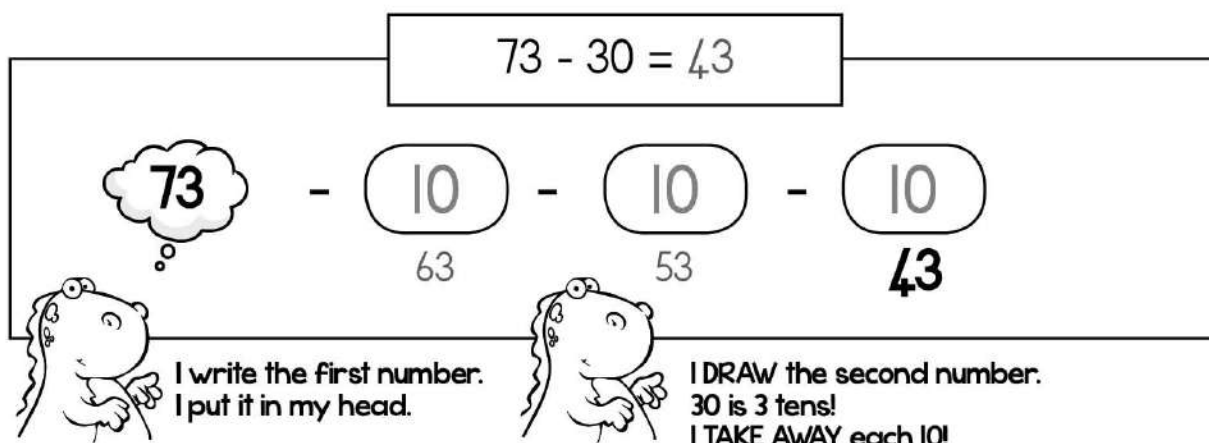
Big Idea of the Week

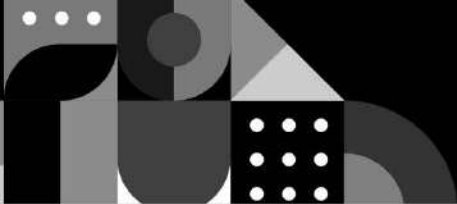
Subtract Tens

In this lesson we support learners to **subtract** 10s from any number between 0 and 100. For example: $56 - 30 = 26$. Before we take this step, learners should be comfortable subtracting a 10 from any number between 0 and 100! See Lesson Week 5!

Zibalo explains a good method for subtracting tens. She writes down the first number and puts it in her head. She breaks down the second number by drawing the number. She subtracts each ten, ten by ten 😊.

Zibalo baked 73 scones. She sold 30 scones. How many scones remain?





LESSON STARTERS

Week 7: Big Idea of the Week

Work through the method with children on the board

to solve: $73 - 30 = \underline{\quad}$

$46 - 20 = \underline{\quad}$

$85 - 40 = \underline{\quad}$

Write 4-5 problems on the board each day. Ask learners to solve them using Zibalo's method in their counter books. Make sure they show their work!

Start with subtracting 20s and 30s. Increase the number range. Then subtract bigger numbers (40s, 50s, 60s!). Strong students can subtract tens across the 100!

Example Set 1	Example Set 2	Example Set 3	Example Set 4
Subtract 20s and 30s	Higher Range	Bigger Numbers	Cross the 100
$34 - 20 = \underline{\quad}$	$78 - 20 = \underline{\quad}$	$78 - 40 = \underline{\quad}$	$112 - 20 = \underline{\quad}$
$52 - 30 = \underline{\quad}$	$85 - 30 = \underline{\quad}$	$85 - 50 = \underline{\quad}$	$125 - 30 = \underline{\quad}$
$46 - 20 = \underline{\quad}$	$92 - 30 = \underline{\quad}$	$92 - 60 = \underline{\quad}$	$126 - 50 = \underline{\quad}$



Don't forget to do the Timed Tango on Friday!

WEEK 7

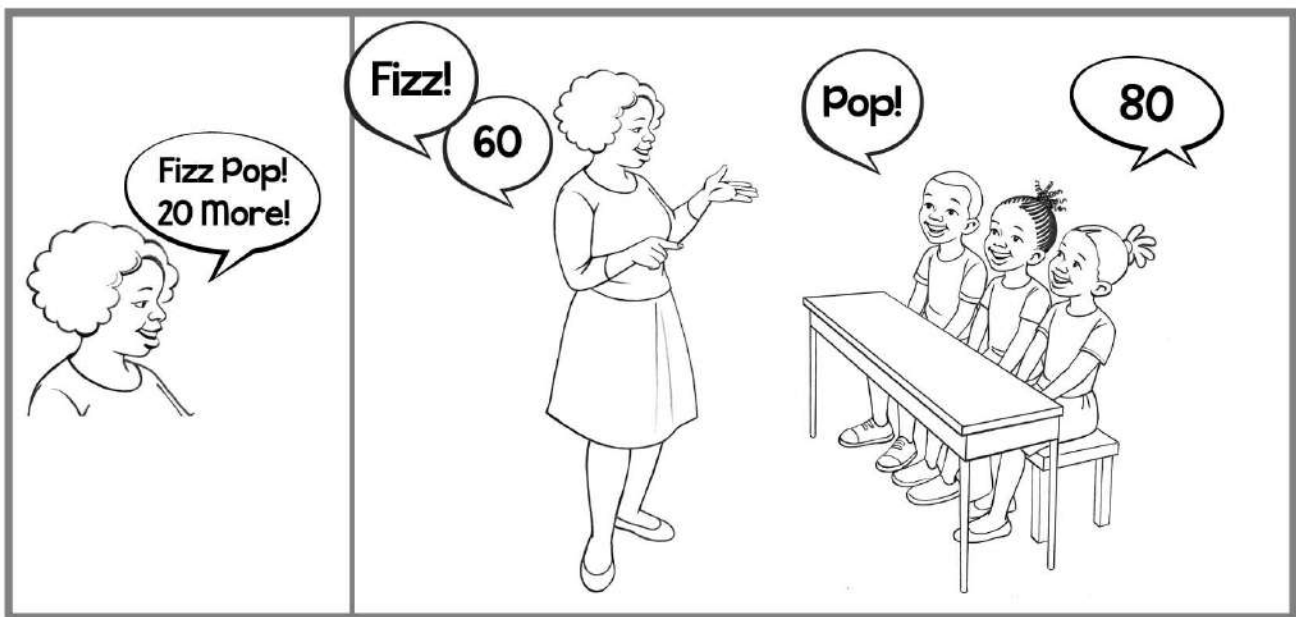


Week 8: Mental Maths

Fizz Pop

20 More and 20 Less

- Use numbers from 0 to 100. Extend to 200.
- Can you go higher?



Counting Forwards in 5s

Count forwards in 5s from 0 to 50.

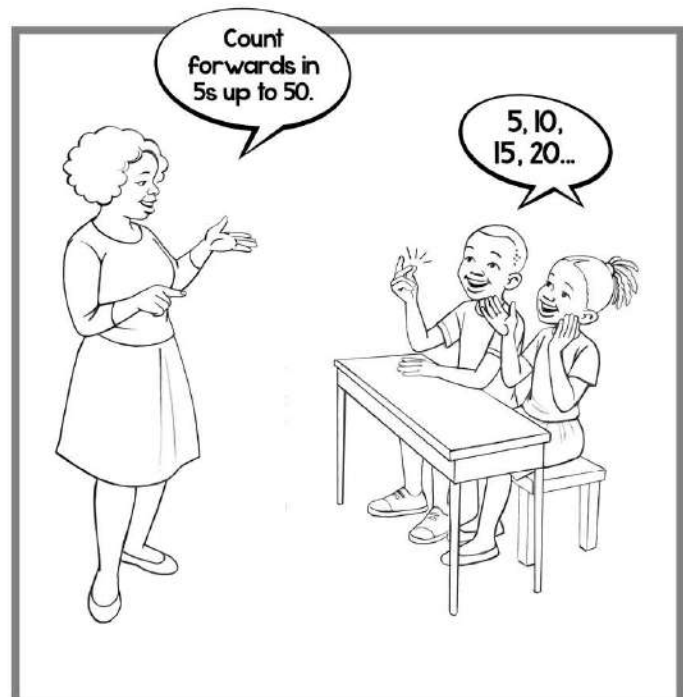
Example:

- Count forwards in 5s from 0 to 50.

Tell learners how many 5s to count forward.

Example:

- Count forward in 5s. Count 6 times.
What number do we stop?
- When we count in 5s we are multiplying in 5s. $5 \times 6 = 30$.

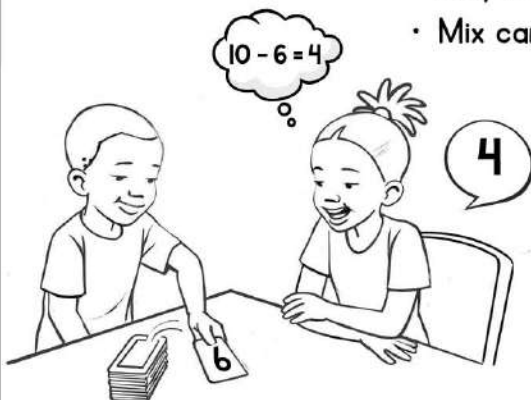


Week 8: Mental Maths

Games in Pairs

Bonds of 10

- Play in pairs with one pile of cards.
- Mix cards from 0 to 10.



Subtract

- Flip a card.
- Subtract the number from 10.



How many more to reach 10?

- Flip a card.
- How many more to reach 10?

Snakes and Ladders

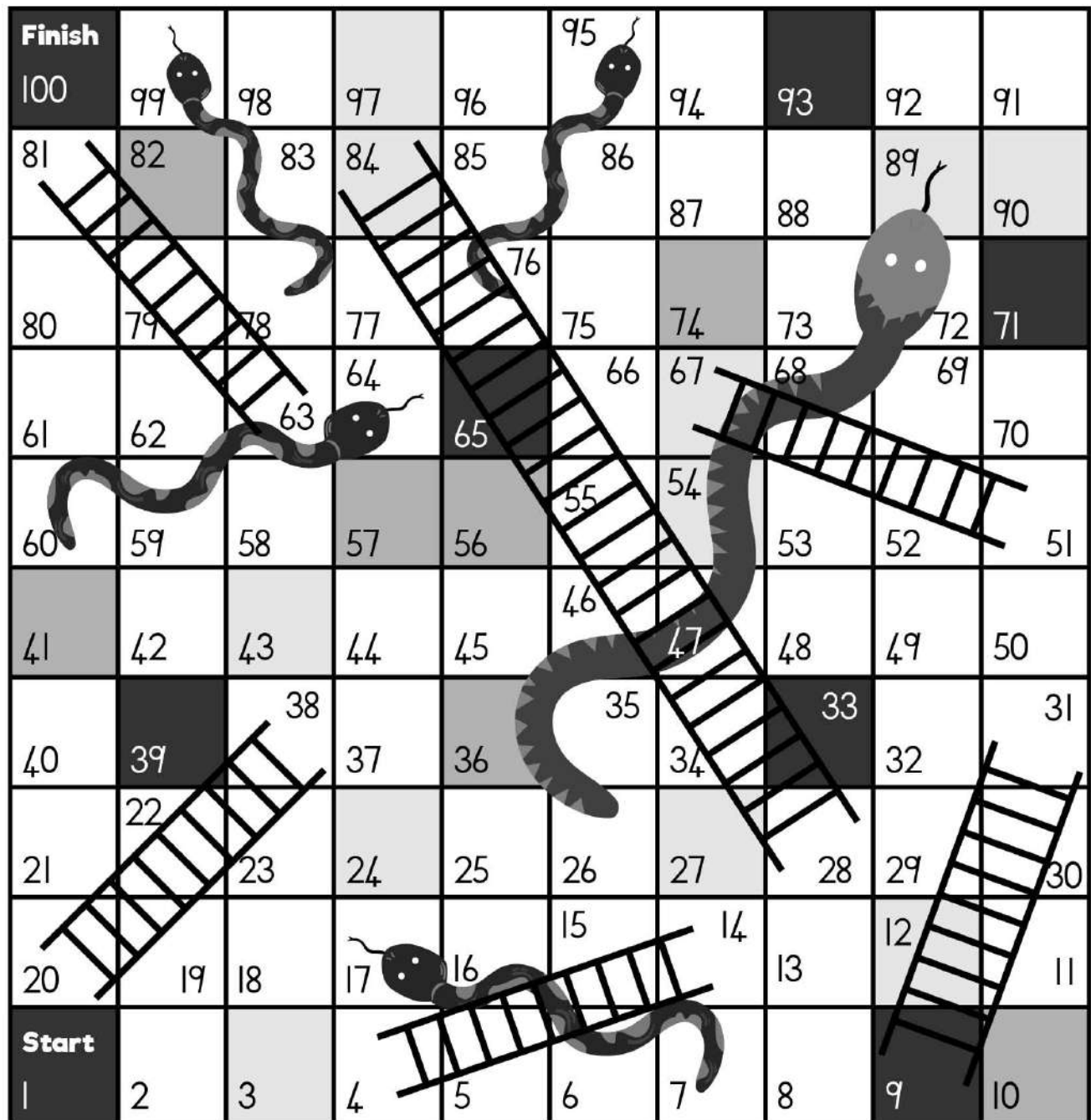
Instructions

- Each player has a counter – something like a bean to move along the board.
- Use cards from 1 to 10.
- Players take turns picking a card. Move your counter the number you draw.
- If you end on a number with a head of a snake, you slide back along the snake to the square with the tail of the snake.
- If you end on a number with the bottom of the ladder, move up to the top of the ladder.
- The first player to reach 100 wins!

LESSON STARTERS

Week 8: Mental Maths

Snakes and Ladders



Week 8: Big Idea of the Week

Big Idea of the Week Add Two Digit Numbers!

In this lesson we support learners to **add two-digit numbers** between 0 and 100. Before we take this step, learners should be comfortable adding units and 10s to any number between 0 and 100!

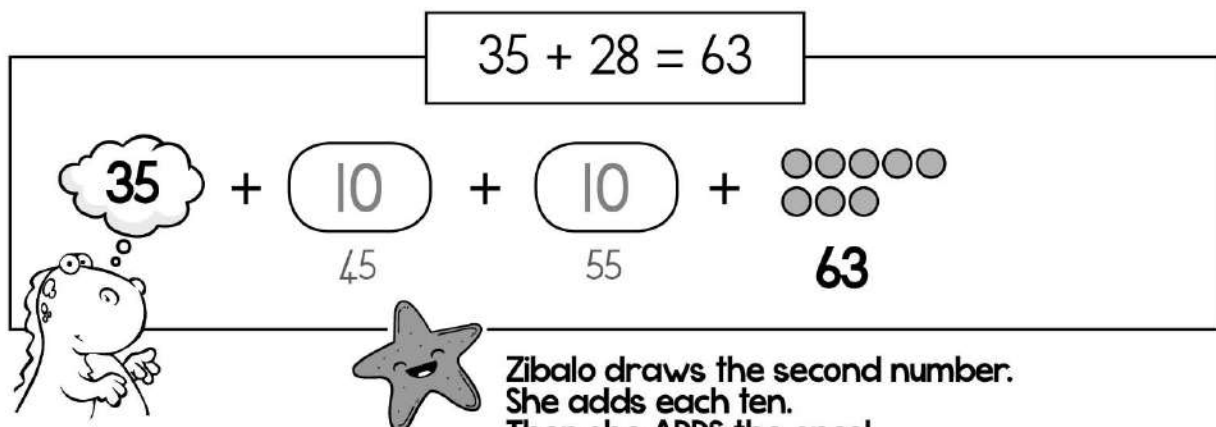
Zibalo explains her method for adding two-digit numbers. She writes down the first number and puts it in her head. She breaks down the second number by drawing the number. She adds the tens. She adds the ones!

Zibalo baked 35 scones in the morning. In the afternoon she baked 28 more. How many scones did she bake altogether?



I write the first number.
I put it in my head.

We can add BIG numbers by BREAKING DOWN the SECOND number!
DRAW the second number!



Zibalo draws the second number.
She adds each ten.
Then she ADDS the ones!



Week 8: Big Idea of the Week

Work through the method with children on the board to

solve: $36 + 23 = \underline{\quad}$

$48 + 34 = \underline{\quad}$

$75 + 25 = \underline{\quad}$

Write 3-4 problems on the board each day. Ask learners to solve them using Zibalo's method in their counter books.

Make sure they show their work!

Choose problems carefully. Start from simpler problems and build to more difficult problems. We share some examples.

Here are some pointers:

- Start with low numbers and then increase the number range.
- Start with problems that do not require crossing the 10. (Sometimes we call this "bridging the 10.")
- Move to problems that require crossing a 10, or "bridging the 10". Start with problems that arrive at the 10. Extend to problems with a "small bridge" and then a "longer bridge".
- Strong learners can solve problem that go over the 100! Start with simple sums over 100, and then work on more complex sums!





LESSON STARTERS

Week 8: Big Idea of the Week

Example Problem Sets: No Bridging of 10

Example Set 1	Example Set 2
Low Number Range	Higher Number Range
$34 + 23 = \underline{\quad}$	$54 + 42 = \underline{\quad}$
$52 + 31 = \underline{\quad}$	$65 + 34 = \underline{\quad}$
$43 + 35 = \underline{\quad}$	$71 + 27 = \underline{\quad}$

Example Problem Sets: Bridging of 10

Example Set 1	Example Set 2	Example Set 3
Simpler	Medium	Harder
Getting to a New Ten	Crossing the 10	Big Jump Past 10
$26 + 24 = \underline{\quad}$	$28 + 23 = \underline{\quad}$	$36 + 27 = \underline{\quad}$
$37 + 23 = \underline{\quad}$	$39 + 32 = \underline{\quad}$	$57 + 38 = \underline{\quad}$
$54 + 26 = \underline{\quad}$	$47 + 24 = \underline{\quad}$	$48 + 37 = \underline{\quad}$

Example Set 1	Example Set 2	Example Set 3
Simpler	Medium	Harder
Just Over 100 / No Cross 10	Bigger Numbers	Crossing a 10
$26 + 24 = \underline{\quad}$	$28 + 23 = \underline{\quad}$	$36 + 27 = \underline{\quad}$
$37 + 23 = \underline{\quad}$	$39 + 32 = \underline{\quad}$	$57 + 38 = \underline{\quad}$
$54 + 26 = \underline{\quad}$	$47 + 24 = \underline{\quad}$	$48 + 37 = \underline{\quad}$



Don't forget to do the Timed Tango on Friday!



Week 9: Mental Maths

Fizz Pop

9 MORE!

Think about it! A strategy for adding 9 is to **ADD 10** and then **SUBTRACT 1**.

We know how to **ADD TENS**! We know how to **SUBTRACT ONES**!

Therefore, we know how to add 9!

- Start with number 0 to 20.

Extend to 100.



Counting

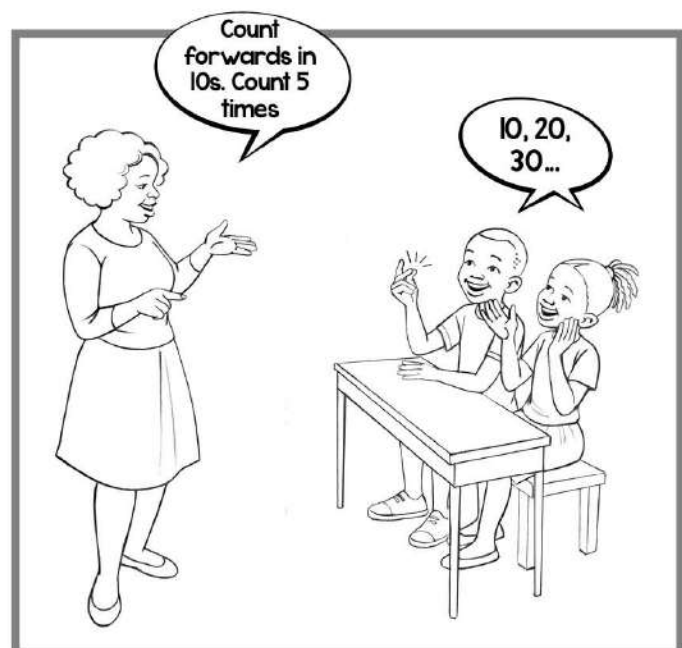
Counting forwards in 10s to multiply 10s!

Count forwards in 10s from 0 to 100.

Tell learners how many 10s to count. Talk about multiplying 10s!

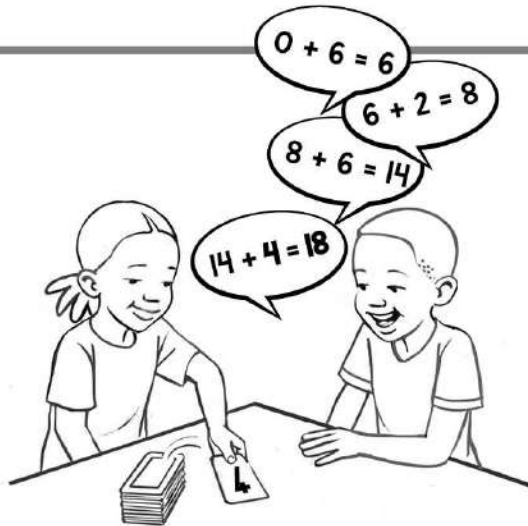
Example:

- Count forward in 10s. Count 5 times. What number do we stop?
- When we count forward in 10s, we can multiply 10s. $10 \times 5 = 50$.



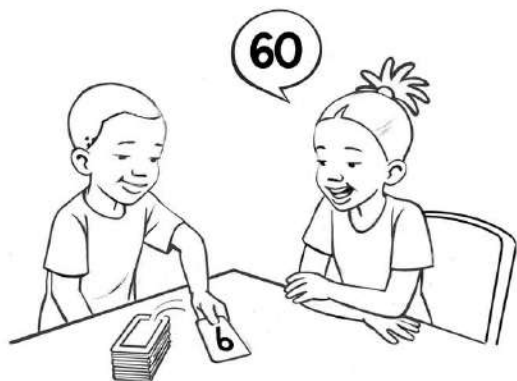
Week 9: Mental Maths

Games in Pairs



Race to 100!

- Play in pairs.
- Take number cards from 0 to 10.
- Mix up and place in a pile face down.
- First learner draws a card. Add to 0.
- Second learner draws a card. Add on.
- Keep adding on until you reach 100!
- Do it again! Faster!



Multiply 10s

- Play in pairs.
 - Take number cards from 0 to 10.
 - Flip a card. Multiply by 10!
 - Start slow and move faster!
- Now include cards from 0 to 20!

LESSON STARTERS

Week 9: Big Idea of the Week

Big Idea of the Week

Subtract Two Digit Numbers!

In this lesson we support learners to **subtract** two-digit numbers between 0 and 100. Before we take this step, learners should be able to subtract units and 10s to any number between 0 and 100!

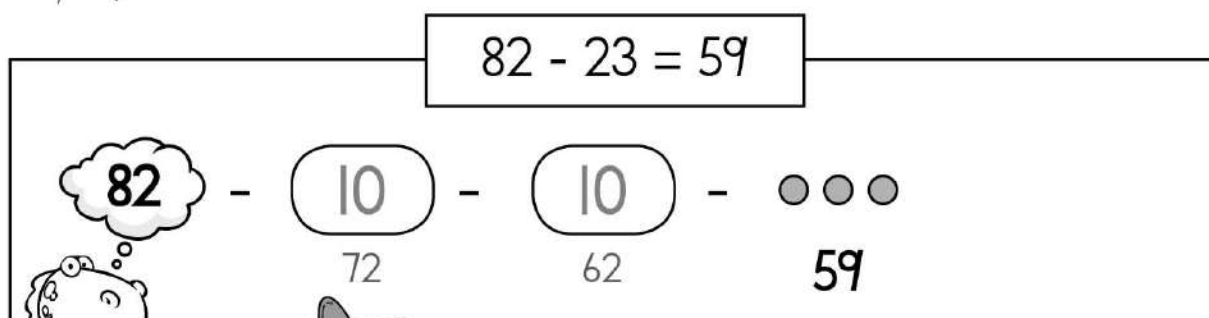
Zibalo explains her method for subtracting two-digit numbers. She writes down the first number and puts it in her head. She breaks down the second number by drawing the number. She subtracts the tens. She subtracts the ones!

Zibalo baked 82 scones yesterday. She sells 23. How many scones remain?

We can subtract BIG numbers by **BREAKING DOWN** the **SECOND** number!
DRAW the second number!



I write the first number.
I put it in my head.



Zibalo draws the second number.
She subtracts tens by counting backwards in 10s.
Then she subtracts the ones by counting backwards in 1s!



LESSON STARTERS

Week 9: Big Idea of the Week

Work through the method with children on the board

to solve: $82 - 23 = \underline{\quad}$

$48 - 25 = \underline{\quad}$

$76 - 32 = \underline{\quad}$

Write 3-4 problems on the board each day. Ask learners to solve them using Zibalo's method in their counter books.

Make sure they show their work!

Again, choose problems carefully. Start from simpler problems and build to more difficult problems. We share some examples. Here are some pointers:

- Start with low numbers and then increase the number range.
- Again, start with problems that do not require crossing the 10. (Sometimes we call this "bridging the 10.")
- Move to problems that require crossing a 10, or "bridging the 10". Start with a small hop over the 10, and then extend.
- Strong learners can solve problem that cross the 100! Start with simple sums over 100, and then work on more complex sums!





Week 9: Big Idea of the Week

Example Problem Sets: No Bridging of 10

Example Set 1	Example Set 2	Example Set 3
Low Number Range	Higher Number Range	Arriving at a 10
$43 - 21 = \underline{\quad}$	$64 - 32 = \underline{\quad}$	$54 - 34 = \underline{\quad}$
$36 - 14 = \underline{\quad}$	$75 - 24 = \underline{\quad}$	$76 - 16 = \underline{\quad}$
$47 - 24 = \underline{\quad}$	$96 - 32 = \underline{\quad}$	$87 - 27 = \underline{\quad}$

Example Problem Sets: Bridging of 10

Example Set 1	Example Set 2
Simpler	Harder
Small Hops Crossing the 10	Bigger Hops Crossing the 10
$61 - 32 = \underline{\quad}$	$63 - 26 = \underline{\quad}$
$72 - 23 = \underline{\quad}$	$72 - 37 = \underline{\quad}$
$83 - 34 = \underline{\quad}$	$53 - 28 = \underline{\quad}$

Example Set 1	Example Set 2
Simpler	Harder
Just Over 100 / No Cross 10	Over 100 and Crossing a 10
$125 - 35 = \underline{\quad}$	$121 - 32 = \underline{\quad}$
$115 - 32 = \underline{\quad}$	$113 - 35 = \underline{\quad}$
$132 - 42 = \underline{\quad}$	$132 - 54 = \underline{\quad}$

Don't forget to do the Timed Tango on Friday!



MATHS LESSON STRATEGY

1

**SETTLE
QUICKLY**

**5 Min
SPEED**

*Settle quickly
into quiet
work.*

2

**MENTAL
MATHS**

**15 Min
SPEED**

Fizz Pop
Strategic
Counting
Game in
Pairs

3

**BIG IDEA OF
THE WEEK**

**20 Min
SLOW IT
DOWN**

*Short clear lesson,
using board,
with practice.*

4

**DAILY MATHS
CLASS WORK**

**50 Min
SLOW IT
DOWN**

*Daily Maths
Lesson.*
NECT / DBE

Week 10: Mental Maths

Fizz Pop

9 LESS!

Think about it! A strategy for subtracting 9 is to **SUBTRACT 10** and then **ADD 1**. (Try it out! Does it work every time?) We know how to SUBTRACT TENS! We know how to ADD

ONES! Therefore, we know how to subtract 9!

- Start with number 0 to 20.
Extend to 100.



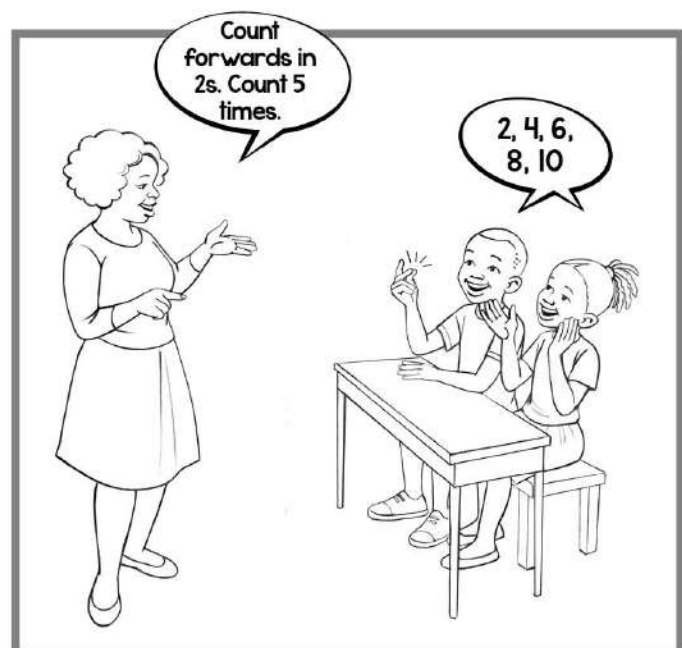
Counting

Counting forwards in 2s to multiply 2s!

Count forwards in 2s from 0 to 20. Tell learners how many 2s to count. Talk about multiplying 2s!

Example:

- Count forward in 2s. Count 5 times. What number do we stop?
- When we count forward in 2s, we can multiply 10s. $2 \times 5 = 10$.



Week 10: Mental Maths

Games in Pairs



Race Back from 100!

- Play in pairs.
- Take number cards from 0 to 10.
- Mix up and place in a pile face down.
- First child picks card. Subtracts from 100.
- Second child draws a card. Subtract again.
- Keep subtracting until you reach 0!
- Do it again! Faster!



Multiply 5s

- Play in pairs.
- Take number cards from 0 to 10.
- Flip a card. Multiply by 5!
- Start slow and move faster!

LESSON STARTERS

Week 10: Big Idea of the Week

Big Idea of the Week

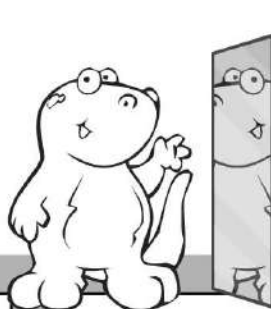
Double!

In this lesson we make sure that learners can double any number between 0 and 100. We use the idea of a "magic mirror."

- Draw a line as a magic mirror.
- Your teacher will call a number (0 to 100)
- Draw the number on the left of the mirror
- Draw the number on the right of the mirror.

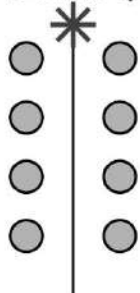


Doubling a number is about repeating a number 2 times!



Draw a line!
Draw a star * at the top.
Now it is a magic mirror!
Draw double!

Double 4

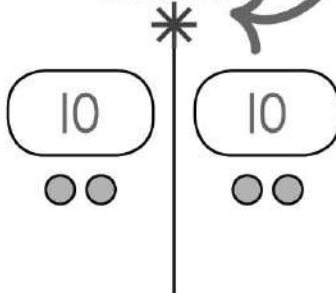


Double 4 is 8

$$4 + 4 = \underline{\quad}$$

There are two 4s in 8.

Double 12

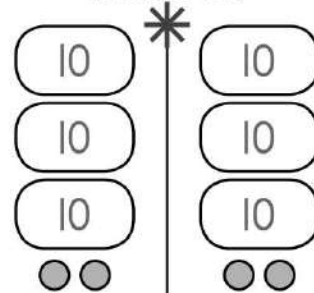


Double 12 is 24

$$12 + 12 = \underline{24}$$

There are two 12s in 24.

Double 32



Double 32 is 64

$$32 + 32 = \underline{64}$$

There are two 32s in 64.





LESSON STARTERS

Week 10: Big Idea of the Week

Write 3-4 numbers to double on the board. Start with simple numbers and then get more complex. All learners should know how to double numbers between 0 and 10. If some struggle, practice by playing Fizz Pop Double!

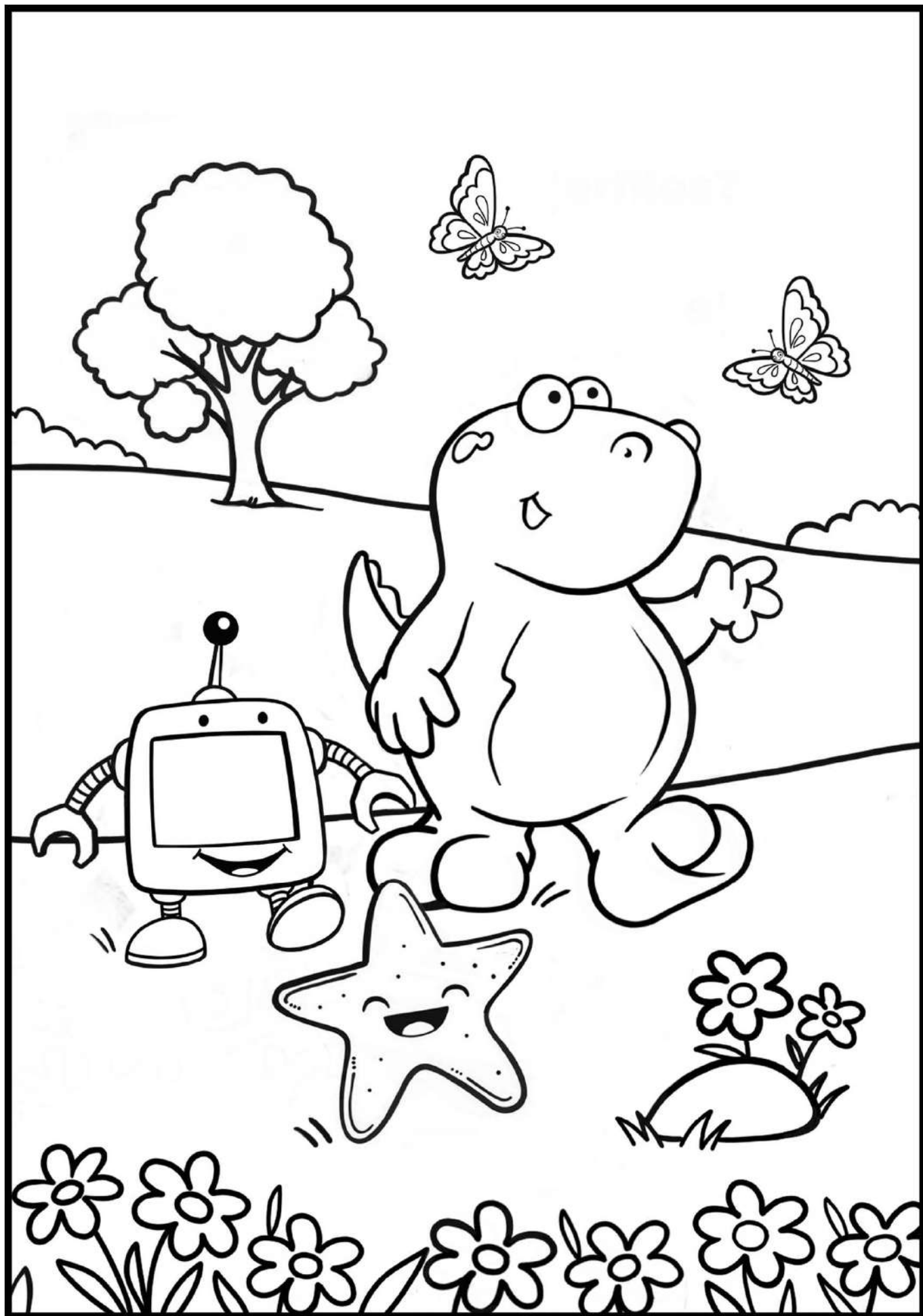
When children double 10s, help them use their knowledge of doubling ones. For example, I know that double 2 is 4, therefore I know that double 20 is 40.

Level 1	Level 2	Level 3	Level 4
Numbers: 0 to 10	Numbers: 10 to 20	Numbers: Tens	Two Digit Numbers
Double 3 _____	Double 13 _____	Double 20 _____	Double 24 _____
Double 5 _____	Double 16 _____	Double 40 _____	Double 31 _____
Double 2 _____	Double 12 _____	Double 50 _____	Double 26 _____



Don't forget to do the Timed Tango on Friday!







TEACHER MANUAL

How do I use
LESSON STARTERS
in my classroom?





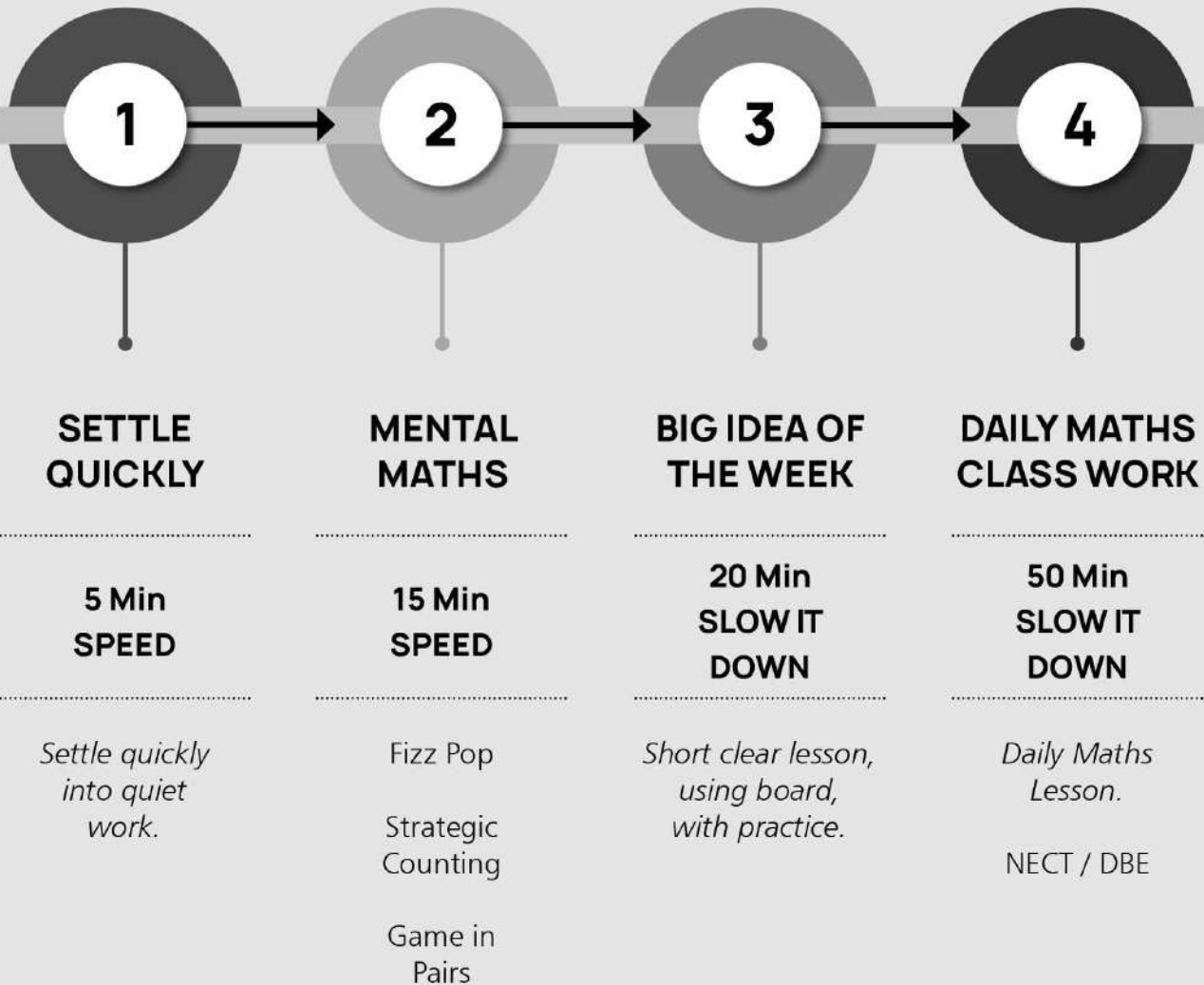
1. Introduction to Lesson Starters

What is a Lesson Starter? What are we trying to achieve with Grade 3 Lesson Starters? How do you manage to fit “Lesson Starters” into your maths lesson every day? This document is designed to answer these questions and share some of our ideas about how to organise maths lessons.

2. What are Our Lesson Starters?

In the MCC, we have adopted the following simple daily lesson plan to organise our 90 minutes maths lessons each day. In the past, we did not always organise a tight 90-minute lesson. Over time we have found that it helps our learners for us to develop a consistent daily routine, at the same time each day. When our learners get used to our routine, activities, and games our classrooms have become easier. We can get more done with less stress. We hope you will try it out and adapt it to your needs.

Maths Lesson Strategy: Monday to Thursday





As you can see, we think about our lesson as FOUR STEPS:

- **Step 1 - Settling Quickly:**

The first step is to settle our learners into the maths lesson quickly after break. We do this by creating and maintaining a MAGIC DOOR and providing quick practice as learners enter the MAGIC DOOR.

- **Step 2 – Mental Maths:**

We begin the lesson with MENTAL MATHS. We undertake three activities every day for mental maths:

- 1) Fizz-Pop;
- 2) Strategic Counting; and
- 3) Games in Pairs.

We explain these activities below. The Lesson Starters provide a detailed guide for these activities across the term.

- **Step 3 – Big Idea of the Week:**

After Mental Maths, we spend 20 minutes teaching the BIG IDEA OF THE WEEK. These are strategic lessons that assist learners to keep up with the fundamental goals of the curriculum. Repeat and reinforce this lesson across the week; learners practice in their counter books on problems you have written on the board.

- **Step 4 - Normal Maths Class Work:**

We then use 45 and 50 minutes to conduct our planned daily maths lesson, using the DBE Workbooks, NECT Lesson Plans and other available materials.



LESSON STARTERS

On Fridays, we shift things up a bit, by doing a Timed Tango and a mini assessment. We describe each of these activities below!

Monday	Tuesday	Wednesday	Thursday	Friday
MAGIC DOOR				
MENTAL MATHS: Fizz Pop, Strategic Counting, Games in Pairs				Timed Tango
BIG IDEA OF THE WEEK				Assess
DAILY MATHS LESSON				

Magic Door

1. Create and Maintain the Magic Door

1.1. Introduction to the Magic Door

The goal of the Magic Door is to help children to settle into the maths lesson quickly.

To create a “Magic Door” you must:

- **Explain** the Magic Door (and its rules) clearly.
- **Organise** work for children to begin right away, without waiting for you or other children to settle.
- **Consistently** enforce the Magic Door rules.

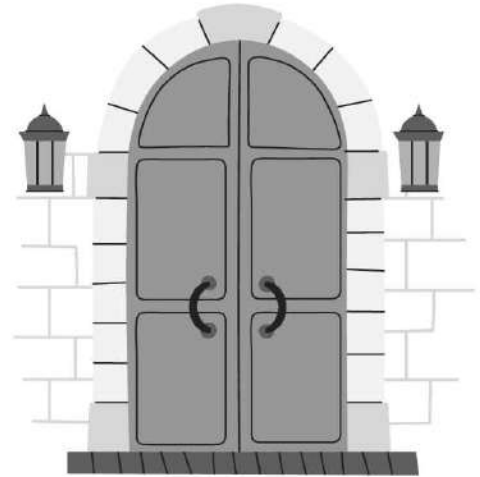
1.2. Explain the Magic Door

“Can you see the door of this classroom? Does it look to you like a normal boring door? Well, not after today...”

From today forward, we will create this door as a MAGIC DOOR. It will help us make our classroom more peaceful and we will learn more when we are together.

One of the things we know about learning is that we only learn nicely when we feel safe and calm. My job as the pilot of this classroom is to make sure we have a calm environment so that we can focus on interesting things.

Outside of this door we all have lives. Some of our lives are quite stressful. Sometimes families are stressful. Sometimes friends are stressful.





LESSON STARTERS

Magic Door

However, when we walk into this classroom, for now on, all of us, including myself will leave our stress outside the door. We will create this classroom as safe, calm and peaceful.

Our bodies have a lot of energy. When we are outside the door, we must let our energy out! Outside this door we must play, run around, move our bodies, make noise, play soccer, play other games, run races and chat with each other.

By the time we walk through the door of the classroom, our bodies and minds are ready to learn!"

1.3 How Do We Create a Magic Door?

From this day forward, every time we come through this door, we will remember to make it magical.

- We will only come through the MAGIC DOOR into the classroom one at a time.
- As we walk through the door, we will quieten our bodies and our minds, and we will leave our problems and stresses outside.
- We will take a deep breath, and feel the calm of this room.
- Without talking, we will go straight to our desks and begin the work that is waiting for us.
- When I see anyone talking as they entre this special place, I will ask you to go out again and practice coming through the Magic Door again.
- If there is a lot of noise, we may ALL go out and come in again!
- When I am stressed, I will go out and come in again! ☺



Magic Door

1.4. Organise Work

In order to make the maths lesson start quickly and quietly, we have work organized for learners before they enter the classroom.

Before leaving the previous day, we write 5 maths problems on the board. Children know that when they come into the classroom, they get their counter books, and start this work. Some of us write two sets of problems on the board – one more difficult than the other. All learners know what set they should work on.

You do NOT need to wait for all learners to complete this work. When you are settled and ready to teach, and children are in their desks, you will say “Fizz!” By putting time pressure, learners will make more progress the next day.



2. MENTAL MATHS

As soon as your learners are settled and you are ready to begin, we start mental maths. Every day we do THREE mental maths activities:

1. Fizz Pop
2. Strategic Counting
3. Games in Pairs

We describe each of these activities below.



LESSON STARTERS

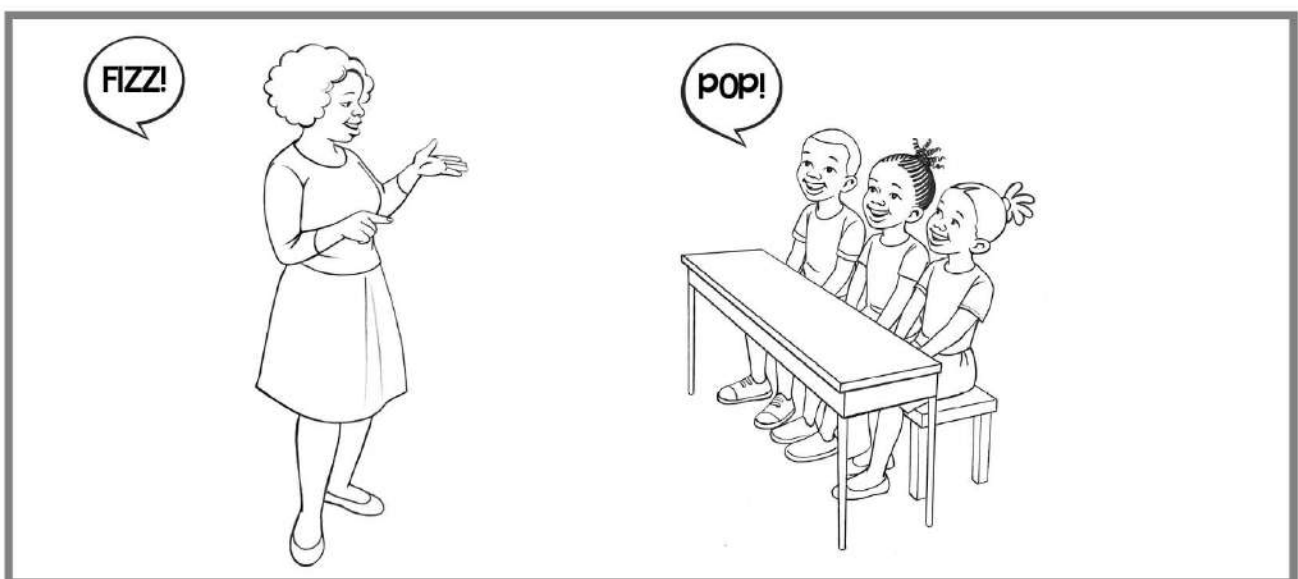
STEP 1: FIZZ POP

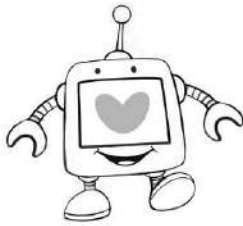
3.1. Introduction

Your learners have come through the Magic Door quietly and started work or board work. (If they are not working quietly, you will maintain the Magic Door by walking learners (some or all) out of the door and ask them to come in again, respecting the Magic Door. (Seriously, you will have to do this from time to time to maintain the Magic Door!))

Again, you should NOT wait for all learners to complete this work. When YOU are settled and ready to teach, and children are in their desks, you will say "Fizz!" We suggest that you do not even say, "good morning class!" (You can do this later.) Start with a bang – "FIZZ!"

Children will respond, "POP!" At first only a few children may respond. You call, "Fizz" until most children have put down their calendar work, and call back, "POP!"

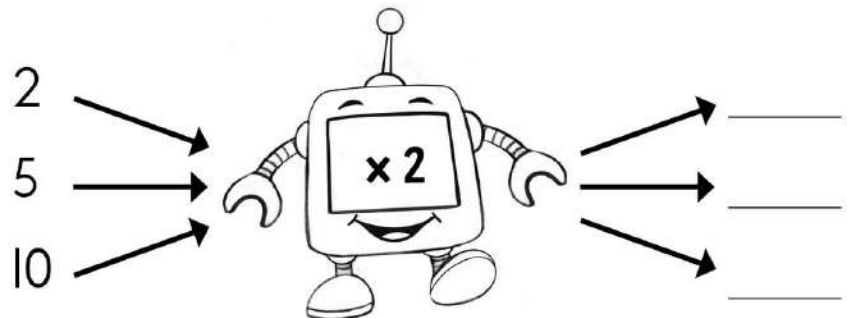




3.2. The KEY for Fizz Pop?

Fizz Pop is a FUNCTION game. A number is called. It is put into the function machine. And the number comes out transformed. (Old machines used to make sounds like fizz and pop!)

This function machine DOUBLES (phinda ka 2) numbers. When we put a 2 in the machine, it is transformed into 4 when it comes out! The number double (phinda ka 2).



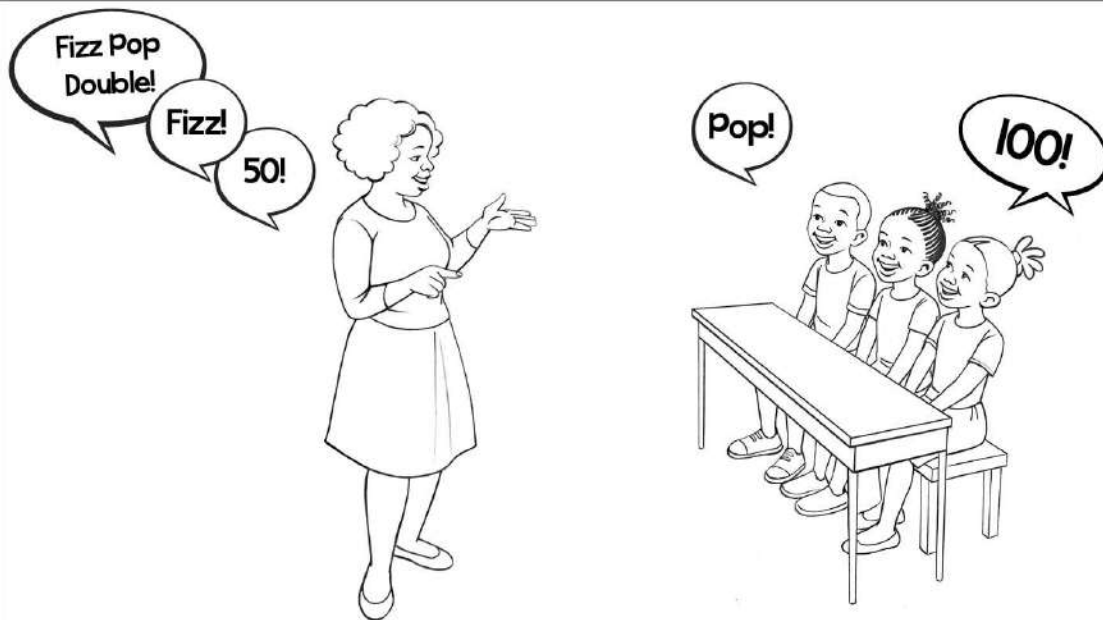
The instructions for playing Fizz Pop are in Box 1. The most important part of the game is to clearly define the function! Check out Box 1 on page 63.

LESSON STARTERS

STEP 1: FIZZ POP

Function	Number Range
1 More and 1 Less	Start with 0 to 100, build to 1000.
10 More and 10 Less	Start with 0 to 100, build to 1000. Focus on bridging the 100. (Fizz Pop, 10 Less! Cal: 105)
100 More and 100 Less	0 to 1000
Add or Subtract: 1, 2, 3, 4, 5...	0 to 1000
Add or Subtract: 10, 20, 30...	0 to 1000
How far to the next 10?	0 to 1000
How far to the next 100?	0 to 1000. Start on the 10. (380)
Double	Start with 0 to 10. Then 10s (10, 20, 30...) (If we know that double 2 is 4, then we know that double 20 is 40.) Then go to 0 to 20. Work to 100.
Half	0 to 20: Start with marbles. (Half of 5 is 2 and 1 left over.) 0 to 20: Go to hotdogs (Half of 5 is 2 and a half)
Add 10, Subtract 1 (Show learners this is the same as adding 9!)	Start with 0 to 100. Build to 200 if 0 to 100 is secure.
Make up your own	

Box 1: Let's Play Fizz Pop!



Step 1	Step 2	Step 3	Step 4
Get learners' ATTENTION quickly. Start the game by calling, "Fizz!" Learners respond, "Pop!" Call, "Fizz! Fizz!" Learners respond, "Pop! Pop!" <i>When you have most learners' attention...</i>	Clearly define the FUNCTION. <i>(The math you want children to do.)</i> Say, "Fizz Pop DOUBLE!" <i>(See below for other examples.)</i>	PLAY Teacher: Fizz! Learners: Pop! Teacher: Fizz! Fizz! Learners: Pop! Pop! ... Teacher: 10 Children: 20!	KEEP GOING! <i>(If children answer quickly, extend the number range. If children struggle, bring back the number range.)</i> Teacher: Fizz! Learners: Pop! Teacher: Fizz! Fizz! Learners: Pop! Pop! ... Teacher: 14 Children: 28!



STEP 2: Strategic Counting

4.1. Introduction

After a few minutes playing Fizz Pop, continue into Strategic Counting. Counting with learners is strategic when it:

- Makes children think about number structure and relationships;
- Does not take too much time; and
- Keeps all children engaged.

The top 3 math rules for strategic counting are:

- Give a number to **begin** and **end**.
- Give the **unit** (or group) you are counting in.
(For example, count in 1s, 2s, 5s or 10s.)
- Give the **direction** for counting.
(Count forward or count backwards.)

Good Example	Not So Good Example
Count backwards in 1s from 135 to 123 Count backwards in 10s from 163 to 43	Count from 150 to 100.

Here are some other tips to make counting strategic:

- Do not allow counting to go on too long – children stop thinking 😊.
- Choose start numbers and end numbers that make learners think.
- Make sure you count BACKWARDS as much as you count FORWARDS!

4.2. Counting in 1s, 10s and 100s!

By the end of Grade 3, ALL children must be able to count forward and backwards in 1s, 10s and 100s between 0 and 1000.

- We call 1 the small counting number.
- We call 10 the medium counting number.
- We call 100 the big counting number.



4.2.1. Counting in 1s:

All learners should be able to count forward and backwards in 1s, starting and ending at any number between 0 and 1000:

- Start with numbers between 0 and 100. Focus on “bridging” (or crossing) the 10s. (For example, count backwards in ones, from 83 to 75.)
- Build to numbers up to 1000. Focus on “bridging” (or crossing) the 100’s. (For example, count backwards in ones, from 208 to 190. Note:



STEP 2: Strategic Counting

- We call 1 the small counting number.
- When we count forwards in ones we are adding ones.
- When we count backwards in ones we are subtracting ones.

4.2.2. Counting in 10s:

All learners should be able to count forward and backwards in 10s, starting and ending at any number between 0 and 1000. Note:

- Begin with counting in 10s between 0 and 100.
- Then practice “bridging” 100 (For example, count backwards in 10s, from 165 to 75.)

- We call 10 the medium counting number.
- When we count forward in 10s, we are adding 10s!
- When we count backward in 10s, we are subtracting 10s!

4.2.3. Counting in 100s:

All learners should be able to count forwards and backwards in 100s, starting and ending with any number between 0 and 1000. Here are some examples:

- Count forward in 100s from 5. Stop before you reach 1000: 5, 105, 205, 305...805, 905!
- Count forwards backwards in 100s from 876. Stop before you reach 0: 876, 776, 676...

- We call 100 the BIG counting number.
- When we count forwards in 100s, we are adding 100s.
- When we count backwards in 100s, we are subtracting 100s!



4.3. Counting in 2s and 5s

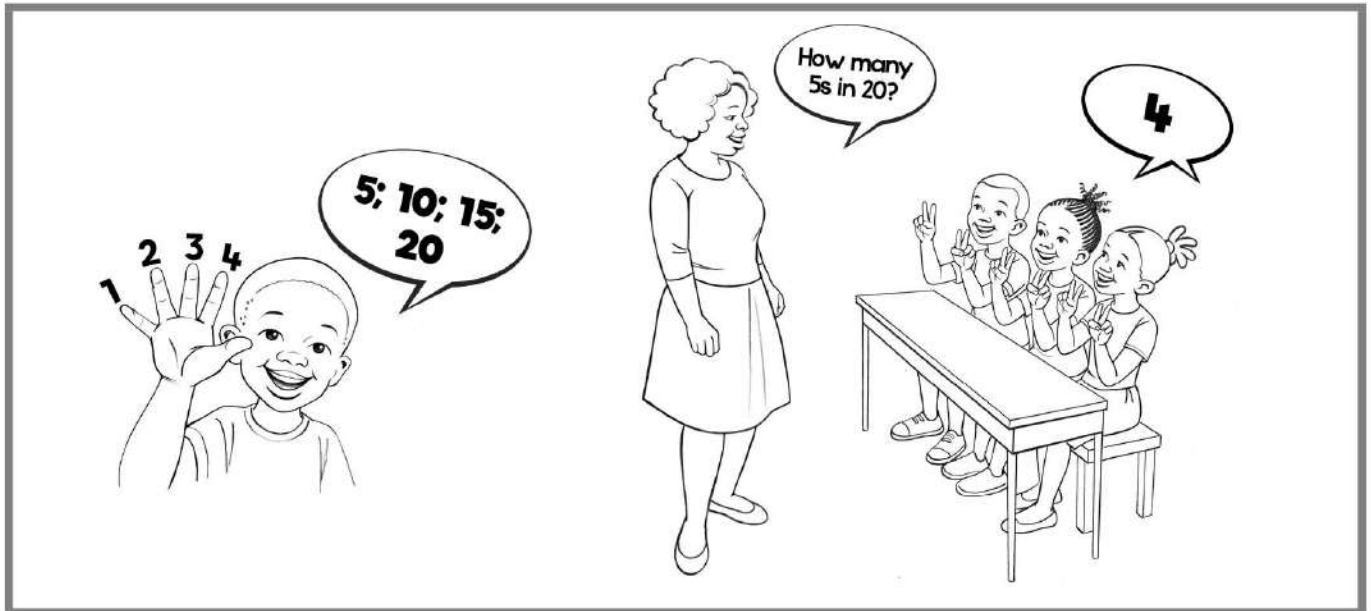
Another priority for counting in Grade 3 is to ensure that children can count forwards and backwards in 2s and 5s. All learners should be able to:

- **Counting 2s / Even Numbers:** Count forwards and backwards in 2s, starting and ending on an even number, especially between 0 and 100.
- **Counting in 2s / Odd Numbers:** Count forwards and backwards in 2s, starting and ending on an odd number, especially between 0 and 100.
- **Counting in 5s / Multiples of 5:** Count forwards and backwards in 5s, starting and ending on a multiple of 5, between 0 and 100.

We recognise that counting in 3s (especially on multiples of 3) and counting in 4s (in multiples of 4) are also CAPS goals. However, make sure that before focusing on 3s and 4s, our children can count confidently in 1s, 2s, 5s, 10s and 100s. If children have not learned 3s and 4s well by the end of Grade 2, we can still make it up in Grade 3. However, if they are not fluent with 1s, 2s, 5s and 10s, they will struggle in future grades.

LESSON STARTERS

STEP 2: Strategic Counting



4.4. Counting for Multiplication and Division

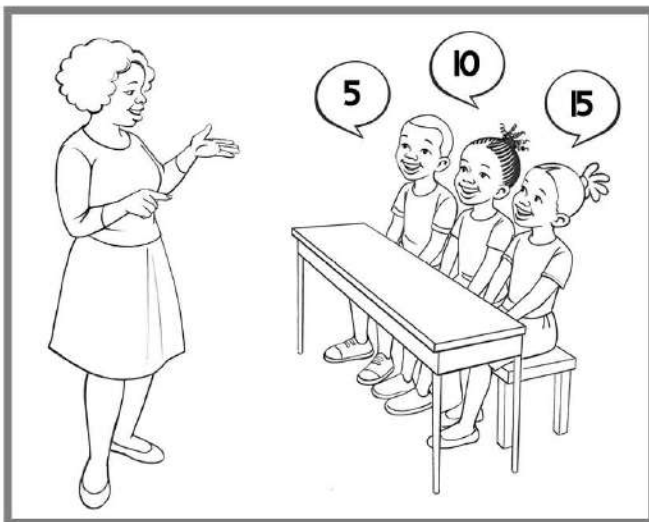
There are some simple things we can do to make sure that strategic counting contributes to children learning multiplication and division. When we practice counting forwards in 2s, 5s and 10s from 0, we can help children begin to understand and learn both multiplication and division:

- Ask learners to count, using their fingers to keep track of how many numbers as they count.
- After counting ask: "How many 5s in 20?"
- Respond, "Yes, there are four 5s in 20. We can say 20 divided by 5 is 4"
- Continue, "So, what is 5 multiplied 4 times?"

4.5. How Teachers Count with Learners

There are three main ways teachers count with learners in a big class:

1. **Whole Class Together:** Many teachers are very skilled at having children count altogether. This is one good strategy. The problem is that often some children do not pay attention.
2. **Whole Class / Learner by Learner:** Some teachers ask one child to start, and the next child continues, going up and down rows (or around the classroom) so that all children participate.
3. **Written:** Another good technique is to ask learners to quickly write the number sequence in their counter books.



What other ways can you find to make counting speedy and fun?

OK! Let's Count!

In each week's Lesson Plan we give a recommendation for a counting range. This is only a recommendation. You know your learners better than we do. Our recommendation may be either too fast, or too slow, for your learners. You drive your classroom! Keep reflecting on the

strategic rules and goals for Grade 3 counting presented above.

- Remember, do not spend too much time counting. It should not take more than a few minutes.

STEP 3: Games in Pairs

5. Game in Pairs!

OK. Drum roll please! Everything we have suggested so far will be relatively easy for you to try in your classroom. We are now asking you to try something new! We want your learners to play maths games in pairs! Many of us as teachers had not done this before, and at the beginning we thought it would be chaos. Over time, our learners have learned to get into pairs quickly and quietly. And they LOVE playing fast maths games together.

The first game we want you to play, we call "Pairs Prepare!" In this game your learners will simply PRACTICE getting into and out of pairs quickly and quietly.

5.1 Prepare: Getting into Pairs

To prepare for this game, all learners must have a partner who sits right next to them. Learners must be able to quickly turn to their partner, every time you say, "Pairs prepare!" See the illustration. You will call, "Pairs Prepare!" When you call "Pairs Prepare" learners should stand up quickly and quietly and face their partner, touching fists. If any child makes noise, she is out of this round of the game! 😊

When you say, "Back Home!" children must sit back in their seats quietly. When your learners can get into and out of pairs you are ready to try playing in pairs!

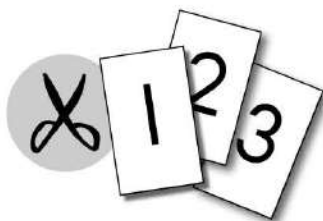
LESSON STARTERS

STEP 3



We will play many games in pairs.
We can only play if we know how to get into pairs
and out of pairs quickly and quietly!
Let's practice! Do you know your partner?

QUICK PAIRS!		
• Your teacher will call, "PAIRS PREPARE;"	• Stand up quietly and quickly. Face your partner touching fists. • Your teacher will say, "BACK HOME!"	• Sit back down quickly and quietly with your hands in your lap.



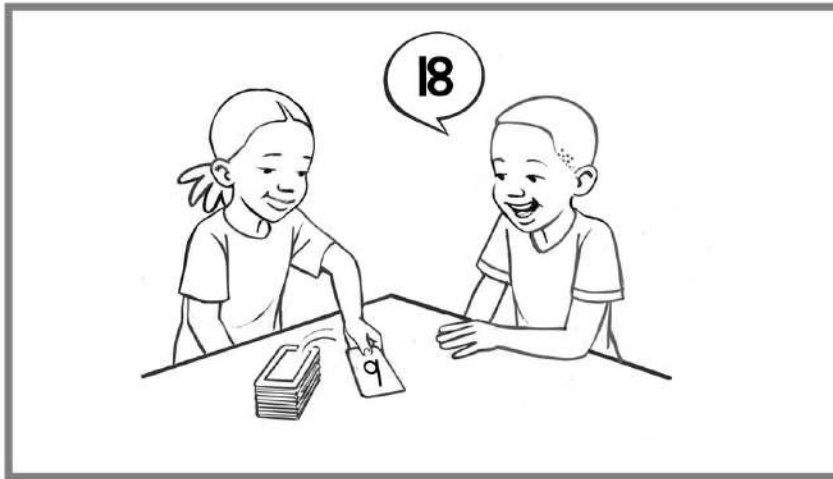
5.2 Prepare: Make Number Cards

In order to play the pair games this term, learners must each have a set of number cards. Photocopy the cards on Pages 101 to 105 for each child. Have each child cut out a set of number cards from 0 to 20. Find a safe space to store the cards. Many of us store the cards in plastic sandwich bags.



LESSON STARTERS

STEP 3: Games in Pairs



5.3 OK! Play!

In the Lesson Plans, you will see that we suggest one or two games to play each week. These games are meant to build fluency. When children first play, they may move slowly. Over time, encourage them to move faster.

If you play this set of games across this term, learners will develop fluency in bonds to 10, bonds of 10, double and half. They will build confidence and fluency in adding and subtracting to 100. And they will develop confidence in multiplying with 2s, 5s and 10s! These are super important skills as children move forward!

Check out the instructions and the illustrations of each game carefully. Make sure you study the game BEFORE you play it in your class. Play with another teacher or a child at home!



LESSON STARTERS

BIG IDEA OF THE WEEK

Big Idea of the Week

In each week of your Lesson Strategy, we provide a BIG IDEA OF THE WEEK. This is a strategic lesson that is designed to BOTH help children recover from backlogs AND develop a strong foundation for maths in Grade 3 and the intermediate phase.

You can prepare your chalkboard in two ways. The picture in this guide demonstrates how to present the lesson on the chalk board. Then write 3 problems on the chalkboard which children can work on that day in their counter books. We recommend doing 3 problems each day. (Some teachers give two sets of problems. They have half of the class work on a set of 3 problems, and half of the class (who are stronger) work on a harder set of 3 problems.

See notes in each week about the lesson.

Daily Maths Lesson

You now have 50 minutes to give your daily planned maths lesson for the day. You may be drawing this from NECT Lesson Plans, or the DBE Workbook. If children are not done with the work on time, ask them to stop, and continue the work later.

FRIDAYS: Timed Tango!

8.1. Introduction

On Fridays we do something different! We do a Timed Tango! The Timed Tango is a TIMED activity where learners work through 10 problems as quickly as they can. It helps children build fluency!

8.2. What are the Goals of the Timed Tango?

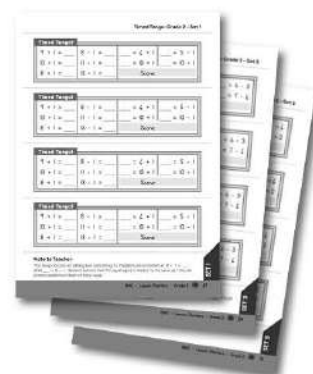
The Timed Tango is an opportunity to build learner's understanding, strategies and fluencies of addition and subtraction at a low number range. By doing the Timed Tango each week, we can achieve three goals:

1. Ensure learners have an *understanding* of addition and subtraction problems (0 to 30) in the different ways problems can be presented.
2. Ensure learners have a *strategy* for answering addition and subtraction problems (0 to 30) in all of the way's problems can be presented.
3. Support learners to gain *speed* (fluency) in answering addition and subtraction problems (0 to 30) in all of the way's problems can be presented.



8.3. How Do I Prepare for a Timed Tango?

- **Timed Tango Marking Sheet:** Photocopy the Timed Tango marking sheet for each learner. Ask each learner to complete their name and grade. See page 81.
- **Photocopy Timed Tango:** We provide a page of Timed Tango for each week. See pages 82 to 91. Before Friday, photocopy the Timed Tango for that week. Photocopy enough to give one problem set to each learner. There are FOUR problem sets on each page. Cut each page into four pieces.





Example: If there are 40 learners in my class, I make 10 copies of the page. I cut each page into four problem sets. I have one problem set for each learner.

Timed Tango!			
$9 + 1 = \underline{\hspace{2cm}}$	$8 - 1 = \underline{\hspace{2cm}}$	$\underline{\hspace{2cm}} = 4 + 1$	$\underline{\hspace{2cm}} = 5 - 1$
$13 + 1 = \underline{\hspace{2cm}}$	$11 - 1 = \underline{\hspace{2cm}}$	$\underline{\hspace{2cm}} = 10 + 1$	$\underline{\hspace{2cm}} = 10 - 1$
$8 + 1 = \underline{\hspace{2cm}}$	$18 - 1 = \underline{\hspace{2cm}}$	Score: 	

- **Distribute to Desks:** Before learners arrive for the maths lesson, distribute the Timed Tango problem set for each learner FACE DOWN on their desks.
- **Explain and Practice:** On the day before your first Timed Tango, explain to learners how it works. (See below.)

8.4. How Does a Timed Tango Work?

On the day before you start with the Timed Tango, explain that when they come into math the following day they will find a small piece of paper face down on their desks. Tell learners NOT to look at the paper until you tell them to start.

Explain that exactly 30 seconds after class begins, you will tell them to begin. (*This encourages learners to be on time ready to go!*) They will see 10 maths problems. They are to work through the problems as quickly as they can. After exactly ONE MINUTE you will tell them to stop. They must put their pencils down!





FRIDAYS: Timed Tango!

8.5. Marking and Discussing

Work through the answers with the class. Discuss how learners approached each problem. Read the basic strategies discussed below.

Have learners count the number of CORRECT answers and record both the date and number correct on their Tango Tracker.

8.6. Is this a Test??

Mainly no. It is a fun way to practice!!! Do the Timed Tango in a fun sporty manner. It is not supposed to be a scary test. The Tango is a fast and fun dance.

And remember, when we get problems wrong, then we can LEARN. Celebrate getting things wrong and trying again!!

8.7. Time Tango Review of Strategies

The discussion of the Timed Tango gives us an important opportunity to remind children of the meaning of addition and subtraction sentences, and to discuss strategies to answer them.

There are three main strategies we want to review, each discussed briefly below.

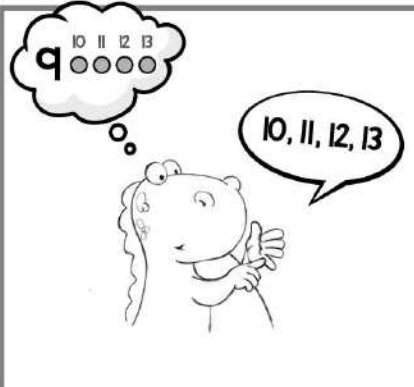
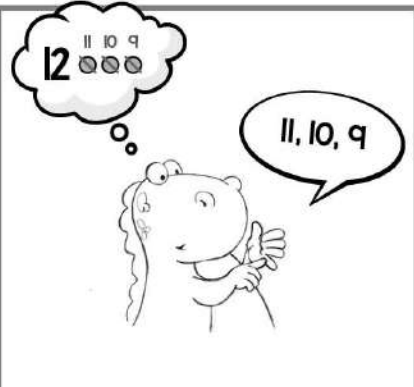
8.7.1. Put the First Number in Our Heads!

The first strategy we want to reinforce is the strategy of putting the first number in our heads. In addition, we count forward in ones. In subtraction we count backwards to subtract ones.



LESSON STARTERS

FRIDAYS

Addition	Subtraction
$4 + 9 =$	$12 - 3 =$
- Put the largest number in your head - Tap 3 times to make sure it is in there. - Count forward in ones to add - Use your fingers to keep track.	- Put the first number in your head. - Tap 3 times to make sure it is in there. - Count backwards in ones to subtract - Use your fingers to keep track
	

8.7.2 Equal Means the Same As

Children mainly see addition and subtraction problems presented similar to those on the left. Remind children that the equal sign “=” means, “**is the same as.**” (*It does not mean “the answer is.”*) Children should be comfortable seeing problems presented the way they are presented on the left and right.

$7 + 3 = \underline{\quad}$	$\underline{\quad} = 7 + 3$
$10 - 3 = \underline{\quad}$	$\underline{\quad} = 10 - 3$





FRIDAYS: Timed Tango!

8.7.3 Moving the Unknown

We also want learners to be able to interpret addition and subtraction sentences where the unknown is moved around.

The table below takes a simple addition sentence ($7 + 3 = 10$) and its related subtraction sentence ($10 - 3 = 7$) and demonstrates how the unknown can move around. We identify the problem, provide a word sum to illustrate the problem, show an example of this problem, and discuss calculation strategies.

Over time, we want children to calculate using known facts. For children who do not have enough known facts, they may count in ones. We provide examples of both.

You may want to work through each type of example with your learners. Do one type of learners in a day. Allow learners to practice many examples.





Table: Moving Around the Unknown in Addition

$7 + 3 = \underline{\quad}$ <table><tr><td colspan="2"></td></tr><tr><td>7</td><td>3</td></tr></table>			7	3	Example: There are 7 children in the taxi. 3 more get on. How many children are on the taxi now? Using Known Facts: Put biggest number in our head. I jump forward 3 to 10. Counting in Ones: Put biggest number in our head. Count forward in ones.
7	3				
$7 + \underline{\quad} = 10$ <table><tr><td colspan="2">10</td></tr><tr><td>7</td><td></td></tr></table>	10		7		Example: There are 7 children in the taxi. Some more children get on. Now there are 10. How many children got on? Calculation: How many from 7 to get to 10? Using Known Facts: I know that $7 + 3 = 10$. Therefore, the answer is 3. Counting in Ones: What must I add to 7 to get to 10? • Put the 7 in your head. Count forward in ones to 10. • Put the 10 in your head. Count backwards in ones to 7.
10					
7					
$\underline{\quad} + 3 = 10$ <table><tr><td colspan="2">10</td></tr><tr><td></td><td>3</td></tr></table>	10			3	Example: There are some children in the taxi. 3 more get on. Now there are 10. How many children were on the taxi at the beginning? Calculation: How much must I add to 3 to get to 10. Or when I add 3 to this number, I get 10. Using Known Facts: I know that $7 + 3 = 10$. Therefore the answer is 7. Counting in Ones: • Put 3 in our head. Count forward to 10. • Put 10 in our head, and count backwards 3. • Try both. Which do you think is a more "efficient" strategy? Why?
10					
	3				

LESSON STARTERS

FRIDAYS: Timed Tango!

Table: Moving Around the Unknown in Subtraction

$10 - 3 = \underline{\quad}$ <table border="1" data-bbox="207 651 515 824"> <tr> <td colspan="2">10</td></tr> <tr> <td></td><td>3</td></tr> </table>	10			3	Example: There are 10 children in the taxi. 3 children get off. How many children are on the taxi now? Calculating with Known Facts: I know that $7 + 3 = 10$. Therefore, I know: $10 - 3 = 7$. Calculating Counting in Ones: Put the first number in our head. Count backwards in ones.
10					
	3				
$10 - \underline{\quad} = 7$ <table border="1" data-bbox="207 1066 515 1238"> <tr> <td colspan="2">10</td></tr> <tr> <td>7</td><td></td></tr> </table>	10		7		Example: There are 10 children in the taxi. Some children get off. Now there are 7 children in the taxi. How many children got off? Calculation: - Put 10 in your head. Count backwards to 7. - Put the number 7 in your head. Count forward to 10.
10					
7					
$\underline{\quad} - 3 = 7$ <table border="1" data-bbox="207 1469 515 1641"> <tr> <td colspan="2"></td></tr> <tr> <td>7</td><td>3</td></tr> </table>			7	3	Example: There are some children in the taxi. 3 more get on. Now there are 10. How many children were on the taxi at the beginning? Calculation: - When I subtract 3, I get 7. - I put 7 in my head, and count forward in ones three times.
7	3				



1-Minute Tango!

Name: _____

Grade: _____ Teacher Signature: _____

Date	Mark out of 10	Percentage



Timed Tango!

$4 + 1 = \underline{\quad}$

$8 - 3 = \underline{\quad}$

$\underline{\quad} = 6 + 4$

$\underline{\quad} = 9 - 4$

$2 + 4 = \underline{\quad}$

$10 - 10 = \underline{\quad}$

$\underline{\quad} = 3 + 5$

$\underline{\quad} = 10 - 7$

$3 + 6 = \underline{\quad}$

$7 - 4 = \underline{\quad}$

Score:

Timed Tango!

$4 + 1 = \underline{\quad}$

$8 - 3 = \underline{\quad}$

$\underline{\quad} = 6 + 4$

$\underline{\quad} = 9 - 4$

$2 + 4 = \underline{\quad}$

$10 - 10 = \underline{\quad}$

$\underline{\quad} = 3 + 5$

$\underline{\quad} = 10 - 7$

$3 + 6 = \underline{\quad}$

$7 - 4 = \underline{\quad}$

Score:

Timed Tango!

$4 + 1 = \underline{\quad}$

$8 - 3 = \underline{\quad}$

$\underline{\quad} = 6 + 4$

$\underline{\quad} = 9 - 4$

$2 + 4 = \underline{\quad}$

$10 - 10 = \underline{\quad}$

$\underline{\quad} = 3 + 5$

$\underline{\quad} = 10 - 7$

$3 + 6 = \underline{\quad}$

$7 - 4 = \underline{\quad}$

Score:

Timed Tango!

$4 + 1 = \underline{\quad}$

$8 - 3 = \underline{\quad}$

$\underline{\quad} = 6 + 4$

$\underline{\quad} = 9 - 4$

$2 + 4 = \underline{\quad}$

$10 - 10 = \underline{\quad}$

$\underline{\quad} = 3 + 5$

$\underline{\quad} = 10 - 7$

$3 + 6 = \underline{\quad}$

$7 - 4 = \underline{\quad}$

Score:

Note to Teacher:

This Tango focuses on adding and subtracting 0 to 10. Problems are presented as: $5 + 1 = \underline{\quad}$ AND $\underline{\quad} = 5 + 1$. Remind learners that the equal sign (=) means "is the same as." We can present problems in both of these ways!



Timed Tango!

$3 + 7 = \underline{\quad}$

$10 - 7 = \underline{\quad}$

$5 + \underline{\quad} = 10$

$10 - 3 = \underline{\quad}$

$6 + 4 = \underline{\quad}$

$10 - 4 = \underline{\quad}$

$4 + \underline{\quad} = 10$

$10 - 10 = \underline{\quad}$

$2 + 8 = \underline{\quad}$

$10 - 8 = \underline{\quad}$

Score:

Timed Tango!

$3 + 7 = \underline{\quad}$

$10 - 7 = \underline{\quad}$

$5 + \underline{\quad} = 10$

$10 - 3 = \underline{\quad}$

$6 + 4 = \underline{\quad}$

$10 - 4 = \underline{\quad}$

$4 + \underline{\quad} = 10$

$10 - 10 = \underline{\quad}$

$2 + 8 = \underline{\quad}$

$10 - 8 = \underline{\quad}$

Score:

Timed Tango!

$3 + 7 = \underline{\quad}$

$10 - 7 = \underline{\quad}$

$5 + \underline{\quad} = 10$

$10 - 3 = \underline{\quad}$

$6 + 4 = \underline{\quad}$

$10 - 4 = \underline{\quad}$

$4 + \underline{\quad} = 10$

$10 - 10 = \underline{\quad}$

$2 + 8 = \underline{\quad}$

$10 - 8 = \underline{\quad}$

Score:

Timed Tango!

$3 + 7 = \underline{\quad}$

$10 - 7 = \underline{\quad}$

$5 + \underline{\quad} = 10$

$10 - 3 = \underline{\quad}$

$6 + 4 = \underline{\quad}$

$10 - 4 = \underline{\quad}$

$4 + \underline{\quad} = 10$

$10 - 10 = \underline{\quad}$

$2 + 8 = \underline{\quad}$

$10 - 8 = \underline{\quad}$

Score:

Note to Teacher:

This Tango focuses on bonds of 10. If children are not yet fast with bonds of 10, do it again the next week until bonds of 10 are moving fast 😊



Timed Tango!

$10 - 7 = \underline{\quad}$

$20 - 4 = \underline{\quad}$

$\underline{\quad} = 10 - 3$

$\underline{\quad} = 20 - 15$

$10 - 2 = \underline{\quad}$

$20 - 5 = \underline{\quad}$

$\underline{\quad} = 10 - 8$

$\underline{\quad} = 20 - 10$

$10 - 5 = \underline{\quad}$

$20 - 2 = \underline{\quad}$

Score:

Timed Tango!

$10 - 7 = \underline{\quad}$

$20 - 4 = \underline{\quad}$

$\underline{\quad} = 10 - 3$

$\underline{\quad} = 20 - 15$

$10 - 2 = \underline{\quad}$

$20 - 5 = \underline{\quad}$

$\underline{\quad} = 10 - 8$

$\underline{\quad} = 20 - 10$

$10 - 5 = \underline{\quad}$

$20 - 2 = \underline{\quad}$

Score:

Timed Tango!

$10 - 7 = \underline{\quad}$

$20 - 4 = \underline{\quad}$

$\underline{\quad} = 10 - 3$

$\underline{\quad} = 20 - 15$

$10 - 2 = \underline{\quad}$

$20 - 5 = \underline{\quad}$

$\underline{\quad} = 10 - 8$

$\underline{\quad} = 20 - 10$

$10 - 5 = \underline{\quad}$

$20 - 2 = \underline{\quad}$

Score:

Timed Tango!

$10 - 7 = \underline{\quad}$

$20 - 4 = \underline{\quad}$

$\underline{\quad} = 10 - 3$

$\underline{\quad} = 20 - 15$

$10 - 2 = \underline{\quad}$

$20 - 5 = \underline{\quad}$

$\underline{\quad} = 10 - 8$

$\underline{\quad} = 20 - 10$

$10 - 5 = \underline{\quad}$

$20 - 2 = \underline{\quad}$

Score:

Note to Teacher:

This Tango focuses on subtracting from 10 and 20. Children who struggle should play 1-2-3 Vesa. Ask a coach for help.



Timed Tango!

$10 - 4 = \underline{\quad}$

$20 - 15 = \underline{\quad}$

$\underline{\quad} = 10 - 10$

$\underline{\quad} = 20 - 8$

$10 - 8 = \underline{\quad}$

$20 - 12 = \underline{\quad}$

$\underline{\quad} = 10 - 5$

$\underline{\quad} = 20 - 9$

$10 - 3 = \underline{\quad}$

$20 - 17 = \underline{\quad}$

Score:

Timed Tango!

$10 - 4 = \underline{\quad}$

$20 - 15 = \underline{\quad}$

$\underline{\quad} = 10 - 10$

$\underline{\quad} = 20 - 8$

$10 - 8 = \underline{\quad}$

$20 - 12 = \underline{\quad}$

$\underline{\quad} = 10 - 5$

$\underline{\quad} = 20 - 9$

$10 - 3 = \underline{\quad}$

$20 - 17 = \underline{\quad}$

Score:

Timed Tango!

$10 - 4 = \underline{\quad}$

$20 - 15 = \underline{\quad}$

$\underline{\quad} = 10 - 10$

$\underline{\quad} = 20 - 8$

$10 - 8 = \underline{\quad}$

$20 - 12 = \underline{\quad}$

$\underline{\quad} = 10 - 5$

$\underline{\quad} = 20 - 9$

$10 - 3 = \underline{\quad}$

$20 - 17 = \underline{\quad}$

Score:

Timed Tango!

$10 - 4 = \underline{\quad}$

$20 - 15 = \underline{\quad}$

$\underline{\quad} = 10 - 10$

$\underline{\quad} = 20 - 8$

$10 - 8 = \underline{\quad}$

$20 - 12 = \underline{\quad}$

$\underline{\quad} = 10 - 5$

$\underline{\quad} = 20 - 9$

$10 - 3 = \underline{\quad}$

$20 - 17 = \underline{\quad}$

Score:

Note to Teacher:

This Tango focuses on subtracting from 10 and 20. Children who struggle should play 1-2-3 Vesa. Ask a coach for help.



Timed Tango!

$4 + 4 = \underline{\quad}$

$6 - 3 = \underline{\quad}$

$2 + \underline{\quad} = 4$

$10 - \underline{\quad} = 5$

$3 + 3 = \underline{\quad}$

$8 - 4 = \underline{\quad}$

$3 + \underline{\quad} = 6$

$8 - \underline{\quad} = 4$

$5 + 5 = \underline{\quad}$

$10 - 5 = \underline{\quad}$

Score:

Timed Tango!

$4 + 4 = \underline{\quad}$

$6 - 3 = \underline{\quad}$

$2 + \underline{\quad} = 4$

$10 - \underline{\quad} = 5$

$3 + 3 = \underline{\quad}$

$8 - 4 = \underline{\quad}$

$3 + \underline{\quad} = 6$

$8 - \underline{\quad} = 4$

$5 + 5 = \underline{\quad}$

$10 - 5 = \underline{\quad}$

Score:

Timed Tango!

$4 + 4 = \underline{\quad}$

$6 - 3 = \underline{\quad}$

$2 + \underline{\quad} = 4$

$10 - \underline{\quad} = 5$

$3 + 3 = \underline{\quad}$

$8 - 4 = \underline{\quad}$

$3 + \underline{\quad} = 6$

$8 - \underline{\quad} = 4$

$5 + 5 = \underline{\quad}$

$10 - 5 = \underline{\quad}$

Score:

Timed Tango!

$4 + 4 = \underline{\quad}$

$6 - 3 = \underline{\quad}$

$2 + \underline{\quad} = 4$

$10 - \underline{\quad} = 5$

$3 + 3 = \underline{\quad}$

$8 - 4 = \underline{\quad}$

$3 + \underline{\quad} = 6$

$8 - \underline{\quad} = 4$

$5 + 5 = \underline{\quad}$

$10 - 5 = \underline{\quad}$

Score:

Note to Teacher:

This Tango focuses on doubles between 0 and 10.
Very important! Keep practicing!



Timed Tango!

$9 + 2 = \underline{\quad}$

$11 - 5 = \underline{\quad}$

$9 + \underline{\quad} = 12$

$11 - \underline{\quad} = 7$

$10 + 2 = \underline{\quad}$

$12 - 4 = \underline{\quad}$

$7 + \underline{\quad} = 11$

$12 - \underline{\quad} = 8$

$8 + 3 = \underline{\quad}$

$12 - 2 = \underline{\quad}$

Score:

Timed Tango!

$9 + 2 = \underline{\quad}$

$11 - 5 = \underline{\quad}$

$9 + \underline{\quad} = 12$

$11 - \underline{\quad} = 7$

$10 + 2 = \underline{\quad}$

$12 - 4 = \underline{\quad}$

$7 + \underline{\quad} = 11$

$12 - \underline{\quad} = 8$

$8 + 3 = \underline{\quad}$

$12 - 2 = \underline{\quad}$

Score:

Timed Tango!

$9 + 2 = \underline{\quad}$

$11 - 5 = \underline{\quad}$

$9 + \underline{\quad} = 12$

$11 - \underline{\quad} = 7$

$10 + 2 = \underline{\quad}$

$12 - 4 = \underline{\quad}$

$7 + \underline{\quad} = 11$

$12 - \underline{\quad} = 8$

$8 + 3 = \underline{\quad}$

$12 - 2 = \underline{\quad}$

Score:

Timed Tango!

$9 + 2 = \underline{\quad}$

$11 - 5 = \underline{\quad}$

$9 + \underline{\quad} = 12$

$11 - \underline{\quad} = 7$

$10 + 2 = \underline{\quad}$

$12 - 4 = \underline{\quad}$

$7 + \underline{\quad} = 11$

$12 - \underline{\quad} = 8$

$8 + 3 = \underline{\quad}$

$12 - 2 = \underline{\quad}$

Score:

Note to Teacher:

This Tango focuses on problems that “bridge” (get over) the 10, staying within numbers 11 and 12.



Timed Tango!

$18 + 3 = \underline{\quad}$

$21 - 3 = \underline{\quad}$

$19 + \underline{\quad} = 22$

$22 - \underline{\quad} = 18$

$17 + 5 = \underline{\quad}$

$22 - 4 = \underline{\quad}$

$18 + \underline{\quad} = 22$

$21 - \underline{\quad} = 19$

$19 + 2 = \underline{\quad}$

$21 - 2 = \underline{\quad}$

Score:

Timed Tango!

$18 + 3 = \underline{\quad}$

$21 - 3 = \underline{\quad}$

$19 + \underline{\quad} = 22$

$22 - \underline{\quad} = 18$

$17 + 5 = \underline{\quad}$

$22 - 4 = \underline{\quad}$

$18 + \underline{\quad} = 22$

$21 - \underline{\quad} = 19$

$19 + 2 = \underline{\quad}$

$21 - 2 = \underline{\quad}$

Score:

Timed Tango!

$18 + 3 = \underline{\quad}$

$21 - 3 = \underline{\quad}$

$19 + \underline{\quad} = 22$

$22 - \underline{\quad} = 18$

$17 + 5 = \underline{\quad}$

$22 - 4 = \underline{\quad}$

$18 + \underline{\quad} = 22$

$21 - \underline{\quad} = 19$

$19 + 2 = \underline{\quad}$

$21 - 2 = \underline{\quad}$

Score:

Timed Tango!

$18 + 3 = \underline{\quad}$

$21 - 3 = \underline{\quad}$

$19 + \underline{\quad} = 22$

$22 - \underline{\quad} = 18$

$17 + 5 = \underline{\quad}$

$22 - 4 = \underline{\quad}$

$18 + \underline{\quad} = 22$

$21 - \underline{\quad} = 19$

$19 + 2 = \underline{\quad}$

$21 - 2 = \underline{\quad}$

Score:

Note to Teacher:

This Tango focuses on problems that cross over 20, staying within numbers up to 22.



Timed Tango!

$57 + 1 = \underline{\quad}$

$36 - 2 = \underline{\quad}$

$61 + \underline{\quad} = 62$

$48 - \underline{\quad} = 47$

$25 + 2 = \underline{\quad}$

$29 - 1 = \underline{\quad}$

$37 + \underline{\quad} = 39$

$51 - \underline{\quad} = 50$

$49 + 1 = \underline{\quad}$

$54 - 2 = \underline{\quad}$

Score:

Timed Tango!

$57 + 1 = \underline{\quad}$

$36 - 2 = \underline{\quad}$

$61 + \underline{\quad} = 62$

$48 - \underline{\quad} = 47$

$25 + 2 = \underline{\quad}$

$29 - 1 = \underline{\quad}$

$37 + \underline{\quad} = 39$

$51 - \underline{\quad} = 50$

$49 + 1 = \underline{\quad}$

$54 - 2 = \underline{\quad}$

Score:

Timed Tango!

$57 + 1 = \underline{\quad}$

$36 - 2 = \underline{\quad}$

$61 + \underline{\quad} = 62$

$48 - \underline{\quad} = 47$

$25 + 2 = \underline{\quad}$

$29 - 1 = \underline{\quad}$

$37 + \underline{\quad} = 39$

$51 - \underline{\quad} = 50$

$49 + 1 = \underline{\quad}$

$54 - 2 = \underline{\quad}$

Score:

Timed Tango!

$57 + 1 = \underline{\quad}$

$36 - 2 = \underline{\quad}$

$61 + \underline{\quad} = 62$

$48 - \underline{\quad} = 47$

$25 + 2 = \underline{\quad}$

$29 - 1 = \underline{\quad}$

$37 + \underline{\quad} = 39$

$51 - \underline{\quad} = 50$

$49 + 1 = \underline{\quad}$

$54 - 2 = \underline{\quad}$

Score:

Note to Teacher:

This Tango focuses on adding and subtracting ones and twos from numbers between 10 and 100.



Timed Tango!

$74 + 2 = \underline{\quad}$

$18 - 2 = \underline{\quad}$

$71 + \underline{\quad} = 73$

$94 - \underline{\quad} = 92$

$88 + 1 = \underline{\quad}$

$65 - 1 = \underline{\quad}$

$86 + \underline{\quad} = 87$

$69 - \underline{\quad} = 67$

$95 + 2 = \underline{\quad}$

$79 - 2 = \underline{\quad}$

Score:

Timed Tango!

$74 + 2 = \underline{\quad}$

$18 - 2 = \underline{\quad}$

$71 + \underline{\quad} = 73$

$94 - \underline{\quad} = 92$

$88 + 1 = \underline{\quad}$

$65 - 1 = \underline{\quad}$

$86 + \underline{\quad} = 87$

$69 - \underline{\quad} = 67$

$95 + 2 = \underline{\quad}$

$79 - 2 = \underline{\quad}$

Score:

Timed Tango!

$74 + 2 = \underline{\quad}$

$18 - 2 = \underline{\quad}$

$71 + \underline{\quad} = 73$

$94 - \underline{\quad} = 92$

$88 + 1 = \underline{\quad}$

$65 - 1 = \underline{\quad}$

$86 + \underline{\quad} = 87$

$69 - \underline{\quad} = 67$

$95 + 2 = \underline{\quad}$

$79 - 2 = \underline{\quad}$

Score:

Timed Tango!

$74 + 2 = \underline{\quad}$

$18 - 2 = \underline{\quad}$

$71 + \underline{\quad} = 73$

$94 - \underline{\quad} = 92$

$88 + 1 = \underline{\quad}$

$65 - 1 = \underline{\quad}$

$86 + \underline{\quad} = 87$

$69 - \underline{\quad} = 67$

$95 + 2 = \underline{\quad}$

$79 - 2 = \underline{\quad}$

Score:

Note to Teacher:

This Tango focuses on adding and subtracting ones and twos from numbers between 10 and 100.



Timed Tango!

$15 + 3 = \underline{\quad}$

$16 - 7 = \underline{\quad}$

$12 + \underline{\quad} = 20$

$17 - \underline{\quad} = 3$

$12 + 6 = \underline{\quad}$

$18 - 4 = \underline{\quad}$

$8 + \underline{\quad} = 12$

$19 - \underline{\quad} = 13$

$9 + 7 = \underline{\quad}$

$20 - 15 = \underline{\quad}$

Score:

Timed Tango!

$15 + 3 = \underline{\quad}$

$16 - 7 = \underline{\quad}$

$12 + \underline{\quad} = 20$

$17 - \underline{\quad} = 3$

$12 + 6 = \underline{\quad}$

$18 - 4 = \underline{\quad}$

$8 + \underline{\quad} = 12$

$19 - \underline{\quad} = 13$

$9 + 7 = \underline{\quad}$

$20 - 15 = \underline{\quad}$

Score:

Timed Tango!

$15 + 3 = \underline{\quad}$

$16 - 7 = \underline{\quad}$

$12 + \underline{\quad} = 20$

$17 - \underline{\quad} = 3$

$12 + 6 = \underline{\quad}$

$18 - 4 = \underline{\quad}$

$8 + \underline{\quad} = 12$

$19 - \underline{\quad} = 13$

$9 + 7 = \underline{\quad}$

$20 - 15 = \underline{\quad}$

Score:

Timed Tango!

$15 + 3 = \underline{\quad}$

$16 - 7 = \underline{\quad}$

$12 + \underline{\quad} = 20$

$17 - \underline{\quad} = 3$

$12 + 6 = \underline{\quad}$

$18 - 4 = \underline{\quad}$

$8 + \underline{\quad} = 12$

$19 - \underline{\quad} = 13$

$9 + 7 = \underline{\quad}$

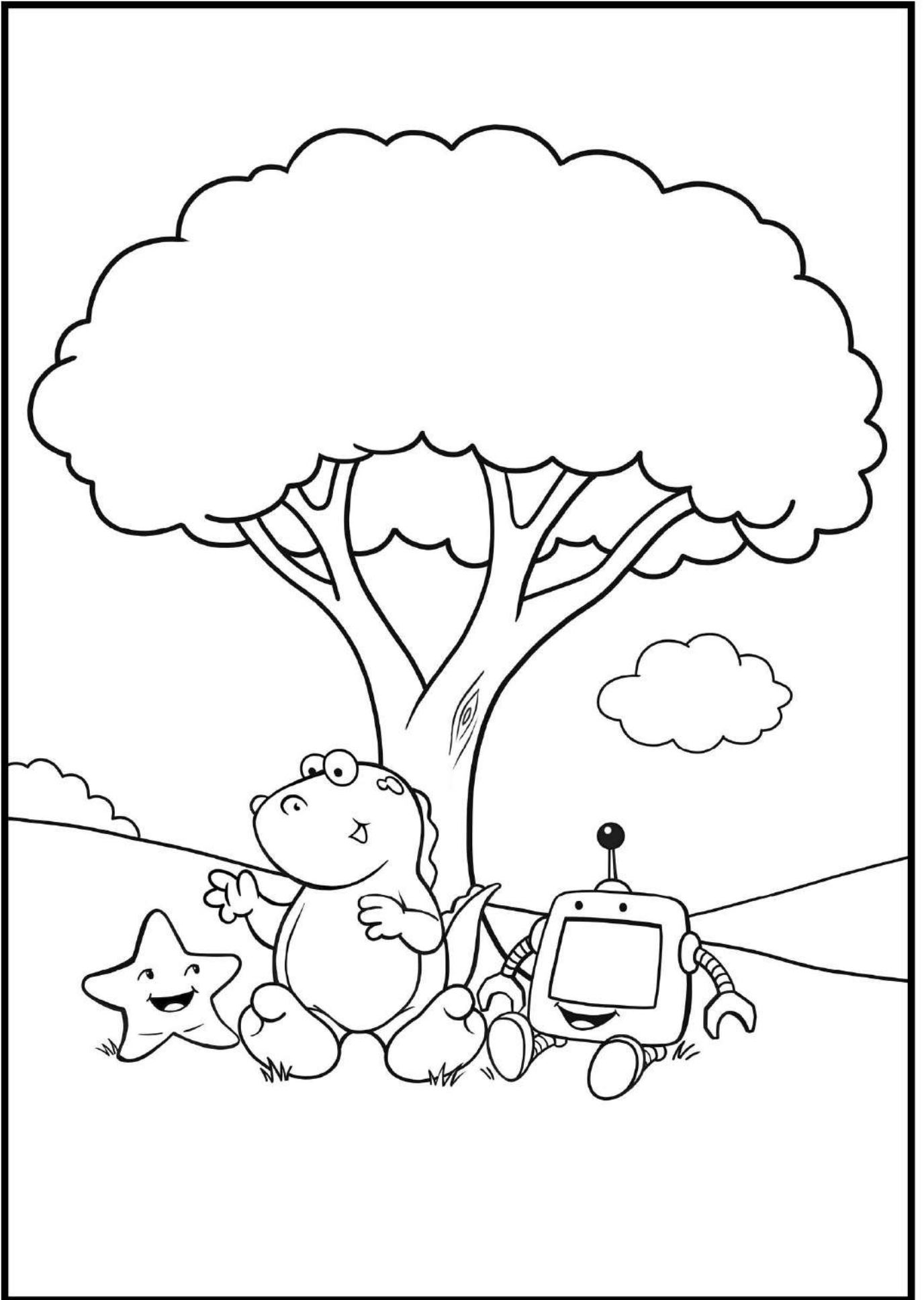
$20 - 15 = \underline{\quad}$

Score:

Note to Teacher:

This Tango focuses on number facts up to 20.

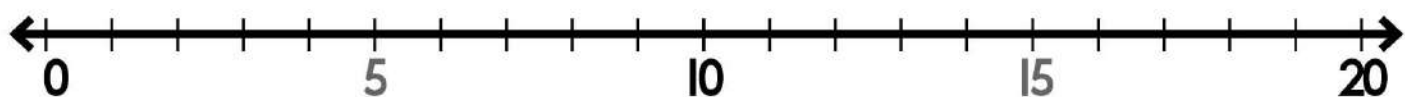
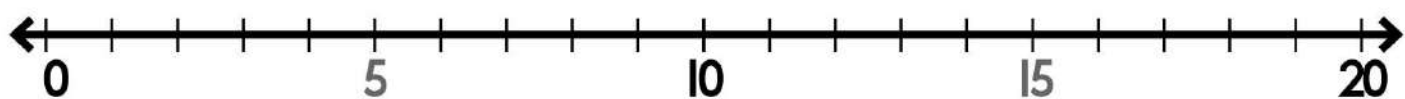
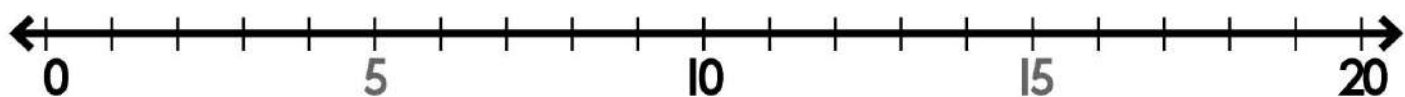
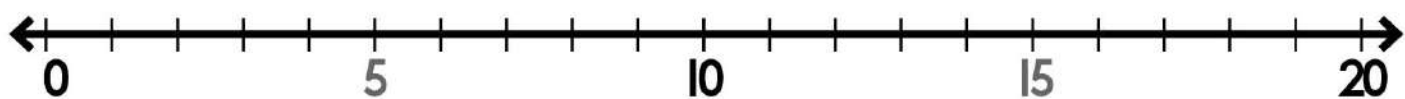
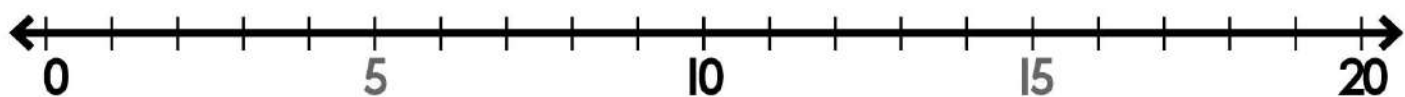
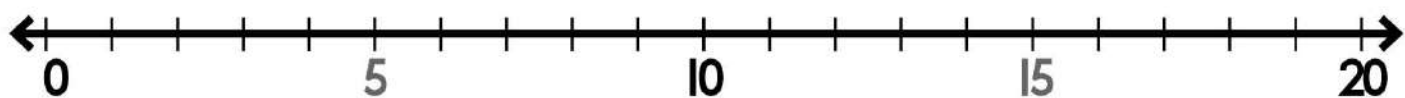
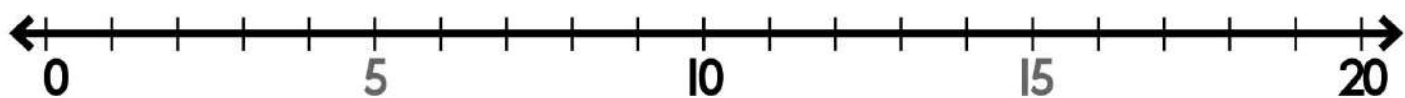
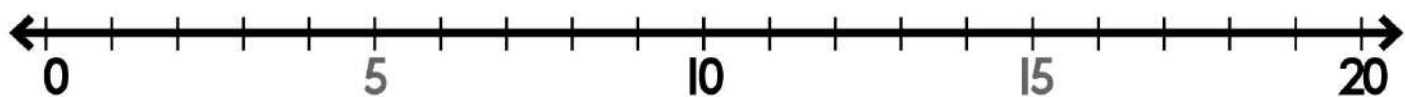




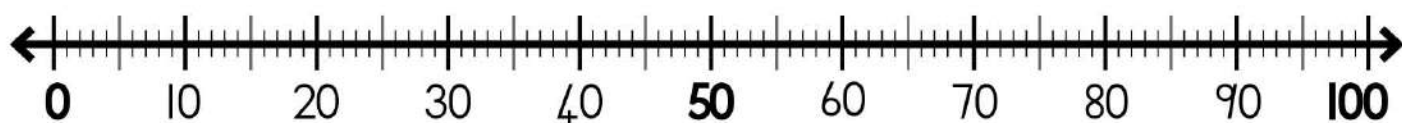
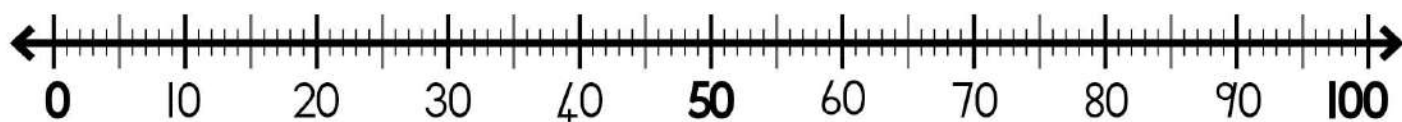
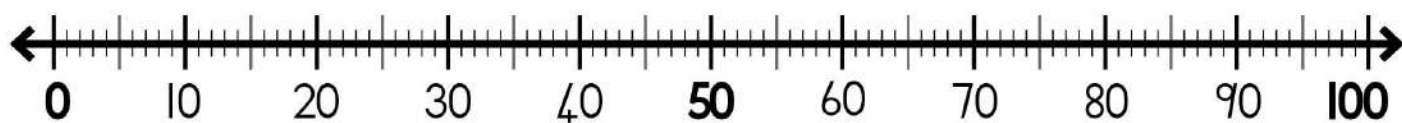
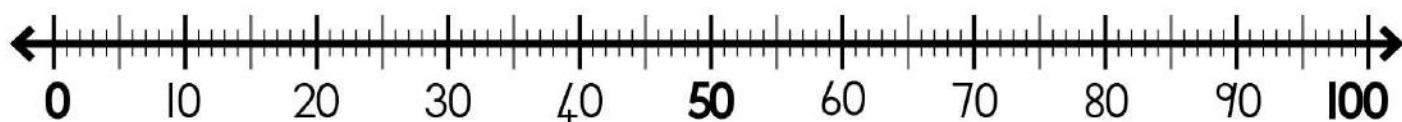
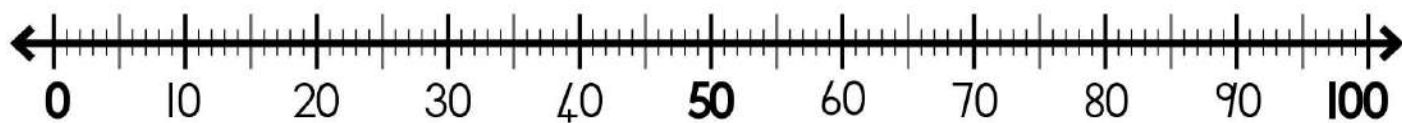
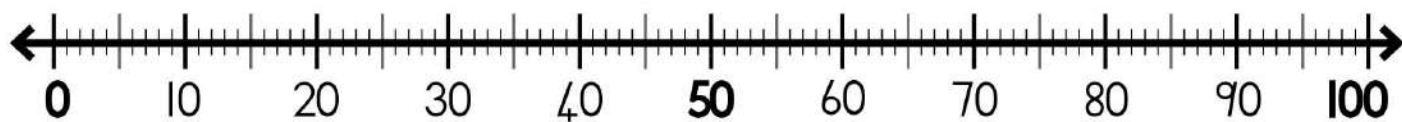
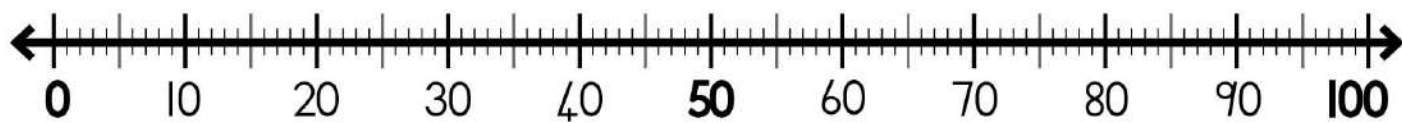
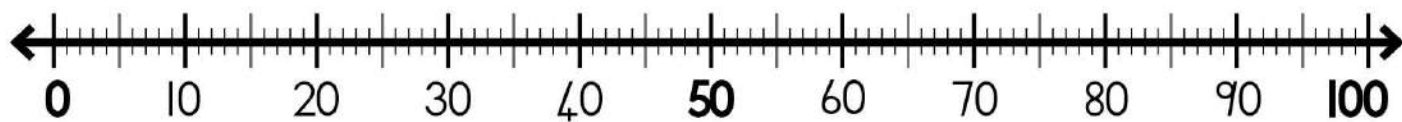
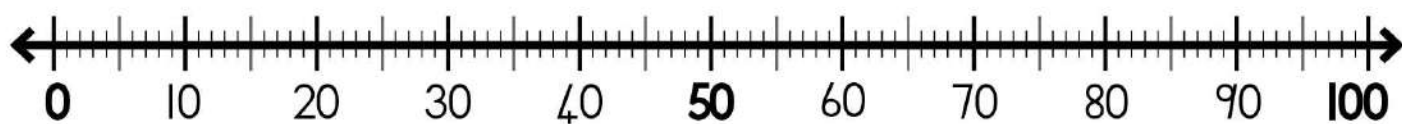
NUMBER LINES & CHARTS**Number Lines and Chart**

- Photocopy and cut out number lines.
See Page 95 - 97.
- Tape onto desks using clear packing tape.
- Photocopy and cut out number charts.
See Page 99
- Tape onto desks using clear packing tape.











91	92	93	91	95	96	97	98	99	100
81	82	83	84	85	86	87	88	89	90
71	72	73	74	75	76	77	78	79	80
61	62	63	64	65	66	67	68	69	70
51	52	53	54	55	56	57	58	59	60
41	42	43	44	45	46	47	48	49	50
31	32	33	34	35	36	37	38	39	40
21	22	23	24	25	26	27	28	29	30
11	12	13	14	15	16	17	18	19	20
1	2	3	4	5	6	7	8	9	10

91	92	93	91	95	96	97	98	99	100
81	82	83	84	85	86	87	88	89	90
71	72	73	74	75	76	77	78	79	80
61	62	63	64	65	66	67	68	69	70
51	52	53	54	55	56	57	58	59	60
41	42	43	44	45	46	47	48	49	50
31	32	33	34	35	36	37	38	39	40
21	22	23	24	25	26	27	28	29	30
11	12	13	14	15	16	17	18	19	20
1	2	3	4	5	6	7	8	9	10

91	92	93	91	95	96	97	98	99	100
81	82	83	84	85	86	87	88	89	90
71	72	73	74	75	76	77	78	79	80
61	62	63	64	65	66	67	68	69	70
51	52	53	54	55	56	57	58	59	60
41	42	43	44	45	46	47	48	49	50
31	32	33	34	35	36	37	38	39	40
21	22	23	24	25	26	27	28	29	30
11	12	13	14	15	16	17	18	19	20
1	2	3	4	5	6	7	8	9	10

91	92	93	91	95	96	97	98	99	100
81	82	83	84	85	86	87	88	89	90
71	72	73	74	75	76	77	78	79	80
61	62	63	64	65	66	67	68	69	70
51	52	53	54	55	56	57	58	59	60
41	42	43	44	45	46	47	48	49	50
31	32	33	34	35	36	37	38	39	40
21	22	23	24	25	26	27	28	29	30
11	12	13	14	15	16	17	18	19	20
1	2	3	4	5	6	7	8	9	10

91	92	93	91	95	96	97	98	99	100
81	82	83	84	85	86	87	88	89	90
71	72	73	74	75	76	77	78	79	80
61	62	63	64	65	66	67	68	69	70
51	52	53	54	55	56	57	58	59	60
41	42	43	44	45	46	47	48	49	50
31	32	33	34	35	36	37	38	39	40
21	22	23	24	25	26	27	28	29	30
11	12	13	14	15	16	17	18	19	20
1	2	3	4	5	6	7	8	9	10

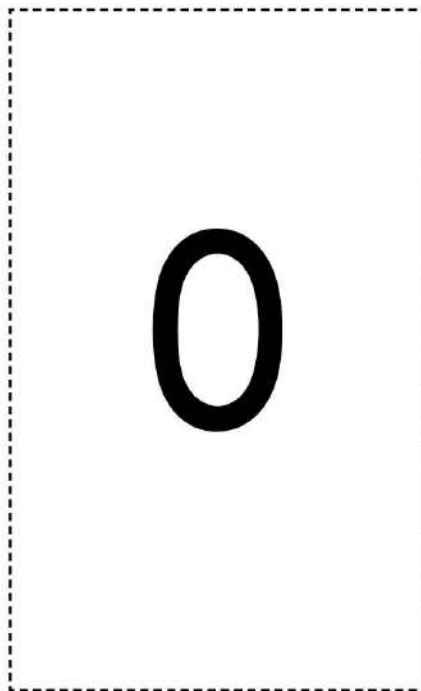
91	92	93	91	95	96	97	98	99	100
81	82	83	84	85	86	87	88	89	90
71	72	73	74	75	76	77	78	79	80
61	62	63	64	65	66	67	68	69	70
51	52	53	54	55	56	57	58	59	60
41	42	43	44	45	46	47	48	49	50
31	32	33	34	35	36	37	38	39	40
21	22	23	24	25	26	27	28	29	30
11	12	13	14	15	16	17	18	19	20
1	2	3	4	5	6	7	8	9	10





NUMBER CARDS

Carefully cut out the number cards from 0 - 20.
Store them in a safe place!



2



1

2

3

4

5

6

7

8

9

10

2



11

12

13

14

15

16

17

18

19

20

2



NUMBER CHART: 1 – 100

91	92	93	94	95	96	97	98	99	100
81	82	83	84	85	86	87	88	89	90
71	72	73	74	75	76	77	78	79	80
61	62	63	64	65	66	67	68	69	70
51	52	53	54	55	56	57	58	59	60
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11	12	13	14	15	16	17	18	19	20
1	2	3	4	5	6	7	8	9	10

Lo ngumsebenzi esizidla ngawo weMagic Classroom Collective (MCC)

The Magic Classroom Collective is a partnership between the Nelson Mandela Institute at the University of Fort Hare and the Eastern Cape Department of Education. The materials have been designed by a long term partnership between the NMI and rural primary schools in the Eastern Cape.

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