



## CHEMBUR EDUCATION SOCIETY'S CHEMBUR SARVANKASH SHIKSHANSHASTRA MAHAVIDYALAYA

## **TECHNOLOGY BASED LESSONS**

Name : Rehmani Afsana Haqiqullah

Year : S.Y.B.Ed

Roll No: 29

Name of Internship School :Tilak Nagar Mumbai Public School

1

Elective Course 2 (EC - 2)

Pedagogy of School Subject : Mathematics

Method Master : Prof. Vibhawari Shigwan

Date :29/06/24

Signature and Stamp

Chembur Sarvankash Shikabanahaster Mahavidyataya Rumkristerion Chemburkor Marg. Chembur Naka, Mumbai 400 071



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CHEMBUR SARVANKASH SHIKSHANSHASTRA MAHAVIDYALAYA

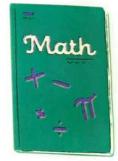
# PEDAGOGY OF SCHOOL SUBJECT: MATHEMATICS

# **Technology Based Lesson Plans**

# **TEACHER INCHARGE : PROF. VIBHAWARI SHIGWAN**

# NAME OF STUDENT TEACHER : KAINAT SALLED





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PRINCIPAL Chembur Sarvankash Shikshanshastra Mahavidyalaya Ramkrishnan Chemburkar Marg, Chembur Naka, Mumbai 400 071 3+3





## CHEMBUR EDUCATION SOCIETY'S

# CHEMBUR SARVANKASH SHIKSHANSHASTRA MAHAVIDYALAYA

# TECHNOLOGY BASED LESSONS

Name : Kainat sayyed

Year : S.Y.B.Ed

Roll No: 33

Name of Internship School : MPS school, Matunga.

Elective Course 2 (EC - 2)

Pedagogy of School Subject : Mathematics

Method Master : Prof. Vibhawari Shigwan

29/06/2024

Signature and Stamp

PRINCIPAL Chembur Sarvankash Shitsbanshastra Mahavidyalaya Ramkrishnan Chemburkar Marg, Chembur Naka, Mumbai 400 071

Date :

# TECHNOLOGY BASED LESSONS

# INDEX

Sr. no.	Tittle of lesson	Link	Application
1.	Pythagoras theorem	https://youtu.be/uMwaQYJ4iRc?feature= shared	Benime/App based
2.	Polygon	https://create.kahoot.it/share/polygon/c52 4fc26-575b-45d0-85b4-9580d7c44555	Kahoot/App based
3.	Circle	https://ed.ted.com/on/ZdUv5Y2L	Ted.Ed/Video based
4.	Polygon	https://edpuzzle.com/join/dezonin	Edpuzzle/Video based
5.	Matrices	https://edpuzzle.com/embed/assignments/ 6644748792cb79576077ce3f/watch	Edupuzzle/Vide o based



#### **APP Based Lesson**

Name of the Learner: - Kainat Sayyed

Lesson Title: - Pythagoras Theorem

Subject: - Mathematics

Name of the App: - Benime

Grade Level: - 7th

Duration: - 41 secs

learning Objective: -

#### Knowledge:

- The pupil remembers the types of triangle.
- The pupil recalls the right angle triangle.

#### Understanding:

- The pupil develops the understanding of Pythagoras theorem.
- The pupil describes various properties of right angle triangle.

#### Application:

- The pupil illustrate difference between right angle triangle & other triangle types.
- The pupil analysis the concept of Pythagoras theorem.

#### Skill:

• The pupil draw diagram for theorem.

Materials: Nil

Technology Requirements: Internet/Wifi connection, Laptop/Smartphone.

Preparation: Not required

	Shikahanah
	Instructional Steps /अनुदेशनात्मक पायन्या
	the topic
ntroduction	<ul> <li>Greet students and introduce the topic.</li> <li>Introduces the app which is going to be used.</li> </ul>
	<ul> <li>Teacher discusses the importance of understanding pythagoras theorem.</li> </ul>
Pre-App Discussion	Teacher discusses the my
	. Grenythagoras theorem.
	<ul> <li>Teacher shows the App based concept for pythagoras theorem.</li> </ul>
App Exploration	
Guided	<ul> <li>Teacher guides the students to solve the question.</li> </ul>
Activities	
Activities	
a fl stand	<ul> <li>Teacher discusses about the concept of right angle triangle.</li> </ul>
Reflection and	
Discussion	
	• Teacher discusses more types of triangle with the students.
Extension Activities	Teacher discusses more types of drange
Assessment	• Teacher checks the answers given by the student to asses them.
Assessment	
Closure	Summarize the concept of theorem and provide them more sums related to
	topic.

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	Instructional Steps / M-J&m-Marta un un
Introduction	<ul> <li>Calcet students and introduce the topic</li> <li>Introduces the app which is going to be used</li> </ul>
Pre-App Discussion	Leacher discusses the importance of understanding pythagoras theorem.
App Exploration	<ul> <li>Teacher shows the App based concept for pythagoras theorem.</li> </ul>
Guided Activities	<ul> <li>Teacher guides the students to solve the question.</li> </ul>
Reflection and Discussion	• Teacher discusses about the concept of right angle triangle.
Extension Activities	• Teacher discusses more types of triangle with the students.
Assessment	• Teacher checks the answers given by the student to asses them.
losure	<ul> <li>Summarize the concept of theorem and provide them more sums related to topic.</li> </ul>

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Sayyed Kainat

Roll no. 33

Subject - Maths

Topic - Pythagoras Theor

Benime App video. pythagoras theorem

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Sayyed Kainat

#### Conclusion

the hypotenuse. That is, a2 + b2 = c2, where c is the length of hypotenuse (the side opposite the right angle). equal to the square of the length of the sum of the squares of the lengths of the legs is the sides of a right triangle. It says that the Pythagorean theorem, Rule relating the lengths of

Benime App video. pythagoras theorem

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The formula for

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What is the full Pythagoras formula?

Sayyed Kainat

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Benime App video. pythagoras theorem

hypotenuse. "A" and "B" represent the other two sides of the represents the longest side of a right triangle, called the

Chembur Naka, Mumbei 409 071

Ramkrishnan Chemburkar Marg.

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Pythagoras' theorem is  $a^2 + b^2 = c^2$ . In this equation, "C"

Benime App video. pythagoras theorem

the length of the shorter sides of a right triangle o

to know the lengths of at least two sides of a right To solve the Pythagorean theorem, we need

The Pythagorean theorem formula is  $a^{2} + b^{2} = c^{2}$ .

The Pythagorean theorem formula can be used to find

I view I hr ago 🗁 ...more



## APP Based Lesson

Name of the Learner: - Kainat sayyed

Lesson Title: - Polygons

Subject: - Mathematics

Name of the App: - Kahoot

Grade Level: - 6th

Duration: - NIL

Learning Objective: -

#### Knowledge:

- The pupil remembers the basic Names of shapes .
- The pupil recalls the shapes .

#### Understanding:

- The pupil develops the understanding of different shape Names •
- The pupil able to understand different sides of shapes. .

#### Application:

- The pupil applies his/her knowledge and understanding in given Sums.
- The pupil analysis the concept of naming polygons according to their sides. •

#### Skill:

- The pupil develops practical skills to draw a polygons. .
- The pupil draws different shapes. .

Materials: Nil

Technology Requirements: Internet/Wifi connection, Laptop/Smartphone.

Preparation: Not required

	Instructional Steps /अनुदेशनात्मक पायऱ्या
Introduction	<ul> <li>Greet students and introduce the terminologies.</li> <li>Introduces the app which is going to be used.</li> </ul>
Pre-App Discussion	• Teacher discusses the importance of understanding different 3D shape figures.
App Exploration	• Teacher shows the App based quizzes on polygons.
Guided Activities	• Teacher guides the students to solve the quiz.
Reflection and Discussion	Teacher discusses about the concept of 3D figures.
Extension Activities	Teacher discusses more such Polygons with the students.
Assessment	• Teacher checks the figures drawn by the student to asses them.
Closure	<ul> <li>Summarize the main points covered in the lesson and provide resources for further exploration, such as 3D figures present in surrounding.</li> </ul>

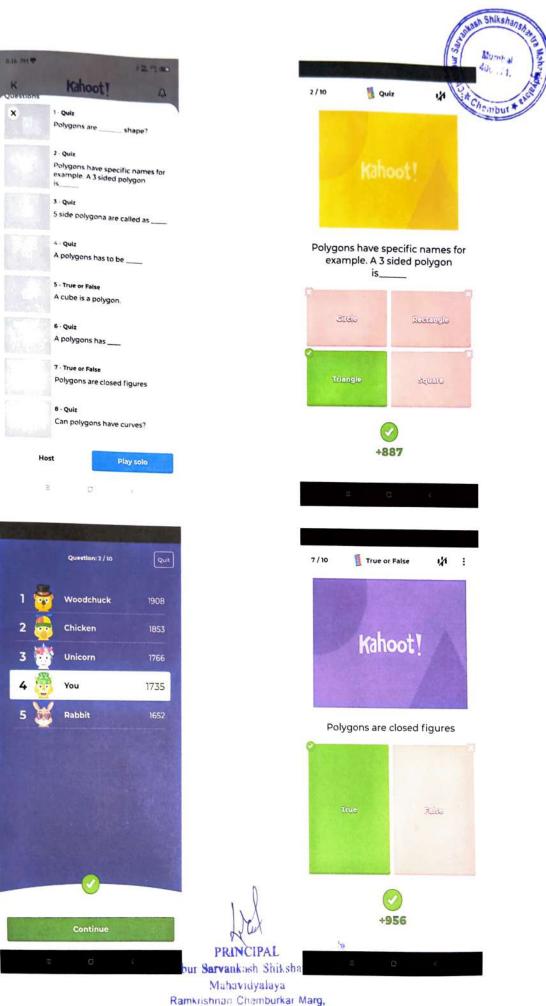
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Signature of Principal

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# Video Based Lesson

Name of the Teacher: Kainat Sayyed Title of the Video: Circle. URL of the Video: <u>https://ed.ted.com/on/ZdUv5Y2L</u> Class Code (If any): - Nil Link for Sharing (If any) : <u>https://ed.ted.com/on/ZdUv5Y2L</u> Duration of the Video: 4:10mins Subject: - Mathematics Grade Level: 8th

## Learning Objectives: -

### Knowledge:

- The pupil remembers the knowledge of circle.
- The pupil able to recognize the diameter and radius.

## Understanding: -

- The pupil develops an understanding concept of circle.
- The pupil explain the concept of properties of chord.

## Application: -

• The pupil verifies the answer by looking at examples given in a video.

• The pupil analysze the questions asked in a video. Skill:

The pupil develops practical skill of drawing chord and diameter of a circle.

Introduction	Instructional Steps / अनुदेशनात्मक पायन्या • Greets students and introduce the topic of Circle.				
<ul> <li>Explains the theorem of Circle.</li> <li>Pre-Viewing</li> <li>Teacher inquires students to know their knowledge of properties of a circle.</li> </ul>					
Video Viewing:	<ul> <li>Play a video presentation on the topic of circle.</li> <li>Teacher provides guided questions for the students to consider while watching.</li> <li>For eg. :-What is the chord of a circle?</li> </ul>				
Post-Viewing Discussion:	<ul> <li>Teacher leads a discussion on the properties of circle.</li> <li>Teacher asked students to analyze the questions they noticed during the video.</li> <li>Teacher discusses any questions or area of confusion that arose during watching the video.</li> </ul>				
Extension Activities: -	<ul> <li>Teacher discusses some more properties of a circle.</li> </ul>				
Assessment:	<ul> <li>Teacher provides additional MCQ's/Quiz for better understanding of the concept of a circle.</li> </ul>				
Conclusion and Reflection	<ul> <li>Summarize the theorem of a circle and properties of a circle and a chord.</li> </ul>				
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	Ramkrishnan Chemburkar Marg,

Ramkrishnan Chemburkar Marg, Chembur Naka, Mumbai 400 071



## Video Based Lesson

Name of the Teacher: Kainat Sayyed Title of the Video: Polygons. URL of the Video: https://edpuzzle.com/join/dezonin

Class Code (If any): - Dezonin Link for Sharing (If any): <u>https://edpuzzle.com/join/dezonin</u>

Duration of the Video: 03:53 mins Subject: - Mathematics Grade Level: 6th

### <sup>t</sup> Learning Objectives: -

### Knowledge:

- The pupil remember different shapes of figures.
- The pupil recalls the concept sides of different shapes i. e Triangle, square etc.

## Understanding: -

The pupil understands 3D figures.

The pupil describes difference between close and open figures.

## Application: -

- The pupil applies his/her understanding on curve and straight line.
- The pupil analysis the difference between close and open shapes.

### Skill:

• The pupil develops practical skill of drawing shapes of polygons.

Introduction	Instructional Steps / अनुदेशनात्मक पाय-या • Greets students and introduce the topic of polygons
Pre-Viewing Discussion	<ul> <li>Explains the concept of Close figure and open figure diagrams.</li> <li>Teacher inquires students to know their knowledge on different shapes.</li> </ul>
Video Viewing:	<ul> <li>Play a video presentation on the topic of polygons.</li> <li>Teacher provides guided questions for the students to consider while watching.</li> <li>For eg. :- How many polygons were there in a video.</li> </ul>
Post-Viewing Discussion:	<ul> <li>Teacher leads a discussion on the key concepts presented in the video.</li> <li>Teacher asked students to share example they noticed in the video</li> <li>Teacher discusses any questions or area of confusion that arose during watching the video.</li> </ul>
Extension Activities: -	<ul> <li>Teacher discusses about more 3D images and how some polygons are interrelated with chemical reaction such as Hexane.</li> </ul>
Assessment:	<ul> <li>Teacher provides additional MCQ's/Quiz for better understanding of the concept polygons.</li> </ul>
Conclusion and Reflection	<ul> <li>Summarize the main points covered in the lesson and provide resources for further exploration, such as find more 3D images in your surrounding.</li> </ul>
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# Video Based Lesson

Name of the Teacher: Kainat Sayyed Title of the Video: Matrices URL of the Video:

https://edpuzzle.com/embed/assignments/6644748792cb79576077ce3f/watch

Class Code (If any): o umupnig Link for Sharing (If any): https://edpuzzle.com/embed/assignments/6644748792cb79576077ce3f/watch subject: - Mathematics Grade Level: 7th

## Learning Objectives: -

### Knowledge:

- The pupil remembers the basic concepts of addition. The pupil recalls the concept of Place value.

## Understanding: -

- The pupil understands the concept of rows and columns.
- The pupil describes the concept of addition or substraction.

## Application: -

- The pupil applies his/her understanding on solving sums.
- The pupil analysis what is given and what to be find.

## Skill:

The pupil develops practical skill solving matrices.

	Instructional Steps / अनुदेशनात्मक
Introduction	Greets students and introduce the topic of Matrices
pre-Viewing Discussion	<ul> <li>Explains the concept of rows and columns.</li> <li>Teacher inquires students to know their knowledge on Addition and Division.</li> </ul>
Video Viewing:	<ul> <li>Play a video presentation on the topic of matrices.</li> <li>Teacher provides guided questions for the students to consider while watching.</li> </ul>
	<ul> <li>For eg. :-What is null matrices?</li> </ul>
post-Viewing	<ul> <li>Teacher leads a discussion on the concepts presented in the video.</li> <li>Teacher educion</li> </ul>
	<ul> <li>Teacher asked students to share example they noticed in the video</li> <li>Teacher discusses any questions or area of confusion that arose during watching the video.</li> </ul>
xtension Activities: -	<ul> <li>Teacher discusses the ways to solve matrices.</li> </ul>
ssessment:	<ul> <li>Teacher provides additional MCQ's/Quiz for better understanding of the concept of Matrices.</li> </ul>
onclusion and eflection	Summarize the examples and types given in video.



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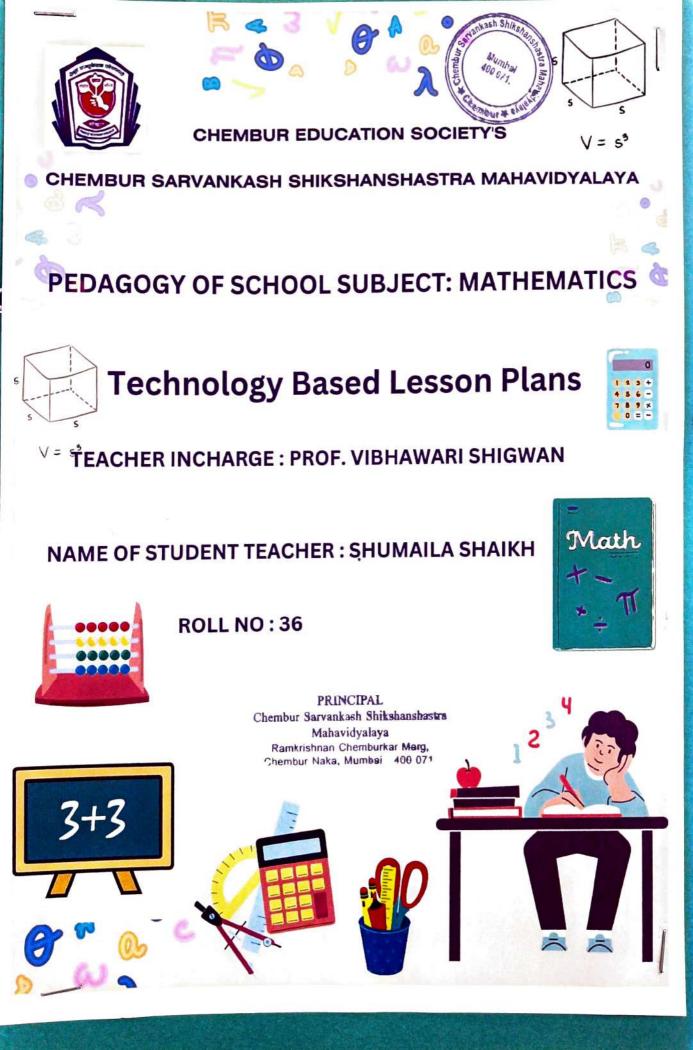
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## **TECHNOLOGY BASED LESSONS**

Name : Shumaila Abdulrashid Shaikh

Year : S.Y.B.Ed

Roll No: 36

Name of Internship School : Tilak Nagar Mumbai Public School

Elective Course 2 (EC - 2)

**Pedagogy of School Subject : Mathematics** 

Method Master : Prof. Vibhawari Shigwan

Date: 29 06 2024.

Signature and Stamp PRINCIPAL Chembur Sarvankash Shikshanshastra Mahavidyalaya Ramonshoon Chemipukar

Chembur Naka, Mumbai 400 071

# **TECHNOLOGY BASED LESSONS**

## INDEX

Sr. no.	Tittle of lesson	Link	Application
1.	Three dimensional objects.	https://edpuzzle.com/assignments/65f344 0ae5d90acf32b84766/watch	Edpuzzle
2.	Types of Angles.	<u>https://ed.ted.com/on/nXCBjQ6H</u>	TEDEd
3.	Pythagoras Theorm	https://ed.ted.com/on/1asd5dnW	TEDEd
4.	Rectangular Prism	https://drive.google.com/file/d/17sagFBH 0GvNHvwJiWajJFfJ0m51gY4PK/view?u sp=drivesdk	Benime
5.	Pythagoras Theorm	https://create.kahoot.it/share/pythagoras- theorem/d9c684b5-873b-40a5-ada8- bbd4947f8572	Kahoot



#### **APP Based Lesson**

Name of the Learner: Shumaila Shaikh

Lesson Title:- Three dimensional shapes

Subject:- Mathematics

Name of the App:- Edpuzzle

Link : https://edpuzzle.com/assignments/65f3440ae5d90acf32b84766/watch

Grade Level:- 6th

Duration:- 6 minutes

Learning Objective:-

Knowledge:

The pupil recalls two dimensional objects.

#### Understanding:

The pupil understand about the three dimensional objects.

#### Application:

The pupil his/her knowledge and understanding in new and unfamiliar way.

#### Skill:

The pupil draws diagram of three dimensional object skillfully.

#### Materials:

Laptop / Smart phone

#### Technology Requirements:

Internet, WiFi connection

#### Preparation:

No specific preparation.

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Instructional Steps /अनुदेशनात्मक पायन्या					
Introduction	Teacher greets the students and draws some two dimensional diagrams and later shows some three dimensional objects.				
Pre-App Discussion	Teacher discuss about three dimensional objects and explain about edges vertices and faces.				
App Exploration	Teacher shows the App based video on the topic and discusses important points with the students.				
Guided Activities	Teacher helps student in identifying various three dimensional objects.				
Reflection and Discussion	Teacher discusses about various examples of three dimensional objects.				
Extension Activities	Teacher ask students to name few three dimensional objects present in the classroom.				
Assessment	Teacher takes quiz on the topic.				
Closure	Teacher summarizes the topic.				

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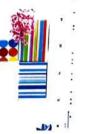
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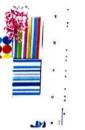
























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## Video Based Lesson

Name of the Teacher:- Shumaila Shaikh

Title of the Video: Types of angles

URL of the Video: https://ed.ted.com/on/nXCBjQ6H

Class Code (If any):- NIL

Link for Sharing (If any) NIL

Duration of the Video: 5 minutes 22 seconds

Subject: Mathematics

Grade Level: 6th

Learning Objectives:-

### Knowledge:

The pupil remembers the concept of lines and rays.

### Understanding:

The pupil understands the concept of different types of angles.

### Application:

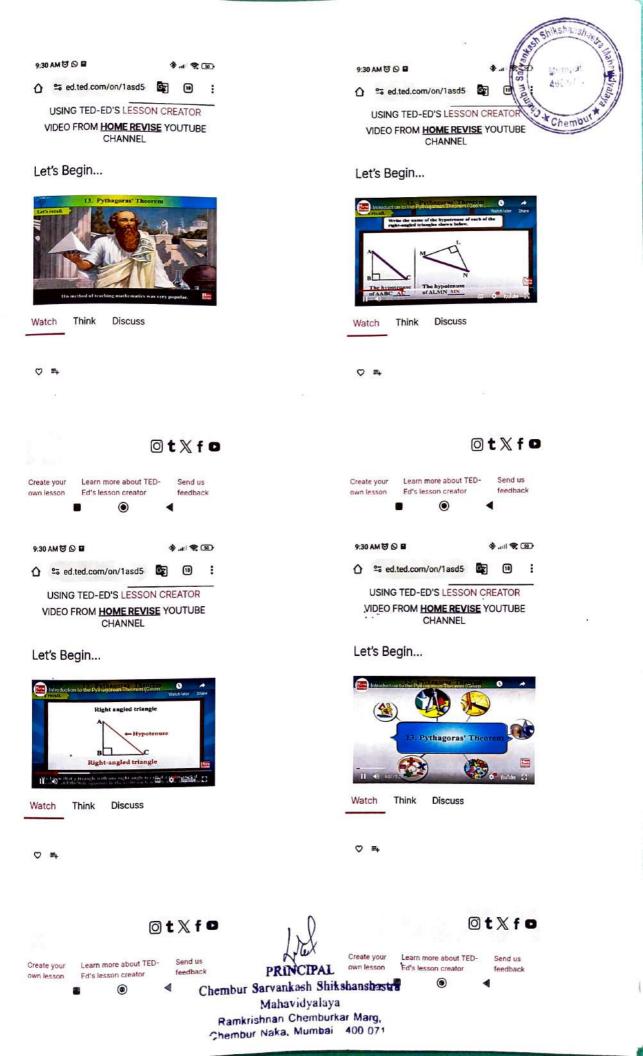
The pupil applies his/her knowledge and understanding ing new and unfamiliar situation.

### Skill:

The pupil draws different types of angles skillfully.

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	Instructional Steps / अनुदेशनात्मक पायऱ्या
Introduction	Teacher greets students and teacher discuss about lines and rays.
Pre Viewing	Teacher explains the different types of angles and discuss how hands of clocks
Discussion	forms different angles.
Video Viewing:	Teacher shows the video on the topic.
Post-Viewing	Teacher discuss about the different angles and their measurements.
Discussion:	
Extension	Teacher form group of students and gives them some matchsticks and ask them to
Activities:	make different angles using matchsticks.
Assessment:	Teacher takes a quiz on the topic.
Conclusion	Teacher summarizes the topic and ask students to draw different types of different
and Reflection	measurements.
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## Video Based Lesson

Name of the Teacher:- Shumaila Shaikh

Title of the Video: Introduction to Pythagoras theorm. URL of the Video: <u>https://ed.ted.com/on/1asd5dnW</u> Class Code (If any):- NIL Link for Sharing (If any) : NIL

Duration of the Video: 2 minutes

Subject: Mathematics

Grade Level: Standard 7th

Learning Objectives:-

## Knowledge:

The pupil remembers right angled triangle.

## Understanding:

The pupil understands the concept of the concept of hypotenuse and side of triangle.

## Application:

The pupil applies his/her knowledge and understanding in new and unfamiliar situation

## Skill:

The pupil solves mathematical problem skillfully.

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	Instructional Steps / अनुदेशनात्मक पायऱ्या
Introduction	Teacher greets students.
	Teacher shows students 3 different types of triangle.
Pre Viewing	Teacher explain about the concept of sides and hypotenuse.
Discussion	
Video Viewing:	Play a video presentation on the topic Introduction of Pythagoras theorem.
	Teacher provides guided questions to the students to consider while watching.
Post-Viewing	Teacher leads a discussion on the key concepts presented in the video.
Discussion:	
Extension	Teacher explain about Pythagoras theorem and the explain its formula.
Activities:	
Assessment:	Teacher gives student problem based on formula.
Conclusion	Teacher summarizes the topic and solves doubts of students.
and Reflection	

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## Video Based Lesson

Name of the Teacher:- Shumaila Shaikh

Title of the Video: Rectangular Prism

URL of the Video:

https://drive.google.com/file/d/17sagFBH0GyNHvwJiWajJFfJ0m51gY4PK/view? usp=drivesdk Class Code (If any):- NIL Link for Sharing (If any) : NIL

Duration of the Video: 2 minutes 55 seconds

Subject: Mathematics

Grade Level: Standard 6th

Learning Objectives:-

### Knowledge:

i. The pupil recalls various three dimensional shapes.
 ii. The pupil remembers a rectangle.

## Understanding:

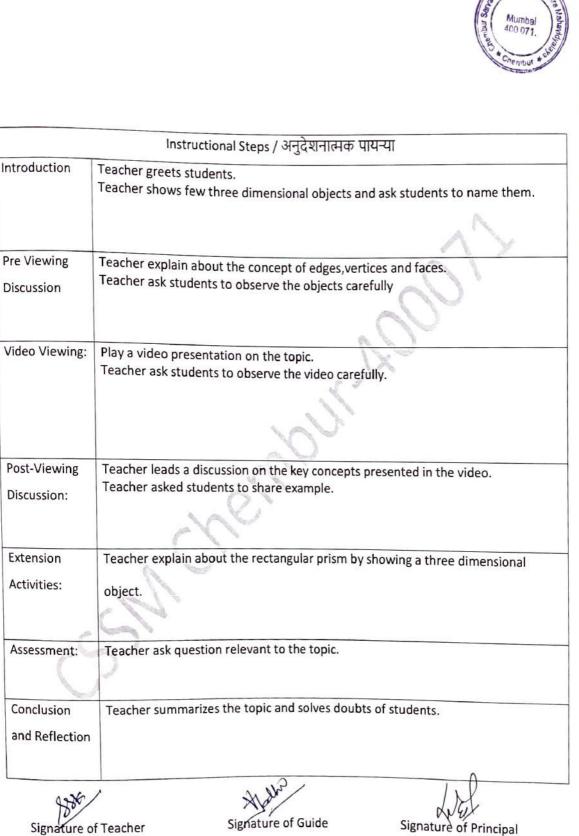
The pupil understands the concept of the concept of edges, vertices and faces.

### Application:

The pupil applies his/her knowledge and understanding in new and unfamiliar situation.

### Skill:

The pupil draws the diagram of rectangular prism skillfully.



Principal Chembur Sarvankash Shikshanshastra Mahavidyalaya R.C. Marg, Chembur, Mumbai - 400 071.





is also called a cuboid.

rectangular in shape. Hence, there are

three pairs of identical faces here.

Due to its shape, a rectangular prism

All the faces of the prism are



PRINCIPAL Chembur Sarvankash Shikshanshastra Mahavidyalaya Ramkrishnen Chemburkar Meep. Chembur Nake, Mumbai 406 071



Chembur Sarvankash Shikshanshastn Mahavidyalaya Ramkrishnan Chemburkar Marg, Chembur Naka, Mumbai 400 071











#### **APP Based Lesson**

Name of the Learner: Shumaila Shaikh

Lesson Title:- Pythagoras theorem

Subject:- Mathematics

Name of the App:- Kahoot

Link :

https://create.kahoot.it/share/pythagoras-theorem/d9c684b5-873b-40a5-ada8bbd4947f8572

Grade Level:- 7th

Duration:- 2 minutes

Learning Objective:-

Knowledge:

The pupil remember different types of triangles,

#### Understanding:

The pupil understand about the concept of Pythagoras theorem.

#### Application:

The pupil applies his/her knowledge and understanding in new and unfamiliar way.

#### Skill:

The pupil solves problems skillfully.

#### Materials:

Laptop / Smart phone

#### Technology Requirements:

Internet, WiFi connection

#### Preparation:

No specific preparation.

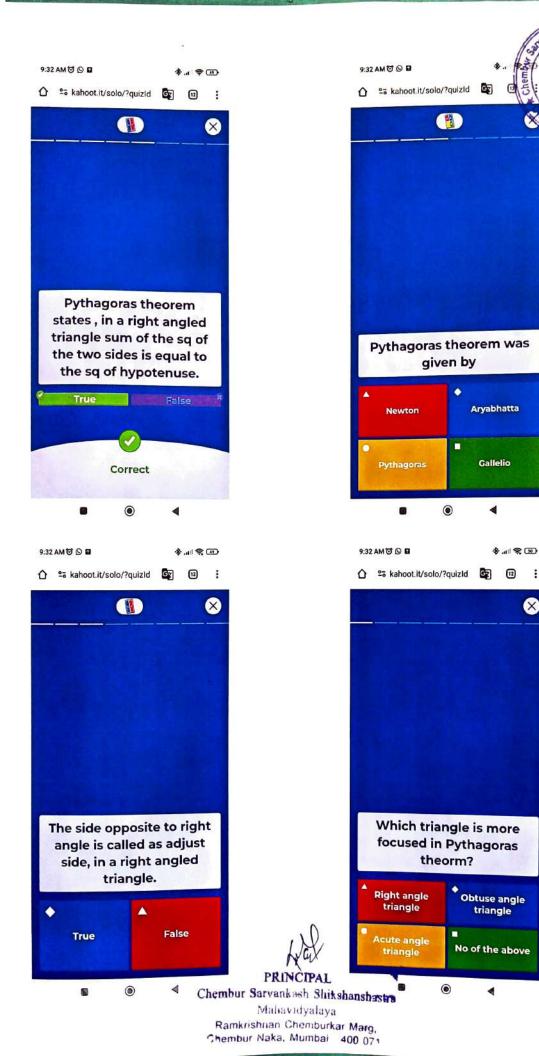
Instructional Steps /अनुदेशनात्मक पायऱ्या		
Introduction	Teacher greets the students and draws three different types of triangles.	
Pre-App Discussion	Teacher discuss about right angled triangle.	
App Exploration	Teacher shows the App based video on the topic and discusses important points with the students.	
Guided Activities	Teacher helps student to understand about hypotenuse of a right angled triangle.	
Reflection and Discussion	Teacher discusses about various examples of Pythagoras theorem	
Extension Activities	Teacher ask students to solve the given examples and state if the triangles are right angled triangle or not.	
Assessment	Teacher takes quiz on the topic.	
	Teacher summarizes the topic.	

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**Chembur Education Society's** 

Chembur Sarvankash Shikshan Shastra Mahavidyalaya

R.C. Marg, Chembur Naka, Chembur-400071

# **TECHNOLOGY BASED LESSONS**

Name of the Student Teacher: Vishwakarma Sheela Akhilesh

S.Y.B.Ed (English medium)

Roll No.: 44

2<sup>nd</sup> Method: Mathematics

4<sup>th</sup> Sem Internship Programme

DATE: 29/06/24

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# INDEX



Sr.No	Lesson Name	Link	Appli- Cation
1.	Video based lesson 1 • Triangle & it's types • Std - 6 <sup>th</sup>	https://edpuzzle.com/ass ignments/65f08533c1ae8 d023861ed20/watch	ED PUZZLE
2.	Video based lesson 2 • Line And angles • Std - 7 <sup>th</sup>	https://ed.ted.com/on/o tLbo0EE	ED TED
3.	App based lesson 3 • Compound Interest • Std- 8 <sup>th</sup>	https://youtu.be/dlpyqH kvrgE?feature=shared	BENI- ME
4.	App based lesson 4 • Triangle & it's types • Std - 6 <sup>th</sup>	https://create.kahoot.it/s hare/angles-and-it-s- type/9fd30dff-d222- 4ba4-aae9-22e18e34f815	KAHOO
5.	Video based lesson 5 • Co-ordinate Geometry • Std - 9 <sup>th</sup>	https://edpuzzle.com/ass ignments/66486c0d96a03 f0a3ad0909e/watch	

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### Video Based Lesson

Lesson No. 01

Name of the Teacher:- Vishwakarma Sheela Akhilesh

Title of the Video: Triangles And Types of triangle

URL of the Video: https://edpuzzle.com/assignments/65f08533c1ae8d023861ed20/watch

Class Code (If any):- uttasuj

Link for Sharing (If any):- ----

Duration of the Video:- 2 Min. 50 sec.

Subject:- Mathematics

Grade Level:- 6<sup>th</sup>

Learning Objectives:- Cognitive, Psychomotor, affective

Knowledge: students will able to recognize the shape of triangle.

Understanding: 1. Students will be able to explain the structure of triangle. 2. Students will be able to explain the perimeter of triangle.

Application: Students will learn the common rules for solving the problems, based on Triangles and its properties and will develops interest will become logical.

Skill: 1. The students applies skill of mathematics. 2. The Students draws diagram accurately.



	Instructional Steps / अनञ्ज दश्ये नःाकं पःायरं या	
Introduction	Show image of various objects that includes triangles, such as:         1. A Slice of pizza         2. Traffic signs         3. The Eiffel Tower         4. Pyramids         5. Slice of cake	
Pre Viewing Discussion	<ol> <li>Students should be familiar with basic geometric shapes such as Square, rectangles, circles and polygons.</li> <li>Understanding about that shapes are defined by their sides and angles.</li> <li>Basic skills in using a ruler to measure lengths.</li> <li>Knowledge of basic angles types i.e. 90°, &lt; 90°, &gt; 90°</li> <li>To draw basic geometry using a ruler.</li> <li>Engage students in a discussion about their previous experie ces with drawingand measuring</li> </ol>	
Video Viewing	<ol> <li>shapes.</li> <li>Definition of triangle.</li> <li>Triangle based on their angles</li> <li>Figure of right, acute, obtuse angles.</li> <li>Triangles of angles made with which angles.</li> <li>What types of triangle.</li> <li>Doing one activity related to the triangle</li> </ol>	
Post-Viewing Discussion	Q1. Students to list the types of triangles based on their angles. Q2. What types of triangle has all sides of equal length ? Q3. What types of triangle has one angle that is exactly 90 degree ?	
Extension Activities	<ul> <li>Distribute small triangles cut - outs ( Each Type: Right, Acute, Obtuse ) to each students or group.</li> <li>Ask students to examine their triangles and discuss what they notice about the sides and angles.</li> <li>Prompt them to compare their triangle with those of their peers to notice differences and similarities.</li> </ul>	
Assessment	FORMATIVE: Observe students during activities to ensure they understand the concepts. SUMMATIVE: Evaluate the worksheet and any homework assigned to assess understanding.	
Conclusion and Reflection	A triangle has three sides, three vertices and three angles. The sum of the three angles of a triangle is always 180°. The sum of the length of two sides of triangle is always greater than the length of the third side.	

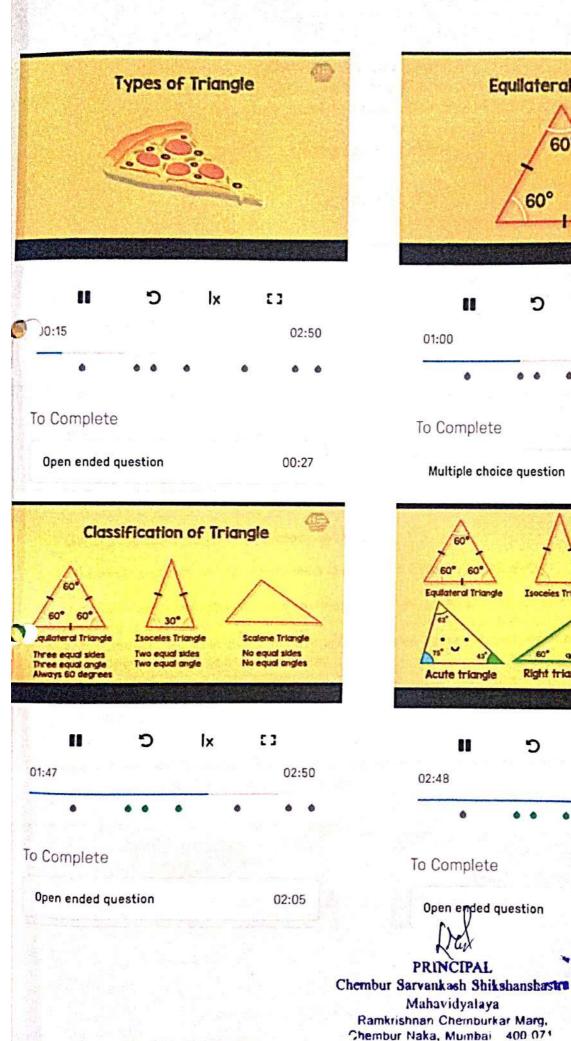
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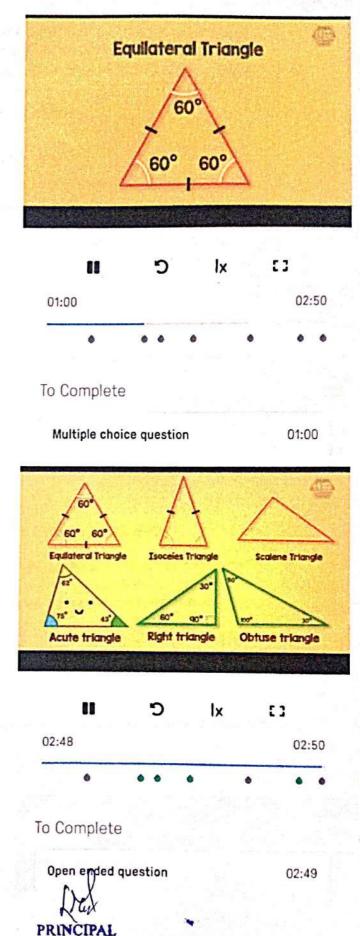
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# Video Based Lesson

### Lesson No. 02

Name of the Teacher:- Vishwakarma Sheela Akhilesh

Title of the Video:- Lines and Angles

URL of the Video:-https://ed.ted.com/on/otLbo0EE

Class Code (If any):-

Link for Sharing (If any):- --

Duration of the Video:- 4 Min. 38 sec.

Subject: Mathematics

Grade Level: 7<sup>th</sup>

Learning Objectives :- Cognitive, Psychomotor, affective

Knowledge: students will able to Recalls & Recognizes basic terms of geometry.

**Understanding:** 1.Students will be able to finds the complementary or supplementary angles for the given angles.

2.Students will be able to identifies corresponding angles, interior angles, alternative angles and vertically opposite angles in a given figure.

Application: 1.Students applies knowledge and skills in real-life examples. 2.Students applies the properties of lies and angles in solving problems related to lines & angles.

Skill: 1. The students develops accuracy in using geometrical instruments like Rulers, protractor etc. 2. The Students draws diagram accurately.



	Instructional Steps/ 에너 이 이 이 이 이 이 이 이 이 이 이 이 이 이 이 이 이 이	शःेनःाôक पःायरंया Student's Answer	
Introduction	Teacher's Question		
	1. What is line?	It we extend any 2 point in eitherdirection endlessly.	
	<ol> <li>What is line segment?</li> <li>What is angle?</li> </ol>	It has 2 end points. It forms when 2 line or line segmentmeets.	
	4. How can you find measure any ang	les? By using a protractor.	
Pre Viewing Discussion1. Lines have no beginning and no end, but a line segment has a ray has a starting point but no end point. 2. An angle is created with two rays having the same starting point		point.	
	<ul><li>transversal and transversal of paral</li><li>4. If the corresponding angles and the have to be parallel.</li></ul>	lel lines. pairs of alternate interior angles are equal, then the lines	
Video Viewing	<ul> <li>There are different types of lines.</li> <li>Line</li> <li>Line segment</li> <li>Ray</li> <li>angles</li> </ul>	<ul> <li>There are four types of angles</li> <li>Complementary angles</li> <li>Supplementary angles</li> <li>Adjacent angles</li> <li>Vertical angles</li> </ul>	
Post-Viewing Discussion	<ol> <li>Identify the different types of angles.</li> <li>Describe lines and pairs of line.</li> <li>Explain parallel line</li> <li>What is a transversal?</li> <li>Define a line segment?</li> </ol>		
Extension Activities	Materials: Protractors, angle worksheets or Activity: Students use protractors to measur worksheets. They can also go on an angle hu of angle.	charts. re and classify angles found in the classroom or o provided nt around theschool to find real-life examples of each typ	
00	progress and provide ongoing feedback that	ucted during the learning process to monitor student can be used to improveteaching and learning. te student learning at the end of an Instructional unit by mmark.	
Reflection	After completing this lesson you should have a good understanding of the lines and angles. A line contains one starting point and one ending point. An angle can be referred to as a figure that is create by two rays. These rays then meet at a commonendpoint. An angle refers to a geometric shape.		

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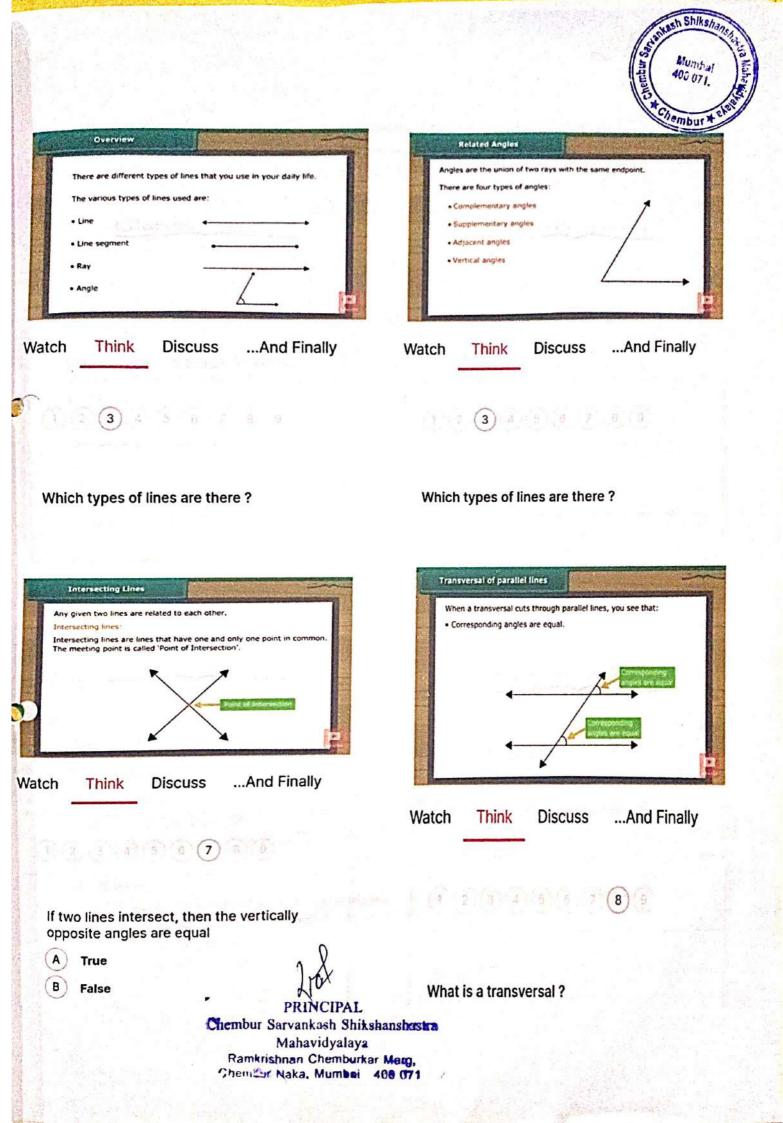
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### **APP Based Lesson**

### Lesson No. 03

Name of the Learner: Vishwakarma Sheela Akhilesh

Lesson Title:- Compound Interest

Subject:- Mathematics

Name of the App:- Benime

Grade Level:- 8<sup>th</sup>

Duration:- 2 Min. 42 sec.

Learning Objective:-Cognitive, Psychomotor, affective

Knowledge: 1. Students will be able to recall compound interest.

2. Students will be able to recognise the concept of interest and its formation of Formula.

**Understanding:** 1. Students will be able to explain and understand the compound interest. 2. Students will be able to classify the formula of compound interest.

Application: 1. Students will be able to demonstrate its application.

2. Students will be able to use the knowledge they learned about compound Interest.

Skill: 1. Students will be able to practice more questions, after understanding the concept.2. Students will be able to perform their skills.

### Materials:-

- Tablets or smartphones with the selected financial calculator app installed (e.g., Compound Interest Calculator, WolframAlpha, or a custom-built app)
- Internet access
- Notebooks and pens



# Technology Requirements:-

- 1. Computers or Tablets
- 2. Internet Access
- 3. Financial Calculator Apps
- 4. Discussion forums

### **Preparation:**

- \* Slides/Presentations
- \* Install necessary apps
- \* Hands on Activity

	Instructional Steps /अनद <b>ु १</b> े न <b>ा</b> ôक प <b>ायऱ</b> ्य <b>ा</b>	
Introduction	<ul> <li>Once upon a time in the bustling town of Prosperville, two friends, Ben and Sarah, both received \$1,000 as a graduation gift. Eager to make their money grow, they visited the local bank for advice.</li> <li>At the bank, they met Mrs. Carter, a wise financial advisor. She explained the concept of compound interest to them.</li> <li>"Imagine," she said, "that you both decide to invest your \$1,000 in our savings account, which offers a 5% annual interest rate, compounded yearly."</li> <li>Compound Interest Formula</li> <li>C.I = P(1+r)<sup>n</sup> -</li> <li>A = is the amount of money accumulated after n years, includin interest.</li> <li>P = is the principal amount (the init amount of money).</li> <li>R = is the annual interest rate (deciment of times that interpret compounded per year.</li> <li>t = is the number of years the money invested or borrowed for.</li> </ul>	
Discussion	<ul> <li>Draw a graph showing the growth of money with simple interest and compound interest over time. High the exponential growth of compound interest compared to the linear growth of simple interest.</li> <li>SIMPLE CALCULATIONS: <ul> <li>Walk through a basic example: If you invest \$1,000 at a 5% annual interest rate, compounded a for 3 years.</li> <li>Year 1: \$1,000 * 1.05 = \$1,050</li> <li>Year 2: \$1,050 * 1.05 = \$1,102.50</li> <li>Year 3: \$1,102.50 * 1.05 = \$1,157.63</li> <li>Emphasize how the interest earned each year increases because it is calculated on the new tota</li> </ul> </li> </ul>	
App Exploration	Show students how to use the app to calculate compound interest. Demonstrate by inputting the principal, interest rate, number of times interest is compounded per year, and the number of years.	
Guided Activities	<ul> <li>Present a scenario: "Imagine you have just received a windfall of \$5,000. You want to invest this money to maximize its growth over the next 20 years. Your goal is to choose the best investment option based on different interest rates and compounding frequencies.</li> <li>"Explain that students will research different investment options and use their knowledge of compound interest to determine which option is the bast.</li> </ul>	
Reflection and Discussion	Ask students to discuss their findings and any patterns they noticed. Discuss the impact of different compounding frequencies (e.g., annually, semi-annually, quarterly, monthly).	
Extension Activities	Students will work in pairs or small groups using the app to solve a set of problems provided by the teacher Each problem should involve different principal amounts, interest rates, and time periods.	

Assessment	<ul> <li>Monitor students during hands-on practice and group discussions.</li> <li>Review the homework worksheet to assess understanding and provide feedback.</li> </ul>
Closure	<ul> <li>Highlight the difference between simple interest and compound interest.</li> <li>Emphasize the power of compound interest in growing savings and investments over time</li> <li>Discuss the impact of different compounding frequencies on the final amount.</li> </ul>

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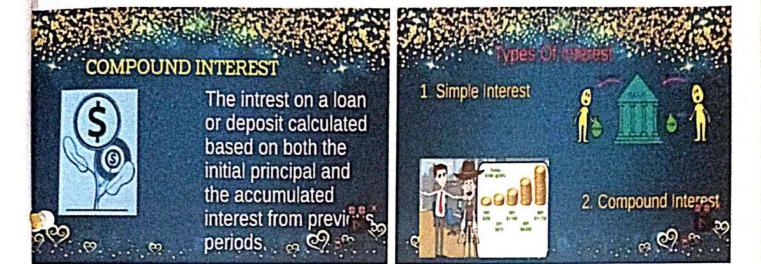
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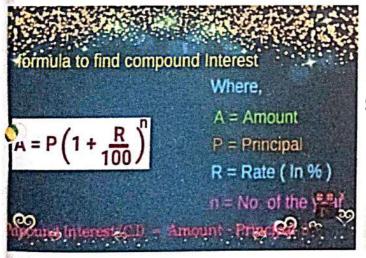
Signature of Guide

Mumbai 400 071.

Signature of Principal Principal Chembur Sarvankash Shikshanshastra Mahavidyalaya R.C. Marg, Chembur, Mumbal - 400 071.







# For example :

Q1. Principal = Rs. 2000, Rate = 5%, Time = 2 years. Find out the amount and compound Interest ?

Soln:  $A = P(1 + \frac{R}{100})^{6}$   $A = 2000(1 + 5/100)^{2}$   $A = 2000 (1.05)^{2}$  A = Rs. 2205 C.I = Amount - Principal C.I = 2205 - 2000C.I = Rs. 205



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# APP Based Lesson

### Lesson No. 04

Name of the Learner: Vishwakarma Sheela Akhilesh

Lesson Title:- Triangles And Types of triangle

Subject: - Mathematics

Name of the App:- Kahoot

Grade Level:- 6th

Duration:- 2 Min. 50 sec.

Learning Objective:-Cognitive, Psychomotor, affective

Knowledge: students will able to recognize the shape of triangle.

**Understanding:** 1. Students will be able to explain the structure of triangle. 2. Students will be able to explain the perimeter of triangle.

Application: Students will learn the common rules for solving the problems, based on Triangles and its properties and will develops interest will become logical.

Skill: 1. The students applies skill of mathematics.

2. The Students draws diagram accurately.

Materials:- Rulers, colored pencils or markers, protractors, Triangle cut-outs (PAPER), Worksheet with exercise, Smartboard/Whiteboard, COMPUTER/SMARTPHONE.

# **Technology Requirements:-**

We have set and the

- Video Introduction: Engages students and provides a visual context.
- Interactive Whiteboard: Facilitates dynamic and interactive teaching.
- > GeoGebra : Provides hands-on experience with drawing and measuring triangles.
- Google Forms and Kahoot!: Enables interactive and immediate assessment of understanding.



#### **Preparation:**

- 1. Content Review and Planning
- 2. Gathering Material
- Digital Tools and Devices
- Software and Applications
- 3. Creating and Organizing Content
- 4. Setting Up Activities : Kahoot Quiz, GeoGebra Activity

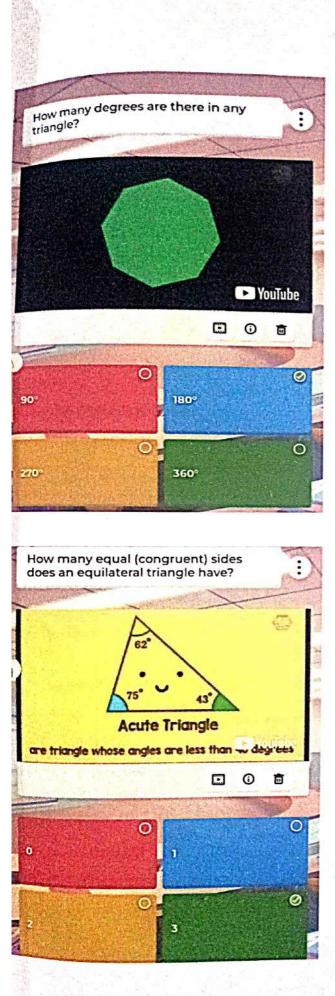
	Instructional Steps /अनद <b>ु श</b> े न <b>ा</b> ôक प <b>ायर</b> ्या		
Introduction Pre -App Discussion	<ul> <li>Show image of various objects that includes triangles, such as : <ol> <li>A Slice of pizza</li> <li>Traffic signs</li> <li>The Eiffel Tower</li> <li>Pyramids</li> <li>Slice of cake</li> </ol> </li> <li>Students should be familiar with basic geometric shapes such as Square, rectangles, circles and polygons.</li> <li>Understanding about that shapes are defined by their sides and angles.</li> <li>Basic skills in using a ruler to measure lengths.</li> <li>Knowledge of basic angles types i.e. 90°, &lt; 90°, &gt; 90°</li> <li>To draw basic geometry using a ruler.</li> </ul>		
App Exploration	To guide students through educational app that demonstrates various types of angles.		
Guided Activities	<ul> <li>So, students how to use rulers and Protractor to measure angles to draw different types of triangles.</li> <li>GROUP WORK: <ul> <li>Divided the students 3-4 small groups and provide the material.</li> <li>Students will use a protractor to measure the angles of each triangle they drew.</li> <li>They will classify each triangle as acute, right or obtuse and label the anglesaccordingly.</li> <li>Provide groups with triangle cut-outs of various sizes and shapes.</li> <li>Students will sort these triangles into categories based on their angles (Acute, Right, Obtuse).</li> <li>They will record their classification on a worksheet.</li> </ul> </li> </ul>		
Discussion	The sum of the length of two sides of triangle is always greater than the length of the third side		
Activities	Distribute small triangles cut - outs ( Each Type: Right, Acute, Obtuse ) to each students orgroup. Ask students to examine their triangles and discuss what they notice about theangles. Prompt them to compare their triangle with those of their peers to noticedifferences and similarities.		
ssessment	FORMATIVE: Observe student participation during the GeoGebra activity, Monitor groupdiscussions and review the digital worksheet and Kahoot! quiz results. SUMMATIVE: Use the exit ticket responses to gauge overall understanding and identify areas for furth.		
Closure	<ol> <li>Definition of triangle and its classification by angles.</li> <li>Parts of triangle.</li> <li>Sum of angles, perimeter of triangles, area of triangle.</li> </ol>		

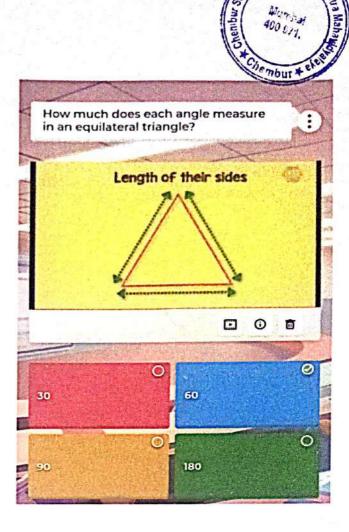
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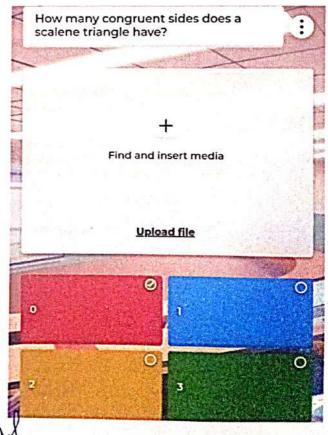
Signature of Principal

Principal Chembur Sarvankash Shikshanshastra Mahavidyalaya R.C. Marg, Chembur, Mumbal - 400 071.





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# Video Based Lesson

### Lesson No. 05

Name of the Teacher:- Vishwakarma Sheela Akhilesh

Title of the Video:- Co-ordinate geometry

URL of the Video:- https://edpuzzle.com/assignments/66486c0d96a03f0a3ad0909e/watch

Class Code (If any):- jomelul

Link for Sharing (If any):-

Duration of the Video:-6 Min. 39 sec.

Subject: Mathematics

Grade Level: 9th

Learning Objectives:- Cognitive, Psychomotor, affective

Knowledge: 1. Pupil will able to recalls & recognizes coordinate axes. 2. Pupil will able to recalls & recognizes points in a plane.

Understanding: 1. Pupil will able to write the coordinates of the points marked on the axes. 2. Pupil will able to marks the points in a plane when coordinates are given.

Application: 1. Pupil will able to applies knowledge and skills in real-life situations.

2. Pupil will able to applies knowledge and skills in organizing his ideas more logically and Express his thoughts more accurately.

Skill: 1. Pupil will able to develops analytical skills.

2. Pupil will able to develops techniques and skills in coordinate geometry.

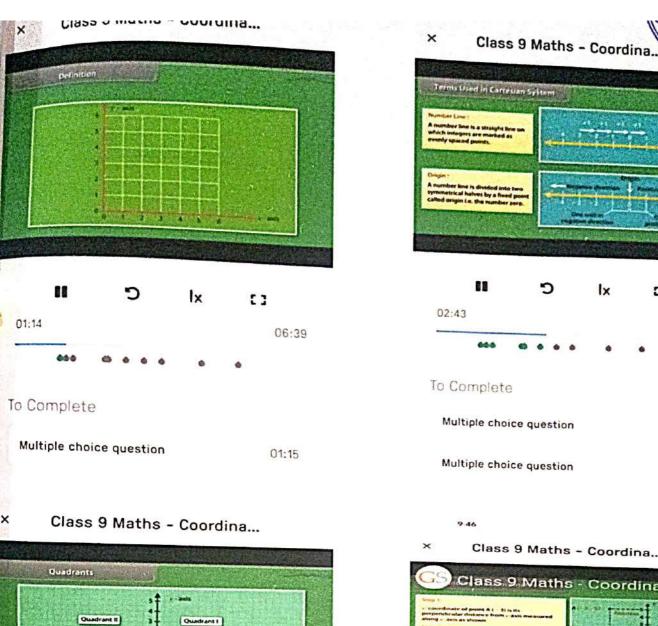
	tional Stons / अन्दर्श न	Clark Activity of
	Instructional Steps / अन <b>ुद</b> शेन	Student's Answer
Introduction	Teacher's Question         1. Can any one tell me meaning of geometry ?         2. Can you defined any one else ?	It is the oldest branch of the mathematics. Geometry is the study of shapes & sizes in various dimensions.
	<ul> <li>There are many kinds of geometry like inclined geometry, Non-inclined geometry &amp; co-ordinate geometry etc.</li> </ul>	
Pre Viewing Discussion	<ul> <li>To understand the concept of coordinate geometry.</li> <li>Explain the Cartesian system.</li> <li>Measure the perpendicular distance of a point from coordinate axes.</li> <li>Plot a point in a plane if its coordinate are known.</li> <li>Define the terms used in coordinate geometry.</li> </ul>	
Video Viewing	<ul> <li>Introduce the concept of coordinates and how to write them as (x, y), ose a visual at to show the Cartesian plane and demonstrate how to plot points.</li> <li>Provide examples of points in different quadrants.</li> </ul>	
Post-Viewing Discussion	<ol> <li>Create a video that explains the Cartesian plane in detail.</li> <li>Demonstrate how to plot points using examples.</li> <li>Explain the concepts of quadrants and how coordinates are written as (x, y).</li> </ol>	
Extension Activities	<ul> <li>Show a video segment with step-by-step instructions on how to plot points.</li> <li>Provide a worksheet or use an interactive tool for students to plot given points on the Cartesian plane.</li> <li>Plotting: Students plot the points on their graphs using different colors for different sets of points.</li> <li>Calculations: Students calculate the distances between specific points and find midpoints or given line segments.</li> <li>Answering Questions: Students answer the questions provided on the worksheet.</li> </ul>	
Assessment	<ul> <li>Evaluate students' understanding throu</li> <li>Review and provide feedback on the pl calculations.</li> <li>Check homework for accuracy and com</li> </ul>	
Conclusion and Reflection	<ul> <li>Through the study of coordinate geometry, we</li> <li>Plot points on the Cartesian plane.</li> <li>Calculate the distance between points</li> <li>Determine the midpoint of a line segment</li> </ul>	using the distance formula.

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Signature of Principal

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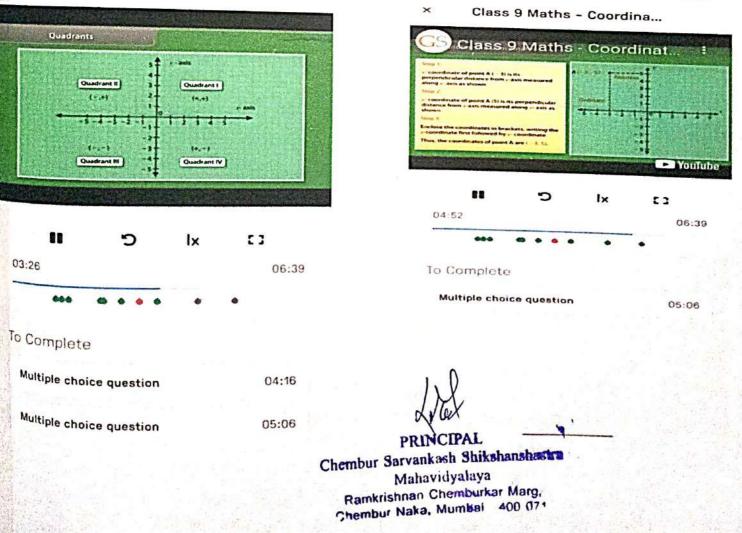
3 Ix [] 06:39 Multiple choice question 03:00

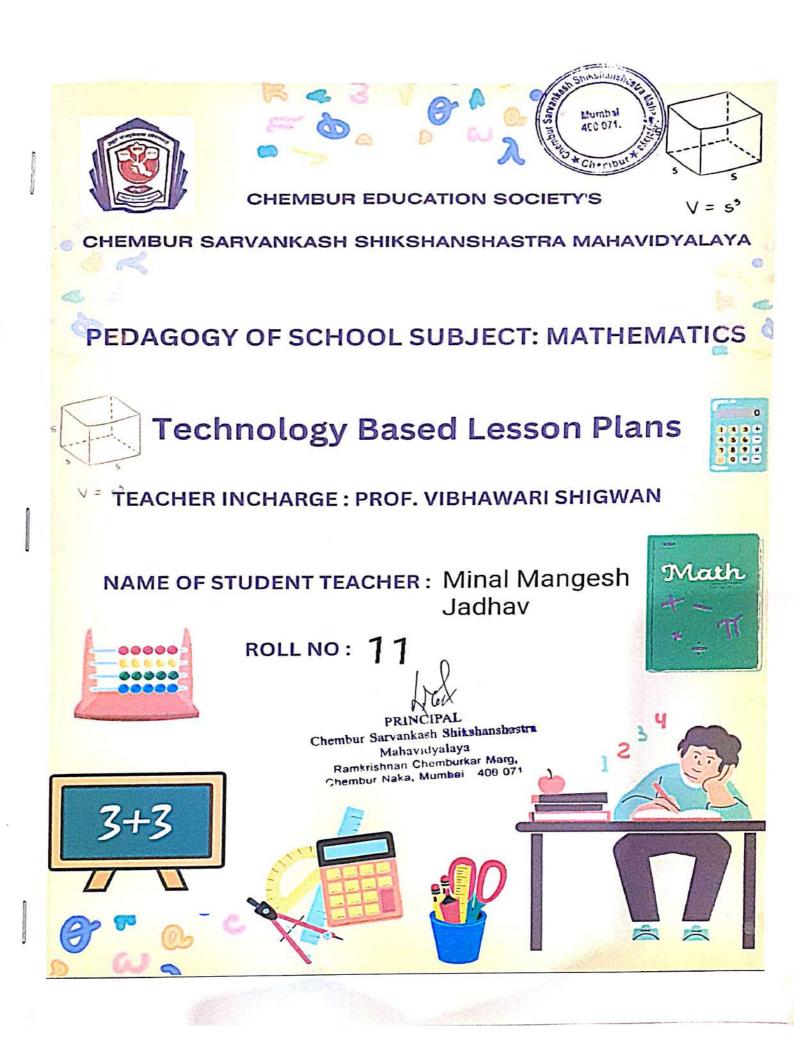
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Multiple choice question 03:23







CHEMBUR EDUCATION SOCIETY'S

CHEMBUR SARVANKASH SHIKSHANSHASTRA MAHAVIDYALAYA

# **TECHNOLOGY BASED LESSONS**

Name : Minal Mangesh Jadhav.

Year : S.Y.B.Ed

Roll No: 11

Name of Internship School : L. K. Waghji Mumbai Public School

Elective Course 2 (EC - 2)

**Pedagogy of School Subject : Mathematics** 

Method Master : Prof. Vibhawari Shigwan

Date: 03 07 24

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400 071.

Signature and Stamp

Chembur Sarvankash Shikshanshastra Mahavidyalaya Ramkrishnan Chemburkar Marg, Chembur Naka, Mumbei 400 071

# **TECHNOLOGY BASED LESSONS**



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Sr.	Tittle of		Application	
no.	lesson	Link		
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2.	Banks & simple interest	https://ed.ted.com/on/1xUxKegZ	Ted.ed	
3.	Operations on rational numbers	https://edpuzzle.com/assignments/65f9b618154950	Edpuzzle	
4.	Compound interest	https://ed.ted.com/on/dKZPxzmY	Ted.ed	
5.	Operations on rational numbers	https://create.kahoot.it/share/operation-of-rational- numbers/a5ab8de4-43c1-430b-89c6-c5de951f44e8	Kahoot app	



### **APP Based Lesson 1.**

Name of the Learner: Minal Mangesh Jadhav

Lesson Title:- Profit & Loss

Subject:- Mathematics

Name of the App:- Benime app

Grade Level:- 6th

Duration:- 3:51 minutes

Learning Objective:-

#### Knowledge:

The pupil remembers the concept of profit and loss

#### Understanding:

The pupil develop understanding the concept of profit and loss

### Application:

The pupil applies their knowledge & understanding of profit and loss in a new situation

### Skill:

The pupil develops analytical skills to solve the profit and loss problems

### Materials:-

Laptop, Projector.

### **Technology Requirements:**

Internet/wi-fi connection

Preparation: Not specific preparation is require.

	3 ( Mumb 20007
	Instructional Steps /अनुदेशनात्मक पायऱ्या
Introduction	Teacher narrate a short story, Riya had bought 10 pens at Rs. 100 and sold it for Rs. 150. Based on this story teacher ask question to the students that, is this transaction profitable or not?
Pre-App Discussion	Teacher explains the meaning of profit and loss with some examples.
App Exploration	Teacher presents an app based video on the topic of profit & loss and discuss an important points of profit and loss with students.
Guided	
Activities	Teacher guides the students in activity of calculating profit and loss worksheets.
Reflection and	Contraction of the second s
Discussion	Teacher discuss the formula to calculate profit and loss: Profit = Selling price - Cost price Loss = Cost price - Selling price
Extension Activities	Teacher gives the problem solving challenge cards on profit and loss to the students.
Assessment	Teacher ask some questions to the students: 1) What is profit & how to calculate it? 2) What is loss & how to calculate it?
Closure	Teacher summarise the main points covered in the lesson and provide sums on profit and loss to solve.

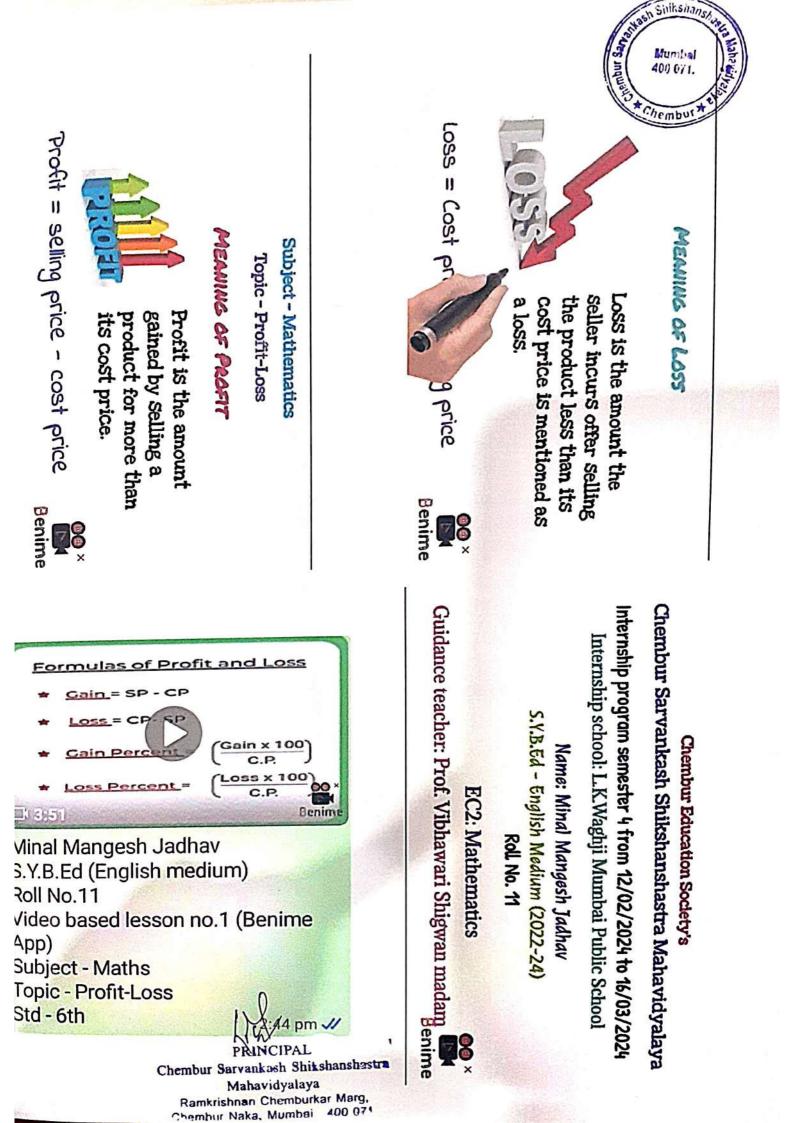
Mina Signature of Teacher

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Signature of Principal

Shikshane

Principal Chembur Sarvankash Shikshanshastra Mahavidyalaya R.C. Marg, Chembur, Mumbai - 400 071.



### Video Based Lesson

Name of the Teacher:- Minal Mangesh Jadhav.

Title of the Video: Banks & simple interest

URL of the Video: https://Youtube.be/axZd-jd4q4E?si=ngKuZBB\_akn1BaZX

Class Code (If any):-

Link for Sharing (If any): https://ed.ted.com/on/1xUxKegZ

Duration of the Video: 05:45 minutes

Subject: Mathematics

Grade Level: VII

Learning Objectives:-

Knowledge: The pupil remembers the knowledge of simple interest

Understanding:

The pupil develop understanding the concept of simple interest.

Application:

The pupil applies their knowledge and understanding of simple interest in new situations.

Skill:

The pupil develop analytical skills to solve simple interest problems

	3 Shikshanshaer	
	Mumbai 400 071.	
	Instructional Steps / अनुदेशनात्मक पायऱ्या	
Introduction	Teacher ask following questions: 1) Where does person borrow money? Ans: Bank 2) Why do bank give money to the person? Ans: To get interest 3) How many types of interest? Ans: 2 4) What are the types of interest? Ans: simple interest & compound interest So, today we are going to learn about the simple interest.	
Pre Viewing		
Discussion	<ul> <li>Teacher discuss some examples of interest such as,</li> <li>1) Mihir has deposited Rs.7000 in his saving account, after 8 months his Saving A/c balance is Rs. 7300.</li> </ul>	
	2) Riya had taken loan from bank of Rs. 50000 for a business & bank charge interest rate for loan is 10% per annum, in this situation Riya has to pay Rs.50000 along wil interest to bank after 1 year.	
Video Viewing:	Teacher discuss with students: P = Principal amount R = Rate of interest T = Time (in yrs) A = Final amount Simple interest = $P^*R^*T / 100$ $A = P + 1 \text{ or } A = P (1 + r^*t)$	
Post-Viewing	In this video we learnt about simple interest;	
Discussion:	<ol> <li>Interest is only calculated on the initial amount,</li> <li>The interest amount remains consistent for each period,</li> <li>Interest does not earn additional interest,</li> <li>Typically used for short term loans or investments,</li> <li>Principal amount is same for every year.</li> </ol>	
Extension	Learn simple interest with puzzle activity;	
Activities:	Students can arrange the loan amount, time, rate puzzle pieces into corresponding interest amount.	
Assessment:		
C	Teacher ask following questions to the students: 1) What is simple interest? 2) How to calculate simple interest? 3) Calculate simple interest & total amount if P=5000, N=3yrs, R=10%	
Conclusion	From this video we learnt meaning of the simple interest, how to calculate simple	
and Reflection	interest in a real life situations.	
Min	raf. mar?	
Signature of	Teacher Signature of Guide Signature of Principal	
	Principal Chembur Sarvankash Shikshanshastra Mahavidyalaya R.C. Marg, Chembur, Mumbai - 400 071.	

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TED-ED'S LESSON CREATON	Let's Begin
VIDEO FROM TICTACLEARN ENGLISH YOUTUBE CHANNEL	in this video we are going to learn about the simple interest: What is simple interest, how to calculate
-	simple interest, how it related to real site with examples etc.
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simple interest, how it related to real life with examples etc.	1
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Additional Resources for you	How can we apply simple intervet in pur-
to Explore	03/17/2024 / C Kessenger
https://youtu.be/jtFE94If7Vw?	
sl=u0unRXEiph03W239	PRINCIPAL
Next Section »	Chembur Sarvankash Shikshanshzstra Mahavidyataya
	UCA Ramkrishnan Chemburkar Marg,
III O (	Chembur Naka, Mumber 400 071

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# Video Based Lesson

Name of the Teacher:- Minal Mangesh Jadhav.

Title of the Video: Operations on rational numbers

URL of the Video: https://youtu.be/p8NaXHIh\_8g?feature=shared

Class Code (If any):- ikikezd

Link for Sharing (If any): https://edpuzzle.com/assignments/65f9b618154950c5fe5b442c/ watch

Duration of the Video: 6:48 minutes

Subject: Mathematics

Grade Level: 7th

Learning Objectives:-

Knowledge: The pupil remembers the knowledge of the operations on rational number:

Understanding: The pupil develop understanding of the concept of operations on rational number:

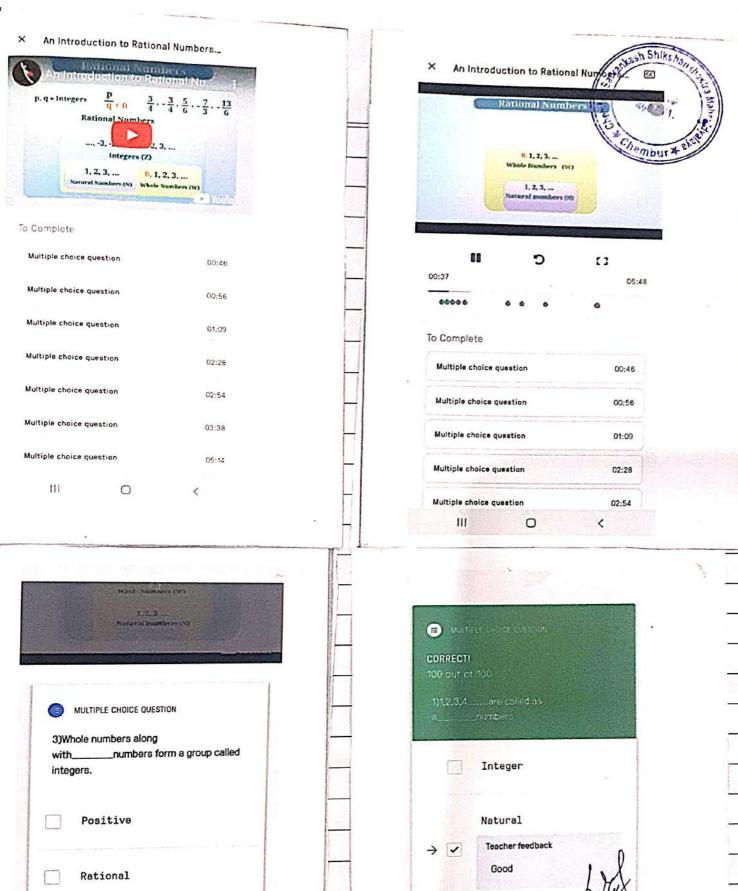
# Application:

The pupil applies their knowledge & understanding of the operations on rational numbers in new situations.

# Skill:

The pupil develop analytical skills to solve operations on rational numbers problem

Mumbel 400 071 Chombul Instructional Steps / अनुदेशनात्मक पायऱ्या Introduction Teacher narrate a story, Riya has ordered a pizza which is divided into 6 equal parts. 1 piece of pizza she has given to mother, 2 pieces to her brothe & 1 piece to her father. Based on this story teacher ask some questions: 1) How many pieces of pizza are left? 2) How can we write the distribution of pizza in numbers? So, today we are going to learn about the operations on rational numbers. Pre Viewing Teacher discuss the types of numbers: Discussion 1) Natural numbers - 1, 2, 3, 4, 5, 6...... 2) Whole numbers - 0, 1, 2, 3, 4, 5, 6...... 3) Integer numbers - -4, -3, -2, -1, 1, 2, 3, 4..... 4) Rational numbers - 4/5, 3.6, 6/7, 2/9, 6.5.... Video Viewing: Teacher solving the sums; 1) 5/7 + 9/11 = 55+63 / 77 = 118/772) 2\*1/7 + 3\*8/14 = 15/7 + 50/14 = 40/73) 1/7 - 3/4 = 4 - 21 / 28 = -17/284) 9/13 \* 4/7 = 9\*4 / 13\*7 = 36/91 5)  $3/5 \times -4/5 = 3 \times -4/5 = -12/25$ **Post-Viewing** A rational numbers in maths can be defined as any number which can be represented in the form of p/g where q is not equal to 0. Also we can say Discussion: that any fraction fits under the category of rational numbers, where the denominator & numerator are integer & denominator is not equal to zero Task card activity, it consists of 32 task cards with 8 positive rational numbers Extension 8 negative rational numbers, 8 positive & negative improper fractions, 8 mixed review cards (repeating decimals, unsimplified fractions etc.) The recording Activities: sheet has 4 number lines. The task cards also have pictures in the corner, so students know which number line they should be placing the rational number on students write the rational number in the box connected to it's location on the number line. Answer key is included as well. Assessment: Teacher ask following questions to the students: 1) What is rational numbers? 2) Give the examples of the rational numbers. Conclusion In this video we learnt about the operations on rational numbers, Meaning of the rational numbers, operations of the rational numbers (addition, and Reflection subtraction, multiplication, division of the rational numbers etc.) minat Signature of Guide Signature of Principal Signature of Teacher Principal Chembur Sarvankash Shikshanshastra Mahavidyalaya R.C. Marg, Chembur, Mumbai - 400 071.



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Video Based Lesson No. 5

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Name of the Teacher:- Minal Mangesh Jadhav

Title of the Video: Compound interest

URL of the Video: https://youtu.be/MbG6JQqbDt8?si=ephB9RAZTHFGsiZa

Class Code (If any):- -

Link for Sharing (If any) : https://ed.ted.com

Duration of the Video: 5:25 minutes

Subject: Mathematics

Grade Level: 8th

Learning Objectives:-

Knowledge:

The pupil remembers the knowledge of the compound interest.

Understanding: The pupil develop understanding the concept of compound interest.

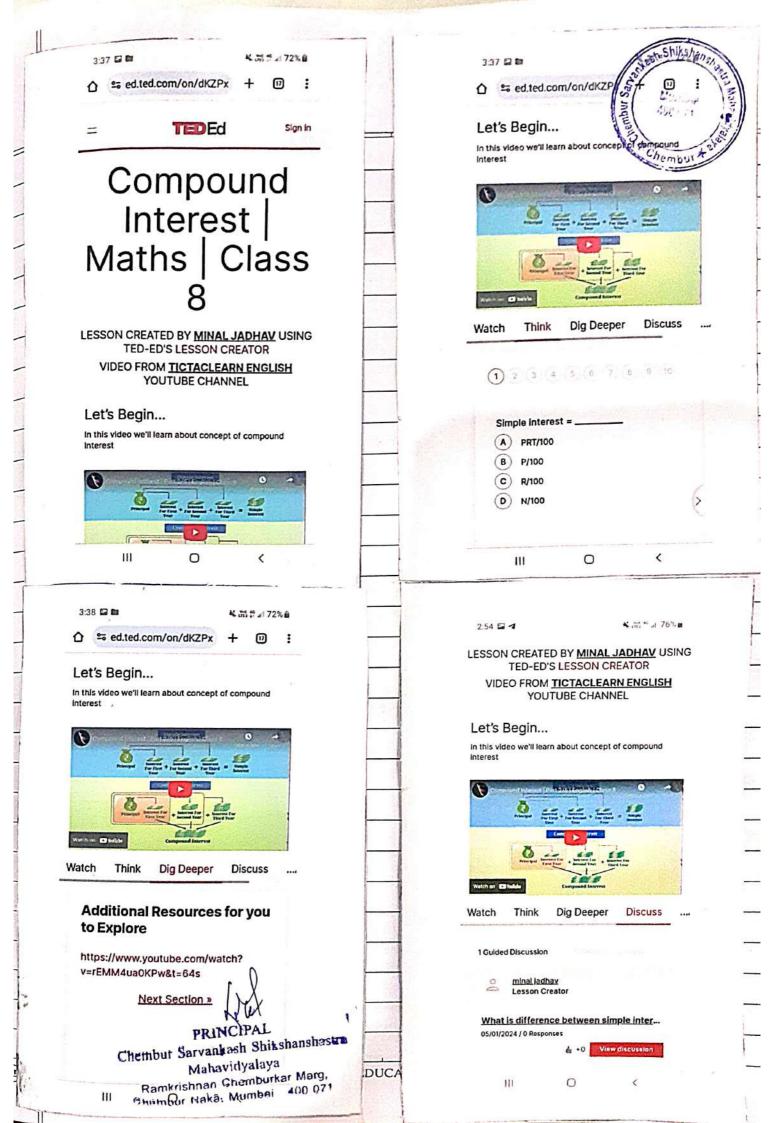
# Application:

The pupil applies their knowledge & understanding of the compound interest in a new situations.

Skill:

The pupil develop analytical skills to solve the compound interest problems

	State Shikshanshara
	Instructional Steps / अनुदेशनात्मक पायऱ्या
Introduction	Teacher narrate a story & ask some questions based on it; Minal has deposited Rs. 7000 in her saving account after 1) What is amount deposited by Minal? 2) After 8 months what was the saving account balance? 3) From where did Rs. 300 came in her saving account?
Pre Viewing	
Discussion	Teacher discuss another example of the interest with students; Reshma had taken loan from a bank of Rs. 50000 for a business & bank charge interest rate for loan is 10% per annum. In this situation Reshma has to pay Rs. 50000 along with interest to bank after 1 year.
Video Viewing:	<ul> <li>While watching video teacher ask some questions to the students;</li> <li>1) Where does person borrow money? Ans: Bank</li> <li>2) Why do banks lend money to the person? Ans: To earn interest</li> <li>3) How many types of interest? Ans: 2</li> <li>4) What are the types of the interest? Ans: Simple interest &amp; Compound interest.</li> </ul>
Post-Viewing	Teacher evoluin the manufacture of interpoli
Discussion:	Teacher explain the meaning of the compound interest; Compound interest is the interest calculated on the principal & the interest accumulated over the previous period.
Extension	Learn compound interest with puzzle activity;
Activities:	Students can arrange the loan amount, time, rate puzzle pieces into the corresponding interest amount.
Assessment:	Teacher ask following questions to the students;
C.	<ol> <li>as the formula of calculating amount of the compound interest?</li> <li>What is the formula of calculating amount of the compound interest?</li> <li>What is the formula of compound interest?</li> </ol>
Conclusion	From this video we learnt meaning of the compound interest & how to
and Reflection	calculate the compound interest in a real life situations.
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Signature of T	Teacher Signature of Guide Signature of Principal Principal Chembur Sarvankash Shikshanshastra Mahavidyalaya R.C. Marg, Chembur, Mumbal - 400 071.





APP Based Lesson 2 Name of the Learner: Minal Mangesh Jadhav Lesson Title:- Operations on rational numbers. Subject:- Mathematics Name of the App:- Kahoot Grade Level:- 7th

Duration:- -

Learning Objective:-

Knowledge:

The pupil remembers the concept of operations on rational numbers

Understanding:

The pupil develop an understanding the concept of operations on rational numbers.

Application:

The pupil applies their knowledge & understanding of the operations on rational numbers

Skill:

The pupil develops analytical skills to solve the problems on operations on rational numbers.

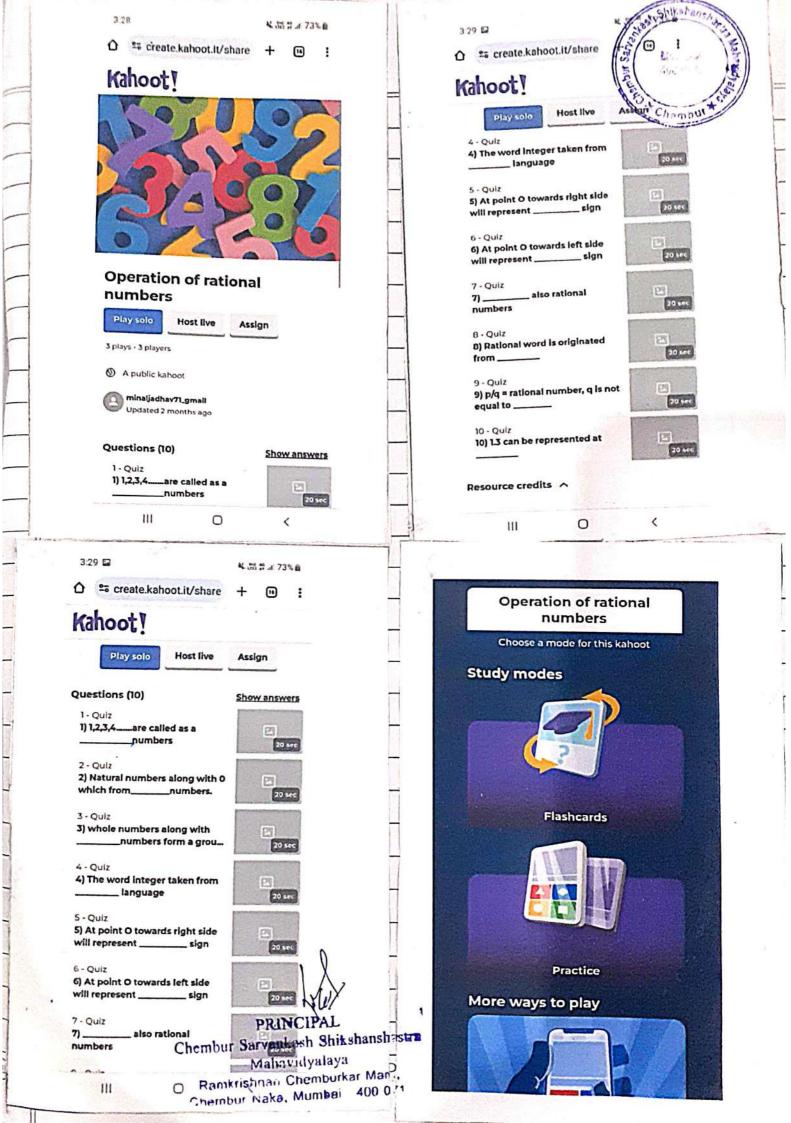
Materials:-

Mobile phones.

Technology Requirements: Internet/wi-fi connection

Preparation: Not specific preparation is required.

	Mumbai 400 071.
	Instructional Steps /अनुदेशनात्मक पायऱ्या
Introduction	The teacher narrate a story, Riya has ordered a pizza. Pizz was equally divided into 6 pieces. 1 piece of pizza she has given to her mother, 2 piece of pizza to her father. Based on this story teacher ask some questions: 1) How many pieces of pizza are left? 2) How can we write the distribution of pizza in numbers?
Pre-App	tional
Discussion	Teacher explains the meaning of operations on rational numbers.
App Exploration	Teacher presents an app based quiz with solution on the topic of operations on rational numbers.
Guided	a stivity of solving problems
Activities	Teacher guides the students in activity of solving problems on the operations on rational numbers worksheets.
Reflection and	Teacher use problem solving method & solve the illustrations
Discussion	of rational numbers on board.
Disease	of rational name of
1	
ACTIVILIES	The teacher gives the problem solving challenge cards or operations on rational numbers to the students.
C	Teacher ask following questions to the students: 1) What is rational numbers? 1) Cive the examples of the rational numbers.
Assessment	Teacher ask following questions to the stand
Assessment	1) What is rational numbers.
Star St.	
	amarise the topic of operations on teams on
llosure	Teacher summanies sums on it to solve the provide sums on it to solve the provide sums on it to solve the provide sums on rational numbers.
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# TECHNOLOGY BASED LESSONS



## INDEX

Sr. no.	Tittle of lesson	Link	Application
1.	Number Line Grade 6 <sup>th</sup>	https://edpuzzle.com/join/fuzpivo Class Code :fuzpivo	Edpuzzle (Video based lesson)
2.	Mean, Median Mode and Range Grade 7 <sup>th</sup>	https://ed.ted.com/on/mK6WcSee	Ted.Ed (Video based lesson)
3.	Mean Median Mode Grade 7 <sup>th</sup>	https://create.kahoot.it/share/mean- median-mode/2ea9c5e4-5aa7-4198- 9b79-e97f8d97eb63	Kahoot (App based lesson)
4.	Algebraic Expressions Grade 7 <sup>th</sup>	https://youtu.be/YJozLCP9m48?fea ture=shared	Benime (Video based lesson)
5.	Pythagorean theorem Grade 7 <sup>th</sup>	https://ed.ted.com/on/dlJPePV9	Ted.ed (Video based lesson)



Name of the Learner: Afsana Rehmani

Lesson Title:- Number Line whole Number Operation

Subject:- Mathematics

Name of the App:- Ed.Puzzle

Grade Level:- 6th

Duration:- 4 min

URL :- https://edpuzzle.com/join/fuzpivo

Learning Objective:-

#### Knowledge:

The pupil know the basic mathematical operations. The pupil has the knowledge of the whole Number

#### Understanding:

The pupils develop understanding of concept Number line . The pupils develops the understanding of whole number.

#### Application:

OThe pupils applies his/her knowledge and understanding of the topic. The pupils applies concept on Numerical.

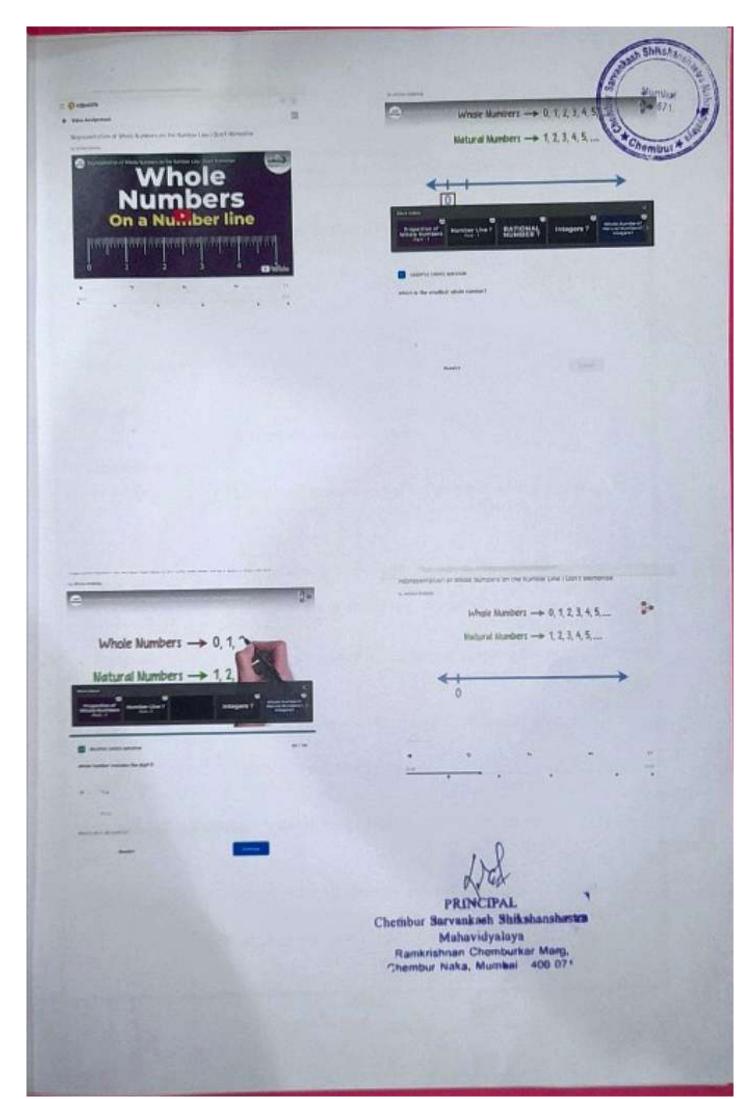
#### Skill:

The pupil applies the skill of mathematics .

## Preparation

Teacher needs to prepare what is number line and what is whole Number .

The Martin	Instructional Steps /अनुदेशनात्मकपायऱ्या
ntroduction	Teacher greets the students and explain the Number line Next teacher explain the operations of whole numbers on a Number line .
Pre- App Discussion	The teacher discusses about the whole Number And basic mathematical operations .
App Exploration:	Teacher shows the App based video on the topic of Number line .
Guided Activities:	Teacher counduct acivities giving them basket of fruit and explain the operation of whole numberon Number line.
Reflection & Discussion: -	Teacher discuss numericals with students .
Extension Activities:	Teacher give other real life examples .
Assessment	1. What is whole Number . 2. What is Number Line .
closure	Teacher summarize the main points of covered in the lesson.
Signature of	Teacher Signature of Guide Signature of Principal





Video Based Lesson

Name of the Learner:	Afsana Rehmani
Lesson Title:-	Mean ,Median ,Mode
Subject:-	MATHEMATICS
Name of the App:-	TED.Ed
Grade Level:-	7TH STANDARD
Duration:-	4 min
URL :-	https://ed.ted.com/on/mK6WcSee
Learning Objective:-	
Knowledge:	<ol> <li>The pupil remembers the knowledge of basic arthematic .</li> <li>The pupil develops understanding of Average .</li> </ol>
Understanding:	1. The pupil understands the concept of Mean . Median . Mode.
	2. The pupil comapres various average values .
Application:	1. The pupil applies the knowledge of mean in to find the average mark of the students in class .
Skill:	The pupil solves real life problems skill fully by using Mean .
Materials:-	Notebook, Pen , Scale, Pencil
Technology Requirem	ents: Smartphone or Laptop, Internet connection.
Preparation: and	e teacher needs to prepare all the three concept mean median d mode with relevant examples and teacher needs to know the plication of the mean median and mode .

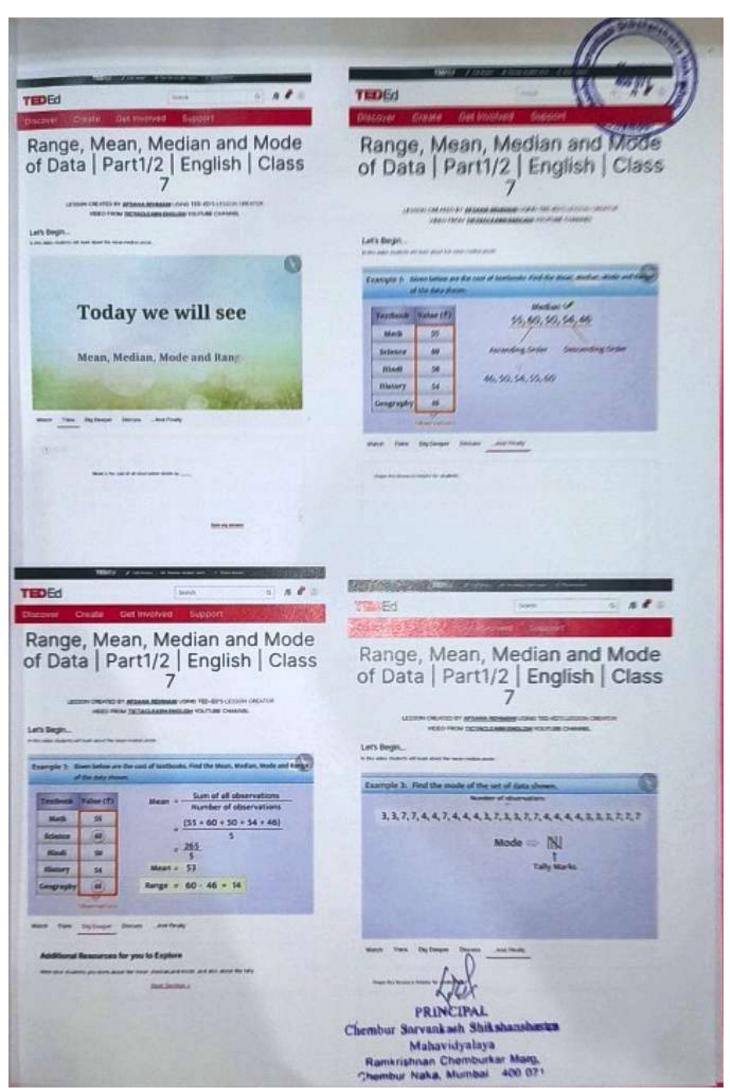
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Introduction	<ul> <li>Greet Students and introduce the topic Mean Median Mode.</li> <li>Explain the concept and related examples .</li> </ul>
Pre-App Discussion	Teacher gives example of tempreture .     Teacher provide different days of tempreture.     Teacher introduce the Concept of Mean.     Teacher co relate it with Marks.
App Exploration	<ul> <li>in this video first the statment of Mean shown.</li> <li>With the help of formula Mean=sum of all observation ÷ Number of observation</li> </ul>
Guided Activities	<ul> <li>Teacher gives some problem based on Mean ,Median,Mode.</li> <li>Teacher measure students height and tell them find a mean</li> </ul>
Reflection and Discussion	<ul> <li>This Concept used in our daily life.</li> <li>Students gives different different examples .</li> </ul>
Extension Activities	<ul> <li>Teacher tells students measure the length of the text book and notebook and find out the mean .</li> <li>Teacher gives the data written in chits and tell them to find out the mode .</li> </ul>
Assessment	<ul> <li>Statment of the Median.</li> <li>formula of the Mean.</li> <li>What is Range ?</li> </ul>
Conclusion	Solved problems based on the Mean, Median, Mode
Signature	of Teacher Signature of Guide Signature of Principal





#### Video Based Lesson

Name of the Learner: Lesson Title:-Subject:-Name of the App:-Grade Level:-Duration:-URL :-Learning Objective:-

Knowledge:

7TH STANDARD Nil

Afsana Rehmani Mean ,Median ,Mode

MATHEMATICS

https://create.kahoot.it/share/mean-medianmode/2ea9c5e4-5aa7-4198-9b79-e97f8d97eb63

The pupil remembers the knowledge of basic arthematic .
 The pupil develops understanding of Average .

**Understanding:** 

1. The pupil understands the concept of Mean , Median , Mode.

2. The pupil comapres various average values .

Application:

1. The pupil applies the knowledge of mean in to find the average marks of the students in class .

Skill:

The pupil solves real life problems skill fully by using Mean .

Materials:-

Notebook, Pen, Scale, Pencil

**Technology Requirements:** 

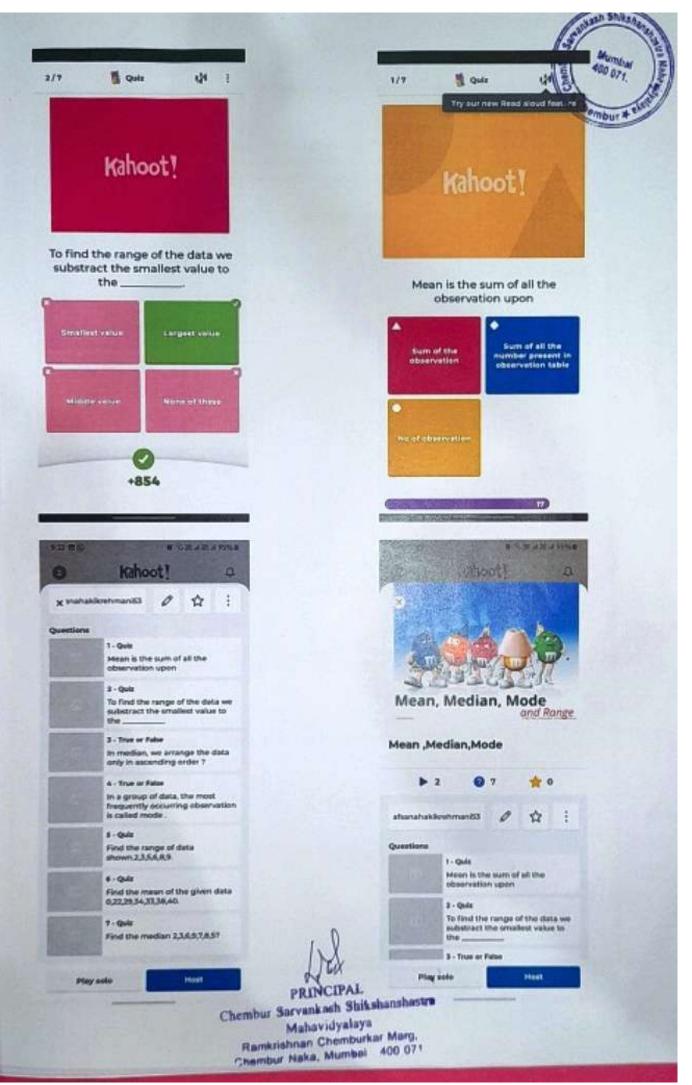
Smartphone or Laptop, Internet connection.

Preparation:

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No specific preparation

Haut 11	1
ntroduction	<ul> <li>Greet Students and introduce the topic Mean Median Mode.</li> <li>Explain the concept and related examples .</li> </ul>
Pre-App Discussion	<ul> <li>Teacher gives example of tempreture .</li> <li>Teacher provide different days of tempreture.</li> <li>Teacher introduce the Concept of Mean.</li> <li>Teacher co relate it with Marks.</li> </ul>
App Exploration	<ul> <li>in this video first the statment of Mean shown.</li> <li>With the help of formula Mean=sum of all observation ÷ Number of observation</li> </ul>
Guided Activities	<ul> <li>Teacher gives some problem based on Mean ,Median,Mode.</li> <li>Teacher measure students height and tell them find a mean .</li> </ul>
Reflection and Discussion	<ul> <li>This Concept used in our daily life.</li> <li>Students gives different different examples .</li> </ul>
Extension Activities	<ul> <li>Teacher tells students measure the length of the text book and notebook and find out the mean .</li> <li>Teacher gives the data written in chits and tell them to find out the mode .</li> </ul>
Assessment	<ul> <li>Teacher provide various Quiz /MCQ for the under standing of the topic .</li> </ul>
Closure	Teacher summaraize the main points of covered in the lesson .
Signature o	t Teacher Signature of Guide Signature of Principal





## Video Based Lesson

Name of the Teacher:- Afsana Rehmani

Title of the Video:- Algebric Expansion

URL of the Video:- Nil

Class Code (If any):- Nil

Link for Sharing (If any):- Nil

Duration of the Video:- 2 minutes

Subject:- Mathematics

Grade Level:-7th

### Learning Objectives:-

#### Knowledge:

- The Pupil remembers the different types of shapes.
- The pupil recall the area of square and rectangle formula.

#### Understanding:

- The Pupil develop the understanding the concept . The pupil generate the equation $(x+y)^3 = x^2 + 2xy + y^2$

#### Application:

The Pupil Applies His/her Knowledge and Understanding of the

topic in real life situation.

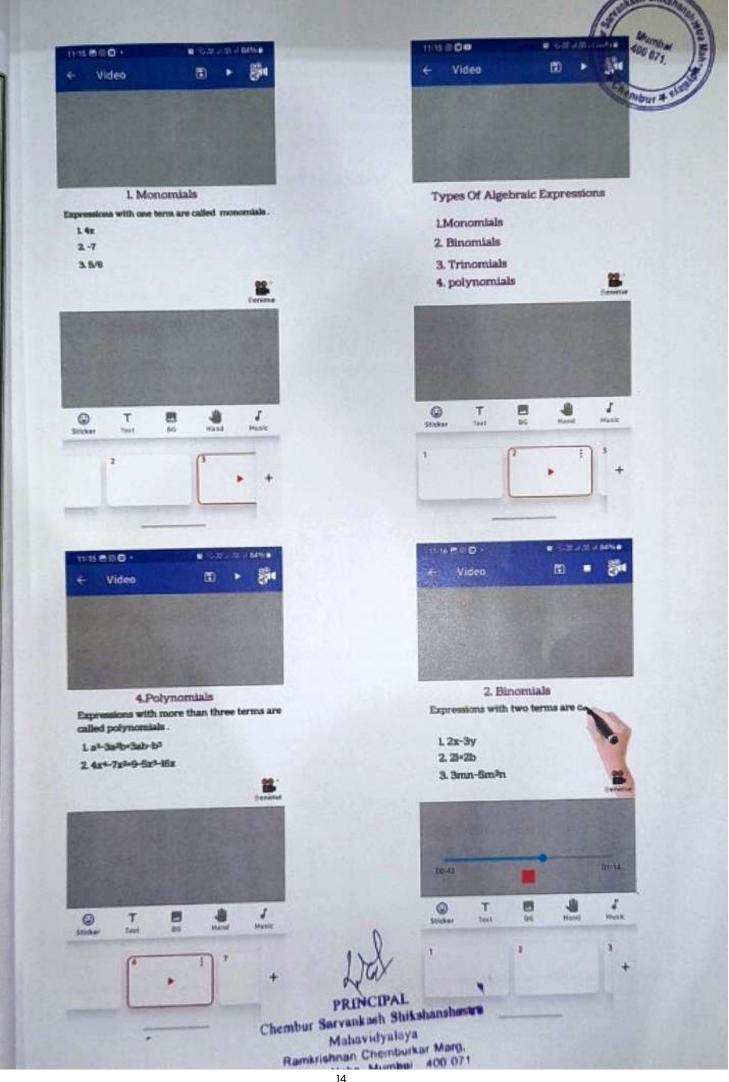
#### Skill:

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· The pupil solves mathematical problem skillfully

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( 74 M)	Instructional Steps अनुदेशनात्मक पायन्या
Introduction	<ul> <li>Greet Students and introduce the topic Algebric expansion.</li> <li>Explain the concept and its example .</li> </ul>
Pre Viewing Discussion	<ul> <li>Show videos and images of children engaging in various activities.</li> <li>Ask students to describe what they observe in the activities.</li> <li>Introduce the topic Addition substraction of Monomials bindmials, polynomials.</li> </ul>
Video Viewing:	<ul> <li>Play a video presentation on the topic Algebric expansion.</li> <li>Teacher provides guided questions to the students to consider while watching.</li> </ul>
Post- Viewing Discussion:	<ul> <li>Teacher leads a discussion on the key concepts presented in the video.</li> <li>Teacher discusses any questions or area of confusion that arose during watching the video.</li> </ul>
Extension Activities	<ul> <li>Teacher repeat to the students about the topic.</li> <li>Teacher give other examples and Numerical.</li> </ul>
Assessment	Teacher provides additional Numerical for better understanding of the topic Algebric Exaposion.
Conclusion and Reflection	Summarize the main points covered in the lesson .
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Video Based Lesson



Name of the Learn	er Afsana Rehmani
Lesson Title	PYTHAGORAS THEOREM
Subject	MATHEMATICS
Name of the App	TED.Ed
Grade level	7TH STANDARD
Duration	3 min
URL	https://ed.ted.com/on/dlJPePV9
Learning Objective	$\sim$
Knowledge	1. The pupil remembers the knowledge of properties of triangles
	2. The pupil recalls sum of angles of a triangle are 180 degree
Understanding:	1.The pupil understands the concept of Pythagoras theorem
	2. The pupil illustrates that only right angled triangle is used in Pythagoras theorem
Application:	1. The pupil applies the knowledge of Pythagoras theorem to find the shortest distance to reach his destination
	1. The pupil solves real life problems skillfully by using
Skill:	Pythagoras theorem by measuring shortest distance to reach destination
Materials:-	Notebook, Pen , Scale, Pencil
Technology Require	ments: Smartphone or Laptop, Internet connection.
Preparation: te	e teacher needs to prepare all the properties of triangles to ach Pythagoras theorem and teacher needs to know the plication of theorem in real life situations. Teacher also have prepare historical background of the theorem

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Introduction	Good morning students today we will learn a important theorem related to properties of triangles. So tell me have you ever tried to measure the length of pole while walking on a road or while walking have you tried to take a shortout cut the distance short.
	In this video we will learn about Pythagoras theorem.
Pre-App	Teacher tells students about who discovered Pythagoras theorem .
Discussion	Teacher shows various images of use of Pythagoras theorem
	Teacher asks students about what is the use of Pythagoras theorem in real li
	In the video first the statement of Pythagoras theorem is shown
App Exploration	Then with the help of a right angled triangle diagram the concept of abjacent angles and hypotenuse angled is shown in a triangle . After the explanation a sum of Pythagoras theorem is solved where the formula (hypotenuse)? = (adjacent side )? + (opposite side)? is used
Guided	Teacher gives some problem based on the Pythagoras theorem to solve.
Activities	Then teacher gives students a word puzzle to solve in which student have to words like Pythagoras, adjacent sides, opposite sides, hypotenuse, right and Theorem, triangles etc.
bett	So student Pythagoras theorem is used in right angled triangle only and not
Reflection and Discussion	obtuse or scalene angled triangle Because this theorem is based on 3 sided figure only as we need a right ang triangle to prove this theorem.
	Teacher will take the students in playground and will divide students in two
extension	
Ictivities	groups and teacher will instruct them 1. First group students will walk in L pattern to cover a certain distance . 2. Second group will cover the same distance diagonally . Teacher will ask students that which group covered the end point in less tim Teacher will ask students that which group covered the provide the start of
6	Teacher will ask students that which group covered theorem ? 1. So students tell me the statement for Pythagoras theorem ?
Assessment	2. What is the formula for Pythagoras theorem ?
	3. Pythagoras theorem is applicable to triangles or rectangles ?
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Signature of Teacher

Signature of Guide

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Signature of Principal

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