

Part 1: Pre-lesson Discussion

Q1. How did you plan the lesson? What kinds of changes were made after discussion with the colleague?

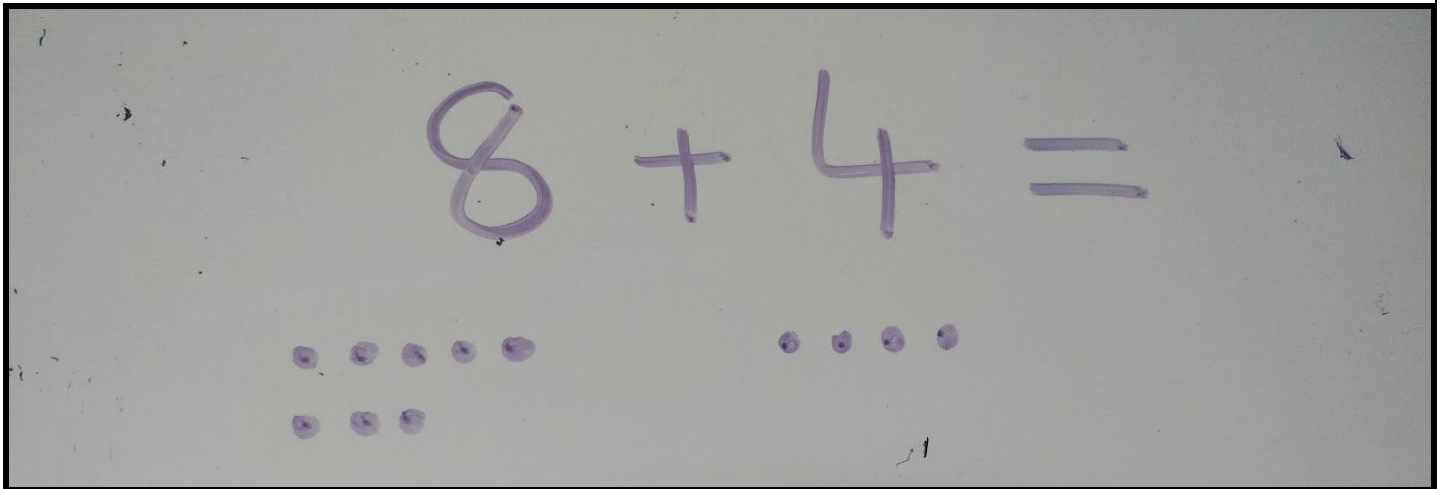
The following factors contributed to the planning of the lesson -

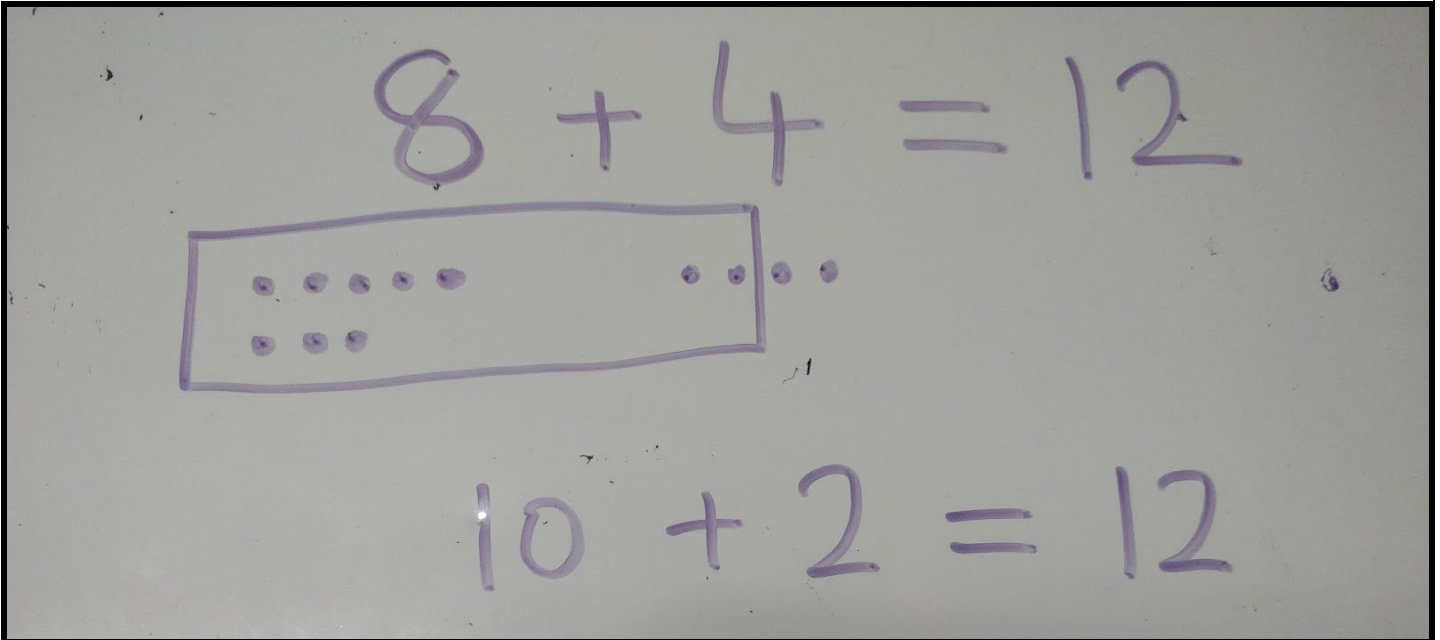
1. Structure - Format followed by Grade 1
2. Content - Pacing guide for Grade 1 - Module 2 Lesson 9 (Attached separately)
3. Length of the lesson (20 minutes - two slots same lesson was taken for two different groups. This is the format of Maths in Grade 1 to take up different maths games/menu/tech and teacher time)
4. Number of students for which the lesson is planned
5. Students ability to solve the problems (Heterogeneous grouping so low ability kids can learn from peers)
6. Materials to be used - whiteboard, markers, unifix cubes
7. Language to be used (mathematical terms - tens frame, number bond, number sentences, addend)
8. Visuals - tens frame, number bonds
9. Worksheets - Exit ticket - formative assessment

After the discussion with the colleague no changes were made to the lesson plan.

Following suggestions were provided by my collaborating teacher -

1. Recap - in words to bridge the connect between the previous sessions and what we would be learning today
2. Lesson I can take up/plan for
3. Use of dots and number bonds
4. Use of worksheets only if time permits
5. Learning is important and not finishing the content so pace your session accordingly





I had created a Math group for the session and this was approved by my collaborating teacher. My strategy was to keep mixed gender group (for every boy, one girl), then looking at their ability to solve maths, one high, one low and two average. I had also rehearsed by myself a day prior to understand the flow and to check if anything is missing or can be changed. My collaborating teacher. I also tried to provide the materials after my warm up of tens frame because I have observed that students tend to draw/play with the marker and cubes, if given before the session.

Part 2: Teaching & Observation

Q2. What are your thoughts about the way you taught the lesson? Did it go as planned or was it changed? What were some of the decisions that you made while teaching? Were these decisions planned or unplanned? What were the questions, ideas, or instances that you found challenging?

I believe the lesson went pretty well. The grouping that was done really helped the students to focus on the topic in hand. It did not completely go as planned but I still believe that the learnings were delivered and acknowledged.

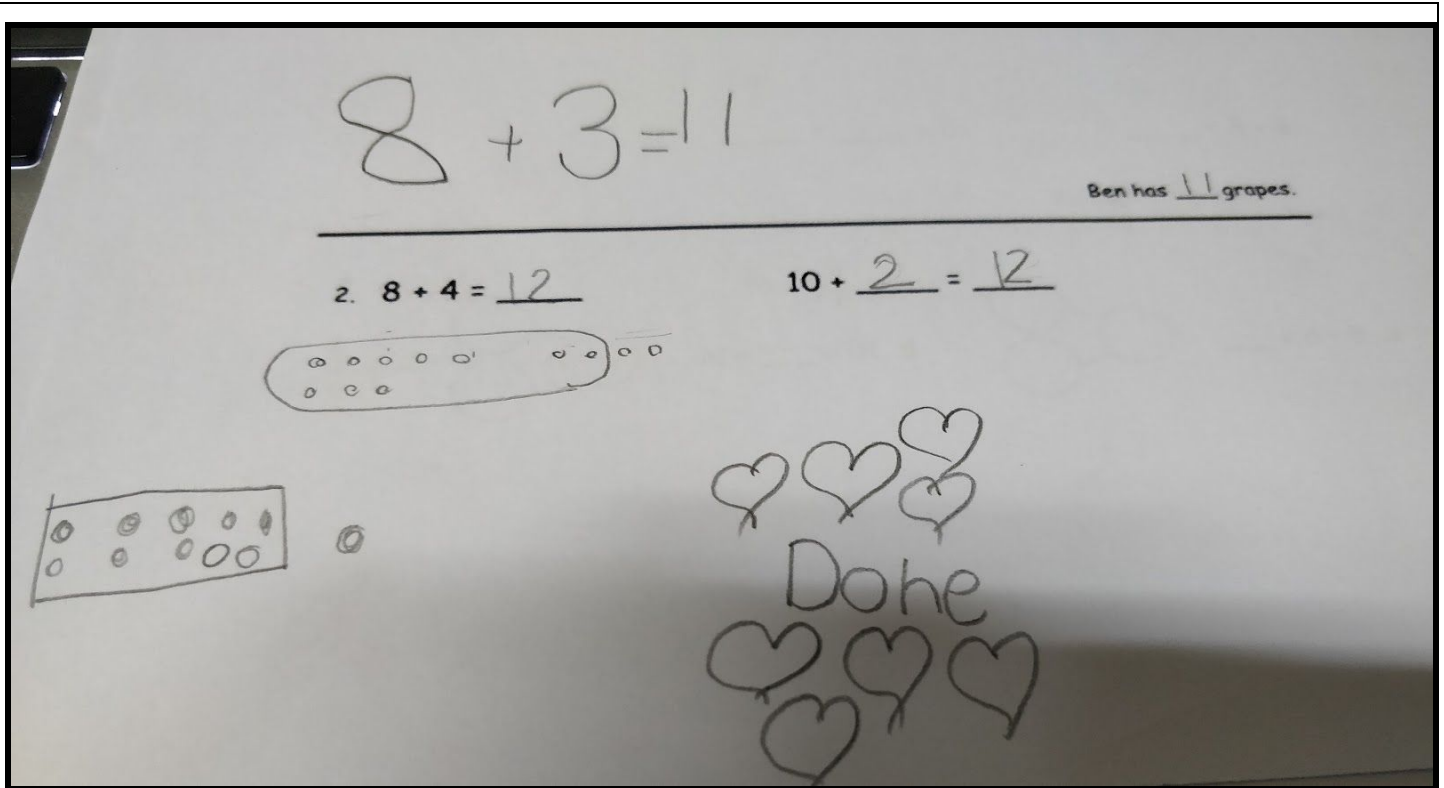
During the warm up of tens frame, few students sometimes identified them incorrectly or added them incorrectly, for example "If I showed them 7, they would say 7 and 4". I did not correct it the first time then I realized that I should count with them to understand the correct tens frame. Again when the instance occurred, then I paused and asked them to count along with me "Lets see, let's count the dots, 1,2...7 and now the empty frames 1,2 and 3 ". I did this so all the students in the group understand that 7 and 3 make a fast ten. If this would have left unattended, students might have different answers and it hampers their understanding conceptually.

During the number sentences, I was demonstrating first and then asking the students to try by themselves but I observed that some of them were writing the answer without showing any working. After I insisted them to draw and show how they got the answer they were able to show their understanding as well. Some made counting mistakes, some drew the tens frame on the dots and got different answer. I would then ask them to try again and see what they got and they were able to self correct. In case of distractions, I directed the student to go the table and join back on the carpet once they were ready. Sometimes, the students wanted to give their own number sentences and wanted to solve something by themselves, so I encouraged it but still asked them to show the drawing and how they arrived at the answer. Once I was sure that students got the understanding, If I found one student with a different answer, I instructed

the rest to continue with worksheets at the table to solve or can come back to the carpet if they need help to solve. This gave me time to help solve the student with silly mistakes or who needed more attention.



I observed that students were having difficulty with the worksheet because they were not used to it and were getting confused looking at the questions. They did not understand that they were solving question 1 but writing the answer on question 2. This confused them and they came asking for help. I have attached students work for reference.



The first problem is 'Ben has 8 green grapes and 3 purple grapes. How many grapes does he have?'. The student has done the working below on the left to reach to the answer 11'

I realized that with the first group, I forgot to recap about the number bond. When I mentioned it they were able to answer what a number bond was.

Also, there was an instance where I erased the number sentence and realized that the students were still solving it and quickly rewrote it so everyone's on the same page or its visible to students who were having difficulty understanding the flow.

I had kept unifix cubes as an option for the kids to comprehend number sense appropriately, but looking at their response using the drawing (tens frame), they could solve it without using the cubes. They were able to group tens and reach at the answer quickly.

I forgot to ask the students to use unifix cubes, if they need, in the second group.

I was looking at the time to keep a tab on the flow and also because I had to switch groups after 20 mins. Both the sessions started and ended on time.

Part 3: Post-lesson Reflection

Q3. Discuss some of the observer's thoughts on the lesson? Did you find the discussion with the observer useful? Give some examples from the discussion.

Observer thought the following -

1. Pointers were given on the language used before the Math lesson
 - Can we meet at the carpet - It should be Let's meet at the carpet

- Do we need to try this again - Lets try this again
 - Tone should be firm
2. Maths part of the lesson went well - Firm control and tone
 3. Dots explanation was very good but zigzag was ok
 4. One student's answer was incorrect because he counted wrong, correction was done by asking him questions that lead to him understanding that the answer was incorrect because of the counting, encouraged student to self correct
 5. Never write on students work - I circled students work with my marker
 6. Your students don't know to read from the screen

Collaborating teacher's observation -

1. Pass on the materials and give them some time to play with it (like couple of minutes) that helps them to be less distracted else they'll start drawing as soon as they get it and not concentrate on the speaker
2. There should be closing to the activity like 'So today we learned making a fast ten with different addends', next we'll continue to work with different addends. This helps bridge between different sessions
3. Demonstrate to kids only if that's the first session, if you see them solving by themselves let them do it independently. All the students don't need the support. This helps to spend more time with students that need more support
4. Also mentioning what we are learning and why we are learning
5. Considering this to be your first academic lesson it went pretty well

I believe, teaching is an art that gets finer with experience. It was my first ever Maths class as a teacher and it came just after 3-4 Maths class observations. So, I was finding it difficult to make some decisions as I had no prior knowledge or observation to reflect upon -

1. In the first group, I kept the students waiting for sometime until all of them finished their working. If I had known that its ok to let some students explore independently and try it out on their own so as to focus on others who need more scaffolding, however I did it in the second group but I was not sure if what I was doing is correct or not
2. I observed that at first I could not make out if the students are following the instructions but when I saw their work I knew if I can continue, go back or pause to make their understanding clear
3. I believe I was keeping an account of what has been done, what needs to be done and how much time I have in hand
4. I should have also asked the students to share their work in the group

Part 4. Reflect on this whole exercise.

Some of the reflection points could be-

- a. What did you learn from these interactions with the observer?
- b. Did it change the way you planned or conducted the lesson? If so, how?
- c. Is this kind of interaction useful for teachers in the long run?
- d. What were the challenges you faced?

I believe, after this exercise that to receive a concrete feedback on the lesson plan and teaching, the observer should be someone who understands the topic in and out, understands the age group I am teaching and their needs. It should be a person who understands the maths curriculum and students as well. I teach Grade 1 and the observer is with Grade 3. This creates a vacuum in the ways of teaching, content and understanding students as well. Students in Grade 1 are not fully developed with reading and writing skills whereas students in Grade 3 have developed that capability. It goes back to my understanding of Profound Understanding Of Mathematics where a teacher with PUFM should have taught in all elementary grades and understand the breadth, depth and thoroughness of mathematics. It comes with years of

experience and learning from colleagues and students. I was also observing and learning different ways of solving a problem. With all due respect, I appreciate the feedback from the observer because it helps me understand what went well, challenges I faced and what I can continue doing and what can be changed, but I still feel this exercise is more relevant in real life or teachers observing colleagues from the same grade because they know the students, the language and the content.

I had also discussed this lesson plan with my collaborating teacher and the feedback from her helped me incorporate a few aspects in the lesson plan

- recap/connection with the ongoing topic: helped me activate their prior knowledge of the topic,
- how to go about the lesson: should it be content driven or student driven, pace it as per the student's understanding,
- Use of exit ticket to understand student's learning

I remember asking my CT during the lesson plan discussion, what should I do if I go blank in front of the students. She replied, just go back one step from where you are and that should give you time to get your thought process back. I did not go blank during my session but it does help me going forward if I face such a situation.

This exercise is definitely helpful and with many such lessons and experience across grades, will help me develop profound understanding of mathematics.

As stated before, I did keep in mind the pace to choose depending on the students response. I did also improvise after reflecting on my mistakes during the session (Example: correcting them while showing fast ten cards). My interactions with the second group was different than the first one as well, so I could see myself changing what challenges I faced in the first session and incorporating them in my second session(Example: Encouraged students to solve by themselves and giving more support to other students). I believe I was able to understand what the student's thought process was and bridge it to the topic in discussion. It is also important to look into student's work and help them self correct and arrive at the answer by themselves. I also kept asking them 'Are you with me? Let's count together' so I know everyone is keeping eyes on me and understanding. If I found anyone distracted, I would ask 'XYZ, are you ready to listen and learn?' This helps me keep a check on student's understanding as well. I also encouraged student's opinion, when they insisted to have their own number sentence and they felt connected and responsible in the activity. Lastly, the language used should be (mathematically) consistent so as the students understand the meaning of it (Example: number bond-two parts make one whole, break apart 4 into 2 and 2)

I can say I learned a lot from this exercise, opens doors to different perspectives and styles of learning and teaching. I am one step forward to being a maths teacher.

Lesson Plan

Lesson plan

Lesson name/ number: Making a fast 10 when one addend is 8/9

Grade: Grade 1

Subject area/s: Mathematics

Date/s: 12/4/2018

Learning Targets:

1. Review a fast 10
2. Review a number bond

3. Making a fast 10 when one addend is 8
4. Making a fast 10 when one addend is 9

Time / Duration	What Teachers will do	What Students will do	Strategies & Classroom dynamics	Resources
12.25 5 minutes	<p>T: Friends, lets quickly meet on the carpet, and find our learning squares (...in 5,4,3 ,2 ,1)and lets have our eyes facing the screen. So, there's a change we're going to do Maths now, how do you feel about it?</p> <p>Lets move on and look at our Math groups for today Ones with the teacher stay on the carpet and the tech ones on their tables exploring mathletics Math Group (Transition into groups)</p>	S: Sit on the carpet	<p>Sitting on their learning squares on the carpet</p> <p>Sitting in a circle on the carpet</p>	Tens Frames White Board Markers Unifix Cubes Worksheet Pencils
5 minutes	<p>T: Lets charge/tune our brains with some maths first to help us make a fast ten. Last week you have worked on making a fast 10, how did we do this? How do you think this strategy helps us? We will continue to work on Making a Fast Ten strategy so we can add numbers quickly.</p> <p>Ok, are you ready? Show them the cards (1 and 9, 2 and 8, 3 and 7, 4 and 6, 5 and 5,6 and 4, 7 and 3, 8 and 2, 9 and 1,10 and 0.) Great! Now we know how to make our fast 10</p>	<p>S: Students talk about why we use a fast 10</p> <p>S: Its a number bond</p>		

<p>10 minute s</p>	<p>T: Now, let's work our brain out T: (Draw a number bond)..What is this? T: Does it matter if I change the position/look at it this way (Rotating the white board) It has two parts and one whole T: Now, everyone take a handful of unifix cubes</p> <p>Lets solve a number sentence. Show number sentence with 8 and 4 We're going to solve a problem T: $8 + 4 =$ (Draw 8 dots and 4 dots) I know 8 is closer to 10, then I know 8 and 2 make a fast 10, So what do I break apart 4 into ? I break apart 4 into 2 and 2. I get a 10 and 2 and I get 12 Repeat the same with number bond Show number sentence with 8 and 5 T: $9 + 4 =$</p>	<p>S: Students look at the steps and replicate the same</p> <p>S: Students take handful of unifix cubes</p> <p>S: Students put 8 cubes and then 4 cubes, then break apart 2 cubes from 3 to make a fast 10. Then $10 + 2 = 12$.. So $8 + 4$ and $10 + 2$ are the same.</p> <p>S: Students write their name and date on it</p>		
<p>5 minute s</p>	<p>I know 9 is closer to 10, then I know 8 and 2 make a fast 10, So what do I break apart 4 into ? I break apart 4 into 1 and 3.. I get a 10 and 3 and I get 13</p> <p>(Distribute the worksheet and ask students to write their name and date on it). Worksheet Module 2 Lesson 9 - Page 1</p> <p>T: Now I want you to give it a try. If you think you can do it independently, go for it and you can work on it on your table. If you think you need some help, stay on the carpet.</p>	<p>S: Students independently solve the problems</p>		

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Differe ntiated learn ing			
Assess ment tasks	Worksheet Module 2 Lesson 9 - Page 2 is the exit ticket		
Con solida tion/ Rec ap	<p>Last week you have worked on making a fast 10, how did we do this? How do you think this strategy helps us?"</p> <p>We will continue to work on the Make a Fast Ten strategy so we can add numbers quickly.</p>		
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Worksheet

Name _____ Date _____

Make ten to solve. Use a number bond to show how you took 2 out to make ten.

1. Ben has 8 green grapes and 3 purple grapes. How many grapes does he have?

Ben has ___ grapes.

2. $8 + 4 = \underline{\quad}$

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

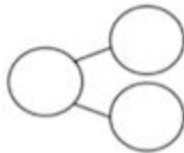
1. Seyla has 3 stamps in her collection. Her father gives her 8 more stamps. How many stamps does she have now? Show how you make ten, and write the 10+ fact.

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

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

2. Complete the addition sentences and the number bonds.

a. $8 + 6 = \underline{\quad}$



b. $10 + \underline{\quad} = 14$

