

Mechanical Engineering

Academic Year – 2021-2022	Class: First Year
Semester – I	Date : 19/03/2022
CO: 1	PO: 1,3,7,9,10,12

Innovative Teaching Methods

Title of Innovation method/activity: Poster Making Activity

1. **Name of Faculty:** Ms. Shirsat Gayatri M.

2. **Subject:** System in Mechanical Engineering

3. Objective of Method:

1. To create awareness of Power plant and its conversions.
2. Compare Power plants & elaborate its application.
3. Obtain the knowledge of Power conversion devices
4. Obtain the knowledge of different forms of Energy
5. Obtain the knowledge of classifications of Energy
6. To create awareness of environmental effects of Power plant

4. Topic Covered through Activity:

1. Wind Power Plant
2. Hydroelectric Power Plant
3. Nuclear Power plant
4. Thermal Power Plant
5. Geothermal Power Plant
6. Solar Power plant
7. Tidal Power Plant
8. Biogas Power plant

5. Description of method with Benefits (8 – 10 lines) :

A Poster making is an action that allows participants/students to discuss and display their final work around a room. It is a way that students can share their group work topic or individual responses to a text in a non-threatening way with the assurance of getting some feedback from their learning community.

This discussion technique allows students to be actively engaged as they **present the topic** in the classroom. They work together in small groups to share ideas and respond to meaningful questions, documents, images, **working of 3D model** or texts.

The method :

1. An assigned task /activity is completed by a team of 3-5 students that form teams.
2. When teams finish their collective work poster, the teacher ask students to explain the form of energy and its conversions in front of other students in the classroom
3. Then the teacher informs the teams that they will present each one of the posters to generate a discussion about their work / poster with their immediate group.
4. The teacher then collects any clarifying questions that were posted on the posters with post-its and commences a Whole Group Discussion.
5. Each clarifying question is directed to the collective group that generated the poster. To facilitate the discussion, the teacher reads each clarifying.
6. The team have opportunity to answer the clarifying question, which can be done by one representative from the group or by all the group members chiming in when appropriate and/or there is a pause after a team member adds a final comment.

Roles and Responsibilities

- **Teacher**
 - Provide the Introduction to all the topic.
 - Aware the student about the length, Breadth, Depth of Topic
 - Provide the Study Material and appropriate guide lines at every stage
 - Remain available all the time during all stages of process.
 - Prepare assessment methodology.
- **Student**
 - Go through all the material provided on particular topic
 - Once topic assigned understand and gain expertise on topic through collaboration.
 - Actively participate in group and contribute by means of discussion, hand-out
 - Share the expertise topic when joins a new group.
- **Group**
 - Develop the guidelines to establish group.(i.e. Decide the roll of all participants)
 - Every group should gain the expertise on particular topic.
 - Prepare at least one-page report which cover all the details corresponding to the topic.
 - Appropriate references should be given.
 - Grammatical mistake should be checked.

6. Develop the guidelines with which every group member can share the topic they learn

Assessment Tools & Rubrics:

1. Depth of Content [10 Mark]

- Presentation topic includes goals/motivating questions that provide the audience with a sense of the main idea. (5 Mark)
- Information is accurate and includes an explanation of key concepts and theories, as well as a clear description of the topics (2 Mark)
- Valid References (2 Mark)
- Applications (1 Mark)

2. Poster Design [5 Mark]

- Poster is attractive in terms of design, layout and neatness.
- Graphics are easily viewed and related to the topic, making the material easy to understand. (3 Mark)
- Text is appropriate in length for audience and to the point of the project. (1 Mark)
- There are no grammatical/spelling mistakes. (1 Mark)

3. Verbal Interaction [5 Mark]

- Presenter(s) demonstrate full knowledge of the material and can explain and elaborate on expected questions.

Criteria	3- High	2- Moderate	1- Slight
Depth of Content	Presentation topic includes goals /motivating questions that provide the audience with a sense of the main idea. (5 Mark) Information is accurate and includes an explanation of key concepts and theories, as well as a clear description of the topics (2 Mark) Valid References (2 Mark) Applications (1 Mark)	Information is un accurate (2 Mark) Application (1 Mark) No Valid References (2 Mark)	Applications (1 Mark) No Valid References (2 Mark)
Poster Design	Neatness. Making the material easy to understand There are no grammatical/spelling mistakes	Moderately Relevant	There are no grammatical/spelling mistakes
Verbal Interaction	Full knowledge of the material and can explain and elaborate on expected questions.	Missing knowledge of the material	Poorly answer

Group No	Roll No	Name of Students	Depth of Content	Poster Design	Verbal Interaction	Final Marks
1.	Topic	Biogas Power Plant				
1	1	AHIRE HARSHALI SANJAY	8	3	4	15
2	9	BRAMHANKAR SAMIKSHA DIPAK	8	3	3	14
3	21	JADHAV PURVA RANDHIR	8	3	4	15
2.	Topic	Hydroelectric Power Plant	Depth of Content	Poster Design	Verbal Interaction	Final Marks
1	2	AHIRE PRATIKSHA SANDIP	9	3	4	16
2	16	GHORPADE RASHMI SHAM	8	3	3	14
3	18	GUNJAL RUTUJA NAMDEO	8	3	3	14
3.	Topic	Solar Power Plant	Depth of Content	Poster Design	Verbal Interaction	Final Marks
1	4	BANKAR ADITYA MADHAV	6	3	3	12
2	5	BARAHATE ABHISHEK SAMADHAN	6	3	3	12
3	17	GOSAVI PRATHAMESH PRAMOD	6	3	2	11
4	10	DAHATONDE ROHIT NAMDEV	6	3	3	12
5	15	FATE GAURAV JAYANT	6	3	2	11
4.	Topic	Nuclear Power Plant	Depth of Content	Poster Design	Verbal Interaction	Final Marks
1	6	BHALERAO DEEPAK DADASAHEB	7	3	3	13
2	12	DEORE YASH SHARAD	7	3	2	12
3	20	INGOLE PRASAD RAMESH	7	3	3	13
4	3	BAGUL DHIRAJ PANDHRINATH	7	3	2	12
5.	Topic	Thermal Power Plant	Depth of Content	Poster Design	Verbal Interaction	Final Marks
1	7	BHAMBARE JANHAVI RAJESH	8	4	4	16
2	11	DANDGE TEJASVINI VIJAY	8	4	4	16
3	14	DUSING DARSHANA SHYAMNATH	8	4	3	15
6.	Topic	Wind Power Plant	Depth of Content	Poster Design	Verbal Interaction	Final Marks
1	8	BORADE PRATIK SHARAD	8	5	4	17
2	13	DHONDGE PANKAJ RAJENDRA	8	5	4	17
3	19	HULWALE SIDDHESH TUKARAM	8	5	3	16

4	23	KAPADNIS OM VIJAY	8	5	4	17
7.	Topic	Wind Power Plant	Depth of Content	Poster Design	Verbal Interaction	Final Marks
1	30	KOSHTI HARSH ULHAS	7	2	4	13
2	39	NICHIT HARSHWARDHAN SHANKAR	8	2	3	13
3	27	KHAIRNAR PRATHAMESH OMPRAKASH	7	2	4	13
4	46	PATIL OM ASHOK	7	2	3	12
8.	Topic	Wind Power Plant	Depth of Content	Poster Design	Verbal Interaction	Final Marks
1	30	KOSHTI HARSH ULHAS	7	2	4	13
2	39	NICHIT HARSHWARDHAN SHANKAR	8	2	3	13
3	27	KHAIRNAR PRATHAMESH OMPRAKASH	7	2	4	13
4	46	PATIL OM ASHOK	7	2	3	12
9.	Topic	Nuclear Power Plant	Depth of Content	Poster Design	Verbal Interaction	Final Marks
1	24	KATALE ADITI RAMESH	8	2	4	14
2	25	KEKAN VIDYA DATTU	7	2	3	12
3	35	MAHAJAN DIVYA BHAGWAT	7	2	3	12
4	42	NIKAM MANSI NITIN	7	2	3	12
10.	Topic	Hydroelectric Power Plant	Depth of Content	Poster Design	Verbal Interaction	Final Marks
1	29	KHATALE SHITAL DILIP	7	3	2	12
2	31	KSHIRSAGAR POOJA SUNIL	7	2	3	12
3	36	MAHALE SANJANA MANGESH	7	3	2	12
4	38	MULHERKAR SAMRUDDHI DEVENDRA	7	2	3	12
11.	Topic	Biomass Pyrolysis Cycle plant	Depth of Content	Poster Design	Verbal Interaction	Final Marks
1	32	KUSHARE RUSHIKESH RAJENDRA	7	2	3	12
2	41	NIKAM NIKHIL SAMADHAN	8	2	3	13
3	34	MAHAJAN TANMAY YOGESHWAR	7	2	3	12
4	44	PAGAR ROSHAN NANDKISHOR	8	2	3	13

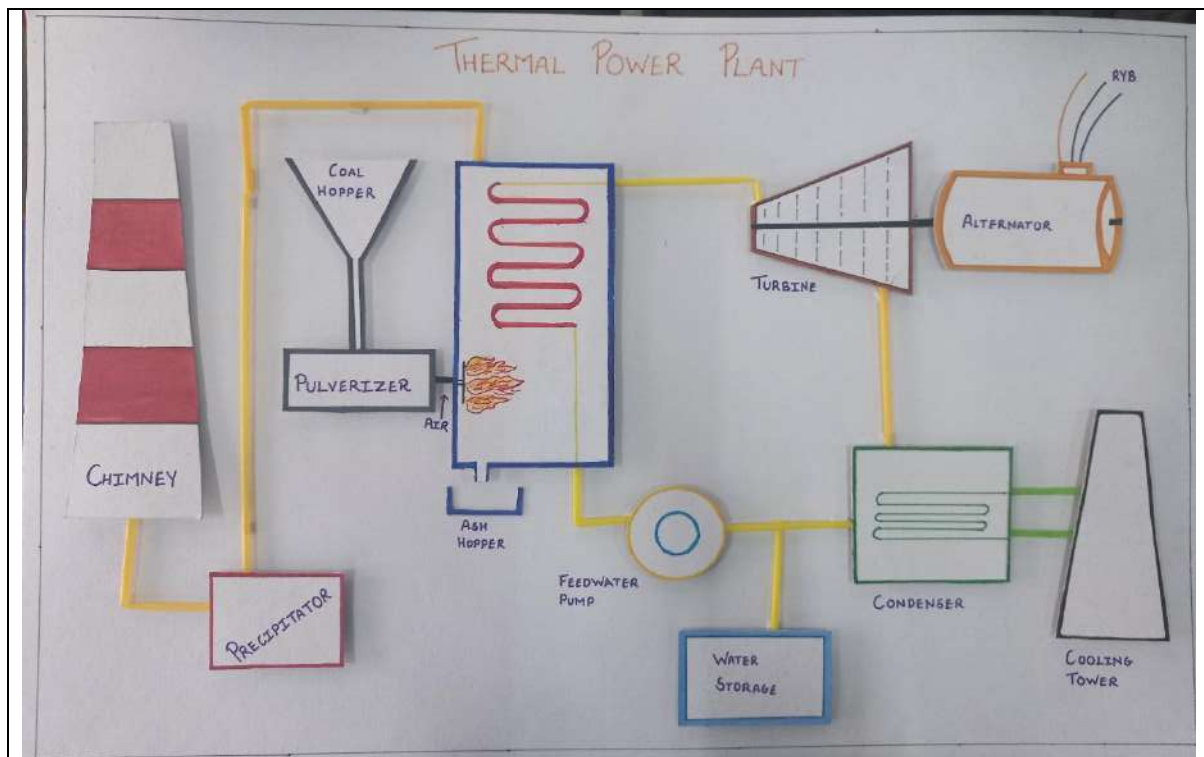
12.	Topic	Thermal Power Plant	Depth of Content	Poster Design	Verbal Interaction	Final Marks
1	47	PATIL YASH SACHIN	8	3	3	14
2	59	SHEWALE KUNAL POPATRAO	8	3	3	14
3	68	THAKARE AJIT POPAT	8	3	3	14
13.	Topic	Nuclear Power Plant	Depth of Content	Poster Design	Verbal Interaction	Final Marks
1	48	PATIL TANMAY PRAMOD	7	3	4	14
2	51	PATIL YOGESHWAR JITENDRA	7	3	3	13
3	52	PATIL YASH LALITKUMAR	7	3	4	14
4	57	SAROLKAR VEDANT HEMANT	7	3	3	13
14.	Topic	Tidal Power Plant	Depth of Content	Poster Design	Verbal Interaction	Final Marks
1	40	NIKAM OM SATISHCHANDRA	6	3	3	12
2	26	KHAIRE SHANTANU MADHAV	6	3	3	12
15.	Topic	Solar Power Plant	Depth of Content	Poster Design	Verbal Interaction	Final Marks
1	55	RASAL TEJASHREE SANJAY	8	3	3	14
2	69	URADE MANISHA BHAGWAN	7	3	2	12
3	65	SURWADE GAYATRI DILIP	8	3	3	14
4	54	PATIL BHAGYASHRI SUPADU	7	3	3	13
16.	Topic	Wind Power Plant	Depth of Content	Poster Design	Verbal Interaction	Final Marks
1	62	SHINDE KIRAN DEVIDAS	7	3	2	12
2	60	SHEWALE DIVYA VISHWANATH	7	3	3	13
3	63	SHINDE YASHASHRI SANJAY	7	3	2	12
4	64	SONAWANE NIKITA SUNIL	7	3	3	13

8. Impact Analysis

Questions	3- High/Excellent	2-Moderate /Average	1- Slight/Poor
1. Did you understand the cover and objective of the poster making task?	83.6	14.8	1.6
2. Do you find that methodology is helpful to cover the content of syllabus?	85.1	13.1	1.6
3. Does this helps for building a good team	81.1	17.2	1.6
4. Does the content covered is relevant and helpful for life long learning	81.1	17.2	1.6
5. Did you want us to conduct such activity again	Yes- 62		

9. Activity Picture





https://drive.google.com/drive/folders/1sNH_9M3MT8eRj1Cr9JvdPBvtwB1kxTBQOzGav1HwVh2CfI1CNbJVa1bw221z-Zeiv5R2CTNo

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