2.3.4: ICT support is used by students in various learning situations such as

1. *Understanding theory courses*
2. *Practice teaching*
3. *Internship*
4. *Out of classroom activities*
5. *Biomechanical and Kinesiological activities*
6. *Field sports*

Link of Resources Used

Swami Vidyamritananda
Principal (Offg.)
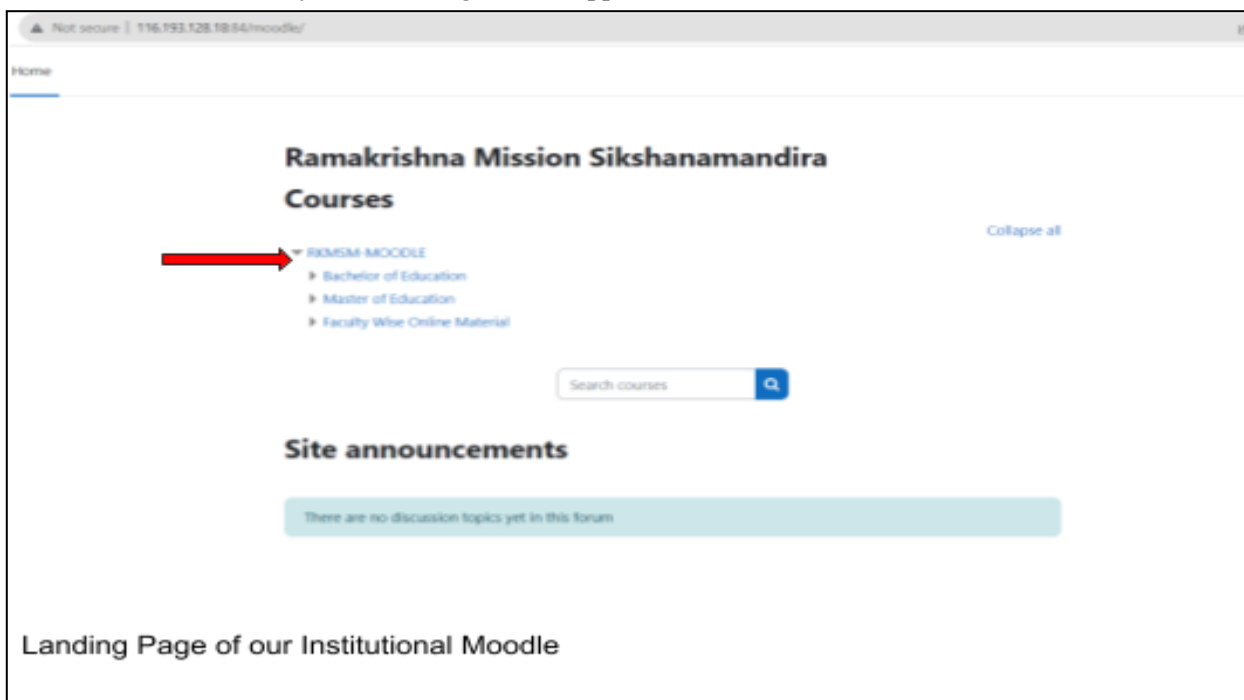Ramakrishna Mission Sikshanamandira
Belur Math, Howrah-711202, W.B.

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**Belur Math, Howrah - 711 202, West Bengal**

1. Understanding Theory Courses:

Our trainee-teachers are always encouraged to use the institutional LMS and Moodle for understanding the theory courses of B.Ed. and M.Ed. An attempt has been made to arrange the courses of B.Ed. and M.Ed. semester wise on our Moodle system. Our students log in their account and use moodle for various learning resources provided by our professors. Our professors refer them to various enriching websites like epg-pathshala, e-gyankosh, videos of eminent professors recorded on vidya mitra channel, NCERT etc. Our students accordingly use them for understanding the theory courses. Besides, our professors also upload relevant powerpoints and pdfs on theory courses on our institutional LMS which is available on our website. Documentary evidence is given to support the claim below.

Landing Page of our Institutional Moodle

Link to the Page: http://116.193.128.18:84/moodle/
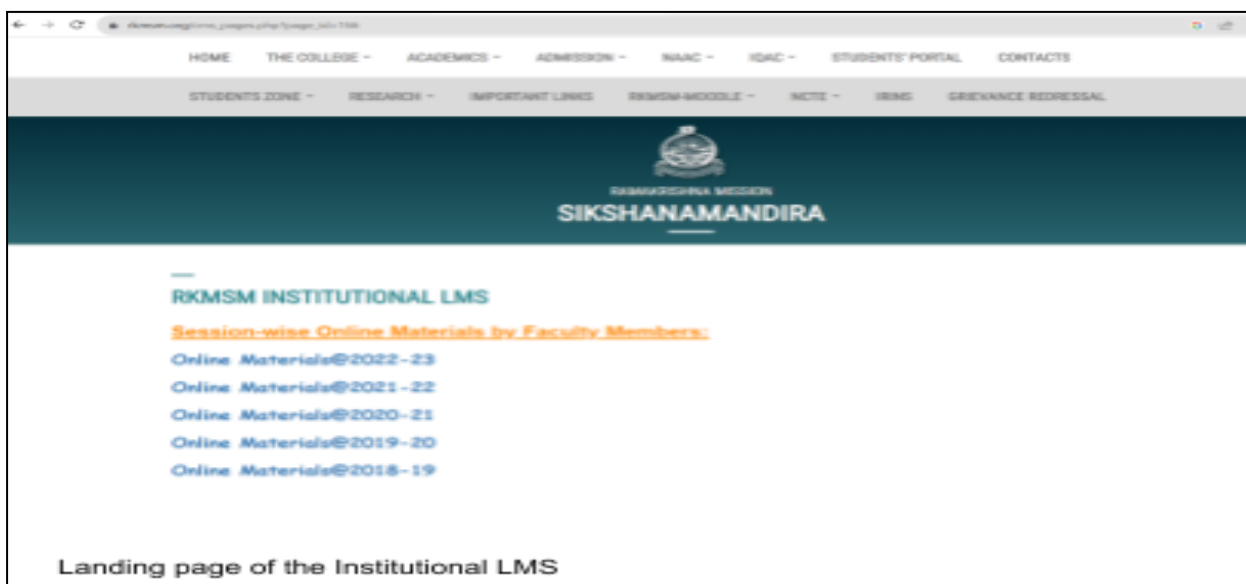
Landing page of the Institutional LMS

Link to the Page: https://rkmsm.org/cms_pages.php?page_id=166

"Education is the manifestation of the perfection already in man."

- **Swami Vivekananda**

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Link to the Page: https://rkmsm.org/cms_pages.php?page_id=165

Link to the Page: http://116.193.128.18:84/moodle/course/view.php?id=18

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- **Swami Vivekananda**

3

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Link to the Page: http://116.193.128.18:84/moodle/course/view.php?id=52

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Our Institution provides our **M.Phil. and Ph.D. scholars** with access to various online paid journals. They are also encouraged to use different online platforms for their research work and referencing. Evidence of usage is given below.

N-LIST Usage Activity July 2021 to June 2022 (New Format)

Name	Username	Department	Month	Year	Times Logged In	Page View
BINOD BASNETT	binodbasnett4u@gmail.com	EDUCATION	6	2022	1	1
ABHIJIT DAS	dasabhijit254@gmail.com	EDUCATION	6	2022	1	1
TANMOY SAHA	jrftanmoy@gmail.com	Education	6	2022	1	5
LALTU HALDER	laltuhalder7@gmail.com	EDUCATION	6	2022	2	5
SAHADEB MAL	malsahadeb27@gmail.com	EDUCATION	6	2022	1	1
PRIYABRATA DAS	priyabrata.chem1996@gmail.com	EDUCATION	6	2022	1	1
HEMANTA SARDAR	Sardar.hemanta2018@gmail.com	EDUCATION	6	2022	1	1
SHANKAR DATTA	shnkrdatta@gmail.com	EDUCATION	6	2022	2	4
SOUMAVA DHAR	soumava.ronnie2014@gmail.com	EDUCATION	6	2022	2	4
SOURYA BANERJEE	Souryabanerjeera1@gmail.com	EDUCATION	6	2022	3	8
SUMANTA DAS	Sumanta.712414@gmail.com	EDUCATION	6	2022	1	1
SURAJIT SAHA	surajit100saha@gmail.com	EDUCATION	6	2022	1	1
WASIKUR RAHAMAN	wasikurrahaman@gmail.com	EDUCATION	6	2022	1	1
SAYAK BANERJEE	watsonbanerjee87@gmail.com	EDUCATION	6	2022	4	5
ANKAN MAITI	2018ankan@gmail.com	EDUCATION	5	2022	3	10
RISHI KUMAR ACHARYA	abrishimath@gmail.com	EDUCATION	5	2022	1	1
AMIT CHOUDHARY	ac9161091@gmail.com	EDUCATION	5	2022	1	1
ALIK KUMAR MONDAL	alikmondal27@gmail.com	Education	5	2022	3	4
AMIT GAYEN	amitgayen198@gmail.com	EDUCATION	5	2022	1	5
ASHUTOSH MURMU	ashutoshmurmu4@gmail.com	EDUCATION	5	2022	1	1
BAPPADITYA ROY	bappaditya246@gmail.com	EDUCATION	5	2022	1	2
BISHAL PURKAIT	bishal.purkait@gmail.com	EDUCATION	5	2022	1	2
ABHIJIT DAS	dasabhijit254@gmail.com	EDUCATION	5	2022	1	2
MITHUN GAYEN	gayenmithun28@gmail.com	Education	5	2022	1	1
SANTANU GHORAI	ghoraisantanu1986@gmail.com	Education	5	2022	1	2
TANMOY SAHA	jrftanmoy@gmail.com	Education	5	2022	2	6
KHIRAN SUBA	khiransuba@gmail.com	EDUCATION	5	2022	1	3
CHIRANJIT GAYEN	mchiranjit97gayen@gmail.com	EDUCATION	5	2022	4	8
PARTHA ROY	partha.med2021@gmail.com	EDUCATION	5	2022	1	3
RAJDEEP MISRA	rajdeep.misra8@gmail.com	EDUCATION	5	2022	1	2
RAM KRISHNA UPADHYAY	ramkrishnaupadhyay369@gmail.com	EDUCATION	5	2022	1	2
RANAJIT BERA	ranajitbera666@gmail.com	EDUCATION	5	2022	4	10
BISWAJIT ROY	roybiswajitsr@gmail.com	Education	5	2022	1	5
UDDALOK SAHA	sahauddalok@gmail.com	EDUCATION	5	2022	1	1
SAMIRAN DUTTA	Samirandutta59@gmail.com	EDUCATION	5	2022	1	1

N-List Usage Statistics

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Sum of Total Hit Count		Year	Month Name				2021	2022	Grand Total
		2013	2014	2015	2016	2017			
Access ID	**Title**								
J325	Journal of Human Values							7	7
J327	Journal of Teacher Education	1	5	5		14	3	9	37
J366	South Asia Research							2	2
J396	Adult Education Quarterly							1	1
J585	Canadian Journal of School Psychology		7		3	8	1	5	24
J591	Educational Researcher			2					2
J592	Review of Educational Research		5	2					7
J593	Review of Research in Education	1	1						2
J594	Journal of Educational and Behavioral Statistics	1	6						7
J651	Journal of Primary Care & Community Health					1			1
J660	Sociology of Education		2						2
J674	Psychology of Women Quarterly				2				2
J676	SAGE Open			1	7				8
J730	AERA Open					1			1
J804	The Canadian Journal of Psychiatry					1			1
L003	Journal of Education for Sustainable Development			1					1
L077	Social Change							2	2
L109	Contemporary Education Dialogue		1	6	4			286	297
L202	Higher Education for the Future							8	8
L230	European Educational Research Journal							2	2
L820	Journal of Research in International Education						4		4
L956	Management in Education	1							1
Grand Total		4	27	17	16	25	8	322	419

Usage Statistics of Online Sage Journals

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2.Practice Teaching:

Before our trainee-teachers are sent to their internship, they are encouraged to use ICT based support for understanding practice teaching. This also helps them clarify their doubts on voice modulation, micro-teaching skills, posture, expressive power, designing lesson plans etc. Our professors upload various relevant links to the moodle for the purpose of practice-teaching. This increases their confidence and orients them to the teaching skill needed for taking a class. Below a link is given to support the claim.

Link to the Page: http://116.193.128.18:84/moodle/course/view.php?id=135

Link to the Page: http://116.193.128.18:84/moodle/course/view.php?id=135

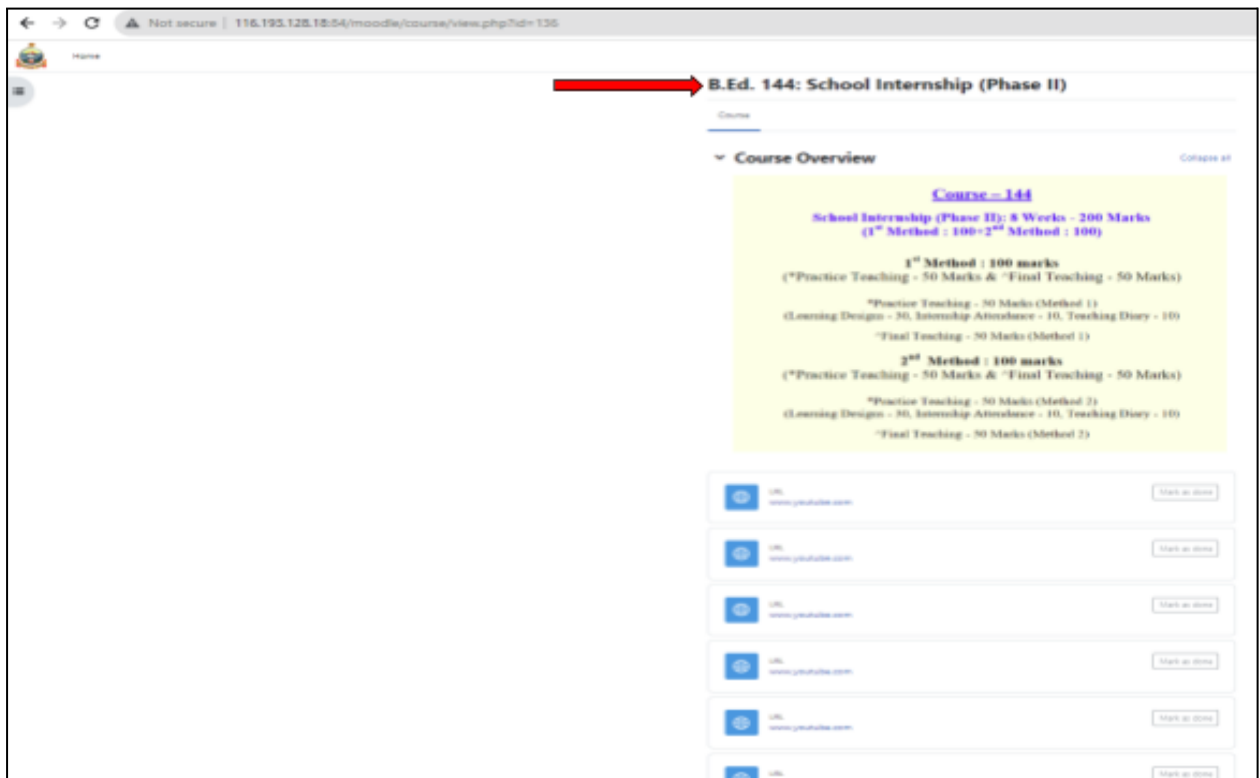**"Education is the manifestation of the perfection already in man."**

- **Swami Vivekananda**

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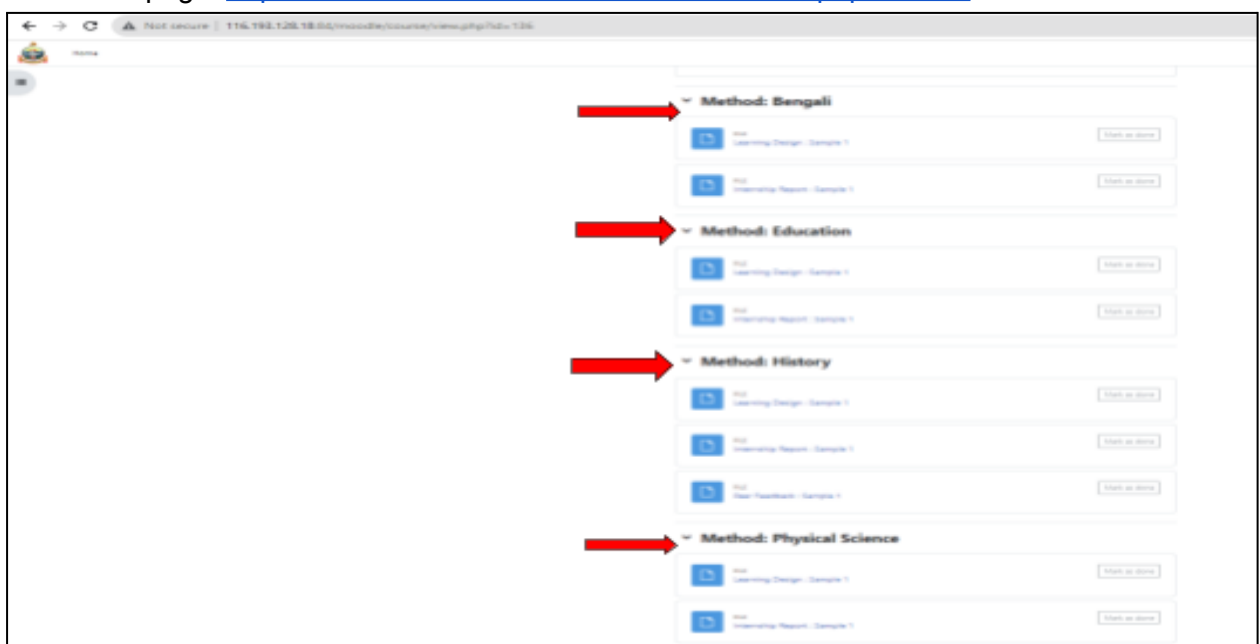
Belur Math, Howrah - 711 202, West Bengal
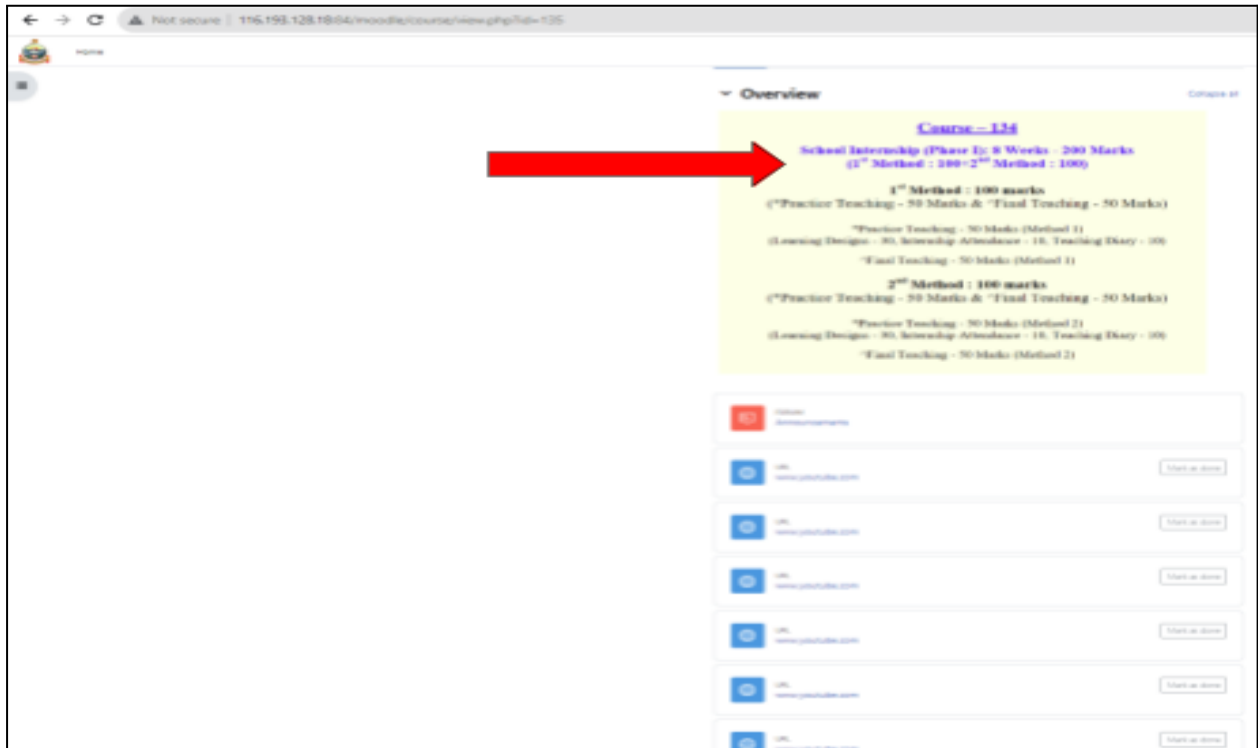
3.Internship:

During internship, our trainee-teachers have to work in different capacities in the allotted school. For this, they need to adapt themselves to different situations arising from teaching and non-teaching work. To have a fair amount of knowledge on those, our trainee-teachers are encouraged to use ICT based materials uploaded on our moodle. Our professors refer them to different online materials, relevant videos for having a prior knowledge of the internship engagement.

Link to the page: http://116.193.128.18:84/moodle/course/view.php?id=136

Link to the page: http://116.193.128.18:84/moodle/course/view.php?id=136

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Digital Lesson Plans prepared by our trainee-teachers:

LEARNING DESIGN

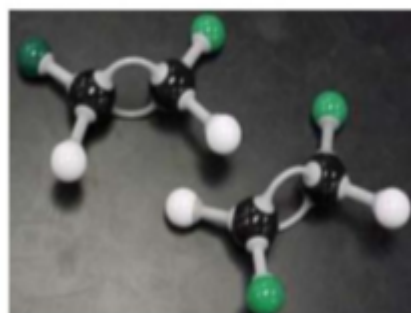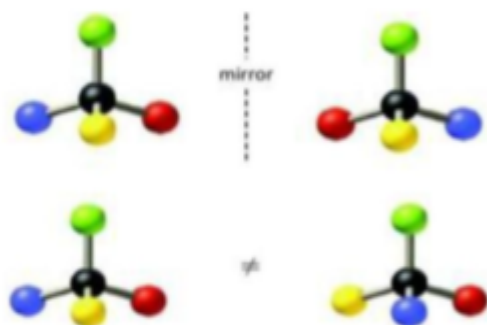| SCHOOL- UTTARPARA GOVT. HIGH SCHOOL	SUBJECT- CHEMISTRY

CLASS-XI
DATE- 29.03.2022
DURATION- 40 MIN
TEACHER- Suman Mondal
ROLL NO- F-42.
	UNIT- STEREOCHEMISTRY
	SUB UNIT –
	  1. CONCEPT OF STEREOCHEMISTRY
	  2. STEREOISOMER
	  3. CONSTITUTIONAL ISOMER.
	TODAY'S TOPIC- STEREOISOMER.

LEARNING GOALS/OBJECTIVES

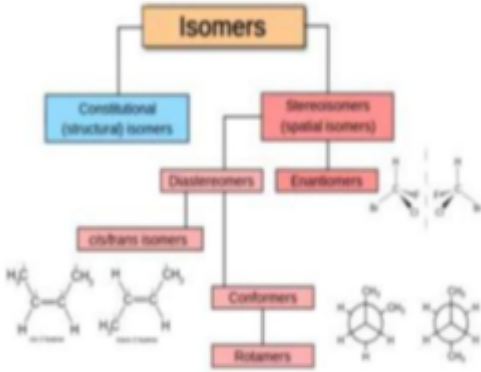|	
Remembering	a) Students know the concept of chiral carbon and Condition of having Chiral molecule. b) Students know the chiral center and Stereogenic Carbon center-
Understanding	a) Students understand the difference bet? Constitutional and Stereo isomer. b) Students Understand the difference bet and E12 Configuration.
Applying	a) Students can apply their knowledge to identify enantiomer and diastereomers. b) students can apply their knowledge to identify active and meso compound.
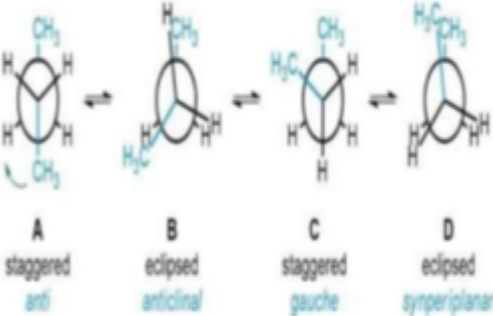
Sample Digital Lesson Plan of Chemistry

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TEACHING LEARNING MATERIALS

1. Chalk 2.Duster 3.Blackboard 4.Book 5.Charts and Models.

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TEACHING LEARNING STRATEGIES

Concept	Teacher's role	Student's role	Black Board work
Classification of Stereoisomer	**Lecture cum Demonstration Method** — Teacher will teach the concept of stereoisimers with proper classification and chart.	Students will understand the concept then interact with teacher regarding their doubts.	
Conformational isomer	**Lecture cum Demonstration Method** — Teacher will teach the concept of Conformational isomers with proper classification and Model.	Students will understand the concept then interact with teacher regarding their doubts.	

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HOME ASSIGNMENT

1. How you will separate diastereomeric pair Compounds?

2. Between compound A and B which will be optically active and which one optically in active and why?
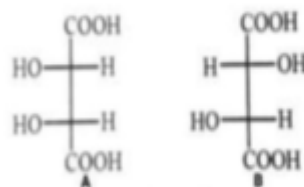
3. What is the difference between Cis/Trans and E/Z isomer?

DIAGNOSIS OF WEAKNESSES FOR REMEDIAL CLASSES

After Evaluation, remedial class will be arranged for weak and unsuccessful students (if any) where the Problem arising port of the topic I will be taught again with effective teaching strategies and more easy and interesting way.

Emanations and Diastereomers	Lecture cum Demonstration Method Teacher will teach the concept of Stereoisimers with proper classification and chart	Students will understand the concept then interact with teacher regarding their doubts.	
Cis/ Trans and E/Z isomers	Lecture cum Demonstration Method Teacher will teach the concept of Cis/Trans and E/Z with proper classification and Model.	Students will understand the concept then interact with teacher regarding their doubts.	

DESIGN FOR EVALUATION

1. what is the difference between Enantiomer and Diastereomer?
2. what is the difference between conformational and Configuration isomer?
3. Draw the two isomer of C_2H_6O molecular formula.

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Learning Design	
School : Uttarpara Govt. High School **Class** : x **Time** : 45 Mins **Date** : 05.04.2022 **Teacher** : Bhairab Singha (F-09)	**Subject** : Physical Science **Unit** : Behavior of Gases **Sub-Unit** : • Pressure and volume • Boyle's law • Charles's law • Absolute temperature scale • Combination of Boyle's & Charles's laws • Avogadro's Hypothesis & ideal gas **Today's lesson** : Combination of Boyle's & Charles's laws

➢ **Learning Objectives :**

After completing the lesson the students will be able to

Remembering	1. Tell the formula of combined gas law. 2. Remember that temperature should always be in Kelvin scale.
Understanding	1. Understand how the formula of combined gas law is formed. 2. Demonstrate the formula.
Applying	1. Solve different types of problem about combined gas law.
Analysing	1. Analyse how Boyle's and Charles's laws are combined. 2. Analyse why temperature should always be in Kelvin scale in that formula.
Evaluating	1. Evaluate the problems regarding combined gas law.

Sample Digital Lesson Plan of Physical Science

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| Creating | 1. Represent the formula in chart. |
| | 2. Apply this formula in higher courses. |

➤ **Analysing Learners and Context :**

To understand the primary behavior and previous knowledge of the students the following questions will be asked:

1. State Boyle's law.
2. What is the mathematical formulation of Boyle's law?
3. State Charles's law with respect to absolute temperature scale.

➤ **Learning Materials :**

1. Textbook : Physical Science & Environment, class x, Calcutta Book House.
2. Supporting Materials : Chalk, Duster, Blackboard, Chart.

➤ **Learning Strategies :**

Learning Areas	Related Strategies
Combination of Boyle's & Charles's laws	By using lecture and demonstration method with questioning, the formula will be established. Let us suppose, amount of gas = n mole, temperature = T K, pressure = P, volume = V. Q: State Boyle's law. A: The pressure and volume of a gas are inversely proportional to each other as long as the temperature and the quantity of the gas are kept constant. Therefore, $V \propto 1/$, when n & T are constant .... (i) Q: State Charles's law regarding absolute temperature. A: The Kelvin temperature and the volume will be in direct proportion when the pressure and the quantity of the gas are kept constant. Therefore, $V \propto T$, when n & P are constant........... (ii) Then from (i) and (ii), it follows that $V \propto T/P$ or, $V = k * T/P$, $k =$constant. So, $(PV)/T = k$ .... (iii)

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	For an n mole quantity of gas, if volume is V_1 in pressure P_1 and temperature T_1 and volume is V_2 in pressure P_2 and temperature T_2, then $$(P_1 V_1)/T_1 = (P_2 V_2)/T_2 \ldots\ldots (*)$$
A simple problem and solution	A problem will be presented in the blackboard and it will be solved by problem solving method. Q: The initial volume of a gas is 6L and its final volume is 3L. Find out the final pressure of the gas such that the initial temperature is 0^0 C while the final temperature is 200K. Moreover, 25K Pa is the initial pressure. A: Here, $P_1 = 25$ K Pa, $V_1 = 6$ L, $T_1 = 273 + 0 = 273$ K and $V_2 = 3$ L, $T_2 = 200$ K. Then $(P_1 V_1)/T_1 = (P_2 V_2)/T_2$ or, $(25 * 6)/ 273 = (P_2 * 3)/ 200$ or, $P_2 = 36.626$ K Pa, which is the final pressure.

➤ Design for Evaluation :

1. Derive the formula of combined gas law.
2. Why the temperature should always be in Kelvin scale in that formula?
3. The initial volume of a gas is 10L and its final volume is 20L. Find out the final pressure of the gas such that the initial temperature is 0^0 C while the final temperature is 373 K. Moreover, 50K Pa is the initial pressure.

➤ Diagnosing the weakness for remedial class :

If students have weakness in today's lesson then remedial classes will be arranged.

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LEARNING DESIGN

NAME OF SCHOOL- M C K Vidyapeeth	**SUBJECT-** Computer Science
CLASS- IX	**TEACHING UNIT-** Word processing
DURATION- 45 minutes	**SUB UNIT-** • Formatting, paragraphs • Alignment, indentation, spacing • Spelling and grammar • Mail merge
DATE-04.04.2022	**TODAY'S LESSON-** All the above
NAME OF THE TEACHER- Sourabh Kumar (F-27)	

Learning goals / objectives

(Based on revised Bloom's Taxonomy)

Expected behavioral changes of the learner's can be studied under different domains of objectives, as follows:

1. Remembering:

- In MS word paragraph is any text which end with a paragraph mark. These are created when we press the enter key on the keyboard. We can see the hidden characters such as the paragraph mark by using show/hide button in the upper right-hand corner of paragraph group.

2. Understanding:

- Understand the various formatting features for paragraph and fonts to create presentable documents that suits the definite purpose.
- Create grammatically correct documents without any spelling error understanding the spelling and grammar feature of MS Word.
- Understand how some document can be used for sending to different mailing address using mail merge feature of MS Word.

Sample Digital Lesson Plan of Computer Science

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mail merge is useful when we want to send the same document to many people.

USING MAIL MERGE

1. Open the word document that you want to use as the letter, greetings, notice etc. the information in the document should not change from letter to letter.
2. Click on the mailings tab.
3. Click on the start mail merge button.
4. Click on letters.
   Nothing happens on screen, but word sets up for a mail merge
5. Click on select recipients.
6. Click on to identify the type of recipient list you plan to use. The new address list dialog box appears, displaying the area where you can enter the information. Click on each area and type the appropriate information for each person.
7. To enter the information for another person, click on new entry. Reapeat steps 7 and 8 for each person to be added to mailing list.
8. When you finish creating the address list, click on ok. The save address list dialog box appears.
9. Click on save button to save the file.
10. Click on edit recipient list. The Mail Merge Recipient Window appears. This area list all the people on your mailing list. Click on check boxes to add or remove a person.
11. Click ok.
12. Click on the location where you want the address to appear in the letter. Click on address block. The insert address dialog box appear.
13. Click on format for each recipients' name and preview it. Click on ok.
14. A merge field representing the address block, the greeting line appears in the letter. Click on the location where you want them to appear. Click preview result.
15. Word displays a preview of the merged letter using the unchanged content information from address file.

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		16. Click on next record icon to preview the next letter and previous letter icon to preview the previous letter. 17. Click on finish and merge. 18. Click on edit individual documents. The merge to new document dialog box appears. Choose the radio button to specify which people from your mailing list, you want to create letters for (All / current / from) 19. Click on ok to create letters. Word opens a new document and creates the personalized letters in the document. 20. Scroll through to see all the pages of your mail merge.

Design for evaluation

1. What is a paragraph?
2. What are the various alignments available for a paragraph?
3. What do you mean by alignment?
4. What is indentation?
5. What is a spacing?
6. What is mail merge? Why is it used?
7. Fill in the blanks:
    a. _____ view displays a webpage preview of your document.
    b. We can drag zoom button in the _____ to zoom in and drag zoom button in _____ to zoom out the document.
    c. Macro function is available in _____ tab.
    d. Save, undo, redo options are present on _____ bar.

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4.Out of Classroom Activities:

For performing various works apart from teaching, our trainee teachers are also encouraged to use different creative activities using our moodle. Our teacher-trainers provide them with various links and videos to prepare for anchoring, visual and performing arts, music, drama, handicrafts etc.

Link to the page: http://116.193.128.18:84/moodle/course/view.php?id=22

Link to the page: http://116.193.128.18:84/moodle/course/view.php?id=144

"Education is the manifestation of the perfection already in man."

- **Swami Vivekananda**

5. Biomechanical and Kinesiological Activities:

Link to the page: http://116.193.128.18:84/moodle/course/view.php?id=21

Link to the page: http://116.193.128.18:84/moodle/course/view.php?id=29

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Link to the page: http://116.193.128.18:84/moodle/course/view.php?id=124

Link to the page: http://116.193.128.18:84/moodle/course/view.php?id=67

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6. Field Sports:

Link to the page: http://116.193.128.18:84/moodle/course/view.php?id=21