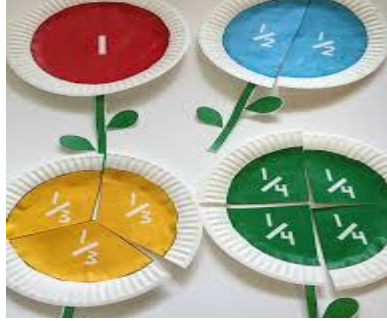


Lesson Plan/ Learning Plan	
Topic- Parts and wholes	Grade: IV
Concept (If Applicable)	Operations of fractions (addition , subtraction), types of fractions , Comparison of fractions, Equivalent fractions , concept of ‘of’
<u>Mapping of skills/competencies/attitudes :</u> <i>(Skills/competencies/attitudes that a teacher plans to develop through the learning engagements)</i>	Critical thinking Collaboration Character Creativity
Lesson Plan Duration : <i>(flexible based on the requirements of the topic)</i>	8 days
Learning Engagements for Active Learning: <i>(examples : KWL chart, Brainstorming, Bundling, Pair-share, Role-play, PPTs, Audio-Video ,live objects from the classroom, Reflections)</i>	• Inside – Outside Circle • DEAL • Bundling • Brainstorming • Story narration
Questioning Technique/s to be Used : <i>(Probing/Comprehension/Simple/Multiple choice, open-close ended)</i>	• Pose , Pause, Pounce & Bounce • DEAL
Learning objectives: By the end of the topic, the learners would be able to: (write in pointers) 1) Perform operations (addition , subtraction , multiplication) 2) compare fractions 3) identify equivalent fractions 4) apply the knowledge of fractions and concept of ‘of’ in real life experiences .	
Annexure 1 (Kolb’s Model)	
Connecting to Prior knowledge <i>(How do you check what learners already know?)</i>	Day 1. The class will be divided into 2 groups and made to stand in 2 concentric circles with students facing each other. They will be paired with the child standing directly across in the

	other circle. Each student will share one point about fraction and then move in clockwise direction to the other student and do the same . Example – *The fraction is a part of a whole . *It has 2 parts – numerator and denominator *We can write fraction in division form . LE- Inside – Outside Circle .
Resources Required:	Marbles, spoons , newspaper , colours, blackboard , chalk , notebook , flash cards .
Implementation of lesson plan - Stage 1	
	Day 1 Students will be asked to find the sum of 90 fruits and 12 chairs. They seem to be confused. The facilitator explains that to do any operation on the given information the numbers should be of the same units. Similarly while performing operations on fractions , it should be changed to like fractions. The facilitator discusses various ways to make the denominators equal for performing operations of addition and subtraction. And let her students conclude that finding the LCM of the denominators to make like fractions is the most feasible method. Students will try few questions given in the spiral. Day 2(Peer learning) Students will perform problems based on subtraction of fractions as a group. Peer learning helps them to gain confidence and it makes the task enjoyable for them. Day3-(Learning Engagement 1) The class will be divided into the group of 4 students each...Each group will be provided with a

	sheet of newspaper . The facilitator will play some music so that the learners dance on their piece of newspaper (barefoot). When the music stops, the learners are instructed to pick up their piece of paper and fold it in half. Again music resumes and they start dancing on half of the newspaper. The music stops and they fold the piece of paper so that they are dancing on only one quarter. Finally, they fold the newspaper so that they are only dancing on one eighth of the paper. Later they will open their newspaper and find the different fractions which they can observe on the newspaper . Competency – Collaboration – Works Effectively in Diverse teams Character - Zest Day 4: (Learning Engagement 1) (students will be taken in an open area) Each learner will be given a flash card showing one fraction in pictorial form. The learners will roam in the class and try to look for partner whose fraction has the same value and will say DITTO as soon as he finds his partner. Through this engagement the facilitator introduces the concept of equivalent fractions. Competency- Critical thinking- Solves problems Day 7 (Learning Engagement1) The facilitator narrated a story to the learners : 4 friends planned a night stay at Ruchita's house. Ruchita's mother gave them 8 chocolates, 16 pieces of cake and 8 juice cans . In the night one of the friend went to the kitchen and brought $\frac{1}{2}$ number of pieces of cakes to eat and shared them equally among 4 of them. Each friend got _____piece/ pieces and _____ pieces were left. Later in the night Zeenat brought $\frac{1}{4}$ number of juice cans and distributed among friends . Each friend got _____ cans and _____ cans were left .
Proceeding further <i>(What strategies will be used in the class to achieve the lesson objectives?)</i>	Day2- (Learning Engagement 1) The facilitator will place a jar with 20 marbles on

	each table(for each group) and ask the learners to take out some marbles from the jar. After everyone has taken out the marbles from the jar the facilitator will ask the fraction of marbles each one is holding and who has the maximum and the minimum number among all in their group as well as who has the maximum and minimum among all the groups. Competencies – Collaboration- Interacts effectively with others; Critical thinking – Use systems thinking . Day3- (Learning engagements -1) To take the learning further the learners were given few sums to identify largest and smallest fraction : Q1. Circle the largest and cross the smallest fraction : Example : $3/16$, $5/16$, $1/16$, <u>$15/16$</u> a)$5/10$, $4/10$,$2/10$,$8/10$ b)$15/25$,$11/25$, $16/25$, $24/25$ Competencies : Critical Thinking – Reasons effectively Day 4: (Learning Engagement 2) The facilitator holds the discussion with the students on why do they think that their fraction has the same value and they said DITTO. Day5 : (Learning engagement 1) The facilitator will ask the learners to take out 4 paper plates and colour each one with different colour . They will keep one plate aside that will be representing the whole . The second plate to be folded into half such that the edges touches each other and then that plate is cut from the impression which is made in the middle. Similarly the learners will cut the third , fourth and fifth plate to make four , eight parts respectively. After this they will be place 1 parts out of 2 from the second plate on the first full plate . After that 2 out of 4 and 4 out of 8 one upon the other.
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resource: members.teachbesideme.com

Competencies:

Collaboration: Collaborates with others

Character -Zest

Creativity – Generate ideas

Day6 :(Learning Engagement 1)

Each pair of learners will be provide 30 spoons .
And the teacher will call out the fraction and the learners will have to think and show the number of spoons equivalent to the fraction spoken by the facilitator. With each correct answer the learners will win 5 points. The pair with maximum points will be called the Equivalent masters .

Competencies : Critical thinking – Reasons Effectively ; Communication – Access and Evaluate Information.

Day 7 (Learning Engagement 1)

The learners will be draw a grid having 10 by 10 squares .The students will have to follow the instructions and colour the grid .

Instructions :

1. Colour half of the grid with yellow colour .
2. Colour $\frac{1}{5}$ of the left small squares with red colour .
3. Colour half of the left squares blue in colour .
4. Colour $\frac{3}{4}$ of the left over squares with green colour.

Write the fraction of the total squares is left uncoloured ?

Competencies :

Character – Zest**Critical thinking – Reason Effectively****Day 8 : (Learning Engagement 1)**

The facilitator will show the rate chart of a sweets shop and students will have to fill the blanks on the basis of the given information: :

Items	Cost per Kg
Laddoo	₹ 120
Gulabjamun	₹ 100
Cake	₹ 200
Burfi	₹ 150



Q. Fill in the blanks :

a) The cost of $\frac{1}{4}$ Kg of Laddoos is__

b) The cost of $\frac{1}{2}$ Kg of Cake is __

Competencies- Critical thinking – Makes Judgements and Decisions .

Learning Logs

(How learners keep a track of what they are learning, includes reflections)

Day2- (Learning Engagement 2)

To take the discussion further the learners will pictorially represent the fractions given below , compare the fractions and put the appropriate sign ($>$, $<$ or $=$):

- a) $\frac{4}{5}$ $\frac{1}{5}$
b) $\frac{7}{16}$ $\frac{11}{16}$
c) $\frac{10}{10}$ 1
d) $\frac{5}{8}$ $\frac{8}{8}$

Competency- Critical thinking – Use Systems Thinking .

Day3- (Learning engagements -2)

The learners will now be able to apply their knowledge to solve word stories based on real

	life situations to represent the fractions pictorially, compare and find the answer : Q1.Rohit ate 6/16 pizza and his sister ate 4/16. Who ate more pizza ? Q2. Leena purchased 12/30 rose flowers and 9/30 flowers of Jasmine. Name the flower she purchased less? Q3. Raman sold 6/10 of his pens and 10/10 of his pencils on Monday. What did he sell more pens or pencils? Competencies : Critical Thinking – Make Judgements and Decisions. Creativity – Generates ideas *Through various sums and word stories the learners will be able to derive the fact that they can compare the fractions by observing the numerator and when their denominators are same .(comparing like fractions) Day 4: (Learning Engagement 3) The learners will paste their flash card and the fraction having same value on the chart paper put on the board. Through this they will get idea of the concept LE- Bundling . Day5: (Learning Engagement 2) The students will be able to firstly write fraction achieved with same value . Example : $\frac{1}{2} = \frac{2}{4} = \frac{4}{8}$ <table border="1"> <tr> <td>D- Describe-The value of numerators were gradually increasing</td> </tr> <tr> <td> E-Explain- numerator and denominator was multiplied by same number-2 and 4 Numerators- 1 → 2 (by 2 times) 1 → 4 (by 4 times) Denominators- </td> </tr> </table>	D- Describe- The value of numerators were gradually increasing	E-Explain- numerator and denominator was multiplied by same number-2 and 4 Numerators- 1 → 2 (by 2 times) 1 → 4 (by 4 times) Denominators-
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	2 → 4 (by 2 times) 2 → 8 (by 2 times) A-Analyse -numerator and denominator of next fraction x times more than the previous fraction. L-Link -We can form equivalent fractions by multiplying or dividing numerator by a common number. LE- DEAL Competency-Critical thinking :Reasons effectively Day 6: (Learning Engagement 2) The guided practice will provided from the spirals where the learners will have to write at least two equivalent fractions of $\frac{5}{6}$, $\frac{7}{9}$, $\frac{8}{10}$, $\frac{2}{5}$. Competencies – Critical thinking – Makes Judgements and Decisions Day 8 : (Learning Engagement 2) The students in the groups will create a recipe of lime water using fractions , prepare it and enjoy it in the class . Competency : Collaboration- Work effectively in diverse teams . Critical thinking – Make judgements and decisions .
Lesson Plan : Stage 2	
Formatives/Unit test <i>(How will the facilitator check for comprehension?)</i> <u>*Integration of Arts/ICT</u>	Day1 – The facilitator will write few fractions on the board and ask learners to state the kinds of fractions . Day 4 – The flash card and the fraction of the same value pasted on the chart in the class will let facilitator check the understanding of the concept.

	Day 5 – The facilitator will write few fractions on the board and ask learners to encircle the equivalent fractions. Competencies – Critical thinking – Make judgements and decisions Day 6- The guided practice will help the learner check the understanding
Teacher Interventions <i>(Addressing the concerns and issues faced during the transactions)</i>	Day 3 : The learner will understand that $\frac{1}{4}$, $\frac{2}{8}$, $\frac{4}{16}$ means the same. But few learners will still not be clear and for that the facilitator will colour four rectangles into one quarter in various ways. On colouring 1 part out of 4 , 2 parts out of 8 , 4 parts out of 16 the learners will understand that $\frac{1}{4}$, $\frac{2}{8}$,$\frac{4}{16}$ are all actually one quarter portion of the rectangle (equal) and hence called equivalent fractions. Day 7- The learner will find the method of forming equivalent fractions little confusing , but the facilitator's intervention will help them to complete the exercise.
Extending the Lesson Further <i>(Creating through Active experimentation)</i>	Day 2 : (Learning Engagement2) Through the learner's performance in guided practice the facilitator will be able to check the understanding of the learners. Competency- Critical thinking – Use systems thinking . Day 8 – The recipe using fractions and the tasty lime water prepared by the learners will make learners feel happy and successful.
Summative Assessment (How will the facilitator check that learning objectives have been achieved?)	
Learners will design a board game of fractions . On every correct answer the learners will move ahead by 2 points and on every wrong answer the will move 1 point back . Competencies – Creativity – Works creatively with others , Critical thinking- Make Judgements and Decisions, Character-Grit	