



Topic: Decimals

Brief Description of the lesson:

In this lesson, students are taught about the fractions in terms of decimal, place value in decimal, Introduction of places: tenths, hundredths, thousandths, their equivalence to fractions. Students are taught to compare the decimal numbers. They will learn to first compare the whole number part and then the decimal part. Students will be able to add, subtract, multiply and divide decimals. They will also be able to apply the concepts to real life situations.

UN Sustainable Goals to be achieved (if any):

Objectives: (put Bloom's level)

I - Specific Objectives

The students will be able to:

- explore decimal place value(K)
- read and write decimals(U)
- compute addition of decimals(Ap)
- compute subtraction of decimals(Ap)
- read and write a fractional number in terms of decimals(U)
- understand the place value of tenths, hundredths, thousandths(U)
- converting decimals into fractions and vice versa(Ap)
- compare the decimal numbers(An)

II - Behavioral Objectives

- Small things also makes huge difference so one should never ignore small things.
- In a race or marathon athlete loses his/her position because of a minute difference of decimal in timing- Time Management
- While prescribing medicines doctors write the amount also like 6.25 mg, 3.25 ml which is in decimals, that shows that small difference also matters a lot – Medication.
- In cricket matches run rate is taken into consideration which helps the cricketers to achieve the target. Hence in achieving the goals.
- Students fail to get a seat in the competitive exams by a minute difference of decimal in their score.
- Use the operations on decimals in dealing with money.

Process / Activities

- **Activity (to introduce the lesson)**

Decimal World

- Teacher will write some decimal numbers on the interactive board and will ask students what are these numbers?
- Students will come with answers such as decimal, point, some of them will be able to read the numbers.
- Teacher will appreciate the students and will ask further questions –
- Where they have seen these decimal numbers?
- Expected answer- In newspapers, at grocery shops, in bills, in cricket matches (run rate), in calculators etc.
- And in this way a mind mapping is made relating decimals to real life.

Activity (to support learning)

Students will be separated in two groups. Each student of first group will be given fraction number and that of another group will be given their decimal numbers and they have to match when their number called out.

Skills (as per subject)

Observation, thinking, analysis, reasoning

Activity / Assignment (to assess learning)

1. Activity- Out to Lunch

Before starting the activity give currency notes of 10,20,50, 100,500 and 1000 to each pair

Teacher will enact as the restaurant manager.

1. Model Placing an Order. Assign partner pairs.
2. Give a menu card to each pair with the title "Snack Bar Menu".
3. Ask the students to place an order according to their choice.
4. After placing the order ask them to find the total amount they spent in their lunch.
5. Then after this ask the students that they have to pay the amount to the manager before leaving.
6. Students will use the currency notes given to them in paying the bill.
7. The students will be asked that how much money the manager will return them, so they will subtract the amount spent.
8. The pairs whose calculations will be correct will get a reward in the form of discount.

The Snack Bar Menu
 Cheese Pizza – Rs. 123.68
 Aloo Tikki- Rs. 30.5
 French Fries- Rs. 85.263
 Choco Lava Cake- Rs. 110
 Strawberry Shake- Rs. 54.21
 Masala Sandwich- Rs. 75.25
 Garlic Bread- Rs. 225.85
 Cheese Dip- Rs. 80.80
 Bisleri Water- 66.73

Exercise for Notebook (put Bloom's level)**Decimals Place Value System**

hundred thousands	ten thousands	thousands	hundreds	tens	ones	Decimal	tenths	hundredths	thousandths	In Words (while Reading)	In Words (while Writing)
					3	.	2	4		Three point two four	Three and twenty four hundredths

- a) Glossary
- b) Like and Unlike Decimals
- c) Like decimals:
- d) The decimal numbers with the same number of decimal places in their decimal part are called like decimals.
 For e.g.
 a) 0.2, 10.3, 773.6
 b) 62.73, 130.20, 44.36
 c) 6.200, 36.002, 24.043
 Unlike decimals: are decimal numbers with different places in their decimal part.
 For e.g.
 a) 2.6, 1.73
 b) 6.02, 4.376, 4.2

Digital Content to be used: Video-

<https://www.youtube.com/watch?v=BeZyGg8xVCE>

Video- <https://www.youtube.com/watch?v=2FH6YiLWluE>

https://www.youtube.com/watch?v=qQ4YaNkA7_4 (How to read the decimals)

<https://www.youtube.com/watch?v=KVuRMZ6DmF0> (Expanded form decimals)

<https://www.youtube.com/watch?v=68TBZRfaKnA> (Comparison of Decimals)

Expected Learning Outcomes

- explore decimal place value(K)
- read and write decimals(U)
- compute addition of decimals(Ap)
- compute subtraction of decimals(Ap)
- use decimals in money(Ap)
- relate decimal in daily life(Ap)
- read and write a fractional number in terms of decimals(U)
- understand the place value of tenths, hundredths, thousandths(U)
- converting decimals into fractions and vice versa(Ap)
- compare the decimal numbers(An)
- Small things also makes huge difference so one should never ignore small things.
- In a race or marathon athlete loses his/her position because of a minute difference of decimal in timing- Time Management
- While prescribing medicines doctors write the amount also like 6.25 mg, 3.25 ml which is in decimals , that shows that small difference also matters a lot – Medication.

- In cricket matches run rate is taken into consideration which helps the cricketers to achieve the target. Hence in achieving the goals.
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Assessment: (put Bloom's level)

Parameters:

Rubrics for Assessment

Expected Learning Outcome	1	2	3	4	5
Decimals	Tries hard to understand the meaning of decimals	Understands the meaning of decimals with little assistance.	Understands the meaning of decimals	Evaluate and correlate use of decimals as parts of a set and parts of a whole	Evaluate and correlate use of decimals as parts of a set and parts of a whole and links it with real life.
Read and Write Decimals	Doesn't know how to read and write decimals	Is able to read and write the left side of the decimal point, however is not able to read and write the right side of the decimal point.	Is able to read and write the left side of the decimal point, sometimes messes up with the places at the right of the decimal point.	Perfectly reads and writes decimals.	Perfectly reads and writes decimals and is able to read large decimal places.
Conversion of Fractions into Decimals and Vice Versa	Is not able to convert fractions into decimals and vice versa.	Tries to convert fractions into decimals and vice versa, needs assistance.	Is able to convert fractions into decimals however is not able to convert decimals into fractions OR Is able to convert decimals into fractions however is not able to convert fractions into decimals	Efficiently converts fractions into decimals and vice versa.	Efficiently converts fractions into decimals and vice versa and even converts the fractions which don't have the denominators in the powers of 10.
Like and Unlike Decimals	Has a little understanding of like and unlike decimals	Has understanding of like and unlike decimals that what are these	Has clear understanding of like and unlike decimals however makes mistakes in converting unlike decimals to like decimals	Has clear understanding of like and unlike decimals, and converts unlike decimals to like decimals confidently	Has clear understanding of like and unlike decimals, converts unlike decimals to like decimals confidently and also extends his/her knowledge in correlating the concept with like and unlike fractions
Comparison of Decimals	Is not able to compare decimals	Is able to compare like decimals however needs assistance in comparison of unlike decimals	Is able to compare like decimals however needs little assistance in comparison of unlike decimals	Compares the like and unlike decimals	Confidently compares the like and unlike decimals, and even converts it in fractions and then compare it.
Addition and Subtraction of Decimals	Is not able to add and subtract decimals	Has confusion in placing the digits according the place value decimal takes constant help either of facilitator or of peer in addition and subtraction.	Adds and subtracts like decimals, takes little help either of facilitator or of peer in addition and subtraction of unlike decimals.	Adds and subtracts both like and unlike decimal	Correlate addition and subtraction of decimals to real life situations like in finding perimeter, in money and measurements etc.

Review of the Lesson Plan: To be done when the lesson gets over

Problems faced –

Success-

Failure-

Real Learning Outcomes-

Students Response / Participation

Teachers Learning to be added.