



!! पढमं नाणं तओ दया !!

SHRI JAIN VIDYA PRASARAK MANDAL
COLLEGE OF EDUCATION

ESTD 8/9/1927

Fattechand Marg, Chafeker Chowk Chinchwad, Pune 411033. Tel.: 020-27352274,

APPROVED BY NCTE, GOVT. OF MAHARASHTRA & AFFILIATED TO SAVITRIBAI PHULE PUNE UNIVERSITY

NCTE CODE- 123228/2015

SPPU ID CODE: PU/PN/B.Ed./240/2006

Website: www.sjvpmcoe.in

Email: sjvpmbed@gmail.com

Dr. Kothawade P.L.

(B.Sc. , M.A. , M.Ed. , Ph.D.) , Principal

Ref.

Date :

2.4.5: Adequate skills are developed in students for effective use of ICT for teaching learning process

2.4.5 Documentary Evidences

1. Technology based lesson plan

2. 104 practical

3. 105 Mobile app practical

4. Self-learning material (Learning resources)



B. Ed. COURSE - 109
अध्यापन क्षमता - II
TEACHING COMPETENCY - II

अनुक्रमणिका - Index

अ.क्र. Sr.No.	पाठ प्रकार Lesson Type	घटक/उपघटकाचे नाव Unit/Subunit Name	इयत्ता Div.	दिनांक Date	गुण Marks out of 100	सही Sign
1	तंत्रज्ञान आधारित पाठ Technology Based Lesson (Method I <u>Science</u>)	Natural Resources [Minerals]	VII A	7/2/23	80	
2	तंत्रज्ञान आधारित पाठ Technology Based Lesson (Method II <u>Math</u>)	Statistics [Average, Grouped Frequency Table]	VII A	8/2/23	81	
1	सांघिक अध्यापन पाठ Team Teaching Lesson (Method I <u>Science</u>)	Heredity and Variation [Types of Chromosomes]	IX B	9/2/23	77	
2	सांघिक आधारित पाठ Team Teaching Lesson (Method II <u>Math</u>)	Angles	VI A	10/2/23	74	
1	प्रतिमान आधारित पाठ Models of Teaching Lesson (Method II <u>Math</u>)	Expansion Formulae	VIII A	13/2/23	81	
2	प्रतिमान आधारित पाठ Models of Teaching Lesson (Method I <u>Science</u>)	Simple Machines a. Lever	VI A	11/2/23	83	

RP
14/1/23
ASST. Prof
Rethod
RP



RP
गटप्रमुख स्वाक्षरी
Group Incharge Sign

तंत्रज्ञान आधारित पाठ -1

Technology Based Lesson - I



श्री जैन विद्या प्रसारक मंडळ संचलित

अध्यापक महाविद्यालय, चिंचवड, पुणे - ३३.

अध्यापन पाठ टाचण - १ / Technology Based Lesson Note - 1

विषय : Science दिनांक : 7/2/23
 Subject : gini sabu Date : 6/1
 विद्यार्थ्याचे नांव : Shri Jain Vidya Prasarak Mandal B.Ed College Roll No.
 शाळ्याचे नांव : VII Name of School : A
 इयत्ता : Natural Resources तुकडी : Minerals
 Std. : Natural Resources Div. : Minerals
 घटक : Natural Resources उपघटक : Minerals
 Unit : Natural Resources Subunit : Minerals

मूल्ये : Conservation, concern for environment
 Value : Natural Resources in Earth's Crust, Forest Resources, Ocean Resources
 गापाभूत घटक : Natural Resources in Earth's Crust, Forest Resources, Ocean Resources
 Core element : Critical thinking, Decision Making skills, etc.
 जीवन कौशल्ये : Critical thinking, Decision Making skills, etc.
 Life Skill : Critical thinking, Decision Making skills, etc.

अध्यापन पध्दती : Explanation, Powerpoint Base Demonstrative
 Teaching Method : Explanation, Powerpoint Base Demonstrative
 शैक्षणिक साहित्य : Powerpoint Presentation, Gold Ring
 Teaching Aids : Powerpoint Presentation, Gold Ring
 उपेक्षित पूर्वज्ञान : students know natural resources and its examples.
 Previous Knowledge : students know natural resources and its examples.

शिक्षक कृती / Teacher's Activity	विद्यार्थी कृती / Student's Activity
<p>प्रस्तावना : Introduction</p> <p>Teacher with the help of students make a list of real samples of soil, water, gold, silver, etc. and then questions students what are these samples generally called?</p>	<p>Students listen carefully and give answers, they are all natural resources. which helps to fulfil our needs</p>
<p>उद्देश्य : Statement of Aim</p> <p>So the teacher declares the topic project when the ppt is the ppt on the board</p>	<p>Students become curious when the ppt is projected.</p>



पाठ्याच्या पायऱ्या Steps of Lesson	पाठ्यांश / Content	उद्दिष्टे व स्पष्टीकरणे Objectives & Specifications	शैक्षणिक साधने Teaching Aids	शिक्षक कृती / Teacher's Activity	विद्यार्थी कृती Student's Activity
Revival of previous knowledge	Natural Resources: We get many things from the nature which satisfy the daily needs. Eg: Soil, stones, minerals, etc	Knowledge: Students know the definition of natural resources	Powerpoint Presentation	Teacher asks the students about the definition of natural resources and asks some examples of natural resources.	Students give answers
Explanation	Natural resources in the earth's crust: Minerals, Ores, Mineral oil Fuels, Rocks, water elements, etc	Understanding: Students understand that metals occur in the form of compound called ores.	Gold ring	Teacher shows a gold ring on her finger and asks what is the resource from where it is derived	Students answer 'soil' is the natural resource and it is derived from ores.
	Introduction of new terms: Lithosphere Minerals and Ores Langue Mining	Understanding: Students understand the mineral formation		Teacher explains each concept related to minerals and ores and shows the presentation and picture of each components and explains the formation of minerals.	Students listen carefully



पाठ्याच्या पायऱ्या Steps of Lesson	पाठ्यांश / Content	उद्दिष्टे व स्वरीकरणे Objectives & Specifications	शैक्षणिक साधने Teaching Aids	शिक्षक कृती / Teacher's Activity	विद्यार्थी कृती Student's Activity
Recapitulation	Mineral and Bio-resources from ocean: Minerals: Thorium, Magnesium, Potassium, sodium, sulphate. Bio-Resources: Fishes, Dried shrimp, Bombay duck powder, Fungi, shark & cod fish, Sea-cucumbers	Skills: Students are able to answer the question asked. Application: Students are able to classify the examples based on the concepts learnt	Powerpoint presentation	Teacher recapitulates the entire content taught and asks questions in order to get answers from students to check their concentration. What natural resources do we use as fuel? Which fuels are non-renewable?	Students answer the question and listen carefully.
Evaluation				Teacher shows certain examples and tells students to classify minerals as metal, non-metal and energy mineral and call out certain students to do the classification.	Students come forward and do the classification and answer correctly.
Homework	Write down the challenges faced during preserving the natural resources	Appli Attitude: Students develop the quality of conservation of resources.		Teacher writes the homework on the board and tells students to write it down in their notebook	Students write the homework in their notebook.



फलक लेखन / (Black Board Writing)

Date: 7/12/23 Day: Tuesday	Subject: Science Topic: Natural Resources Sub-Topic: Minerals	Std: VII Div: A
Natural Resources: Things that we get from which satisfy human needs	Examples of Minerals: Metals like Thorium, Sodium, Magnesium Sulphate	
* Earth's Crust: Minerals, Ores, Fuels, etc.	Examples of Bio-Resources: Fishes, Dried shrimps, shells, Fungi, etc.	
* Lithosphere Minerals & Ores Gangue Mining	Homework: Challenges faced during preserving natural resources.	

शैक्षणिक साधने / (Teaching Aids)

Gold Ring

STD: 7
Natural Resources
PRESENTED BY JIN SARDI

Topic Outline

- Natural Resources
- Introduction to Terms
- Classification of Minerals
- Formation
- Minerals and Bio-Resources from Ocean
- Homework

Introduction

What is Natural Resources?

A natural resource is anything found on planet earth or in the atmosphere that can be used by humans. Everything we eat, drink, breathe, and use as a material for manufacturing is a natural resource.

Question: Give examples of natural resources.

Introduction to various terms

- Lithosphere
- Minerals and Ores
- Gangue
- Mining

Classification of Minerals

Non-metal Minerals	Metal Minerals	Energy Minerals
Mica, Sulphur, Gypsum, Potash, Graphite, Diamond, Feldspar.	Iron, Gold, silver, tin, bauxite, manganese, platinum, tungsten.	Coal, mineral oil, natural gas.

Formation

- MINERALS
- COAL
- MINERAL OIL
- NATURAL GAS

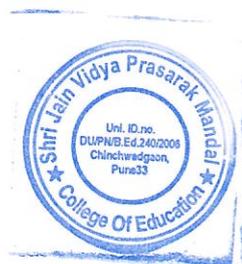
Question: What Natural Resources we use as fuel? Which are the fuels that are non-renewable?

Minerals and bio-resources from ocean

Homework

Write down the challenges faced during preserving the natural resources and the side effects on nature if these resources are extinct in nature.

Thank you for listening!
Don't hesitate to ask any questions!



तंत्रज्ञान आधारित पाठ निरीक्षण तक्ता

पदनिश्चयन श्रेणी : १) असमाधानकारक २) समाधानकारक ३) सरासरी ४) चांगला ५) उत्कृष्ट
Rating Scale: 1) Unsatisfactory 2) Satisfactory 3) Average 4) Good 5) Excellent

No.	Steps	Criteria	1	2	3	4	5
1	पाठ टाचण	नीटनेटके, अपूर्ण, पूर्ण					✓
2	प्रस्तावना	संबंधित आणि उद्दिष्ट					✓
3		पूर्वज्ञानाची उजळणी आणि पुढील ज्ञानाची सांगड					✓
4		हेतूकथन आणि शीर्षक लेखन					✓
5	सादरीकरण	कथनातील, उदाहरणातील ओघवतेपणा आणि स्पष्टता					✓
6		प्रश्न : स्पष्ट, संक्षिप्त, व्याकरणीयदृष्ट्या शुद्ध, प्रश्नार्थक उच्चार					✓
7		प्रश्न - तांत्रिक व विचाराप्रवर्तक					✓
8		आसपास प्रयुक्त					✓
9		तंत्रज्ञान साधनांची निवड					✓
10		तंत्रज्ञान साधनांचा वापर					✓
11		सादरीकरणातील गुणवत्ता					✓
12		तंत्रज्ञान आणि अभ्यासनातील समन्वय					✓
13		तंत्रज्ञान वापरातील सुलभता आणि आत्मविश्वास					✓
14		तंत्रज्ञान वापरता दिसेल याच म्हाय					✓
15		द्वितीय योजनेची मांडणी					✓
16		उद्दिष्टानुसार / उद्दिष्टानुरूप संकल्पन					✓
17		उपयोजन योग्य / नवनिर्मित					✓
18	मूल्यापन	गृहपाठ - योग्य / कृतीयुक्त					✓
19		वर्णन्यवस्थापन					✓
20		वेळेचे नियोजन					✓
Total Marks -100			80				

गुणक प्रत्याभरण/ Qualitative Remarks

→ mastery over the content
→ selection & presentation of J.T. tool
→ वाच्यता

Sign. of
Professor Incharge
Asst. prof. Retired



Chart

Excellent

4

तंत्रज्ञान आधारित पाठ - 2
Technology Based Lesson - 2

In. of
Incharge



श्री जैन विद्या प्रसारक मंडळ संचलित

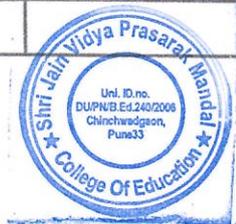
अध्यापक महाविद्यालय, चिंचवड, पुणे - ३३.

अध्यापन पाठ टाचण - २ / Technology Based Lesson Note - 2

विषय : Mathematics दिनांक : 8/2/23
 Subject Jini Sabu Date 64
 विद्यार्थ्यांचे नांव : S.J.V.P.M B.Ed College रोल नं.:
 Name of Student VII Roll No.
 शाळचे नाव : Statistics तुकडी : A
 Name of School Statistics Div. : Average, Grouped
 इयत्ता : Statistics उपघटक : Frequency Table
 Std. Statistics Subunit Frequency Table
 घटक : Statistics
 Unit Statistics

मूल्ये : Honesty, Consistency
 Value Average, Frequency, Frequency Distribution Table
 गाभाभूत घटक : Problem Solving, Critical Thinking, Responsible
 Core element Digital Participation
 जीवन कौशल्ये : Problem Solving, Critical Thinking, Responsible
 Life Skill Digital Participation
 अध्यापन पध्दती : Explanation, Deductive, Demonstration
 Teaching Method Explanation, Deductive, Demonstration
 शैक्षणिक साहित्य : Textbook, Blackboard, Powerpoint Presentation
 Teaching Aids Textbook, Blackboard, Powerpoint Presentation
 अपेक्षित पूर्वज्ञान : Students know to make groups of a
 Previous Knowledge given data.

शिक्षक कृती / Teacher's Activity	विद्यार्थी कृती / Student's Activity
प्रस्तावना : Introduction	
Teacher shows a census data in a newspaper article and asks whether this is related to Math and which lesson, do you think are we going to start from the textbook	Students answer to the questions
हेतूकथन : Statement of Aim	
Good! slence today we start with the lesson 'Statistics'	Students listen carefully.



पाठ्याच्या पायऱ्या Steps of Lesson	पाठ्याचा / Content	उद्दिष्टे व स्पष्टीकरणे Objectives & Specifications
Revival of previous knowledge and linking with the topic	Data:	
	Day Mon Tue Wed Thurs Mins 20 20 22 18	Knowledge: students know and tell the sum and how to count and tell the total number of observation.
	Day Fri Sat Mins 18 20	
	Sum = $20+20+22+18+18+20$ = 118	
	Total no. of observation = 6	
Presentation of the content	Average: A number which expresses the central value in a set of data	Understanding: students are able to write the formula and tell the definition
Explanation	Average = $\frac{\text{sum of all scores in a data}}{\text{Total no. of scores}}$	Knowledge: Students know to represent the answer in mixed number form.

शैक्षणिक साधने Teaching Aids	शिक्षक कृती / Teacher's Activity	विद्यार्थी कृती Student's Activity
Black-board	Teacher represents a data on the ^{board} and tells students to add all the numbers and tell the answer	students answer the sum is 118
	Teacher then tells the student to count the number of observation or how many numbers are there	students answer there are 6 observations.
PowerPoint Presentation	Teacher then introduces the term 'average' and tells the definition and then introduces the formula for average.	students listen carefully.
Black-Board	Teacher then continues with the data given on the blackboard and starts solving to get the average	students listen carefully.



पाठ्याच्या पायऱ्या Steps of Lesson	पाठ्यांस / Content	उद्दिष्टे व स्वहीकरणे Objectives & Specifications	शैक्षणिक साधने Teaching Aids	शिक्षक कृती / Teacher's Activity	विद्यार्थी कृती Student's Activity
Explanation and content grasping Evaluation	Average of given data $= \frac{118}{6} = 19\frac{2}{3}$ Asmita on an average takes $19\frac{2}{3}$ mins to cycle to school everyday	Understanding: Students understand how to use the formula and find the answer. Application: Students are able to find the average for the data given. Understanding: Students are able to assign the tally marks and prepare a grouped frequency distribution table.	Powerpoint Presentation	Teacher then presents a data to be projected on a ppt and calls 3 students to come and solve the sum on the board.	The first student writes the formula second substitutes the value and third finds the average value of the presented data.
			Powerpoint Presentation	Teacher quickly recapitulates the topic 'average' and then explains how to prepare grouped frequency table and presents a data for the same on the board.	Students listen carefully.
Evaluation	Homework in the ppt:	Application: Students are able to solve the sums given for homework.	Ppt	Teacher then based on the topics learnt presents the homework screen and tells the student to write it down in the notebook.	Students write down the homework in their notebook.



फलक लेखन / (Black Board Writing)

Date: 8/2/23 Subject: Math Std: VII
 Day: Wednesday Unit: Statistics Div: A
 Sub-Unit: Average

Data:

Day	Mon	Tue	Wed	Thurs	fr	Sat
Min	20	20	22	18	18	20

Sum = $20 + 20 + 22 + 18 + 18 + 20$
 $= 118$

Total no. of observations = 6

* Average:
 Number which expresses central value

Formula for average:

$$\text{Average} = \frac{\text{Sum}}{\text{Total}}$$

$$= \frac{118}{6}$$

$$= 19 \frac{2}{3}$$

[QR] = $\frac{54}{4}$

∴ Asmita on an average takes $19 \frac{2}{3}$ mins on cycle to school everyday.

शैक्षणिक साधने / (Teaching Aids)

~~Powerpoint Presentation~~

Statistics

Agenda

- Average
- Frequency Distribution Table
- Problems
- Homework

Average

Result obtained by adding together several items and then dividing this total by the number of items

Sum of all scores in the given data / Total number of scores

PROBLEM	SOLUTION
The daily rainfall for each day of a week in a certain city is given in millimeters. Find the average rainfall during the week. 9, 6, 20, 10, 16, 12	Average Rainfall = $\frac{\text{Sum of Total Rainfall}}{\text{No. of days}}$ $= \frac{9+6+20+10+16+12}{7}$ $= \frac{83}{7}$ $= 11.85$ mm

Frequency Distribution Table

Number of times a particular score occurs in such cases a frequency table is drawn in three columns, one each for the tally marks and the

Subject	Tally Marks	Number of students
Mathematics		4
English		4

Category	Tally Marks	Frequency
Red		4
Green		4
Blue		4
Black		4

Problems and Solutions

Example: Find the average of the following numbers: 10, 15, 20, 25, 30, 35, 40, 45, 50, 55, 60, 65, 70, 75, 80, 85, 90, 95, 100.

Solution: Average = $\frac{10+15+20+25+30+35+40+45+50+55+60+65+70+75+80+85+90+95+100}{19}$

HOMEWORK

If 20 children in a class are given 1000 marbles. How many marbles will each child have?

Write the following numbers in a horizontal line: 100, 200, 300, 400, 500, 600, 700, 800, 900, 1000.

Write the following numbers in a vertical line: 100, 200, 300, 400, 500, 600, 700, 800, 900, 1000.

THANKYOU



तंत्रज्ञान आधारित पाठ निरीक्षण तक्ता

पदनिश्चयन श्रेणी : १) असमाधानकारक २) समाधानकारक ३) सरासरी ४) चांगला ५) उत्कृष्ट

Rating Scale: 1) Unsatisfactory 2) Satisfactory 3) Average 4) Good 5) Excellent

Sr.No.	Steps	Criteria	1	2	3	4	5
1	पाठ टाचण	नीटनेटके, अचूक, पूर्ण				✓	
2	प्रस्तावना	संबंधित आणि उद्दिपक				✓	
3		पूर्वज्ञानाची उजळणी आणि पुढील ज्ञानाशी सांगड				✓	
4		हेतूकथन आणि शीर्षक लेखन				✓	
5	सादरीकरण	कथनातील, उदाहरणातील ओघवतेपणा आणि स्पष्टता				✓	
6		प्रश्न : स्पष्ट, संक्षिप्त, व्याकरणीयदृष्ट्या शुद्ध, प्रश्नार्थक उच्चार					✓
7		प्रश्न - तार्किक व विचारप्रवर्तक					
8		आशयावर प्रभुत्व				✓	
9		तंत्रज्ञान साधनांची निवड				✓	
10		तंत्रज्ञान साधनांचा वापर				✓	
11		सादरीकरणातील गुणवत्ता				✓	
12		तंत्रज्ञान आणि अध्यापनातील समन्वय				✓	
13		तंत्रज्ञान वापरातील सुलभता आणि आत्मविश्वास				✓	
14		तंत्रज्ञान वापराला दिलेला योग्य न्याय				✓	
15		द्वितीय योजनेची मांडणी				✓	
16		उद्दिष्टानुसार / उद्दिष्टानुरूप संकलन				✓	
17		उपयोजन योग्य / नवनिर्मित				✓	
18	मूल्यमापन	गृहपाठ - योग्य / कृतीयुक्त				✓	
19		वर्गव्यवस्थापन					
20		वेळेचे नियोजन			✓		
Total Marks -100			81				

गुणात्मक प्रत्याभरण / Qualitative Remarks

• Distribution of question in class was good
 • mastery over the content
 • overall lesson was good

Prof. Pethal

Sign. of
Professor Incharge

Asst. prof. Pethal



PRINCIPAL
 Shri Jain Vidhya Prasarak Mandal
 College of Education (B.Ed.)
 Chinchwadgaon, Pune-33.

ॐ नमो भगवते वासुदेवाय ॐ

SHREE JAIN VIDYA PRASARAK MANDAL'S ADYAPAK
MAHAVIDYALAYA (B.Ed), CHINCHWAD, PUNE- 411033.

B.ED COURSE:104

ASSESSMENT AND EVALUATION FOR
LEARNING

- COURSE RELATED PRACTICAL WORK

DEVELOPING AN ACHIEVEMENT TEST WITH
ITS BLUE PRINT

प्रात्यक्षिक कार्य

संपादन चाचणीचे विकसन आणि संविधान तक्ता.

NAME OF THE STUDENT TEACHER

शिरसाठ शोभन विलास

ROLL NO

९३

INCHARGE

ASST. PROF. AMAR PAPAL



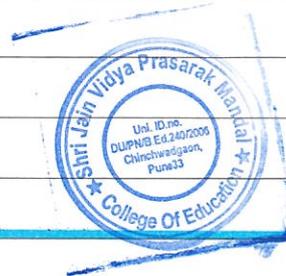
ii) उपघटकांना द्यावयाचे सारांश

अ.नं.	उपघटकाचे नाव	मुल	शेकडा मुल
१)	लैसिक	६	२४
३)	शमोकोल	७	२८
२)	काच	६	२४
४)	काचेचे मुलाधर्म	६	२४
	सुद्धा	२५	१००



ii] उद्दिष्टानां दशावयाचे मारांश

अ.नं	उद्दिष्ट्ये	गुण	शेकडा गुण
१)	ज्ञान	e	28
२)	आकलन	L	36
३)	उपयोजन	L	80
	एकूण	24	900



iii] प्रश्नप्रकारांना द्यावयाचे सारांश

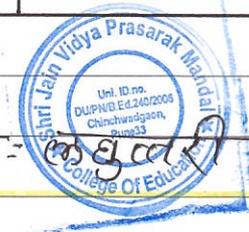
अ.नं	प्रश्न - प्रकार	प्रश्नसंख्या	बुटा	शेकडा बुटा
१)	वस्तुनिष्ठ	९	९	२४
२)	लघुत्तरी	३	८	३६
३)	दीर्घोत्तरी	२	८	८०
	एकूट	१४	२५	१००



6] संविधान तक्ता

क्र.	उद्दिष्ट्ये	ज्ञान			आकलन			उपयोजन			एकूण
	उपधटक	व	क	दी	व	क	दि	व	क	दि	
१.	एलॅक्सिक	(e)			(१)						(१०)
		e			३						१२
२.	शमोकोल				(१)				(१)		(१)
					२				२		२
३.	काच				(१)				(१)		(२)
					३				४		७
४.	काचेचे गुणधर्म								(१)		(१)
									४		४
	एकूण	(e)	-	-	(३)	-	-	-	(२)		(१४)
		e			८				८		२५
	एकूण	e			८				८		२५

• लिप - व = वस्तुमिळ , क = कडुपत्तरी , दि = दिवोत्तरी



• घटक चाचणी •

श्री जैन विद्या प्रसारक मंडळ संपन्नित अध्यापक
महाविद्यालय, चिंचवड पुणे - ३३

शाळा

इयत्ता - ८वी

विषय - विज्ञान

राकुण कुण - २५

दु - अ

घटक - मानवनिर्मित पदार्थ

वेळ

विद्यार्थ्यांना सूचना :-

- १) सर्व प्रश्न सोडविणे आवश्यक आहेत.
- २) उजव्या बाजूस दिलेली संख्या ही कुण दर्शविते.

प्रश्न-१ ला . रिकान्या जागा भरा .

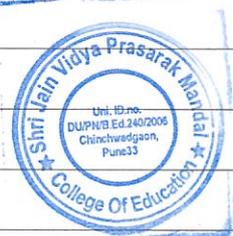
————— (५)

१) एलॉस्टिकमध्ये ----- हा गुणधर्म आहे, म्हणून त्याला हवा तो आकार देता येतो.

२) मोटार भाठ्यांना ----- कोटींग करतात.

३) थर्मोकॉल ----- तापमानाला प्रव अवस्थेत जाते.

४) ----- कच पाण्यात विरघळते.



प्रश्न २ रा. जोड्या लावा _____ (5)

'अ' गट

- १) शिसेयुक्त काच
- २) बॅकेलाइट
- ३) शमीकोल
- ४) प्रकार्शीय काच
- ५) पॉलिप्रोपिलिन

'ब' गट

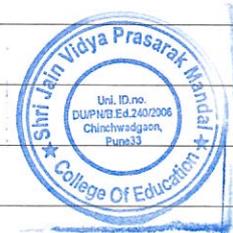
- अ) प्लेक्स
- ब) चट्या
- क) विस्तृत वलय
- ड) इलेक्ट्रिक स्विच
- इ) दुधीण

प्रश्न ३ रा. खालील प्रश्नांची उत्तरे १-३ ओळीत लिहा — (कोणतेही तीन प्रश्न सोडवा.)

- १) शमीकोल कोणत्या पदार्थापासून तयार करतात ?
- २) काचेमधील प्रमुख बटक कोणते आहेत ?
- ३) प्लॉस्टिक कसे तयार होते ?
- ४) PVC चे उपयोग लिहा.

प्रश्न ४ था. कोणत्याही दोन प्रश्नांची उत्तरे ७ ते ८ ओळीत लिहा — (६)

- १) मानवनिर्मित पदार्थ व निसर्गनिर्मित पदार्थ यांतील फरक स्पष्ट करा.
- २) काचेचे गुणधर्म लिहा.
- ३) प्लॉस्टिकचे उपयोग लिहा.



(Signature)

PRINCIPAL

Shri Jain Vidhya Prasarak Ma
College of Education (B.E.)
Chinchwadgaon, Pune-33

SHREE JAIN VIDYA PRASARAK MANDAL'S ADHYAPAK
MAHAVIDYALAYA, CHINCHWAD, PUNE -33.

B.ED. COURSE 105

ADVANCED PEDAGOGY AND APPLICATION OF ICT

PRACTICAL WORK:

REVIEW AN EDUCATIONAL MOBILE APP AND WRITE A REPORT

Name of the Student:

Manisha. Sonawane.

Roll No:

2020 - 2021

In-charge

ASST. PROF. SAKUNDE ASHA



**SHREE JAIN VIDYA PRASARK MANDAL'S ADHYAPAK
MAHAVIDYALAYA, CHINCHWAD, PUNE -33.**

=====

B.ED. 105

**PRACTICAL WORK: REVIEW AN EDUCATIONAL MOBILE APP AND
WRITE A REPORT**

Name of the Student: Ms. Manisha Somwane Roll No: _____

EVALUATION SCHEME

Rating Scale: 1 unsatisfactory, 2 Average, 3 Satisfactory, 4 Good, 5 Excellent

Sr. No.	Criteria	1	2	3	4	5
01	Introduction				✓	
02	Concept of Mobile App					✓
03	General Educational Uses of Mobile App				✓	
04	Technical Description of the selected Mobile App			✓		
05	Features/ Facilities/ Tools in the Mobile App					✓
06	Educational Implication of Mobile App				✓	
07	Limitations of the Mobile App				✓	
08	Suggestions to improve the Mobile App					✓
09	Screen Shots of the Mobile App				✓	
10	Overall impression					✓
Total Marks Out of 50						37/20+20 = 43/50

Qualitative Feedback (if any): followed all guidelines

written neatly



Course In-charge
Ashakunde
ASST. PROF. SAKUNDE ASHA

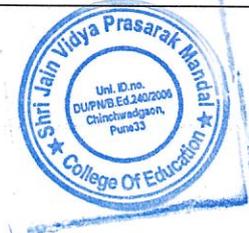
**SHREE JAIN VIDYA PRASARK MANDAL'S ADHYAPAK
MAHAVIDYALAYA, CHINCHWAD, PUNE - 33.**

=====

B.ED. 205-19 COMMERCE
REVIEW AN EDUCATIONAL MOBILE APP AND WRITE A REPORT
कोणत्याही एका शैक्षणिक मोबाईल ऍपचा (अनुप्रयोग) आढावा व अहवाल लेखन

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02	CERTIFICATE प्रमाणपत्र
03	ACKNOWLEDGEMENT ऋणनिर्देश
04	INTRODUCTION प्रस्तावना
05	CONCEPT & DEFINITION OF MOBILE APP मोबाईल ऍपची (अनुप्रयोग) संकल्पना आणि व्याख्या
06	FEATURES OF MOBILE APP मोबाईल ऍपची (अनुप्रयोग) गुणवैशिष्ट्ये
07	LIST OF EDUCATIONAL MOBILE APPS मोबाईल ऍपची (अनुप्रयोग) यादी
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11	MERITS OF SELECTED MOBILE APP निवडलेल्या मोबाईल ऍपचे गुण
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13	LIMITATIONS OF SELECTED MOBILE APP निवडलेल्या मोबाईल ऍपच्या मर्यादा
14	EDUCATIONAL IMPLICATION OF SELECTED MOBILE APP निवडलेल्या मोबाईल ऍपचे शैक्षणिक उपयोजन
15	SUGGESTIONS FOR SELECTED MOBILE APP निवडलेल्या मोबाईल ऍपबद्दल शिफारशी
16	OPINION ABOUT SELECTED MOBILE APP निवडलेल्या मोबाईल ऍपबद्दल मत
17	REMARK ABOUT PRACTICAL प्रात्यक्षिकाबाबत अभिप्राय
18	SCREEN SHOTS OF SELECTED MOBILE APP निवडलेल्या मोबाईल ऍपच्या स्क्रीन फोटो



CERTIFICATE प्रमाणपत्र

This is to certify that Ms. Manisha Sonawane of course B.ED (I. year) of Shree Jain Vaidya Prasarak Mandal Adhyapak Mahavidyalaya College had completed her project file of B.ED. Course - 105 Review an Educational Mobile App and write a Report. Under the guidance of Prof. Asst. Mrs. Asha Sakunde.

~~It is~~ This is to certify that this practical is upto my expectation and as per guidelines issued by college and Savitribai Phule, Pune University.

~~Signature~~
Mrs. Asha Sakunde
(In-charge)



ACKNOWLEDGEMENT ऋणनिर्देश

Presentation, inspiration and motivation have always played a key role in the success of any venture.

I express my sincere thanks to Savitribai Phule Pune University to admit me and allowing for further education.

I express my gratitude to Prof. Pranin Kothawade, Principal, Shree Jain Vidya Prasarak Mandal Adhyapak Mahavidyalaya, Chinchwad, Pune. I also thank the college in helping me to study and pursue Bied professional degree - Shree Jain Vidya Prasarak Mandal Adhyapak Mahavidyalaya, Chinchwad, Pune.

I pay my deep sense of gratitude to my teacher Mrs. Asst. Prof. Sakunde Asha, who gave me an opportunity to do this wonderful project on this topic.

Educational app also helped me in doing lot of research and I came to know about so many new things.

I am really thankful them. Secondly I would also like to thank my parents and friends who helped me a lot in finalizing this project within the limited time frame.



INTRODUCTION प्रस्तावना:

Innovation is the key to improvement. In current times the obsolete ideologies and methods of teaching do not work. Today is the age of videos and podcasts and children can easily learn through this interactive media. Smartphones - connect, video streaming, image capturing devices are a lot of fun. They can align perfectly with your classrooms. The first step to mobile learning for many parents and educators is to get schools off board. Schools can save on the larger cost of class computers and the portable devices mean that they can buy twenty iPads to move from room to room rather than investing in stationary. I have selected Robomate + app.

CONCEPT & DEFINITIONS OF MOBILE APP मोबाईल ऐपची (अनुप्रयोग) संकल्पना आणि व्याख्या:

Miracles are these days. One miracle ~~we~~ we keep wondering about is 'how mobile apps have transformed education?'

A mobile application, most commonly referred to as an app, is a type of application software designed to run on mobile device - such as a smartphone or tablet computer. Mobile applications frequently serve to provide users with similar services to those ~~accessed~~ accessed on PCs.

In 2009, technology columnist David Pogue said that newer smartphones could be nicknamed "app phones" to distinguish them from earlier less sophisticated smartphones. The term "app," short for "software application," has since become very popular in 2010, it was listed as "Word of the Year" by the American Dialect Society.



FEATURES OF MOBILE APP मोबाईल ऐपची (अनुप्रयोग) गुणवैशिष्ट्ये:

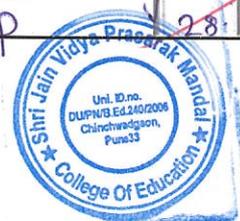
Features are an essential part of product.

Definition - Each requirement need to be clearly broken down for the product team, whether in the form of a PRD or user stories. Map out the mobile app features that will help you achieve your product objectives. The following are features of Robomate +

- Video lectures by Expert Teachers.
- Mapped to the Curriculum.
- Oriented towards Examination.
- Well organized by chapter and module.
- Short 5-7 min videos for easy understanding.
- Simply structured for easy navigation; notes can be added to the video time-line.
- Tests after every module.
- Performing Assessment feature, study groups forums to clarify doubts.
- Quick & reliable technical support.

LIST OF EDUCATIONAL MOBILE APPS मोबाईल ऐपची (अनुप्रयोग) यादी:

- | | |
|---------------------------------------|---|
| 1. Digital Teacher-Learning app | 15. Shaala: CBSE, ICSE, NCERT Solutions. |
| 2. Genius Teacher Free: CBSE Quiz app | 16. Meritation: CBSE, ICSE & More app |
| 3. Diksha app CBSE, NCERT. | 17. Kids Spelling Learning - Learn to spell |
| 4. Math Tests - Mathematics practice | 18. iDexam Learning App |
| 5. Praxadi Education | 19. iPrep - Learning App for 1 st - 12 th |
| 6. ePathshala | 20. Speed Learning |
| 7. Matrie Learning - 1:4 LIVE | 21. Practice Tests and Flashcards. |
| 8. Teachmint | 22. Best High school study Tool. |
| 9. National Digital Library of India | 23. Chemistry notes app. |
| 10. myCBSEguide - CBSE | 24. General Knowledge Quiz: World GK Quiz |
| 11. Oda Classes: LIVE Learning | 25. High School Math: Practice Test. |
| 12. Science Basics app. | 26. Math - Basic Math & Learnmath |
| 13. Noon Academy - Student Learning | 27. Maharashtra state Board Textbook of |
| 14. Shiksha Learning app | 28. Extra marks - The Learning app. |



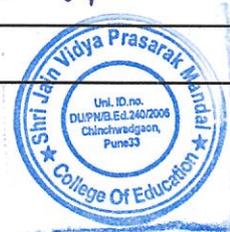
TECHNICAL DESCRIPTION OF THE SELECTED MOBILE APP मोबाईल ऐपची (अनुप्रयोग) तांत्रिक वर्णन:

Robomate + is the worlds largest curriculum based study platform and a complete learning solution for students. Robomate + gives you the convenience to study and revise in the comfort of your homes. Detailed lectures and Practice test series of professional exams like CA Exams including CPT, IPCC, Engineering Entrance Exams such as Jee Mearns and Advanced, MHT CET, Medical entrance exams including NEE, AIIMS, AIPMT and MBA entrance CAT, CMAT, GMAT, XAT, MH CET. Students can also take the help of Robomate + to prepare for NTSE and Olympiads. Robomate + is the most popular study tool for the following: CBSE (8-10), ICSE (9-10), SSC (Maharashtra State Board (7-10) Commerce (101-12, F.Y. Bcom), Science (11-12) and Karnataka (PU 1 & 2).

Robomate + App is available on Tablet, SD card and Online videos compatible with OS: Android and iOS.

FEATURES IN THE SELECTED MOBILE APP निवडलेल्या मोबाईल ऐपची (अनुप्रयोग) गुणवैशिष्ट्ये:

- The following are the features of Robomate +
1. Videos lectures by Expert Teachers.
 2. Mapped to the Curriculum as per Board lists.
 3. Oriented towards Examination
 4. It allows us to select our category to be studied
 5. Course types to be selected as per classes
 6. 5-7 min short video
 7. Dynamic Test and Evaluation on Progress.
 8. Lectures to be saved option for further reference
 9. eBooks added and can be added to courses.
 10. Study Groups Forum to clarify doubts
 11. Reliable technical support.



FACILITIES & TOOLS IN THE SELECTED MOBILE APP निवडलेल्या मोबाईल ऍप (अनुप्रयोग) मधील साधने

आणि सुविधा:

Robomati + is the world's largest curriculum based study app that provides interactive study material for students. We endeavour to make learning easy for students and help them score more. This app is carefully designed to ensure maximum learning through proven techniques such as conceptual videos, adaptive learning and collaborative learning methods:

I- Board \Rightarrow CBSE, ICSE, MSB, Karnataka State Board.

II- Subjects \Rightarrow Maths, Science, English, History, Civics, Hindi, Marathi, Sanskrit. We can buy and subscribe ebooks.

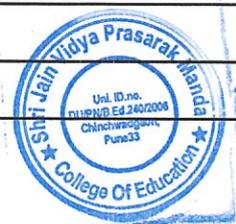
This app provides facilities from Grade 8th to higher post degree courses.

Tools \Rightarrow Uncategorized (39), Media (78), Blog (328), Video lectures (413), Text Papers (529), Archive (78), Resources (46), Recommendations (4), Solved Papers (14), MHT-CET 2016 Mock Test (25), All courses (271), Press release (1), R+Talk (3).

MERITS OF SELECTED MOBILE APP निवडलेल्या मोबाईल ऍपचे गुण:

Like all good things, an online studies app has its own merits and demerits. While you can study anytime and anywhere you increase screen time.

- \rightarrow Anywhere, Anytime with the online studies app.
- \rightarrow Trackable learning
- \rightarrow Better presentation - High engagement, Interactive learning with Presentation and Animation.
- \rightarrow Quick assessment - Polls and MCQs, Surveys, Quizzes.
- \rightarrow No Peer Distractions.
- \rightarrow No commuting required.



DEMERITS OF SELECTED MOBILE APP निवडलेल्या मोबाईल ऍपचे दोष:

The demerits of Robomate + app -

- Need Regular and continuous Internet
- Distractions can be at home too.
- Procrastination by students.
- Time Management skills needed
- Parents need to contribute time
- Robomate + a Must have for Students
- Technology for studies
- It is engaging and interactive.

LIMITATIONS OF SELECTED MOBILE APP निवडलेल्या मोबाईल ऍपच्या मर्यादा:

A website designed for standard desktop computers but you obviously want to keep up with times and make your site mobile friendly too. However, it isn't just a matter of scaling down your design, it's a new platform with a new set of interaction patterns and limitations.

1] No Hover state (not yet anyways)

- Visible - The content is accessible from visual means.
- Convention

2] Slow and Error Prone Typing

3] Less Context

4] Inaccurate clicks

5] Poor Connectivity - No connection, slow download speeds.

6] Slow Hardware

7] Usage Situation

8] No right click (added by Jamie)



EDUCATIONAL IMPLICATION OF SELECTED MOBILE APP निवडलेल्या मोबाईल ऍपचे शैक्षणिक उपयोजन:

"Educational Software." Educational software or computer applications developed for the purpose of teaching and learning arrived with virtually the first desktop computer.

* The Education points of the mobile app \Rightarrow Launch Screen.

① Accelerated ② Cognitive improvement ③ Self-improvement
④ Educational Standards changing. ⑤ Engaged and Interactive students.

* Implication point of ^{the} mobile app \Rightarrow drawn ~~by~~ from Piaget's theory
1] A focus on the process of children's thinking, not just its product

2] Recognition of the crucial role of children's self-initiated, active involvement in learning activities. 3] A de-emphasis on practices aimed at making children adult-like in their thinking.

SUGGESTIONS FOR SELECTED MOBILE APP निवडलेल्या मोबाईल ऍपबद्दल शिफारशी:

Developing and improving mobile application are part of the development team or responsible for the end-user user experience, these suggestion will help improving a mobile app.

1. Do support real time experiences - Modern app require real time events from backend services like-incorporated data distribution technologies within your app development cycle that intelligently access data to only send most up-to-date information.

2. Do ensure your app is highly responsive.

3. Do keep scale in mind what happens if your app goes viral.

4. Don't develop for one device and platform at a time

5. Don't develop an ~~open~~ app that cannot make use of device features.



OPINION ABOUT SELECTED MOBILE APP निवडलेल्या मोबाईल ऍपबद्दल मत:

Mobile app development and its importance in today's world. In education field it had become a big source or a major role we can say.

As the competition level had increased in all field from school to business level, education pattern and syllabus also has been changed. Many educational apps have been introduced amongst which Robomate+ is one of those where there is large scale of learning installed in this app for students to grow and intellectual with their peers and gain knowledge.

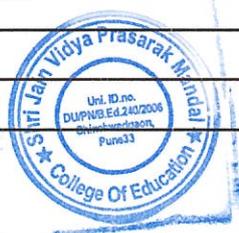
Many plus and minus are available in each app but due to this Robomate+ a student can be independent and get accurate knowledge.

REMARK ABOUT PRACTICAL प्रात्यक्षिकाबाबत अभिप्राय:

This practical is very useful for student and teacher. Unlike all apps this app also gives lot of information on e-learning. While doing this practical we learn more about different types, method of teaching in a fun way, technical structure of this App, the history of app. At large, most schools, colleges, institutions have approached and have been downloading and accessing different mobile apps for betterment of students.

Mobile apps are way faster than website, thereby leading to faster actions and faster results.

Education is not limited only to black-boards and attending schools is what can be marked from the above practical.



SCREEN SHOTS OF SELECTED MOBILE APP निवडलेल्या मोबाईल ऍपच्या स्क्रीन फोटो:



P.T.O.



VoLTE LTE 70% 7:59 PM

Robomate +

Enter Your Username/Email ID

Enter Your Password

Login

Forgot Password?

I'm new here, create my account

Powered by **ROBOMATE+**

Version: 2.3.3





VII-CBSE

Trial period ends in 2 days.

Buy

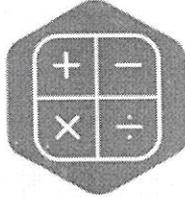


Tap a subject to access video lectures & tests



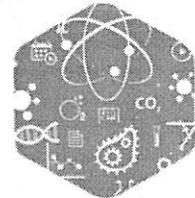
Social Science

0.0%



Mathematics

0.0%

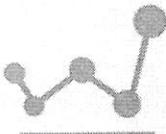


English Com-
municate with ...

0.8%



Dynamic Test



Progress



PRINCIPAL

Shri Jain Vidhya Prasarak Mandal
College of Education (B.Ed.)
Chinchwadgaon, Pune-33.



Self-learning material (Learning resources)

B. Ed. course 101-

<https://classroom.google.com/c/MTA4OTY3OTU2NTAw?cjc=l4trft>

B. Ed. course 102-

<https://meet.google.com/tfs-qoct-tge>

B. Ed. course 103-

<https://classroom.google.com/c/MzI0Njg4MTgzNDY2?cjc=zdriry7>

B. Ed. course 104-Video call link:

<https://meet.google.com/qxe-grwv-zcf>

B. Ed. course 105-

https://docs.google.com/forms/d/1gRycmNnfMsRnK_dsaXOEExT94FKYaCG4FyYsjYORZIA/edit

B. Ed. course 106-

<https://classroom.google.com/c/MzUxMzAyMzEwNzQ4?cjc=4jih442>

B. Ed. course 107-

<https://classroom.google.com/c/MzUxMzAyMzEwNzQ4?cjc=4jih442>

B.Ed. Second Year

B. Ed. course 201-

<https://classroom.google.com/c/MTE2NDAYNzcwNzQ5?cjc=kqceggkc>

B. Ed. course 202-

<https://classroom.google.com/c/MTE2NDA3MjY2MTYz?cjc=mjw5kle>

B. Ed. course 203-

<https://classroom.google.com/c/MTA4OTY3OTU2NTAw?cjc=l4trfta>

B. Ed. course 204-

<https://classroom.google.com/c/MzI0Njg4MTgzNDY2?cjc=zdriry7>

B. Ed. course 205-

<https://classroom.google.com/c/MzI0Njg4MTgzNDY2?cjc=zdriry7>

Open Access E-Resources: Free and Downloadable

- eShodhSindhu - <https://ess.inflibnet.ac.in/> Online Resources for supporting Researchers Research material, educational course material as a support for students, research scholars and academics and to supported educational institutions during the challenging time of COVID-19
- EBSCO - <https://www.ebsco.com/> An 'Open Access Initiative' of EBSCO that provides information about trending topics, maps and data visualizations, global news, and journal updates.
- World Digital Library: <https://www.loc.gov/> A project of the U.S. Library of Congress, with the support of UNESCO, and contributions from libraries, archives, museums, educational institutions, and international organizations around the world.
- मराठी विश्वकोश - <https://marathivishwakosh.org/> या संकेतस्थळावर मराठी विश्वकोश आणि इतर प्रकाशानंबद्दलची माहिती उपलब्ध आहे 'विश्वकोश प्रथम आवृत्ती' या दुव्याचा लिंक वापर केल्यास माहितीचा शोध घेण्यासाठी तीन विकल्प देण्यात आले आहेत एक- 'मराठी विश्वकोश ज्ञानमंडळ', दोन- 'मराठी विश्वकोश खंड निहाय' आणि तीन- 'अकारविल्हे नोंदसूची'.
- मराठी भाषा विभाग, महाराष्ट्र शासन - <https://marathi.gov.in/> शासन व्यवहारासाठी शब्दकोश आणि शास्त्रीय व तांत्रिक परिभाषा कोश.

- संत साहित्य – <https://www.santsahitya.in/> सर्व संतांची माहिती दृक्श्राव्य आणि इतर स्वरूपात

Open Access E-Books:

- DOAB (Directory of Open Access Books): <https://www.doabooks.org/> 69,500 Academic peer-reviewed books from 393 publishers
- IntechOpen - <https://www.intechopen.com/> 6,500 Open Access E-Books for the Scientists by the Scientists
- Project Gutenberg: <https://gutenberg.org/> Project Gutenberg is a library of over 60,000 free eBooks.
- PDFDrive - <https://www.pdfdrive.com/> PDF Drive is a search engine for PDF files. As of 20-06-2023, there are 84,442,893 eBooks for you to download for free.
- Open Textbook Library - <https://open.umn.edu/> Textbooks every student can access and afford. These books have been reviewed by faculty from a variety of colleges and universities to assess their quality.
- महाराष्ट्र राज्य साहित्य आणि संस्कृती मंडळ – <https://sahitya.marathi.gov.in/> मराठी ई बुक डाऊनलोड
- राज्य मराठी विकास संस्था - <https://rmvs.marathi.gov.in/> प्रकाशने - ग्रंथ ई बुक स्वरूपात
- ईपुस्तकालय - <https://epustakalay.com/> Online Marathi and Hindi Books
- e-Balbharati: <https://ealbharati.in/> Downloadable E-Books of Maharashtra State Board of Secondary and Higher Secondary Education.
- NCERT Books: <https://ncert.nic.in/textbook.php> Text Books for all classes from Std. I to Std. XII available in pdf format for reading online as well as downloading.

Open Access E-Content (Videos, Tutorials, Interactive Content):

- e-PG Pathshala: <https://epgp.inflibnet.ac.in/> A Gateway to all PG Courses - High quality, curriculum-based, interactive content in different subjects across all disciplines

- e-Pathshala of NCERT: <https://epathshala.nic.in/> Access digital textbooks and eResources useful for Std. XI and Std.XII
- Vidya-Mitra: Integrated E-Content Portal - <https://vidyamidra.inflibnet.ac.in/> Project of MHRD-Govt. of India & INFLIBNET - e-Text, Videos, e-Tutorials for UG & PG Students
- SWAYAM-PRABHA- Free DTH Channels for Education: <https://swayamprabha.gov.in/> Project of MHRD-Govt. of India & INFLIBNET - 32 DTH Channels telecasting of high-quality educational programmes on 24X7 basis

E-Learning Courses Platforms:

- SWAYAM: <https://swayam.gov.in/> (Study Webs of Active Learning for Young Aspiring Minds) SWAYAM is a programme initiated by Government of India. Courses delivered through SWAYAM are available free of cost to the learners, however learners wanting a SWAYAM certificate should register for the final proctored exams that come at a fee and attend in-person at designated centers on specified dates.
- UGC MOOCs: <https://ugcmoocs.inflibnet.ac.in/> A Vertical of SWAYAM
- NPTEL: <https://nptel.ac.in/> (National Programme on Technology Enhanced Learning) A Project funded by the MHRD, Govt. of India
- Future Learn: <https://www.futurelearn.com> Get access to high quality learning wherever you are, with online courses, programs and degrees created by leading universities, business schools and specialist organisations.
- Unacademy: <https://unacademy.com/> Enroll in courses and watch lessons from India's best educators, on India's largest learning platform
- Khan Academy: <https://www.khanacademy.org/> A non-profit organization with the mission to provide a free, world-class education for anyone, anywhere ... for every student.