SURF Lesson Plan – Week 1

Focus: Introducing the program and establishing expectations/ norms

Thursday

- Who am I and who are you?
- What is SURF? What will we be learning about?

  Discuss how it is similar to CAFE; discuss how there are 4 goals.

  Introduce one teaching point to slot under each goal.

  - Mental math strategies; e.g., of count on
  - Understanding our math; e.g., of commutative law
  - Reading; e.g., what is the plus sign
  - Fast Facts; e.g., rainbow facts – teach "Ping Pong"

  Discuss how we will be playing lots of games to assist us with our learning. Write up ping pong as the first math game
- My expectations (Catch waves when you do something awesome in class; Smiley faces and Frowny faces for listening can earn the class waves; Catch 3 waves and win a raffle ticket)
- How are surfing and doing math the same? - discussion
- Drawing a picture in your book of you surfing some difficult number sentences
- Introduce and play 'gotya' if there is time

Friday

- Share our pictures - circle
- What makes a good maths teacher? Think-Pair-Share; discuss how we are all teachers. Discuss the importance of ‘thinking out loud’ and ‘explaining our thinking’
- What makes a good maths learner? Think-Pair-Share; discuss using the four keys
- Introduce and play ‘ten snap’ to reinforce rainbow facts as fast facts
- Time permitting:
    - Introduce and play ‘islands’ in a maths context
    - Follow-up with a game of buzz, gotya and/or ping pong

SURF
Mental Maths and Problem Solving Program
LESSON PLAN FORMAT

Name: James Russo

School: Belgrave South Primary | **Date: 6th March (Lesson 3)**
Topic: Equals Sign | **Year Level: Grade 1/2**
Learning Area: Reading | **Duration: 50 minutes**

Learning Purpose: For students to understand how to read the symbol '=', and to view this symbol as meaning 'the same as', rather than simply to 'find the answer'.

Australian Curriculum references:
Grade 1: Represent and solve simple addition and subtraction problems using a range of strategies including counting on, partitioning and rearranging parts.

For grade 2 students, this focus on part-part-whole and exploring the meaning of the equal signs can constitute revision.

	Group set up	**Materials**
Review: 5 minute review. Go through the SURF board briefly. Get students to discuss what each of the letters stand for? Briefly review what a good maths teacher looks like, and what a good maths learner looks like. **Engagement (whole group):** What does this sign ('=') mean? How do we read this sign? Brainstorm as a group to identify students' current understanding of equals sign (5 mins) **Procedure:** • Model (whole group) Emphasise that equal signs mean the same as. Get 4 student volunteers to stand up. Group students in different ways, and write the corresponding number sentences on the board (1+3=2+2=3+1=4+0=4). (5 mins) • Activity (small groups): Organise students into groups of 5 or 6. Their job is to physically represent all of the addition number sentences they can. One student can be responsible for recording the corresponding number sentences. (10 mins) • Share (whole group): Discuss results together. Write up number sentences. (5 mins) • Activity with teacher intro (pairs): Grab a handful of counters or teddy bears. You and your partner need to create as many addition number sentences as you can using this total of teddy	Need to decide how to structure groups of 5/6 and how to construct pairs. I might split each class into 4 groups based on their performance on Online Numeracy Interview.	Counters/ Teddies Workbooks Whiteboards (4)

bears. Record the number sentences in your book as you go (15 mins) • Share (whole group) Discuss results of student investigations (5 mins) **Pulling it together:** Whole group: Review what the equal sign means (i.e., the same as). Throw some number facts to the class, and reward them for responding with an equivalent number fact. .		

Observations of students' learning: Student ability at the end of the session to respond with equivalent number facts. Student ability to generate a range of number facts during paired work.
Teacher's Resources: Whiteboard or large paper.
Catering for inclusion: This lesson caters for individuals with different learning styles, and provides opportunities to deepen understanding, through requiring students to engage in the concept in multiple ways, including: Acting it out (kinaesthetic), modelling it by making it (visual/ kinaesthetic), writing it in a logical form (visual/ auditory) and responding with verbally equivalent number facts (auditory). Extension*:* Larger collection of teddies during the shared activity. Exploration of multiplication equivalents, as well as addition equivalents (i.e., get students to group teddies 4 groups of 6 = 6 groups of 4 = 20 + 4 etc). Consolidation: Smaller collection of teddies during shared activity, perhaps the same number of teddies as with the physical demonstration tasks (i.e., to consolidate understanding).

Your reflection: Identify the pedagogical stance you took during the lesson and reflect on:

- what went well and why
- what was difficult and why
- how engaged the students were and
- what you did to encourage this
- what else you could have done to improve the students' learning
- how responsive you were able to be to the students
- what you learnt

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LESSON PLAN FORMAT

Name: James Russo

School: Belgrave South Primary | **Date: 7th March (Lesson 4)**
Topic: Rainbow Facts (and Equals Sign) | **Year Level: Grade 1/2**
Learning Area: Fast Facts (and Reading) | **Duration: 50 minutes**

Learning Purpose: For students to understand why rainbow facts work through connecting the concept of the equals sign as meaning 'the same as' to the tens facts.

Australian Curriculum references:

Year 1: Represent and solve simple addition and subtraction problems using a range of strategies including counting on, partitioning and rearranging parts.

Year 2: Solve simple addition and subtraction problems using a range of efficient mental and written strategies, such as ten facts.

	Group set up	**Materials**
Review: 5 minute review. What did we learn about this symbol ('=') yesterday? **Engagement (whole group):** Select 10 student volunteers; on one whiteboard, write a plus sign, on another, an equals sign, on another, write the number 10. Organise student volunteers into different combinations. Record the relevant ten facts as we go. Discuss with students how the whole never changes – there is always 10 students; but the size of the two parts is changing (15 mins) **Procedure:** • Differentiated activity with teacher intro (pairs): • 1) Grab ten counters or teddies and two tens frames. The students' job is to model and record in their workbooks all of the addition rainbow facts (20 mins). • 2) Grab nine MAB 10's and ten MAB 1's. You and your partner need to create as many addition number sentences as you can using this total of MAB. Record the number sentences in your book as you go (20 mins). Allow students to discover that they are in fact exploring compliments to 100 through physical modelling. • Time permitting/ early finishers: Play ten snap	Need to decide how to structure groups of 5/6 and how to construct pairs. I might split each class into 4 groups based on their performance on Online Numeracy Interview.	Counters/ Teddies Workbooks Whiteboard

Pulling it together: Whole group: Discuss the results of student investigations. Go over the idea that, for our rainbow facts, the parts change (the operands), but the whole (the sum) always stays the same. Finish by asking students. 'My whole is 10, what might be my parts?' and 'My whole is 100, what might be my parts?' .		

Observations of students' learning: Student ability at the end of the session to respond with equivalent number facts. Student ability to generate a range of number facts during paired work.

Teacher's Resources: Whiteboard or large paper.

Catering for inclusion: This lesson caters for individuals with different learning styles, and provides opportunities to deepen understanding, through requiring students to engage in the concept in multiple ways, including: Acting it out (kinaesthetic), modelling it by making it (visual/ kinaesthetic), writing it in a logical form (visual/ auditory) and responding with verbally equivalent number facts (auditory).

Extension*:* Explore complements to 100, rather than rainbow facts.

Consolidation: Additional investigation. Draw a number of plus and equal signs on cards. You will also need a large bunch of tens frames and counters. The students' job is to make a gigantic ten facts circle, modelling all of the rainbow facts using the ten frames (8+2 = 7+3= 6+4 etc).

Your reflection: Identify the pedagogical stance you took during the lesson and reflect on:

- what went well and why
- what was difficult and why
- how engaged the students were and
- what you did to encourage this
- what else you could have done to improve the students' learning
- how responsive you were able to be to the students
- what you learnt

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LESSON PLAN FORMAT

Name: James Russo

School: Belgrave South Primary | **Date: 13th & 14th March (Lessons 5+6)**
Topic: 2-digit numbers | **Year Level: Grade 1/2**
Learning Area: Reading | **Duration: 50 minutes x 2**

Learning Purpose: For students to understand how to read numbers 11 to 99, specifically how:

- the English language makes learning the names of the numbers much more difficult than Asian languages (it should be three-ten six or three-ty six instead of thirty-six)
- how the teen numbers in particular are a bit crazy because they are back to front (it should be one-ty-three instead of thirteen);
- ; how 'ty' means ten, and how this can help us to make sense of our number system.

Australian Curriculum references:

Grade 1: Recognise, model, read, write and order numbers to at least 100, in particular, modelling numbers with a range of material and images

Grade 2: Recognise, model, represent and order numbers to at least 1000, in particular, recognising there are different ways of representing numbers and identifying patterns going beyond 100

For grade 2 students, the whole-of-group focus on reading 2-digit numbers, and understanding how the English language makes learning the names of our numbers challenging, can constitute revision and a deepening of their understanding.

	Group set up	Materials
<u>Lesson 5</u> **Review:** 5 minute review. Go through the SURF board briefly. Get students to discuss what each of the letters stand for? Briefly review what the equal sign means. **Engagement (whole group):** Get three volunteers, give each of them a card with a number on them. Get these volunteers to go and quickly make their number using popsticks or MAB (with groups of 10). Go through each volunteer in turn and get them to state what lives inside their number (i.e., to state how they partitioned their number into tens and ones)? Then ask, how do we say this number? Numbers to choose: 43, 62, 85 (10 mins) Get students to think-pair-share – What do they think ty means (5 mins) **Procedure:** • Activity (small groups). Working in groups of six, students are given one number each and are	Need to decide how to structure groups of 5/6 and how to construct pairs. I might split each class into 4 groups based on their performance on Online Numeracy Interview.	Number cards (1-99) Sheet with random hundreds numbers Sheet with random thousands numbers 100's boards Counters

instructed to make that number. Ensure that each group has at least two teen numbers, two numbers in the 20's, 30's or 50's and two other 2-digit numbers. Students then get into a circle in their groups, and say what their number is called and what 'lives inside their number'. 15 mins Note: It is assumed that students have some knowledge of this, given they spent two weeks in their classes on place value earlier in the term. **Pulling it together:** Whole group: Discuss how in some languages (e.g., Chinese, Korean) what lives inside the number and what the number is called are always the same thing. This is sensible. But is this the case in English? Do all our numbers follow the same pattern? Get students to think about which numbers don't follow the number-ty-number pattern. Does the number they have on their card follow the pattern? Mark out the classroom into two areas. Sensible numbers and crazy numbers. Get students to decide which half of the class they belong to. Once students have made up their minds, target students and ask them to explain why they think their number is sensible or crazy. Support students in their explanations. Discuss how the teen numbers are clearly crazy because they are back-to-front. 15 mins _____ **Lesson 6:** **Review** Whole group review: Remind students that last class what about how we say 2-digit numbers, and how some of our numbers are sensible, and how some are crazy (and how some are 'a bit crazy' if this third category comes up – e.g., numbers like 26). Remind students that in some Asian languages – all the numbers are sensible, but English has some crazy numbers because English is a crazy language. 5 mins **Engagement (whole group)** Select 10 volunteers, and give each a number card (different numbers to the previous session). Get volunteers to decide whether or not their number is crazy, and go and get them to stand on the appropriate side of the classroom. Get volunteers to explain to the class why they made their choice. 10 mins		

Procedure: • Activity 1 (pairs). Give students a 100's chart and some counters. Their job is to place a counter on each number that is crazy. Once participants have completed this activity, they can move on to Activity 2. • Activity 2 (pairs). Give students a sheet with some random hundred numbers. Get students to work out which numbers are crazy, and to place a counter on these numbers. Early finishers can move on to Activity 3. • Extension: Activity 3 (pairs). Give students a sheet with some random thousand numbers. Get students to work out which numbers are crazy, and to place a counter on these numbers. • Super extension: Why might some people think that the number 14,365 could be classified as 'crazy'? (Answer: because our counting system starts again when we reach the thousands, 14 is crazy, which makes 14 thousand crazy. Note how we say 14 thousand, and that this is not 1 million 4 thousand etc; almost all top students at Grade 2 level made this very understandable error). • With regards to extension groups: Discuss how it does not really matter with 3 (or 4 digit numbers) what the 1st (or 2nd) digit are – it is the last 2 numbers which determine whether a number is sensible or crazy. 20 mins **Pulling it together:** Review activity. Mark out the crazy numbers on the SplatBoard. Get students to pair up with their buddy. Their job is to turn all of the crazy numbers into sensible numbers by saying them in a sensible way (e.g., thirteen becomes one-ty-three; thirty six becomes three-ty-six). Model first. <u>Time permitting</u>: Introduce buzz and play a game together, counting by 1's, with multiples of 10 being buzz. Whenever students count a 'crazy number', they are to make a crazy face. 15 mins		

Observations of students' learning: Student ability to classify themselves correctly as having a crazy or sensible number. Student ability to work in pairs to determine which of the numbers on the number chart are sensible, and which are crazy.

Teacher's Resources: Whiteboard. EWB and SplatBoard.

Catering for inclusion: This lesson caters to a range of different learning styles, including kinaesthetic (e.g., as students move to different places in the room depending on whether they have a crazy or sensible number), visual (e.g., placing counters on a 100's chart over the crazy numbers) and auditory (e.g., discussing the number-ty-number pattern, and what our crazy numbers would sound like if they were sensible).

Extension*:* As outlined in activity.

Consolidation: Spend considerable time physically modelling the teen numbers, and discussing how we would say these numbers if English was a sensible language (e.g., one-ty-four). The assumption is that the teen numbers are the most counter-intuitive, and perhaps do the most to undermine their understanding of place value.

Your reflection: Identify the pedagogical stance you took during the lesson and reflect on:

- what went well and why
- what was difficult and why
- how engaged the students were and
- what you did to encourage this
- what else you could have done to improve the students' learning
- how responsive you were able to be to the students
- what you learnt

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LESSON PLAN FORMAT

Name: James Russo

School: Belgrave South Primary | **Date: 19th and 20th March**
Topic: Doubles | **Year Level: Grade 1/2**
Learning Area: Number | **Duration: 50 minutes x 2**

Learning Purpose: For students to use an abacus to represent doubles facts. For students to connect doubles to the concept of counting by two. For students to recall double facts rapidly.

Australian Curriculum references:
Year 1: Represent and solve simple addition and subtraction problems using a range of strategies including counting on, partitioning and rearranging parts.

Year 2: Solve simple addition and subtraction problems using a range of efficient mental and written strategies, such as doubles.

Also connections to statistics and probability component, in particular, the data representation and interpretation component: Collect, check and classify data and Create displays of data using lists. In the second lesson, this will be further extended to what constitutes a 'fair game', which is an aspect of chance explored at the Grade 3 level.

	Group set up	Materials
LESSON 1 **Review:** Query students understanding of the SURF board so far. Remind students that last week we focussed on how to Read 2-digit numbers; this week it is going to be about our Doubles Fast Facts **Engagement (whole group):** Model how an abacus works. Model how we can represent doubles facts with our abacus, and how we can work out the answer to these doubles facts either by counting by ones, by counting by twos or just by knowing our doubles. Emphasise that we are trying to move students towards knowing their doubles. **Procedure:** • Pair students up with an abacus. Call out a few doubles facts. Get students to represent the doubles facts on the abacus, and get them to figure out the answer in different ways (i.e.,	Pair students up based on similar ability levels.	Abacus Cards Dice Double Dice vs Cards game boards Counters

counting by 1's, counting by 2's, known facts – if students do have this knowledge already). • Whole group comes back together and the teacher will model the game Double Dice vs Cards. The game works like this: One student is the dice, the other the cards. On the count of three, the students flip a card or roll a one dice retrospectively. The student who rolls the dice has to double the number on the face of the dice. They can model the doubles fact with the abacus if they need to. Whatever is the larger number, the dice rolled doubled, or the number represented on the card, is the winner and scores a point. The player who wins the duel advances their counter along the gameboard. Recall that jacks and queens are zeroes, and that kings are tens, just like in ten snap. This game can be differentiated by allowing students to play with two dice (which are added and then doubles) versus two cards (which are added), or even three dice vs three cards etc. **Pulling it together:** Come together as a class and tally up whether dice or cards won most of the time. Do we think the game was fair? Why or why not? Time permitting, play a game of gotcha at the end, recalling doubles facts. **LESSON 2** **Review:** Reinforce how an abacus can be used to represent doubles facts. Play a quick game of Ping Pong to warm up with our doubles facts. Model how we can check if we are right be using the abacus and counting by 2. **Engagement (whole group):** Physically model how we can make double numbers using students. Get a certain amount of volunteers to stand up, then get volunteers to select a partner. We have doubled the number of students standing up, and we can work out how many students are standing either by doubling the number or by counting by twos. Review why our game wasn't fair yesterday. Discuss how we could make it fairer. Suggest that we make the Jacks, Queens, Kings and Jokers all worth ten each (instead of Jacks, Queens and Jokers being worth zero). Review how the game works.		

Procedure: Play the game Double Dice vs Cards again, this time using the new rules. Encourage students to extend themselves by playing with an extra dice and card if they feel up to the challenge. **Pulling it together:** Come together as a group and tally who won the most times, cards versus dice. How do the results compare to yesterday? Do we think today's rules were fairer, less fair or about the same? Play a game of gotcha to finish the lesson.		

Observations of students' learning: Observations of whether students can model and calculate double facts using an abacus. Observations of whether students can accurately recall doubles facts when playing Double Dice vs Cards game.
Teacher's Resources: EWB with large dice to model game; large abacus to model with.
Catering for inclusion: The game can be differentiated upwards to make it more challenging for those students who need to be challenged. The entire activity caters to kinaesthetic learners (e.g., through use of the abacus), visual learners (e.g., through the activities with cards and dice) and auditory learners (e.g., through the game of gotcha at the end, which involves rapid recall of facts).

Your reflection: Identify the pedagogical stance you took during the lesson and reflect on:

- what went well and why
- what was difficult and why
- how engaged the students were and
- what you did to encourage this
- what else you could have done to improve the students' learning
- how responsive you were able to be to the students
- what you learnt

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LESSON PLAN FORMAT

Name: James Russo

School: Belgrave South Primary
Topic: Near Doubles (Strategy) AND
More than One Way (Understanding)
Learning Area: Number

Date: 27th and 28th March
Year Level: Grade 1/2
Duration: 50 minutes x 2

Learning Purpose: For students to use an abacus to represent near doubles facts. For students to use their developing knowledge of doubles facts to calculate near doubles facts. For students to realise that there is more than one way of solving a problem.

Australian Curriculum references:

Year 1: Represent and solve simple addition and subtraction problems using a range of strategies including counting on, partitioning and rearranging parts.

Year 2: Solve simple addition and subtraction problems using a range of efficient mental and written strategies, such as near doubles.

	Group set up	Materials
LESSON 1 **Review:** Discuss how last week we focussed on Fast Facts and, specifically, doubles. Review how we represent a doubles fact on an abacus. Discuss how we can count by 2's, or by 1's, to confirm whether our 'best guess' for our doubles fact is correct (i.e., encourage students to predict what the answer to a doubles fact will be and then find out). Students as teachers: Get various student volunteers to demonstrate how to represent doubles fact with an abacus. 10 minutes **Engagement (whole group):** Model how we can use an abacus to represent a near doubles fact. Basically, if we are trying to add two adjacent numbers, we double the smaller number, and add 1. Get various students to model how we can represent a near doubles fact with an abacus. 10 minutes **Procedure:** • Pair students up with an abacus. Call out a few near doubles facts. Get students to represent the doubles facts on the abacus first, calculate it, and then change it into a near doubles fact by adding	Pair students up based on similar ability levels.	Abacus Cards Dice Counters Cards for writing near doubles facts Worksheets (2 levels) Textas

another one. Give students a worksheet and get them to work through some near doubles facts in pairs. Have two different levels of worksheet for students at different levels. 20 minutes **Pulling it together:** • Whole group comes back together and we can play a game of 3 in a row: Boys vs Girls. Basically, the aim of the game is to be the first player (or, in this case, team) to get three in a row on a100's board. The first player rolls a dice, doubles the number and then needs to make a decision. They can either place a counter on that number OR they can draw a card. If the card they draw is black they can add 1 to their doubles fact, if the card they draw is red, they can take 1 away. Only one players counter can occupy one place. Whoever is their first, keeps the space forever. The goal is to be the first player to get three in a row. If neither player manages three in a row, it is a draw. • Instead of playing with counters, we will play with students using a physical number line. This will also serve as an introduction to the game for tomorrow's lesson. 15 mins • Time permitting, play a game of GOTYA with the class using near doubles facts. Students will get to move bonus steps if they can accurately describe the thinking behind the near doubles strategy. **LESSON 2** **Review:** Reinforce how an abacus can be used to represent near doubles facts. Model how we can use the abacus to double the smaller number and then add one (just like on the previous day). Get various student volunteers to model some near doubles facts using the abacus. 10 min **Engagement (whole group):** Introduce Understanding teaching point – there is more than one way of solving a problem. This point has to be made with a lot of energy and emphasis – it is one of the key understandings and underpinnings of the entire SURF program. It is believed that getting students to internalise this BIG IDEA will build mental flexibility. Using an abacus, model how we can also double the larger number, and then take away one. Discuss how with Near Doubles, there is always two ways of working out the answer. 10 min		

Procedure: • Working in pairs, partners can take turns in working through a series of near doubles facts on some cards. One partner solves it one way (either doubling the smaller and then adding, or doubling the larger and then subtracting) and then the other partner has to solve it the other way. If they are sure about the answer, because they both solved it using a different method, they can write the answer on the back of the card. These cards can then be used as a class set for working through near doubles facts in the future. Give each group 3 facts to solve initially, although have more facts available for early finishers. Have some more challenging near doubles facts in a different colour for those students working through two-digit addition. 20 min **Pulling it together:** • Whole group comes back together and we can play a game of 3 in a row: Basically, the aim of the game is to be the first player to get three in a row on a100's board. The first player rolls a dice, doubles the number and then needs to make a decision. They can either place a counter on that number OR they can draw a card. If the card they draw is black they can add 1 to their doubles fact, if the card they draw is red, they can take 1 away. Only one players counter can occupy one place. Whoever is their first, keeps the space forever. The goal is to be the first player to get three in a row. If neither player manages three in a row, it is a draw. • Depending on the amount of time available, we can either play this as a group (e.g., BOYS vs GIRLS), or in pairs. • Time permitting, play a game of GOTYA with the class using near doubles facts. Students will get to move bonus steps if they can accurately describe the thinking behind the near doubles strategy.		

Observations of students' learning: Observations of whether students can model and calculate near double facts using an abacus. Observations of whether students can accurately solve near doubles facts using both the adding and subtracting approach.
Teacher's Resources: EWB with large dice to play game; large abacus to model with; cards with near doubles facts on them; worksheets.

Catering for inclusion: Give stronger students a more difficult sheet/ fact cards of near doubles to calculate. If we play three in a row game in pairs, modify the rules for stronger students by giving these pairs a 20-sided dice and getting them to doubles these numbers. Some students can play with 10-sided dice (default for Grade 2 students), other students can play with 6-sided (default for Grade 1 students).

Again, the kinaesthetic nature of the game and the abacus caters to those who like to learn by doing. Visual learners will have the fact flash cards and the worksheets to reinforce their learning, and the auditory learners will have teacher explanations and the opportunity to play a game of GOTYA at the end of the lesson to strengthen their understanding.

Your reflection: Identify the pedagogical stance you took during the lesson and reflect on:

- what went well and why
- what was difficult and why
- how engaged the students were and
- what you did to encourage this
- what else you could have done to improve the students' learning
- how responsive you were able to be to the students
- what you learnt

SURF
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LESSON PLAN FORMAT

Name: James Russo	
School: Belgrave South Primary	**Date: 3rd of April**
Topic: Review and resource creation	**Year Level: Grade 1/2**
Learning Area: Number	**Duration: 50 minutes x 1 and extension lesson 50 minutes x 1**

Learning Purpose: For students to review the SURF program covered this term. For students to create resources for use in SURF next term.

Australian Curriculum references:

	Group set up	**Materials**
Engagement (whole group): Go through the SURF board. Get students to articulate their understanding of the different teaching points covered during the term, and demonstrate their learning. Actively reward participation and doubly reward articulation of thinking. 15 mins **Procedure:** Resource creation. Explain that students are going to be creating fast fact cards for use next term. Explain how each student will be able to create two fast facts, one green and one orange (easier questions and medium questions). Students need to write questions on the one side, and the answers on the other side in their best handwriting. Once the facts have been created, they need to be checked by three checkers (checkers can mark the card in the corner with a dot using a grey-lead pencil). To become a checker, you need to finish creating your two fast facts. Students will be allocated a fact by the main teacher. The second classroom teacher will function as a checker. Each class will work on one set of fast facts: • Rainbow facts – 0/1D; 10+0; 9+1; 5+5 can be seen as the green facts • Doubles facts – 1/2C. 6+6; 7+7; 8+8; 9+9 are the orange facts, the rest are green • Add 1 or subtract 1 – 1/2P; numbers greater than 10 are orange, numbers less than 10 green • Number facts to 10 – 1/2S – adding 1 or 2 is green, adding 3 or 4 orange. 20-25 mins	Individual activity.	Writing Cards Red, green orange textas

Pulling it together: Spend the last 15 minutes of the session playing some of the games learnt throughout the term, matching particular games to the set of facts the class is responsible for creating. **Extension Group** Will be given an opportunity to create a harder set of problems (red problems). Each student can create initially one of the following: • Complements to 100 • Double-Digit Doubles Facts (answer greater than 20) • Add 10 or subtract 10 • Number facts to 20 Once they have finished creating one set of facts, they can start creating another set.		

Observations of students' learning:
Teacher's Resources:
Catering for inclusion:

Your reflection: Identify the pedagogical stance you took during the lesson and reflect on:

- what went well and why
- what was difficult and why
- how engaged the students were and
- what you did to encourage this
- what else you could have done to improve the students' learning
- how responsive you were able to be to the students
- what you learnt