

SUBJECT: Mathematics
GRADE: Two
STRAND: Number
DURATION: 60 Minutes
TOPIC: Count by 2s, 3s, 4s and 10s

FOCUS QUESTION:
Select from Integrated Studies

STANDARD:
Students will demonstrate an understanding of numbers, types of numbers, numeration systems, and the relationship among numbers, and apply number theory concepts to compute fluently and solve problems.

ATTAINMENT TARGETS:
Demonstrate an understanding of the ideas of sets.

BENCHMARKS:
Demonstrate understanding of groups or sets using actual objects or pictures of objects.

MATERIALS:
body parts, students' shoes, pictures of animals' feet, 100- chart

SPECIFIC OBJECTIVES:
By the end of the lesson, students will be able to:

- Count by 2s, 5s, and 10s with at least 70% accuracy.
- Explain a strategy that could be employed to count by any of the numbers given

PRIOR LEARNING
Students should already be able to:

- Count by 1.
- Know basic relationships among numbers
- Add correctly

CONTENT OUTLINE
Adding by 2s, 3s, 4s and 10s is basically skip counting by the given numbers. Whenever you count by 2s you are adding on two to the previous number given. The same can be said of 3, 4 and 10.

DAY 1

ENGAGE

1. Have students remove their shoes and place them next to their desk one at a time. Allow the students to come to the front of the class when their names are called. Have them line up their pair of shoes neatly against one wall so that everyone can see. Allow them to share with the class the total number of shoes against the wall. The first student will

respond to say 2 and sit. The numerical symbol of two will be recorded. Allow the next student to place his/her shoes against the wall and share the total number of shoes that are placed against the wall then sit. The response of 4 shoes will be recorded in sequence next to the 2. Allow students to continue until all shoes are placed against the wall and each consecutive skipped number is recorded; i.e. the students' answers.

EXPLAIN

- Students will say what they have noticed with the symbols written sequentially and the placement of the shoes. They will justify their answers and hence they should discover the pattern of skip counting. They are actually counting by 2s.

EXPLORE

- Students will use their fingers and toes to carry out similar activities as done in the engagement activity. They will be guided to recognise that they have five fingers/toes on one hand/foot and five on the other which gives a total of ten. Have the students recognized that two students have 20 fingers/toes; three students have 30 and so on. They will practise how well they can skip count forward or backwards using the following: 2, 4, 6, 8, 10 or 16, 18, 20 onwards; 10, 20, 30, 40 and so on up to 100.

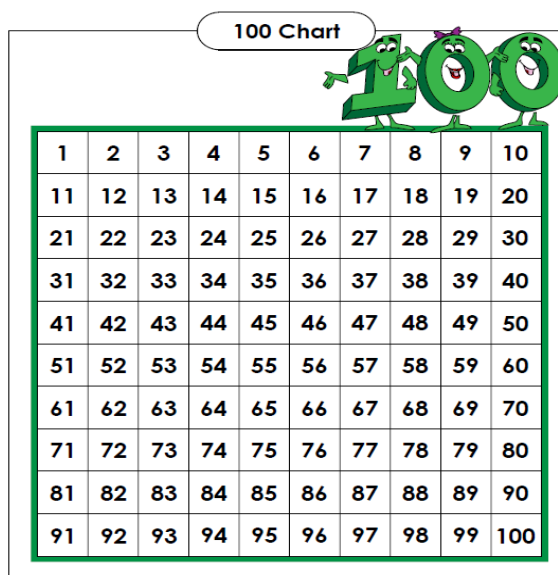
EXTEND/ELABORATE

- Students will be given pictures of the feet of various four footed animals to investigate how well they can skip count by 4 either forward or backwards. They will be guided in recognising the pattern realising they are adding 4 each time.

STUDENTS EVALUATION

Students will be given the following hundred grid – They will count by 2s by marking an X through all those numbers, count by 5 by colouring those numbers with a colour of their choice and count by 10 by circling those numbers

100 Chart



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

TEACHER EVALUATION

<i>What percentage of students able to:</i>	0% - 50%	51% - 80%	81% - 100%	
Count by 2s, 5s, and 10s competently				
Explain a strategy that could be employed to count by any of the numbers given				

COMMENTS:*Areas of strengths -*

Areas of weaknesses

PLAN OF ACTION

- Reteach Concept
- Reinforcement of Concept
- Advance to new topic

SUBJECT: Mathematics

GRADE: Two

STRAND: Number

DURATION: 60 Minutes

TOPIC: Subtraction Using Sets

FOCUS QUESTION:

Select from Integrated Studies

STANDARD:

Students will demonstrate an understanding of numbers, types of numbers, numeration systems, and the relationship among numbers, and apply number theory concepts to compute fluently and solve problems.

ATTAINMENT TARGETS:

Use the basic operations with numbers and number patterns

BENCHMARKS:

Compute with whole numbers quickly and accurately; use these skills to find answers in realistic (problem) situations.

MATERIALS:

Activity sheet, interlocking or unifix cubes, chart paper, number cubes

SPECIFIC OBJECTIVES:

By the end of the lesson, students will be able to:

- Model subtraction problems using comparison of sets
- Write the difference between two sets of numbers with the use of interlocking or unifix cubes
- Use charts to draw conclusions

PRIOR LEARNING

Students should already be able to:

- Compare sets
- Understand subtraction facts

CONTENT OUTLINE

To subtract means to take away an amount from another. When we take away the number which remains is usually less than what we originally had.

ENGAGE

- Students will play the game “Bounce Count”. They will be guided to sit in a circle.
- A student will bounce a ball to another student. That student will choose another student and bounce the ball over to him/her, counting the bounces as they move towards them (e.g. 1, 2, 3, 4, 5...). The person they have bounced it to then bounces the ball and goes back to the empty space. As they travel they can either add or subtract the numbers or bounces (e.g. 5, 4, 3... or 6, 7, 8...).

EXPLORE

1. Students will model a subtraction problem in which two sets are compared. For e.g.: Jody's shirt has 5 buttons and Sandy's shirt has 3 buttons.



Jody's shirt
5 buttons



Sandy's shirt
3 buttons

EXPLAIN

Students will share with the class how many more buttons Jody's shirt has and how many fewer buttons Sandy's shirt has. Students will justify their answer as they pose and answer questions based on similar scenarios to the one above. They will write a story involving a subtraction problem in which a set of 3 and a set of 4 are composed. Students will model the problem using colour coded counters or cubes and share them with the class. While the students model the problem with teacher's guidance, they will discover the counting on or any other strategy that may have unearthed in the lesson.

EXTEND

Students will be encouraged to make up another problem, this time showing the comparison of 5 trains with a set of 7. Individual students will be called upon to share their problems. A large chart will be displayed on the board or at a location where all students can see it. The chart will be labelled: Cubes in Shorter Train, Cubes in Longer Train and Difference. A train of 6 connecting cubes with one colour and another train of 4 cubes in another colour will be displayed. Students will be asked how the trains could be compared. They will in turn dictate the entries for each column. They could also add trains to the shorter in a different column until they are the same length then count how many were added.

- Students will play the game "So Many More" that will concretise the set model for comparison of subtraction. A train of cubes (any number greater than 1 will work) will be shown to the students.
- A number cube will be rolled and students will be asked how many cubes will be on a train with that many more cubes. A train will be made to verify the students' response as seen below.



- A volunteer will be asked to start with same number, roll the die and make a train with that many cubes. They will now compare the trains. The person with the longer train makes a tally mark. Students can play five rounds in pairs. The winner will be the person with the most tally marks.

STUDENT EVALUATION

- In pairs, students will be provided with connecting cubes and a piece of paper. They will make trains, compare them then record the number of cubes in each train and how many more in the longer train.
- Students will make these entries on the given paper then transfer to the class chart.
- The terms “compare” and “difference” will be reviewed with the whole class.

TEACHER EVALUATION

What percentage of students able to:	0% - 50%	51% - 80%	81% - 100%	
Model subtraction problems using comparison of sets				
Write the difference between two sets of numbers with the use of interlocking or unifix cubes				
Use charts to draw conclusions				

COMMENTS:

Areas of strengths

Areas of weaknesses

PLAN OF ACTION

- Reteach Concept
- Reinforcement of Concept
- Advance to new topic

SUBJECT: Mathematics
GRADE: Two
STRAND: Number
DURATION: 60 Minutes
TOPIC: Subtracting one digit from two digit numbers.

FOCUS QUESTION:

Select from Integrated Studies

STANDARD:

Students will demonstrate an understanding of numbers, types of numbers, numeration systems, and the relationship among numbers, and apply number theory concepts to compute fluently and solve problems.

ATTAINMENT TARGETS:

Use the basic operations with numbers and number patterns.

BENCHMARKS:

Compute with whole numbers quickly and accurately; use these skills to find answers in realistic (problem) situations.

MATERIALS:

Counters/ bundles of sticks, string bag, strip of paper, computer, speakers

SPECIFIC OBJECTIVES:

By the end of the lesson, students will be able to:

- Subtract multiples of ten from a number which is less than ten without renaming.
- Solve problems requiring the Subtraction of two digit numbers without renaming

PRIOR LEARNING

Students should already be able to:

- The basic facts of Subtraction.
- How to count and identify numbers up to 99
- How to correctly represent two digit numbers on a place value chart.
- How to use base ten materials.

CONTENT OUTLINE

- Subtraction is the removal of objects from a collection.
- Subtraction results in a decrease when two sets are combined.

ENGAGE

- Students and teacher will be engaged in the playing of a game. This activity will begin with the teacher turning on some music. The students will be instructed to pass around a

bag containing strips of paper with subtraction questions written on them. This is done until the music stops, the person who is left holding the bag will have to select a question. The student will be required to read the question aloud and solve it mentally. This procedure will be repeated with more students.

Example; $9 - 2 =$

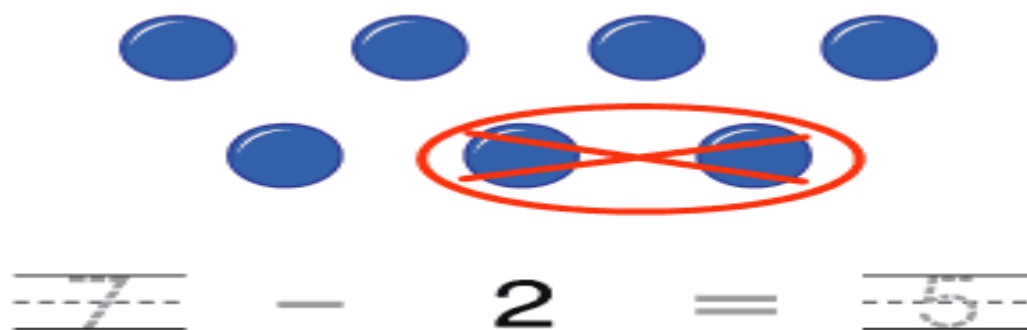


EXPLORE

The class will be placed into groups of two's.

- Each group of students will be given a set of counters.
- The groups of students will be given a strip with seven (7) subtraction questions on it.
- The teacher will then select randomly which group will take which question.
- The groups will then be asked to model their questions using the counters then represent the question along with the solution on the board.

Example of what is expected to be done by each group except subtracting single digit from double digit numbers.



Students will be given hundred charts in their groups to explore the subtraction of whole numbers. The first question from below will be done using the hundred chart.

25

$$\begin{array}{r} 25 \\ - 3 \\ \hline \end{array}$$

1	2	3	4	5	6	7	8	9	10
11	12	13	14	15	16	17	18	19	20
21	22	23	24	25	26	27	28	29	30
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EXPLAIN

Through teacher's guidance, the students will use singles/counters/sticks, to demonstrate how to subtract one digit number from multiples of ten. They will explain their understanding of what they do.

STUDENT EVALUATION

Students will be given hundred charts to complete the following questions in their groups:

Instruction: Complete the following questions.

A)

25	37	86	48	19
$\underline{- 3}$	$\underline{- 6}$	$\underline{- 4}$	$\underline{- 2}$	$\underline{- 8}$

B) Students will read the following problems and find solutions:

- Alexia's Dress Shop sold 8 dresses during the sale. If she started with 86 dresses, how many dresses does she have left?
- Greg collected 39 cards, James collected 6 cards. How many more cards than James did Greg collected?
- Rita had 24 marbles. She gave 4 marbles to Tony. How many marbles does she have left?

EXTEND

Students will be given the following question to work:

Omar had 7 marbles. He got 5 more from his sister. If he gave 6 of his marbles to his friend:

- a) How many marbles did he have before giving his friend some?
- b) How many marble did he have after giving his friend the 6 marbles?

TEACHER EVALUATION

<i>What percentage of students able to:</i>	0% - 50%	51% - 80%	81% - 100%	
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