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## Activity Based Learning Report (2022-23)

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Jalandhar-Pathankot National Highway (NH 44), Sarmastpur - 144 012, Jalandhar, Punjab, INDIA

# DAV UNIVERSITY, JALANDHAR

## DEPARTMENT OF BOTANY AND ENVIRONMENT SCIENCE

Activity Type	Mind Map activity		
Activity Topic	Natural Resources and its types		
Class	B.Sc Hons.Botany		
Semester	6 <sup>th</sup> sem.		
Academic Year	2022-2023		
Course Name	Natural Resources Management		
Course Code	BOT 335		
Date 7.4.2023			
Mapping with Co's	Co1		
Faculty In-charge	Dr.Nishi Sondhi		

## ACTIVITY REPORT

#### Context:

In this Mind Map activity, which is a group activity, the students of B.Sc. (Hons.) Botany Sem-VI th were divided into three groups and each group was asked to select of a topic of their choice from the syllabus of BOT 335 and create a mind map on the real-world applications of the selected techniques/topic. The activity included student involvement, thinking on problem statement, group discussion among the team and identification of solution. Team formation was done as per the choice of students and comfort zone to get better outcome. The students themselves selected the topics and discussed the same with the faculty in-charge, after which the topics were finalized. One hour was given to the students to study on the topic individually, discuss in the group and create the mind map. Students sat together and prepared the solutions for the selected problem statement. Once the solution was ready, the students drew the complete details on Board or chart paper and presented in front of the complete class. Other students asked questions and got involved in each other's work. Faculty in-charge also discussed with the students and clarified the queries of the students on the given topics.

#### Activity Description:

- The activity involved following steps
- Step1 Selection of team members as per your choice and comfort level
- Step 2- Finalization of topic in coordination of team members
- Step 3- Discussion on solution finding and functioning of it.
- Step 4- Finalization of most suitable solution
- Step 5- Drawing the complete flow diagram, solution and advantages, disadvantages on chart/board
- Step 6- Presentation of the topic in front of the class
- Step 7- Discussion and answering the questions by friends and teacher.

The students were divided into 3 groups namely – Grp I, Grp II and Grp III with 6 members each Group I & II and 5 members in Group III.

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## **Details of Participants:**

S. No.	Group-I participants	Group-II participants	÷
1	Aditi Rana	Anjali Thakur	
2	Kanika Katwal	Anjali Dhaiman	
3	Harmeen Kaur	Jasmeen Cheema	
4	Manveer Kaur	Pooja Kumari	

## Assessment Rubrics -

Criteria			Ra	tings		Points
	5	4	3	1	1	
1. Understanding the topic	Correct Solution with excellent explanation and correct answers to all logical asked questions during presentation	Correct Solution with good explanation failed to answer one basic question asked during explanation	Correct Solution with limited explanation, failed to answer two OR more than two basic questions asked during explanation	Partially correct solution to the problem with limited explanation	Wrong solution with no/partial explanation	5
2. Quality of mind-	5	4	3	2	1	
map and presentation	Poster/ Map prepared with correct points & neat & complete explanation	Poster prepared with correct points or design & incomplete explanation	Poster prepared with partially correct points or design & incomplete explanation	Poster prepared with Partially correct design and poor explanation	No Poster prepared with incorrect design and explanation	5
	· · · ·	]	[ Fotal			10

# Outcomes of the activity:

This activity helped the students in developing various essential qualities among them such as, team work, discussion, involvement, thinking on critical topics and presentation skills. Students were motivated to work well and produce good results. All the team members were involved and participated equally. Student's involvement was good and satisfactory performance was observed during the presentations.

The current activity helped the students to understand the real-world applications of the techniques they are learning in this subject, their advantages and disadvantages. The students drew an outline on different applications of the techniques they selected and other students asked relevant questions.

## Photos of activity:

GPS GPS Map Camer Sarmastpur, Punjab, India Sarmastpur, Punjab, India CJ9C+QHM, DAV University Rd, Sarmastpur, CJ9C+QHM, DAV University Rd, Sarmastpur, Punjab 144025, India Punjab 144025, India Lat 31.419691° Lat 31.419684° Long 75.621368° Long 75.621358° Google Google 31/01/23 10:03 AM GMT +05:30 31/01/23 10:08 AM GMT +05:30 Esh Exhaustable tin at in limite GPS Map Car C GPS M Sarmastpur, Punjab, India Sarmastpur, Punjab, India CJ9C+QHM, DAV University Rd, Sarmastpur, CJ9C+QHM, DAV University Rd, Sarmastpur, Punjab 144025, India Punjab 144025, India Lat 31.419675° Lat 31.419692° Long 75.621386° Long 75.621366° Google Google 31/01/23 10:06 AM GMT +05:30 31/01/23 10:06 AM GMT +05:30

Group-I presentation and Mind Map

# ATTESTED

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## Group-I presentation and Mind Map

#### Points earned by each group:

SI No	Group No.	Criteria Ratings		Points Acquired	<b>Total Points</b>
		1	2		
1	Ι	5	4	9	10
2	II	4	4	8	10

# **Critics:**

### Following are the observation related to Mind map activity

Feedback has been taken from students orally and through Google form Positive observations –

- Students liked team work, involvement and polishing of their presentations skills
- Students learned to cooperate in a team
- Communication skills will be improved
- Students develop problem identification and solving abilities

## Result of Google form feedback from Participants:



8 responses

8 responses



Mind map preparation
Team work
Presenting the mind map

Group discussion

Do you think this activity was useful in enhancing your knowledge and interest in the subject?

Сору



5

#### Namie

8 responses

Harmeen kaur

Manveer

Kanika katwal

Aditi Rana

Pooja Kumari

Anjali Dhiman

Jasmeen

Anjali thakur

#### Semester

8 responses



С Сору

6

Registration number	
responses	
12000693	
12000484	
12001329	
12000115	
12000475	
12000765	
12000536	
12000090	

Do you think this activity was useful in enhancing your knowledge and interest in the L Copy subject?

8 responses



Strongly agree Agree Disagree Strongly Disagree

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Are you able to correlate the topics in the activity with the real life problems? С Сору 8 responses Strongly Agree 62.5% Agree Disagree Strongly Disagree 37.5% Give one positive aspect of this activity ? С Сору 8 responses 3 3 (37.5%) 2 1 1 (12.5%) 1 (12.5%) 1 (12.5%) 1 (12.5%) 1 (12.5%) 0 Good knowledge It enhance knowledge Knowledge enhancement Increase knowledge It increases knowledge Knowledgeable ATTESTED Registrar 0 DAV University, Jalandhar

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Сору Rate all overall experience of activity. 8 responses Excellent Good 50% very good Poor A cast ATTESTED Tstaine Ranietier

# DAV UNIVERSITY, JALANDHAR

## DEPARTMENT OF BOTANY AND ENVIRONMENT SCIENCE

#### **ACTIVITY REPORT**

Activity Type	Mind Map		
Activity Topic	Hydrological Cycle and Food Chain		
Class	B.SC Botany		
Semester	4		
Academic Year	2022-2023		
Course Name	Plant Ecology and Phytogeography		
Course Code	BOT226		
Date	8.april.2023		
Mapping with Co's	CO2		
Faculty In-charge	Dr.nishi sondhi		

#### Context:

In this Mind Map activity, which is a group activity, the students of B.Sc. (Hons.) Botany Sem-4 were divided into two groups and each group was asked to select of a topic of their choice from the syllabus of BOT226 and create a mind map on the real-world applications of the selected techniques/topic. The activity included student involvement, thinking on problem statement, group discussion among the team and identification of solution. Team formation was done as per the choice of students and comfort zone to get better outcome. The students themselves selected the topics and discussed the same with the faculty in-charge, after which the topics were finalized. One hour was given to the students to study on the topic individually, discuss in the group and create the mind map. Students sat together and prepared the solutions for the selected problem statement. Once the solution was ready, the students drew the complete details on Board or chart paper and presented in front of the complete class. Other students asked questions and got involved in each other's work. Faculty in-charge also discussed with the students and clarified the queries of the students on the given topics.

#### Activity Description:

The activity involved following steps

Step1 - Selection of team members as per your choice and comfort level

Step 2- Finalization of topic in coordination of team members

Step 3- Discussion on solution finding and functioning of it.

Step 4- Finalization of most suitable solution

Step 5- Drawing the complete flow diagram, solution and advantages, disadvantages on chart/board

Step 6- Presentation of the topic in front of the class

Step 7- Discussion and answering the questions by friends and teacher.

The students were divided into 2 groups namely – Grp I and Grp II with 3 members in Group 1 & 4 member in Group 2.

**Details of Participants:** 

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S. No.	Group-I participants	Group-II participants	
1	Divyanshi	Megha	
2	Navneet kaur	Pooja	
3	Bhargab	Yukti	
4		Harmanjot kaur	

#### <u>Assessment Rubrics –</u>

Criteria				Ratings	and a street of	Points
	5	4	3	1	1	
1. Understanding the topic	Correct Solution with excellent explanation and correct answers to all logical asked questions during presentation	Correct Solution with good explanation failed to answer one basic question asked during explanation	Correct Solution with limited explanation, failed to answer two OR more than two basic questions asked during explanation	Partially correct solution to the problem with limited explanation	Wrong solution with no/partial explanation	5
2. Quality of mind-	5	4	3	2	1	
map and presentation	Poster/ Map prepared with correct points & neat & complete explanation	Poster prepared with correct points or design & incomplete explanation	Poster prepared with partially correct points or design & incomplete explanation	Poster prepared with Partially correct design and poor explanation	No Poster prepared with incorrect design and explanation	5
(11)(2:11) N			Total			10

## **Outcomes of the activity:**

This activity helped the students in developing various essential qualities among them such as, team work, discussion, involvement, thinking on critical topics and presentation skills. Students were motivated to work well and produce good results. All the team members were involved and participated equally. Student's involvement was good and satisfactory performance was observed during the presentations.

The current activity helped the students to understand the real-world applications of the techniques they are learning in this subject, their advantages and disadvantages. The students drew an outline on different applications of the techniques they selected and other students asked relevant questions.

## Photos of activitity

# Group-I presentation and Mind Map







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Group-II presentation and Mind





## Points earned by each group:

Sl No	Group No.	Criteri	a Ratings	Points Acquired	<b>Total Points</b>
		1	2		
1	I	5	4	9	10
2	II	4	4	8	10

## **Critics:**

## Following are the observation related to Mind map activity

Feedback has been taken from students orally and through Google form Positive observations -

- Students liked team work, involvement and polishing of their presentations skills
- Students learned to cooperate in a team
- Communication skills will be improved
- Students develop problem identification and solving abilities

## Result of Google form feedback from Participants:









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## DEPARTMENT OF BOTANY

## **ACTIVITY REPORT**

Activity Type	Mind Map Activity		
Activity Topic	Nuclei division in Endosperm		
Class	M.Sc. (Hons.) Botany		
Semester	4 <sup>th</sup>		
Academic Year	2022-23		
Course Name	Plant Developmental Biology		
Course Code	BOT643		
Date	05/04/2023		
Mapping with Co's	CO3		
Faculty In-charge	Harleen kaur		

#### **Context:**

In this Mind Map activity, which is a group activity, the students of M.Sc. (Hons.) Botany Sem-4<sup>th</sup> were divided into two groups and each group was asked to select of a topic of their choice from the syllabus of BOT643 and create a mind map on the real-world applications of the selected techniques/topic. The activity included student involvement, thinking on problem statement, group discussion among the team and identification of solution. Team formation was done as per the choice of students and comfort zone to get better outcome. The students themselves selected the topics and discussed the same with the faculty in-charge, after which the topics were finalized. One day was given to the students to study on the topic individually, discuss in the group and create the mind map. Students sat together and prepared the solutions for the selected problem statement. Once the solution was ready, the students drew the complete details on Board or chart paper and presented in front of the complete class. Other students asked questions and got involved in each other's work. Faculty in-charge also discussed with the students and clarified the queries of the students on the given topics.

#### **Activity Description:**

The activity involved following steps

Registrar

Step1 - Selection of team members as per your choice and comfort level DAV University, Jalandhar

Step 2- Finalization of topic in coordination of team members

Step 3- Discussion on solution finding and functioning of it.

Step 4- Finalization of most suitable solution

Step 5- Drawing the complete flow diagram, solution and advantages, disadvantages on chart/board

Step 6- Presentation of the topic in front of the class

Step 7- Discussion and answering the questions by friends and teacher.

The students were divided into 2 groups namely - Grp I, Grp II with 8 members each.

# **Details of Participants:**

S. No.	Group-I participants	Group-II participants
1	Anjali Verma	Anavi
2	Akshiptika	Madhuri
3 .	Anjali Devi	Sakshi
4	Rudrpriya	Sunidhi
5	Charu	Priyanka
6	Niharika	Sunchita
7	Isha Sharma	Sonia
8	Nisha	Nisha

# Assessment Rubrics -

		Ratings					
	5	4	3	1	1	- 0111	
l. Understanding the topic	Correct Solution with excellent explanation and correct answers to all logical asked questions during presentation	Correct Solution with good explanation failed to answer one basic question asked during explanation	Correct Solution with limited explanation, failed to answer two OR more than two basic questions asked during explanation	Partially correct solution to the problem with limited explanation	Wrong solution with no/partial explanation	5	
2. Quality of mind- map and	5	4	3	2	1		
presentation	Poster/ Map prepared with correct points & neat & complete explanation	Poster prepared with correct points or design & incomplete explanation	Poster prepared with partially correct points or design & incomplete explanation	Poster prepared with Partially correct design and poor explanation	No Poster prepared with incorrect design and explanation	5	

# Outcomesof the activity:

This activity helped the students in developing various essential qualities among them such as, team work, discussion, involvement, thinking on critical topics and presentation skills. Students were

motivated to work well and produce good results. All the team members were involved and participated equally. Student's involvement was good and satisfactory performance was observed during the presentations.

The current activity helped the students to understand the real-world applications of the techniques they are learning in this subject, their advantages and disadvantages. The students drew an outline on different applications of the techniques they selected and other students asked relevant questions.

## Photos of activity:





## Points earned by each group:

Sl No	Group No.	Criteria Ratings		Points Acquired	Total Points
		1	2		1 otal 1 offits
1	I	5	4 ·	0	10
2	II	1	5	,	10
	11	4	3	9	10

## Critics:

# Following are the observation related to Mind map activity

Feedback has been taken from students orally and through Google form Positive observations -•

- Students liked team work, involvement and polishing of their presentations skills
- Students learned to cooperate in a team •
- Communication skills will be improved •
- Students develop problem identification and solving abilities •

# Result of Google form feedback from Participants:

any University, Jalandher

You were able to correlate the topics in the activity with real-life problem. 16 responses Strongly agree Agree 31.3% Disagree Strongly disagree 68.8% How well you participated in the activity. 16 responses Good Fair Poor 18.8% Did not participate 81.3% ATTESTED Q 6 Registrar DAV University, Jalandhar



These activities should be carried out more frequently in all the subjects.

16 responses



Rate your overall experience in the activity 16 responses



# **DAV UNIVERSITY, JALANDHAR**

### DEPARTMENT OF < Botany and Environment Studies>

Activity Type	Mind Map Activity
Activity Topic	Intellectual Property Right
Class	B.Sc. (Hons.) Botany
Semester	4 <sup>th</sup>
Academic Year	2022-23
Course Name	Intellectual Property Right
Course Code	BOT231
Date	6/04/23
Mapping with Co's	CO 1, CO 2, CO3
Faculty In-charge	Anchal

## ACTIVITY REPORT

#### **Context:**

In this Mind Map activity, which is a group activity, the students of B.Sc. (Hons.) Botany Sem-IV were divided into two groups and each group was asked to select of a topic of their choice from the syllabus of BOT231 and create a mind map on the real-world applications of the selected techniques/topic. The activity included student involvement, thinking on problem statement, group discussion among the team and identification of solution. Team formation was done as per the choice of students and comfort zone to get better outcome. The students themselves selected the topics and discussed the same with the faculty in-charge, after which the topics were finalized. One hour was given to the students to study on the topic individually, discuss in the group and create the mind map. Students sat together and prepared the solutions for the selected problem statement. Once the solution was ready, the students drew the complete details on Board or chart paper and presented in front of the complete class. Other students asked questions and got involved in each other's work. Faculty in-charge also discussed with the students and clarified the queries of the students on the given topics.

#### **Activity Description:**

The activity involved following steps

Registrar

Step1 – Selection of team members as per your choice and comfort level

- Step 2- Finalization of topic in coordination of team members
- Step 3- Discussion on solution finding and functioning of it.
- Step 4- Finalization of most suitable solution
- Step 5- Drawing the complete flow diagram, solution and advantages, disadvantages on chart/board
- Step 6- Presentation of the topic in front of the class
- Step 7= Discussion and answering the questions by friends and teacher.

The students were divided into 2 groups namely - Grp I with 4 members & 3 members in Grp II.

## **Details of Participants:**

S.	Group-I participants	
No.		Group-II participants
1	Divyanshi	Bhargab
2	Harmanjot	Megha
3	Yukti	Pooja
4	Navneet	

#### Assessment Rubrics -

543111. Understanding the topicCorrect Solution with excellent explanation and correct answers to all logical during presentationCorrect Solution with good explanation failed to answers to all logical asked during presentationCorrect Solution with limited explanation, failed to answers to all logical asked during presentationCorrect Solution with limited explanation, failed to answer one during explanationPartially correct solution to with problem with no/partial explanationWrong solution to with no/partial explanation52. Quality of mind- map and presentation543212. Quality of mind- map and presentation543212. Quality of mind- map and prepared with correct points & complete explanationPoster prepared with correct design & incomplete explanationPoster prepared with correct design & incomplete explanationNo Poster prepared with correct design & incomplete explanation111. Understand prepared with correct design & incomplete explanation543212. Quality of mind- map and prepared with correct points & correct543212. Quality of mind- map and prepared with correct explanation543213. Det prepared with incorrect explanationPoste	Criteria		1.1	R	atings		Points	
1. Understanding the topic   Correct   Solution   Correct   Solution   Varially   Wrong   5     Solution   with   Solution   Correct   Solution   with   image and presentation   solution   with   solution   with   solution   with   image and presentation   solution   with   solution   solution   solution   solution		5	4	3	1	1	1 onits	
2. Quality of mindmap and presentation   5   4   3   2   1     Poster/Map prepared prepared with correct   Poster   Poster   Poster prepared with points & correct points & correct explanation   Poster   Poster prepared with points or complete explanation   Points or expla	1. Underst to	anding the opic	Correct Solution with excellent explanation and correct answers to all logical asked questions during presentation	Correct Solution with good explanation failed to answer one basic question asked during explanation	Correct Solution with limited explanation, failed to answer two OR more than two basic questions asked during explanation	Partially correct solution to the problem with limited explanation	Wrong solution with no/partial explanation	5
presentation Poster/Map prepared Poster prepared Poster prepared Poster prepared Poster prepared No Poster prepared 5   with correct with with Partially with prepared prepared with incorrect sincorrect and poor design and explanation fincomplete explanation fincomplete explanation explanation fincomplete explanation fincomplete explanation fincomplete explanation fincomplete explanation fincomplete fincomplete explanation fincomplete fincomplete explanation fincomplete fincomplete explanation fincomplete fincomple	2. Quality mar	of mind- and	5	4	3	2	1	
Total	preser	ntation	Poster/ Map prepared with correct points & neat & complete explanation	Poster prepared with correct points or design & incomplete explanation	Poster prepared with partially correct points or design & incomplete explanation	Poster prepared with Partially correct design and poor explanation	No Poster prepared with incorrect design and explanation	5
1 otal			In the LATER	Т	otal			10

### Outcomes of the activity:

This activity helped the students in developing various essential qualities among them such as, team work, discussion, involvement, thinking on critical topics and presentation skills. Students were motivated to work well and produce good results. All the team members were involved and participated equally. Student's involvement was good and satisfactory performance was observed during the presentations.

The current activity helped the students to understand the real-world applications of the techniques they are learning in this subject, their advantages and disadvantages. The students drew an outline on different applications of the techniques they selected and other students asked relevant questions.

Photos of activity:

## Students having discussion in groups



Group-I presentation and Mind Map

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## Group-II presentation and Mind Map



1

## Points earned by each group:

Sl No Group No.		Criteria Ratings		Points Acquired	Total Points	
		1	2			
1 .	I	5	4	9	10	
2	II	4	5	9	10	

## **Critics:**

Following are the observation related to Mind map activity

Feedback has been taken from students orally and through Google form

Positive observations -

- Students liked team work, involvement and polishing of their presentations skills
- Students learned to cooperate in a team
- Communication skills will be improved
- Students develop problem identification and solving abilities

# Result of Google form feedback from Participants:



22

Registrar DAV University, Jalandhar These activity should be carried out more frequently in all the subject 7 responses Strongly agree agree 28.6% Disagree Strongly disagree 71.4% Rate you overall experience in the activity 7 responses Excellent Good Fair 14.3% Poor 85.7% 12101390 C

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# DAV UNIVERSITY, JALANDHAR

#### DEPARTMENT OF BOTANY AND ENVIRONMENT STUDIES

Activity Type	Mind map activity
Activity Topic	Life cycles of archegoniate
Class	M.sc. (Hons.) Botany
Semester	2 <sup>nd</sup>
Academic Year	2022-23
Course Name	Archegoniate biology
Course Code	BOT 531
Date	06/04/23
Mapping with Co's	CO 1, CO2, CO3
<b>Faculty In-charge</b>	Swapnil Singh

#### **ACTIVITY REPORT**

### Context:

In this Mind Map activity, which is a group activity, the students of M.Sc. (Hons.) Botany Sem-II were divided into two groups and each group was asked to select of a topic of their choice from the syllabus of BOT531 and create a mind map on the real-world applications of the selected techniques/topic. The activity included student involvement, thinking on problem statement, group discussion among the team and identification of solution. Team formation was done as per the choice of students and comfort zone to get better outcome. The students themselves selected the topics and discussed the same with the faculty in-charge, after which the topics were finalized. One hour was given to the students to study on the topic individually, discuss in the group and create the mind map. Students sat together and prepared the solutions for the selected problem statement. Once the solution was ready, the students drew the complete details on Board or chart paper and presented in front of the complete class. Other students asked questions and got involved in each other's work. Faculty in-charge also discussed with the students and clarified the queries of the students on the given topics.

#### Activity Description:

The activity involved following steps

Step1 - Selection of team members as per your choice and comfort level

Step 2- Finalization of topic in coordination of team members

- Step 3- Discussion on solution finding and functioning of it.
- Step 4- Finalization of most suitable solution
- Step 5- Drawing the complete flow diagram, solution and advantages, disadvantages on chart/board

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- Step 6- Presentation of the topic in front of the class
- Step 7- Discussion and answering the questions by friends and teacher.

The students were divided into 2 groups namely - Grp I and Grp II with 6 members each Group.

# **Details of Participants:**

S. No.	Group-I participants	Group-II participants
1	Kritika	Akriti
2	Anjali	Raijwinder
3	Tamanna	Nitankshi
4	Sunaina	Priva
5	Arzoo	Ramandeen
6	Ayushi	Sumiya

# Assessment Rubrics -

Citteria				Ratings		Point
	5	4	3	1	1	s
1. Understanding the topic	Correct Solution with excellent explanation and correct answers to all logical asked questions during presentatio n	Correct Solution with good explanatio n failed to answer one basic question asked during explanatio n	Correct Solution with limited explanation , failed to answer two OR more than two basic questions asked during explanation	Partially correct solution to the problem with limited explanation	Wrong solution with no/partia 1 explanat ion	5
2. Quality of mind- map and	5	4	3	2	1	
presentation	Poster/ Map prepared with correct points & neat & complete explanation	Poster prepared with correct points or design & incomplete explanatio n	Poster prepared with partially correct points or design & incomplete explanation	Poster prepared with Partially correct design and poor explanation	No Poster prepared with incorrect design and explanat ion	5
	explanation	explanatio n	incomplete explanation			and explanat ion

# Outcomes of the activity:

This activity helped the students in developing various essential qualities among them such as, team work, discussion, involvement, thinking on critical topics and presentation skills. Students were motivated to work well and produce good results. All the team members were involved and participated equally. Student's involvement was good and satisfactory performance was observed during the presentations.

The current activity helped the students to understand the real-world applications of the techniques they are learning in this subject, their advantages and disadvantages. The students drew an outline on different applications of the techniques they selected and other students asked relevant questions.

### Photos of activity:



## Students having discussion in groups



ATTEST Registrar DAV University, Jalandhar

# Group-I presentation and Mind Map



# Group-II presentation and Mind Map



#### Points earned by each group:

Sl No Group No.		Criteria Ratings		Points Acquired	Total Points	
		1	2			
1	Ι	5	4	9	10	
2	II	4	5	9	10	

## Critics:

## Following are the observation related to Mind map activity

Feedback has been taken from students orally and through Google form Positive observations –

- Students liked team work, involvement and polishing of their presentations skills
- Students learned to cooperate in a team
- Communication skills will be improved
- Students develop problem identification and solving abilities

## Result of Google form feedback from Participants:






#### DEPARTMENT OF BOTANY AND ENVIRONMENT STUDIES

Activity Type	Mind Map Activity	]
	Breeding methods of self and cross pollinated	
Activity Topic	crops	
Class	M.Sc. (Hons.) Botany	1
Semester	4 <sup>th</sup>	
Academic Year	2022-23	
Course Name	Advances in plant breeding	
Course Code	BOT 637	
Date	08/04/23	CTED
Mapping with Co's	CO2,CO3	SIED
Faculty In-charge	Swapnil Singh	
	Reg	istrar

DAV University, Jalandhar

#### **ACTIVITY REPORT**

Context:

In this Mind Map activity, which is a group activity, the students of M.Sc. (Hons.) Botany Sem-IV were divided into two groups and each group was asked to select of a topic of their choice from the syllabus of BOT 637 and create a mind map on the real-world applications of the selected techniques/topic. The activity included student involvement, thinking on problem statement, group discussion among the team and identification of solution. Team formation was done as per the choice of students and comfort zone to get better outcome. The students themselves selected the topics and discussed the same with the faculty in-charge, after which the topics were finalized. One hour was given to the students to study on the topic individually, discuss in the group and create the mind map. Students sat together and prepared the solutions for the selected problem statement. Once the solution was ready, the students drew the complete details on Board or chart paper and presented in front of the complete class. Other students asked questions and got involved in each other's work. Faculty in-charge also discussed with the students and clarified the queries of the students on the given topics.

#### Activity Description:

The activity involved following steps

Step1 - Selection of team members as per your choice and comfort level

Step 2- Finalization of topic in coordination of team members

Step 3- Discussion on solution finding and functioning of it.

Step 4- Finalization of most suitable solution

Step 5- Drawing the complete flow diagram, solution and advantages, disadvantages on chart/board

Step 6- Presentation of the topic in front of the class

Step 7- Discussion and answering the questions by friends and teacher.

The students were divided into 2 groups namely – Grp I and Grp II with 6 members in Group I and 7 members in Group II.

S. No.	Group-I participants	Group-II participants
1	Priyanka	Anjali Verma
2	Isha	Akshipitika
3	Madhuri	Anjali Devi
4	Sucheta	Rudrapriva
5	Nisha	Charu
6	Sunidhi	Niharika
7		Sonia

#### Assessment Rubrics -

Criteria			R	atings		Points
	5	4	3	1	1	
1. Understanding the topic	Correct Solution with excellent explanation and correct answers to all logical asked questions during presentation	Correct Solution with good explanation failed to answer one basic question asked during explanation	Correct Solution with limited explanation, failed to answer two OR more than two basic questions asked during explanation	Partially correct solution to the problem with limited explanation	Wrong solution with no/partial explanation	5
2. Quality of mind- map and	5	4	3	2	1	
presentation	Poster/ Map prepared with correct points & neat & complete explanation	Poster prepared with correct points or design & incomplete explanation	Poster prepared with partially correct points or design & incomplete explanation	Poster prepared with Partially correct design and poor explanation	No Poster prepared with incorrect design and explanation	5
		Т	otal			10

#### Outcomes of the activity:

This activity helped the students in developing various essential qualities among them such as, team work, discussion, involvement, thinking on critical topics and presentation skills. Students were motivated to work well and produce good results. All the team members were involved and participated equally. Student's involvement was good and satisfactory performance was observed during the presentations.

The current activity helped the students to understand the real-world applications of the techniques they are learning in this subject, their advantages and disadvantages. The students drew an outline on different applications of the techniques they selected and other students asked relevant questions.

#### Photos of activity:



### Students having discussion in groups



Group-I presentation and Mind Map

ATTESTED Registrar DAV University, Jalandhar



Group-II presentation and Mind Map



#### Points earned by each group:

SI No	Group No.	Criteria	a Ratings	Points Acquired	<b>Total Points</b>
		1	2		
1	Ι	5	4	9	10
2	II	4	5	9	10

# **Critics:**

#### Following are the observation related to Mind map activity

Feedback has been taken from students orally and through Google form Positive observations –

- Students liked team work, involvement and polishing of their presentations skills
- Students learned to cooperate in a team
- Communication skills will be improved
- Students develop problem identification and solving abilities





### DEPARTMENT OF <BOTANY AND ENVIRONMENTAL STUDIES\_>

Activity Type	MIND MAP ACTIVITY
Activity Topic	PHYTOREMEDIATION AND DRIP IRRIGATION
Class	M.Sc (Hons) Botany
Semester	2 <sup>nd</sup>
Academic Year	2022-2023
Course Name	CONSERVATION OF NATURAL RESOURCES
Course Code	BOT535
Date	6-4-2023
Mapping with Co's	C02,C03
Faculty In-charge	RAVNEET KAUR

#### **ACTIVITY REPORT**

#### Context:

In this Mind Map activity, which is a group activity, the students of M.Sc. (Hons.) Botany Sem-IInd were divided into two groups and each group was asked to select of a topic of their choice from the syllabus of BOT535 and create a mind map on the real-world applications of the selected techniques/topic. The activity included student involvement, thinking on problem statement, group discussion among the team and identification of solution. Team formation was done as per the choice of students and comfort zone to get better outcome. The students themselves selected the topics and discussed the same with the faculty in-charge, after which the topics were finalized. One hour was given to the students to study on the topic individually, discuss in the group and create the mind map. Students sat together and prepared the solutions for the selected problem statement. Once the solution was ready, the students drew the complete details on Board or chart paper and presented in front of the complete class. Other students asked questions and got involved in each other's work. Faculty in-charge also discussed with the students and clarified the queries of the students on the given topics.

#### Activity Description:

The activity involved following steps

Registrar

Step1 - Selection of team members as per your choice and comfort level DAV University, Jalandhar

- Step 2- Finalization of topic in coordination of team members
- Step 3- Discussion on solution finding and functioning of it.
- Step 4- Finalization of most suitable solution
- Step 5- Drawing the complete flow diagram, solution and advantages, disadvantages on chart/board
- Step 6- Presentation of the topic in front of the class
- Step 7- Discussion and answering the questions by friends and teacher.

The students were divided into 2 groups namely - Gp I, Gp II with 6 members each Group I & II

S. No.	Group-I participants	Group-II participants	
1	Ramandeep Kaur	Anjali	
2	Nitanshi	Kritika	
3	Rajwinder kaur	Tamana	-
4	Priya	Sunaina	-
5	Sumia	Arzoo	
6	Akriti	Avushi	

### Assessment Rubrics -

		R	atings		Points
5	4	3	1	1	
Correct Solution with excellent explanation and correct answers to all logical asked questions during presentation	Correct Solution with good explanation failed to answer one basic question asked during explanation	Correct Solution with limited explanation, failed to answer two OR more than two basic questions asked during explanation	Partially correct solution to the problem with limited explanation	Wrong solution with no/partial explanation	5
5	4	3	2	1	
Poster/ Map prepared with correct points & neat & complete explanation	Poster prepared with correct points or design & incomplete explanation	Poster prepared with partially correct points or design & incomplete	Poster prepared with Partially correct design and poor explanation	No Poster prepared with incorrect design and explanation	5
	5 Correct Solution with excellent explanation and correct answers to all logical asked questions during presentation 5 Poster/ Map prepared with correct points & neat & complete explanation	54Correct Solution with excellent explanation and correct answers to all logical asked questions during presentationCorrect Solution with good explanation failed to answer one basic question asked during explanation54Poster/ Map prepared with correct points & complete explanationPoster prepared with correct points or design & incomplete explanation	543Correct Solution with excellent explanation and correct answers to all logical during presentationCorrect Solution with good explanation failed to answer one basic questions during explanationCorrect Solution with limited explanation failed to answer one basic questions during explanationCorrect Solution with limited explanation failed to answer one basic questions during explanation543Poster/Map prepared with correct points & correct points & correctPoster prepared with correct design & points or incomplete explanation	5431Correct Solution with excellent explanation and correct answers to all logical during presentationCorrect Solution with good explanation failed to answer one during during presentationCorrect Solution with limited explanation, failed to answer one basic questions during explanationPartially correct solution with limited explanation, failed to answer two basic questions during explanationCorrect 	54311Correct SolutionCorrect SolutionCorrect SolutionSolution with limited explanation and correctCorrect SolutionPartially correct solution to the problem with limited explanation and correctWrong solution with limited explanation failed to answer two answer one all logical asked questions during presentationCorrect failed to answer one during explanationPoster prepared with prepared with correctPoster prepared with points & correctPoster prepared with points or correctPoster prepared with points or correct prepared with correctPoster prepared with points or correct correctNo Poster prepared with points or correct prepared with correctPoster prepared prepared prepared with points or correctPoster prepared prepared prepared prepared with correctPoster prepared prepared prepared prepared prepared prepared prepared with correctNo Poster prepared prepare

#### Outcomes of the activity:

This activity helped the students in developing various essential qualities among them such as, team work, discussion, involvement, thinking on critical topics and presentation skills. Students were motivated to work well and produce good results. All the team members were involved and participated equally. Student's involvement was good and satisfactory performance was observed during the presentations.

The current activity helped the students to understand the real-world applications of the techniques they are learning in this subject, their advantages and disadvantages. The students drew an outline on different applications of the techniques they selected and other students asked relevant questions.

#### Photos of activity:

#### Group-I presentation and Mind Map







Group-II presentation and Mind Map





# Points earned by each group:

SI No	Group No.	Criteri	a Ratings	Points Acquired	Total Date
		1	2	- on the fire and a	Total Points
1	I	5	4	0	10
2	II	4	5	,	10
			5	9	10

# Critics:

# Following are the observation related to Mind map activity

Feedback has been taken from students orally and through Google form Positive observations –

- Students liked team work, involvement and polishing of their presentations skills
- Students learned to cooperate in a team
- Communication skills will be improved
- Students develop problem identification and solving abilities

#### Result of Google form feedback from Participants:





#### DEPARTMENT OF BOTANY AND ENVIRONMENT

Activity Type	Mind map activity		
Activity Topic Effect of pollutant on plants			
Class	Msc (Hons) Botany		
Semester	4 <sup>th</sup>		
Academic Year	2021-2023		
Course Name	Plant ecology and phytogeography		
Course Code	Bot 645		
Date	7-04-2023		
Mapping with Co's	C01		
Faculty In-charge	Dr Nishi Sondhi		

#### **ACTIVITY REPORT**

#### Context:

In this Mind Map activity, which is a group activity, the students of M.sc (Hons.) Botany Sem-IV were divided into three groups and each group was asked to select of a topic of their choice from the syllabus of B0T 645 and create a mind map on the real-world applications of the selected techniques/topic. The activity included student involvement, thinking on problem statement, group discussion among the team and identification of solution. Team formation was done as per the choice of students and comfort zone to get better outcome. The students themselves selected the topics and discussed the same with the faculty in-charge, after which the topics were finalized. One hour was given to the students to study on the topic individually, discuss in the group and create the mind map. Students sat together and prepared the solutions for the selected problem statement. Once the solution was ready, the students drew the complete details on Board or chart paper and presented in front of the complete class. Other students asked questions and got involved in each other's work. Faculty in-charge also discussed with the students and clarified the queries of the students on the given topics.

#### **Activity Description:**

The activity involved following steps

Step1 - Selection of team members as per your choice and comfort level

- Step 2- Finalization of topic in coordination of team members
- Step 3- Discussion on solution finding and functioning of it.
- Step 4- Finalization of most suitable solution
- Step 5- Drawing the complete flow diagram, solution and advantages, disadvantages on chart/board
- Step 6- Presentation of the topic in front of the class
- Step 7- Discussion and answering the questions by friends and teacher.

The students were divided into 3 groups namely – Grp I, Grp II and Grp III with 6 members each Group I & II and 5 members in Group III.

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Registrar

DAV University, Jalandhar

S. No.	Group-I participants	Group-II participants	Group-III participants
1	Anjali verma	Charu	Anavi
2	Akshptika saini	Niharika	Madhuri
3	Anjali devi	Isha sharma	Sakshi pathania
4	Rudrpriya bharti	Nisha	Sunidhi
5	Priyanka	Suchita	Sonia
6	Nisha devi		

#### Assessment Rubrics -

Criteria			Ra	tings		Points
	5	4	3	1	1	
1. Understanding the topic	Correct Solution with excellent explanation and correct answers to all logical asked questions during presentation	Correct Solution with good explanation failed to answer one basic question asked during explanation	Correct Solution with limited explanation, failed to answer two OR more than two basic questions asked during explanation	Partially correct solution to the problem with limited explanation	Wrong solution with no/partial explanation	5
2. Quality of mind-	5	4	3	2	1	
map and presentation	Poster/ Map prepared with correct points & neat & complete explanation	Poster prepared with correct points or design & incomplete explanation	Poster prepared with partially correct points or design & incomplete explanation	Poster prepared with Partially correct design and poor explanation	No Poster prepared with incorrect design and explanation	5
TEN TRAIL		I	otal			10

#### Outcomes of the activity:

This activity helped the students in developing various essential qualities among them such as, team work, discussion, involvement, thinking on critical topics and presentation skills. Students were motivated to work well and produce good results. All the team members were involved and participated equally. Student's involvement was good and satisfactory performance was observed during the presentations.

The current activity helped the students to understand the real-world applications of the techniques they are learning in this subject, their advantages and disadvantages. The students drew an outline on different applications of the techniques they selected and other students asked relevant questions.

#### **Photos of activity:**



# Students having discussion in groups



Registrar DAV University, Jalandhar



#### Group-I presentation and Mind Map







#### DEPARTMENT OF BOTANY

**ACTIVITY REPORT** 

# **Activity Type** Mind Map Activity

Activity Topic	Metabolism in Plants
Class	B.Sc. (Hons.) Botany
Semester	6 <sup>th</sup>
Academic Year	2022-23
Course Name	Plant Metabolism
Course Code	BOT331
Date	28/03/2023
Mapping with Co's	CO5
Faculty In-charge	Harleen kaur

#### **Context:**

In this Mind Map activity, which is a group activity, the students of B.Sc. (Hons.) Botany Sem-6<sup>th</sup> were divided into two groups and each group was asked to select of a topic of their choice from the syllabus of BOT331 and create a mind map on the real-world applications of the selected techniques/topic. The activity included student involvement, thinking on problem statement, group discussion among the team and identification of solution. Team formation was done as per the choice of students and comfort zone to get better outcome. The students themselves selected the topics and discussed the same with the faculty in-charge, after which the topics were finalized. One day was given to the students to study on the topic individually, discuss in the group and create the mind map. Students prepared the solutions for the selected problem statement. Once the solution was ready, the students drew the complete details on Board or chart paper and presented in front of the complete class. Other students asked questions and got involved in each other's work. Faculty in-charge also discussed with the students and clarified the queries of the students on the given topics.

#### **Activity Description:**

The activity involved following steps

Step1 - Selection of team members as per your choice and comfort level

- Step 2- Finalization of topic in coordination of team members
- Step 3- Discussion on solution finding and functioning of it.
- Step 4- Finalization of most suitable solution
- DAV University, Jalandhar Step 5- Drawing the complete flow diagram, solution and advantages, disadvantages on chart/board
- Step 6- Presentation of the topic in front of the class
- Step 7- Discussion and answering the questions by friends and teacher.

The students were divided into 2 groups namely - Grp I, Grp II with 4 members each.

Registrar

S. No.	Group-I participants	Group-II participants
1	Harmeen kaur	Aditi Rana
2	Anjali Dhiman	Pooja Kumari
3	Jasmeen Cheema	Anjali Thakur
4	Kanika Katwal	Manveer kaur

#### Assessment Rubrics -

Criteria			R	atings		Pointe
	5	4	3	1	1	Tomits
1. Understanding the topic	Correct Solution with excellent explanation and correct answers to all logical asked questions during presentation	Correct Solution with good explanation failed to answer one basic question asked during explanation	Correct Solution with limited explanation, failed to answer two OR more than two basic questions asked during explanation	Partially correct solution to the problem with limited explanation	Wrong solution with no/partial explanation	5
2. Quality of mind- map and	5	4	3	2	1	
presentation	Poster/ Map prepared with correct points & neat & complete explanation	Poster prepared with correct points or design & incomplete explanation	Poster prepared with partially correct points or design & incomplete explanation	Poster prepared with Partially correct design and poor explanation	No Poster prepared with incorrect design and explanation	5
		Т	otal			10

# Outcomes of the activity:

This activity helped the students in developing various essential qualities among them such as, team work, discussion, involvement, thinking on critical topics and presentation skills. Students were motivated to work well and produce good results. All the team members were involved and participated equally. Student's involvement was good and satisfactory performance was observed during the presentations.

The current activity helped the students to understand the real-world applications of the techniques they are learning in this subject, their advantages and disadvantages. The students drew an outline on different applications of the techniques they selected and other students asked relevant questions.

#### Photos of activity:



#### Points earned by each group:

SI No	Group No. Criteria Ratings Points Acquired		Total Points		
		1	2 ·		
1	I	4	4	8	10
2	II	5	4	9	10

### **Critics:**

# Following are the observation related to Mind map activity

Feedback has been taken from students orally and through Google form Positive observations -

- Students liked team work, involvement and polishing of their presentations skills
- Students learned to cooperate in a team
- Communication skills will be improved
- Students develop problem identification and solving abilities

#### Result of Google form feedback from Participants:

You were able to correlate the topics in the activity with real-life problem.

8 responses



Strongly agree
 Agree
 Disagree
 Strongly Disagree

Do you think the activity was useful in enhancing your knowledge. 8 responses



These activities should be carried out more frequently in all the subjects. 8 responses



Strongly agree
 Agree
 Disagree
 Strongly disagree



Rate your overall experience in the activity 8 responses



Excellent
Good
Fair
Poor



#### **DEPARTMENT OF BOTANY**

#### **ACTIVITY REPORT**

Activity Type	Mind Map Activity
Activity Topic	Evolution of plants with genetic drift and gene flow with special speciation and Urey experiment
Class	M.Sc. (Hons) Botany
Semester	2 <sup>nd</sup>
Academic Year	2022-2023
Course Name	Evolutionary Biology of Plants
Course Code	BOT540
Date	18-04-2023
Mapping with Co's	CO1 and CO2
Faculty In-charge	Ms. Neetu Jagota

#### Context:

In this Mind Map activity, which is a group activity, the students of M.Sc. (Hons.) Botany Sem-II were divided into two groups and each group was asked to select of a topic of their choice from the syllabus of BOT 540 and create a mind map on the real-world applications of the selected techniques/topic. The activity included student involvement, thinking on problem statement, group discussion among the team, and solution identification. Team formation was done as per the choice of students and comfort zone to get better outcome. The students themselves selected the topics and discussed the same with the faculty in-charge, after which the topics were finalized. One hour was given to the students to study on the topic individually, discuss in the group and create the mind map. Students sat together and prepared the solutions for the selected problem statement. Once the solution was ready, the students drew the complete details on Board or chart paper and presented in front of the complete class. Other students asked questions and got involved in each other's work. Faculty in-charge also discussed with the students and clarified the queries of the students on the given topics.

#### Activity Description:

The activity involved following steps

- Step1 Selection of team members as per your choice and comfort level
- Step 2- Finalization of topic in coordination of team members
- Step 3- Discussion on solution finding and functioning of it.
- Step 4- Finalization of most suitable solution
- Step 5- Drawing the complete flow diagram, solution and advantages, disadvantages on chart/board
- Step 6- Presentation of the topic in front of the class
- Step 7- Discussion and answering the questions by friends and teacher.

The students were divided into 2 groups namely – Grp I, and Grp II with 6 members in Group I and 6 members in Group II.



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S. No.	Group-I participants	Group-II participants
1	Anjali	Avushi
2	Kritika	Arzoo
3	Ramandeep	Akriti
4	Rajwinder	Nitanshi
5	Sunaina	Priva
6	Tamanna	Sumia

#### Assessment Rubrics -

Criteria			R	atings		Point	
	5	4	3	1	1		
1. Understanding the topic	Correct Solution with excellent explanation and correct answers to all logical asked questions during presentation	Correct Solution with good explanation failed to answer one basic question asked during explanation	Correct Solution with limited explanation, failed to answer two OR more than two basic questions asked during explanation	Partially correct solution to the problem with limited explanation	Wrong solution with no/partial explanation	5	
2. Quality of mind- map and	5	4	3	2	1		
presentation	Poster/ Map prepared with correct points & neat & complete explanation	Poster prepared with correct points or design & incomplete explanation	Poster prepared with partially correct points or design & incomplete explanation	Poster prepared with Partially correct design and poor explanation	No Poster prepared with incorrect design and explanation	5	
		T	otal			10	

#### Outcomes of the activity:

This activity helped the students in developing various essential qualities among them such as, team work, discussion, involvement, thinking on critical topics and presentation skills. Students were motivated to work well and produce good results. All the team members were involved and participated equally. Student's involvement was good and satisfactory performance was observed during the presentations.

The current activity helped the students to understand the real-world applications of the techniques they are learning in this subject, their advantages and disadvantages. The students drew an outline on different applications of the techniques they selected and other students asked relevant questions.

#### **Photos of activity:**



Students having discussions in groups



ATTESTED Registrar DAV University, Jalandhar



Group-I presentation and Mind Map





#### Group II presentation and Mind Map

#### Points earned by each group:

Sl No	Group No.	Criteria Ratings Points Acquired		Points Acquired	Total Points
		1	2		
1	I	5	4	9	10
2	II	5	4 ·	9	10

# **Critics:**

# Following are the observation related to Mind map activity

Feedback has been taken from students orally and through Google form

Positive observations -

- Students liked team work, involvement and polishing of their presentations skills
- Students learned to cooperate in a team
- Communication skills will be improved
- Students develop problem identification and solving abilities

# Result of Google Form feedback from Participants:

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#### What did you enjoy the most in the activity? 12 responses



Do you think this activity was useful in enhancing your knowledge and interest in the subject? <sup>12 responses</sup>





These activities should be carried out more frequently in all the subjects. 12 responses

4



You were able to corelate the topics in the activity with real-life problem. 12 responses





# ATTESTED



Rate your overall experience in the activity. 12 responses





For

#### DEPARTMENT OF BOTANY AND ENVIRONMENT SCIENCE

Activity Type	Mind Map Activity
Activity Topic	Discussions on floral formula and floral diagram
Class	B.Sc. (Hons.) Botany
Semester	4 <sup>th</sup>
Academic Year	2022-23
Course Name	Plant Systematics
Course Code	BOT228
Date	
Mapping with Co's	CO1 and CO2
Faculty In-charge	Dr. Ashish Sharma

#### **ACTIVITY REPORT**

#### Context:

In this Mind Map activity, which is a group activity, the students of B.Sc. (Hons.) Botany Sem-IV were divided into two groups, group 1 was allotted the topic on FLORAL DIAGRAM (which is a very important aspect of studying plants) and the second group was allotted the topic on FLORAL FORMULA (that gives the basic but exact composition of a flower) and each group was asked create a mind map on the ability of the two topics to make people understand the floral characters of plants which is an important feature in identification of the angiospermic plants and developing classifications. The activity included student involvement, thinking on problem statement, group discussion among the team and identification of solution. Team formation was done as per the choice of students and comfort zone to get better outcome. The students prepared the charts in consultation with the faculty in-charge. One hour was given to the students to study on the topic individually, discuss in the group and create the mind map. Students sat together and prepared the solutions for the selected problem statement. Once the solution was ready, the students drew the complete details on Board or chart paper and presented in front of the complete class. Other students asked questions and got involved in each other's work. Faculty in-charge also discussed with the students and clarified the queries of the students on the given topics.

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DAV University, Jalandhar

#### Activity Description:

The activity involved following steps

- Step1 Selection of team members as per your choice and comfort level
- Step 2- Allotment of topic in coordination of team members
- Step 3- Discussion on solution finding and functioning of it.
- Step 4- Finalization of material to be discussed
- Step 5- Drawing the complete flow diagram, solution and advantages, disadvantages on chart/board
- Step 6- Presentation of the topic in front of the class
- Step 7- Discussion and answering the questions by friends and teacher.

The students were divided into 2 groups namely - Grp I with 4 members & 4 members in Grp II.

S. No.	<b>Group-I</b> participants	
		Group-II participants
1	Divyanshi	Harmanjot
2	Bhargab	Pooia
3	Navneet	Yukti
4	Megha	Megha

\*Megha was allowed to participate in both teams to balance out the teams but was given freedom to let others prepare the chart

### Assessment Rubrics -

Criteria			R	latings		Point
	5	4	3	1	1	
1. Understanding the topic	Correct Solution with excellent explanation and correct answers to all logical asked questions during presentation	Correct Solution with good explanation failed to answer one basic question asked during explanation	Correct Solution with limited explanation, failed to answer two OR more than two basic questions asked during explanation	Partially correct solution to the problem with limited explanation	Wrong solution with no/partial explanation	5
2. Quality of mind-map and	5	4	3	2	1	
presentation	Poster/ Map prepared with correct points & neat & complete explanation	Poster prepared with correct points or design & incomplete explanation	Poster prepared with partially correct points or design & incomplete explanation	Poster prepared with Partially correct design and poor explanation	No Poster prepared with incorrect design and explanation	5
	HAR C		Total			10

### Outcomes of the activity:

This activity helped the students in developing various essential qualities among them such as, team work, discussion, involvement, thinking on critical topics and presentation skills. Students were

motivated to work well and produce good results. All the team members were involved and participated equally. Student's involvement was good and satisfactory performance was observed during the presentations.

The current activity helped the students to understand the real-world applications of the techniques they are learning in this subject, their advantages and disadvantages. The students drew an outline on different applications of the techniques they selected and other students asked relevant questions.

#### Photos of activity:

#### Students having discussion in groups



#### Group-I presentation and Mind Map



# Group-II presentation and Mind Map



### Points earned by each group:

SI No	Group No.	Criteria	Ratings	Points Acquired	Total Pointa
		1	2		10tal 1 Units
1	I	5	4	9	10
2	II	4	5	0	10
			5	9	1

# Critics:

Following are the observation related to Mind map activity Feedback has been taken from students orally and through Google form Positive observations –

- Students liked team work, involvement and polishing of their presentations skills
  Students learned to cooperate in a team
- Students learned to cooperate in a team
  Communication skills will be improved
- Communication skills will be improved
  Students develop problem identification
- Students develop problem identification and solving abilities

# Result of Google form feedback from Participants:

How well you participated in the activity ? 8 responses

4


What did you enjoy the most in the activity? 8 responses



Do you think this activity was useful in enhancing your knowledge and interest in the subject? 8 responses





These activities should be carried out more frequently in all the subjects. 8 responses



$\mathbf{O}$	Strongly agree
	Agree
0	Disagree
0	Strongly disagree

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Registrar DAV University, Jalandhar You were able to corelate the topics in the activity with real-life problem. 8 responses





- Agree
- Disagree
- Strongly disagree

Rate your overall experience in the activity. 8 responses



0	Good.
•	Fair
۲	Poor
0	Excellent

100

TETI STORE

## DAV UNIVERSITY, JALANDHAR

#### DEPARTMENT OF BOTANY AND ENVIRONMENT SCIENCE

Activity Type	Mind Map Activity
Activity Topic	Understanding the technique of regression analysis
Class	B.Sc. (Hons.) Botany
Semester	6 <sup>th</sup>
Academic Year	2022-23
Course Name	Biostatistics
Course Code	BOT339
Date	
Mapping with Co's	CO2/CO3
Faculty In-charge	Dr. Ashish Sharma

#### ACTIVITY REPORT

#### Context:

In this Mind Map activity, which is a group activity, the students of B.Sc. (Hons.) Botany Sem-VI were divided into two groups, group 1 was allotted the topic on Regression analysis and the second group was allotted the topic on Plotting the lines of regression and each group was asked create a mind map on the ability of the two topics to make people understand how the technique of predicting the change in one variable dependent on the other variable. The activity included student involvement, thinking on problem statement, group discussion among the team and identification of solution. Team formation was done as per the choice of students and comfort zone to get better outcome. The students prepared the material in consultation with the faculty in-charge. One hour was given to the students to study on the topic individually, discuss in the group and create the mind map. Students sat together and prepared the solutions for the selected problem statement. Once the solution was ready, the students drew the complete details on Board and presented in front of the complete class. Other students asked questions and got involved in each other's work. Faculty in-charge also discussed with the students and clarified the queries of the students on the given topics.

#### Activity Description:

The activity involved following steps

- Step1 Selection of team members as per your choice and comfort level
- Step 2- Allotment of topic in coordination of team members
- Step 3- Discussion on solution finding and functioning of it.
- Step 4- Finalization of material to be discussed
- Step 5- Drawing the complete solution and advantages, disadvantages on board
- Step 6- Presentation of the topic in front of the class
- Step 7- Discussion and answering the questions by friends and teacher.

The students were divided into 2 groups namely - Grp I with 4 members & 4 members in Grp II.

Registrar DAV University, Jalandhar

#### **Details of Participants:**

S. No.	Group-I participants	Group-II participants
1	Harmeen	Jasmeen
2	Aditi	Pooja
3	Kanika	Anjali Dhiman
4	Manveer	Anjali Thakur
-		
	and the second sec	

#### Assessment Rubrics -

Criteria	1		Ra	tings		Points
	5	4	3	1	1	
1. Understanding the topic	Correct Solution with excellent explanation and correct answers to all logical asked questions during presentation	Correct Solution with good explanation failed to answer one basic question asked during explanation	Correct Solution with limited explanation, failed to answer two OR more than two basic questions asked during explanation	Partially correct solution to the problem with limited explanation	Wrong solution with no/partial explanation	5
2. Quality of	5	4	3	2	1	
mind-map and presentation	Poster/ Map prepared with correct points & neat & complete explanation	Poster prepared with correct points or design & incomplete explanation	Poster prepared with partially correct points or design & incomplete explanation	Poster prepared with Partially correct design and poor explanation	No Poster prepared with incorrect design and explanation	5
			Total			10

#### Outcomes of the activity:

This activity helped the students in developing various essential qualities among them such as, team work, discussion, involvement, thinking on critical topics and presentation skills. Students were motivated to work well and produce good results. All the team members were involved and participated equally. Student's involvement was good and satisfactory performance was observed during the presentations.

The current activity helped the students to understand the real-world applications of the techniques they are learning in this subject, their advantages and disadvantages. The students drew an outline on different applications of the techniques they selected and other students asked relevant questions.

#### Photos of activity:

Students having discussion in groups



Group presentation and Mind Map



ATTESTED Registrar DAV University, Jalandhar



#### Points earned by each group:

SI No	Group No.	Criteria Ratings	Points Acquired	<b>Total Points</b>	
		1 2			
1		5 4	9	10	
2	11	4 5	9	10	

## **Critics:**

Following are the observation related to Mind map activity Feedback has been taken from students chally and through Google form Positive observations –

- Students liked team work, involvement and polishing of their presentations skills
- Students learned to cooperate in a team
- Communication skills will be improved
- Students develop problem identification and solving abilities

Result of Google form feedback from Participants:

How well you participated in the activity? 8 responses

Good
Fair
Poor
Did not participate

What did you enjoy the most in the detivity? 8 responses



Mind map preparation Team work Presenting the mind Group discussions

Do you think this activity was to the in enhancing your knowledge and interest in the subject? 8 responses





8 responses

These activities should be called a more frequently in all the subjects.



Strongly agree	
Agree	
Disagree	
Strongly disagree	TED
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DHA O.	

You were able to corelate the topics in the activity with real-life problem. 8 responses



Strongly agreeAgree

2. 9

- Disagree
- Strongly disagree

Rate your overall experience in the second v. 8 responses

Good
Fair
Poor
Excellent

1000

## DAV UNIVERSITY, JALANDHAR

#### DEPARTMENT OF BOTANY AND ENVIRONMENT SCIENCE

#### Mind Map Activity Activity Type Demonstration of carbon fixation pathway **Activity Topic** M.Sc. (Hons.) Botany 2<sup>nd</sup> 2022-23

Plant Physiology

Dr. Ashish Sharma

**BOT533** 

CO2/CO3

#### ACTIVITY REPORT

#### **Context:**

Class

Date

Semester

Academic Year

Mapping with Co's

Faculty In-charge

**Course Name Course Code** 

In this Mind Map activity, which is a group activity, the students of M.Sc. (Hons.) Botany Sem-II were divided into three groups, and were allowed to choose the topics from carbon fixation pathway in plants and each group was asked create a mind map on the ability of the topics to make people understand how the atmospheric carbon can be converted into the carbon that can be utilized by the living organisms. The activity included student involvement, thinking on problem statement, group discussion among the team and identification of solution. Team formation was done as per the choice of students and comfort zone to get better outcome. The students prepared power point presentations in consultation with the faculty in-charge. One hour was given to the students to study on the topic individually, discuss in the group and create the mind map. Students sat together and prepared the solutions for the selected problem statement. Once the solution was ready, the students drew the complete details on power point and presented in front of the complete class. Other students asked questions and got involved in each other's work. Faculty in-charge also discussed with the students and clarified the queries of the students on the given topics.

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#### Activity Description:

The activity involved following steps

Step1 - Selection of team members as per your choice and comfort level

- Step 2- Allotment of topic in coordination of team members
- Step 3- Discussion on solution finding and functioning of it.
- Step 4- Finalization of material to be discussed
- Step 5- Drawing the complete flow diagram, solution and advantages, disadvantages on ppt
- Step 6- Presentation of the topic in front of the class
- Step 7- Discussion and answering the questions by friends and teacher.

The students were divided into 2 groups namely - Grp I with 4 members & 4 members in Grp II.

#### 80

## **Details of Participants:**

S. No.	Group-I participants	Group-II participants	Group-III participants
1	Anjali	Akriti	Ramandeen
2	Kritika	Arzoo	Raiwinder
3	Tamana	Ayushi	Priva
4	Sunaina	Sumia	Nitanshi

#### Assessment Rubrics -

Criteria			R	atings		Points
	5	4	3	1	1	1 Offics
1. Understanding the topic	Correct Solution with excellent explanation and correct answers to all logical asked questions during presentation	Correct Solution with good explanation failed to answer one basic question asked during explanation	Correct Solution with limited explanation, failed to answer two OR more than two basic questions asked during explanation	Partially correct solution to the problem with limited explanation	Wrong solution with no/partial explanation	5
2. Quality of mind-map and	5	4	3	2	1	
presentation	Poster/ Map prepared with correct points & neat & complete explanation	Poster prepared with correct points or design & incomplete explanation	Poster prepared with partially correct points or design & incomplete explanation	Poster prepared with Partially correct design and poor explanation	No Poster prepared with incorrect design and explanation	5
•			Total			10

## Outcomes of the activity:

This activity helped the students in developing various essential qualities among them such as, team work, discussion, involvement, thinking on critical topics and presentation skills. Students were motivated to work well and produce good results. All the team members were involved and participated equally. Student's involvement was good and satisfactory performance was observed during the presentations.

The current activity helped the students to understand the real-world applications of the techniques they are learning in this subject, their advantages and disadvantages. The students drew an outline on different applications of the techniques they selected and other students asked relevant questions.

**Photos of activity:** 



#### Points earned by each group:

SI No	Group No.	Criteria Ratings		Points Acquired	<b>Total Points</b>
		1	2		
1	I	5	4	9	10
2	II	4	5	9	10
3	III	5	4	9	10

### **Critics:**

## Following are the observation related to Mind map activity

Feedback has been taken from students orally and through Google form Positive observations –

- Students liked team work, involvement and polishing of their presentations skills
- Students learned to cooperate in a team
- Communication skills will be improved
- Students develop problem identification and solving abilities

## Result of Google form feedback from Participants:

How well you participated in the activity ? 13 responses





What did you enjoy the most in the activity? 13 responses



Mind map preparation
 Team work
 Presenting the mind
 Group discussions

Do you think this activity was useful in enhancing your knowledge and interest in the subject?



Strongly agree
 Agree
 Disagree
 Strongly disagree

These activities should be carried out more frequently in all the subjects. 13 responses



Strongly agree
 Agree
 Disagree

Strongly disagree

You were able to corelate the topics in the activity with real-life problem. 13 responses



Strongly agree
Agree
Disagree
Strongly disagree

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Rate your overall experience in the activity. 13 responses



Good
Fair
Poor
Excellent

NO

## DAV UNIVERSITY, JALANDHAR

#### DEPARTMENT OF PHYSICS A CTIVITY REPORT

	ACHVITTILL
Activity Type	Mind-Map
Activity Topic	Breadth of Spectral Lines
Class	M.Sc (Hons.) Physics
Semester	2
Academic Year	2022-23 (II)
Course Name	Atomic & Molecular Spectroscopy
Course Code	РНҮ 512
Date	06-04-2023
Manning with Co's	CO2 -3
Faculty In-charge	Dr.Daljit Kaur

The activity has been designed so that each group devise an innovative technique to memorize and understand the breadth of spectral lines and their types along with its application in astronomy and atomic physics. Then they discussed different types of spectral lines broadening along with their numerical problems.

- 1. There were total 4 groups formed of all the 18 participants randomly with 4-5 students in each group.
- 2. They were asked to collect information regarding the above topic and then prepare the chart in the class assigned for activity on 6th April 2023.
- 3. The chart preparation was done in class after discussion of 35-40 minutes among group members.
- 4. The whole group was asked to present and explain their topic in 15 minutes.

This is a group activity. It would involve reading, thinking, discussing and reporting back to the group.

## Description of Problem (Problem Statement, Rubrics):

There are several sub-topics related to the problem given for collecting information and presenting to the class:

- 1. Each group was assigned one type of line broadening like natural, Doppler, collision, pressure etc.
- 2. Each of them will discuss the type and one application problem related to that type.

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#### **Details of Participants:**

S. No.	Group-I participants	Group-II participants	Group-III participants	Group-IV participants
1	Sanya	Mohan	Saloni	Nikhil Mehra
2	Aneesha	Simran Kaur	Minakshi	Shivani Salaria
3	Nikhil Bhatia	Janvi	Nikita	Shivani Sharma
4	Atul Kumar	Prerna	Vishali	Sheetal
5	Himanshi	and the second se		
6	Aanchal		8	10

Assessment Rubrics -

Criteria	Ratings				
	10	08	06	04	
Poster preparation and presentation	Excellent Poster presentation and explanation of new memorizing technique, example using 5-6 formulae and rules with application	Moderate Poster presentation And explanation new memorizing technique, example using 4- 5 formulae and rules with application	Moderate Poster presentation with limited explanation of memorizing technique and application with no example	Poster presentation only with explanation of memorizing technique	10

#### Evidence of Success / Post reflection:

- The activity was quite successful in terms of understanding of the topic of breadth of spectral lines
- The exciting way of memorizing different line broadening, were happily shared among studer
- The groups have very well presented the various applications of line broadening.
- Overall, this activity gave a boost to their confidence and perception level of the chosen topic.
- There are very good speakers/presenters found in class after this activity.
- The students liked it as it was different from monotonous lecture delivering.
- Group 4 was given maximum marks of 10 due to best presentation, explanation and poster, followed by Group 1 with the best designed example scoring 9 marks.

#### Photos of the activity:



**Group 1 Participants** 

**Group 2 Participants** 



**Group 3 Participants** 

**Group 4 Participants** 

Participants presenting in the class

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Group 2 Mindmap



Group 3 Mindmap

Group 4 Mindmap

#### Mind Map(s) prepared by the participant

#### Critics:

The feedback of the above activity has been taken by Google form whose link was shared to the class. This feedback is required for the improvement/refinement of planned activity, and delivery. The following Google form link:

This feedback has been treated as critics of the activity. Some of the responses have been shown below:

	Questións Bespanse	6		Questions Responses	Settings
	Did you find the activity interesting? 15 resonce	● Yee ● Yee ● Ne	How well was your engageme Is responses	nt in the activity?	€ Far © Good © Popr
	Did it help you to understand and remember the topic? 13 responses	● *** ● **:	Did the presentation part boos 13 regonas	t your confidence®	© 115 @ 160
Pros of the activ	vity:				
List two advantag	ges of the activity.				
Good teamwork Build the confident	ce, team work ce				
Built up the confide Better understand	ence level ing of topic as we need to c	lefine the sar	ne topic in front of	whole class	
Teamwork. Confid Boosts self confide Indepth understan Confidence Team work	lence ence ding of topics				
Boost confidence,	team work			ATTE	STED
build our confidend give us fast knowle	ce edge about the topic			Poni	
Boost our confider	nce, enhance our knowledg	е	DA	- Hogi	ty Jalandhar
Level up our confid	dence,and knowledge		DA	V UIIVEISI	ty, outering
Enjoyment					
Team work, confid	lence				
Confidence, unity					
Boosts confidence	and presentation skills				
Suggestions ask	ed:				42
Write two sugges	tions for enhancing the e	xercise.			
Good teamwork					
Healthy Interaction	1				
Nothing					
PPT presentations more time for prepa	aration				
Projector will impro	ove the presentation				

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## DAV UNIVERSITY, JALANDHAR

#### DEPARTMENT OF PHYSICS ACTIVITY REPORT

Mind-Map	
Historical Development of Particle Physics	
B.Sc (Hons.) Physics & B.Sc (CS)	
6	
2022-23 (II)	
Electromagnetic Theory	
PHY 339	
31-01-2023	
CO1 -3	
Dr.Daljit Kaur	
	Mind-MapHistorical Development of Particle PhysicsB.Sc (Hons.) Physics & B.Sc (CS)62022-23 (II)Electromagnetic TheoryPHY 33931-01-2023CO1 -3Dr.Daljit Kaur

#### Context:

The activity has been designed so that each group devise an innovative way to memorize and understand the historical development of particle physics in different time intervals from 1896 to 2005. Then they discussed different types of Particles that were invented during different timelines.

- 1. There were total 6 groups formed of all the 15 participants randomly with 4-5 students in each group.
- 2. They were asked to collect information regarding the above topic and then prepare the chart in the class assigned for activity on 31st January 2023.
- 3. The chart preparation was done in class after discussion of 35-40 minutes among group members.
- 4. The whole group was asked to present and explain their topic in 15 minutes.

## This is a group activity. It would involve reading, thinking, discussing and reporting back to the group.

#### Description of Problem (Problem Statement, Rubrics):

There are several sub-topics related to the problem given for collecting information and presenting to the class:

- 1. Each group was assigned one timeline and the varous particles that were invented during that timeline
- 2. Each of them will discuss the type and properties of particles discovered related to their timeline.

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#### **Details of Participants:**

S. No.	Group-I participants	Group-II participants	Group-III participants	Group-IV participants	Group-V participants	Group-VI participants
1	Nirvair Kaur	Ankita	Arshpreet Singh	Navpreet	Anjali	Kriti
2	Harmanpreet Kaur	Nidhi	Sahil	Jasvir Singh	Ritika	Mansi
3	Bhanu Pratap					Priyanka

#### Assessment Rubrics -

Criteria		Ratings				
	10	08	06	04		
Poster preparation and presentation	Excellent Poster presentation and explanation of new memorizing technique, example using 5-6 formulae and rules with application	Moderate Poster presentation And explanation new memorizing technique, example using 4- 5 formulae and rules with application	Moderate Poster presentation with limited explanation of memorizing technique and application with no example	Poster presentation only with explanation of memorizing technique	10	

#### Evidence of Success / Post reflection:

- The activity was quite successful in terms of understanding of the topic of Historical development of particle physics
- The exciting way of memorizing different particles and timelines of development of particles
- The groups have very well presented the various timelines of strange, anti-particles and mesons.
- Overall, this activity gave a boost to their confidence and perception level of the chosen topic.
- There are very good speakers/presenters found in class after this activity.
- The students liked it as it was different from monotonous lecture delivering.
- Group 1 was given maximum marks of 10 due to best presentation, explanation and poster, followed by Group 2.

#### Photos of the activity:



Group 1 Participants

**Group 2 Participants** 



**Group 3 Participants** 

**Group 4 Participants** 



#### **Group 5 Participants**

Group 6 Participants Participants presenting in the class



Group 1 Mindmap

Group 2 Mindmap





Group 5 Mindmap

Group 6 Mindmap

#### Mind Map(s) prepared by the participant

#### Critics:

The feedback of the above activity has been taken by Google form whose link was shared to the class. This feedback is required for the improvement/refinement of planned activity, and delivery.

The following Google form link:

This feedback has been treated as critics of the activity. Some of the responses have been shown below:



### Pros of the activity:

List two advantages of the activity.
Built up the confidence level Better understanding of topic as we need to define the same topic in front of whole class
Teamwork. Confidence
Boosts self confidence Indepth understanding of topics
Confidence Team work
Boost confidence, team work
build our confidence give us fast knowledge about the topic
Boost our confidence, enhance our knowledge
Level up our confidence, and knowledge *
Enjoyment
Team work, confidence
Confidence, unity
Boosts confidence and presentation skills
Suggestions asked:
Write two suggestions for enhancing the exercise.
Good teamwork
Healthy Interaction
Nothing
PPT presentations more time for preparation

# DAV UNIVERSITY, JALANDHAR

#### DEPARTMENT OF PHYSICS ACTIVITY REPORT

Activity Type	Mind-Map
Activity Topic	Types, production and detection of Polarization of Light
Class	B.Sc (Hons.) Chemistry
Semester	2
Academic Year	2022-23 (II)
Course Name	Optics & Lasers
Course Code	РНҮ 153А
Date	28-03-2023
Mapping with Co's	CO3 -3
Faculty In-charge	Dr.Daljit Kaur

#### Context:

The activity has been designed so that each group devise an innovative technique to understand the types, production and detection of polarized light. Then they discussed different types of polarized light and their production using birefringence, scattering, dichroism along with their numerical problems.

- 1. There were total 3 groups formed of all the 9 participants randomly with 3 students in each group.
- 2. They were asked to collect information regarding the above topic and then prepare the chart in the class assigned for activity on 28th March 2023.
- 3. The chart preparation was done in class after discussion of 35-40 minutes among group members.

4. The whole group was asked to present and explain their topic in 15 minutes.

This is a group activity. It would involve reading, thinking, discussing and reporting back to the

2

## Description of Problem (Problem Statement, Rubrics):

an a management

Reals There are several sub-topics related to the problem given for collecting information and presenting to the class: DAV UN

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1. Each group was assigned one type of polarization, production and detection method

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2. Each of them will discuss the topic with illustrative figures and diagrams.

#### **Details of Participants:**

S. No.	Group-I participants	Group-II participants	Group-III participants
1	Shruti Puri	Muskan	Maniot
2	Samiksha	Shaurya	Mehak
3	Aashna	Neha	Kinder

#### Assessment Rubrics -

Criteria	Ratings				
	10	08	06	04	
Poster preparation and presentation	Excellent Poster presentation and explanation of new memorizing technique, example using 5-6 formulae and rules with application	Moderate Poster presentation And explanation new memorizing technique, example using 4- 5 formulae and rules with application	Moderate Poster presentation with limited explanation of memorizing technique and application with no example	Poster presentation only with explanation of memorizing technique	10

### Evidence of Success / Post reflection:

- The activity was quite successful in terms of understanding of the topic of polarized light
- The exciting way of memorizing different types and production of polarized light were shared among students
- The groups have very well presented the various applications of polarized light.
- Overall, this activity gave a boost to their confidence and perception level of the chosen topic.
- There are very good speakers/presenters found in class after this activity.
- The students liked it as it was different from monotonous lecture delivering.
- Group 1 was given maximum marks of 10 due to best presentation, explanation and poster.

#### Photos of the activity:



**Group 1 Participants** 

**Group 2 Participants** 



**Group 3 Participants** 

Participants presenting in the class

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Group 2 Mindmap

Group 1 Mindmap



Group 3 Mindmap

#### Mind Map(s) prepared by the participant

#### Critics:

The feedback of the above activity has been taken by Google form whose link was shared to the class. This feedback is required for the improvement/refinement of planned activity, and delivery. The following Google form link:

This feedback has been treated as critics of the activity. Some of the responses have been shown below:

Pros of the activity: List two advantages of the activity. Increase confidence, team work

Good teamwork Build the confidence

Built up the confidence level

Better understanding of topic as we need to define the same topic in front of whole class

Teamwork. Confidence

Boosts self confidence Indepth understanding of topics

Confidence Team work

Boost confidence, team work

build our confidence give us fast knowledge about the topic

Boost our confidence, enhance our knowledge

Level up our confidence, and knowledge

Enjoyment

Team work, confidence

Confidence, unity

Boosts confidence and presentation skills

#### Suggestions asked:

Write two suggestions for e	enhancing	the exercis	е.	
Good teamwork				
Healthy Interaction				
Nothing				
PPT presentations more time for preparation				
Projector will improve the pre	sentation			

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#### DAV University, Jalandhar

**Department: Physics** 

CAY: 2022-23(Term 1)

## DAV UNIVERSITY, JALANDHAR

**DEPARTMENT OF < Physics>** 

#### **ACTIVITY REPORT**

Activity Type	Mind Map Activity
Activity Topic	Bioelectromagnetism
Class	BSc Physics
Semester	6 <sup>th</sup>
Academic Year	2022-23
Course Name Electromagnetic theory	
Course Code	PHY330
Date 06-04-2023	
Mapping with Co's	1,2,3,4
Faculty In-charge	Dr. Rama Gupta

#### Context:

In this Mind Map activity, which is a group activity, the students of B.Sc. (Hons.) Physics Sem-VI were divided into four groups and each group was asked to select of a topic of their choice from the syllabus of PHY330B and create a mind map on the real-world applications of the selected techniques/topic. The activity included student involvement, thinking on problem statement, group discussion among the team and identification of solution. Team formation was done as per the choice of students and comfort zone to get better outcome. The students themselves selected the topics and discussed the same with the faculty in-charge, after which the topics were finalized. One hour was given to the students to study on the topic individually, discuss in the group and create the mind map. Students sat together and prepared the solutions for the selected problem statement. Once the solution was ready, the students drew the complete details on Board or chart paper and presented in front of the complete class. Other students asked questions and got involved in each other's work. Faculty in-charge also discussed with the students and clarified the queries of the students on the given topics.

#### Activity Description:

The activity involved following steps

Step1 – Selection of team members as per your choice and comfort level

- Step 2- Finalization of topic in coordination of team members
- Step 3- Discussion on solution finding and functioning of it.

Step 4- Finalization of most suitable solution

Step 5- Drawing the complete flow diagram, solution and advantages, disadvantages on chart/board

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Step 6- Presentation of the topic in front of the class

Step 7- Discussion and answering the questions by friends and teacher.

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## DAV University, Jalandhar **Department: Physics**

CAY: 2022-23(Term 1)

The students were divided into 3 groups namely - Grp I, Grp II and Grp III with 5 members each Group I & II and 6 members in Group III.

#### **Details of Participants:**

S. No.	Group-I participants	Group-II participants	Group-III participants
1	Priyanka	JYOTI BHAGAT	KRITI
2	BALWANT KUMAR	MANSI PATHANIA	ANMOLDEEP CHAHAL
3	Ankita jamwal	sachin	DEEPIKA SAMBYAL
4	Sashank thakur	NIDHI	MEHAK DEEP KAUR
5	HARMANPREET KAUR	ANCHAL DEVI	ANJALI
21		17.00 M (19.00 M)	ritika
Assessi	nent Rubrics	A	

#### Assessment Rubrics -

Criteria	Ratings					
	5	4	3	1	1	1.000
2- Understanding the topic	Correct Solution with excellent explanation and correct answers to all logical asked questions during presentation	Correct Solution with good explanation failed to answer one basic question asked during explanation	Correct Solution with limited explanation, failed to answer two OR more than two basic questions asked during explanation	Partially correct solution to the problem with limited explanation	Wrong solution with no/partial explanation	5
3- Quality of mind-map and presentation	5	4	3	2	1 - 20	54 1971
	Poster/ Map prepared with correct points & neat & complete explanation	Poster prepared with correct points or design & incomplete explanation	Poster prepared with partially correct points or design & incomplete explanation	Poster prepared with Partially correct design and poor explanation	No Poster prepared with incorrect design and explanation	5
11.11.710	Total					10

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## DAV University, Jalandhar Department: Physics CAY: 2022-23(Term 1)

<u>Outcomes of the activity:</u> This activity helped the students in developing various essential qualities among them such as, team work, discussion, involvement, thinking on critical topics and presentation skills. Students were motivated to work well and produce good results. All the team members were involved and participated equally. Student's involvement was good and satisfactory performance was observed during the presentations. The current activity helped the students to understand the real-world applications of the techniques they are learning in this subject, their advantages and disadvantages. The students drew an outline on different applications of the techniques they selected and other students asked relevant questions.

Photos of activity:



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## DAV University, Jalandhar

## **Department: Physics**

CAY: 2022-23(Term 1)

#### Students having discussion in groups



## DAV University, Jalandhar Department: Physics CAY: 2022-23(Term 1)

#### **Group-I presentation and Mind Map**





#### Group-II presentation and Mind Map



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Signific all light reported a

## DAV University, Jalandhar Department: Physics CAY: 2022-23(Term 1)





#### Group-III presentation and Mind Map

#### Points earned by each group:

Sl No	Group No.	Criteria Ratings		Points Acquired	Total Points	
		I atta	2			
1	Ι	5	4	9	10	
2	• II	4	4	8	10	
3	III	5	4	9	10	

## Critics:

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## DAV University, Jalandhar Department: Physics

CAY: 2022-23(Term 1)



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# DAV University, Jalandhar

**Department: Physics** 

CAY: 2022-23(Term 1)

# DAV UNIVERSITY, JALANDHAR

DEPARTMENT OF <Physics>

# **ACTIVITY REPORT**

Activity Type	Mind Map activity
	Correlation between Quantum field theory and particle
Activity Topic	physics
Class	M.Sc. Physics
Semester	IV
Academic Year	2022-23
Course Name	Particle Physics
Course Code	РНУ604А
Date	16 March, 2023
Mapping with Co's	1,2,3,4
Faculty In-charge	Dr. Rama Gupta

DAV University, Jalandhar

# Context:

In this Mind Map activity, which is a group activity, the students of M.Sc. (Hons.) Physics Sem-IV were divided into two groups and each group was asked to find the correlation between quantum field theory and particle physics and create a mind map. The activity included student involvement, thinking on developing a correlation between mathematics and physical aspects of topic concerned, group discussion among the team and identification of various relations. In order to get better results, teams were formed based on the preferences and comfort zones of the students. One hour was given to the students to study on the topic individually, discuss in the group and create the mind map. Students sat together and prepared the solutions for the given problem statement. Once the solution was ready, the students drew the complete details on Board or chart paper and presented in front of the complete class. Other students asked questions and got involved in each other's work. Faculty in-charge also discussed with the students and clarified the queries of the students on the given topics.

#### **Activity Description:**

#### The activity involved following steps

Step 1: Choose the team members that best suit your preferences and comfort level. Step 2: Discussion of the problem-solving process and its operation. Step 3: Selecting the best course of action Step 4: Sketch down the entire flow diagram, the solution, and the topic's benefits and drawbacks on a chart or board.

Step 5: Present the material to the class.

Step 6: Discussion between teachers and students.

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# DAV University, Jalandhar Department: Physics

CAY: 2022-23(Term 1)

Details of Participants: The students were divided into 2 groups namely – Grp I, Grp II with 6 members each Group I & II

S. No.	Group-I participants	Group-II participants
1	Ritika	Ravneet
2	Anamika	Shivali
	Vijay Lakshmi	Jaspreet
3	Priya	Dushali
4	Komal	Riya
5	Mansi	
6		

# Assessment Rubrics -

Criteria			Ra	tings		Points
8	5	4	3	1	1	_
3- Understanding the topic	Correct Solution with excellent explanation and correct answers to all logical asked questions during presentation	Correct Solution with good explanation failed to answer one basic question asked during explanation	Correct Solution with limited explanation, failed to answer two OR more than two basic questions asked during explanation	Partially correct solution to the problem with limited explanation	Wrong solution with no/partial explanation	5
- Quality of mind-map	5	4	3	2	1	
and presentation	Poster/ Map prepared with correct points & neat & complete explanation	Poster prepared with correct points or design & incomplete explanation	Poster prepared with partially correct points or design & incomplete explanation	Poster prepared with Partially correct design and poor explanation	No Poster prepared with incorrect design and explanation	5
	1	7	lotal			10

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# DAV University, Jalandhar **Department: Physics** CAY: 2022-23(Term T)

## Outcomes of the activity:

This activity helped the students in developing various essential qualities among them such as, team work, discussion, involvement, thinking on critical topics and presentation skills. Students were motivated to work well and produce good results. All the team members were involved and participated equally. Student's involvement was good and satisfactory performance was observed during the presentations.

The current activity helped the students to understand the real-world applications of the techniques they are learning in this subject, their advantages and disadvantages. The students drew an outline on different applications of the techniques they selected and other students asked relevant questions.

# Photos of activity:



Students having discussion in groups

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# DAV University, Jalandhar Department: Physics CAY: 2022-23(Term T)



**Group-I presentation and Mind Map** 



# Group-II presentation and Mind Map



# DAV University, Jalandhar Department: Physics

CAY: 2022-23(Term 1)

		1	2		
1	I	4	4	8	10
2	II	5	4	9	10

# Critics:

Following are the observation related to Mind map activity

Feedback has been taken from students orally and through Google form Positive observations –

- 50. Students liked team work, involvement and polishing of their presentations skills
- 51. Students learned to cooperate in a team
- 52. Communication skills will be improved
- 53. Students develop problem identification and solving abilities

# Result of Google form feedback from Participants:



# DAV UNIVERSITY, JALANDHAR

# **DEPARTMENT OF <Chemistry> ACTIVITY REPORT**

Activity Type	Mind Map activity			
Activity Topic	Unification of electricity and magnetism			
Class	BSc Chemistry			
Semester	IV			
Academic Year	2022-23 [I]			
Course Name	Electricity, magnetism and electronics			
Course Code	PHY253A			
Date	06-04-2023			
Mapping with Co's	1,2			
Faculty In-charge	Dr. Rama Gupta			

#### Context:

In this Mind Map activity, which is a group activity, the students of B.Sc. (Hons.) Chemistry Sem-IV were divided into two groups and each group was asked to create a mind map on the unification of electricity and magnetism. The activity included student involvement, thinking on problem statement, group discussion among the team and identification of solution. Team formation was done as per the choice of students and comfort zone to get better outcome. One hour was given to the students to study on the topic individually, discuss in the group and create the mind map. Students sat together and prepared the solutions for the selected problem statement. Once the solution was ready, the students drew the complete details on Board or chart paper and presented in front of the complete class. Other students asked questions and got involved in each other's work. Faculty in-charge also discussed with the students and clarified the queries of the students on the given topics.

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Activity Description: The activity involved following steps

Step1 - Selection of team members as per your choice and comfort level

- Step 2- Finalization of topic in coordination of team members
- Step 3- Discussion on solution finding and functioning of it.

Step 4- Finalization of most suitable solution

Step 5- Drawing the complete flow diagram, solution and advantages, disadvantages on chart/board

Step 6- Presentation of the topic in front of the class

Step 7- Discussion and answering the questions by friends and teacher.

The students were divided into 2 groups namely - Grp I and Grp II with 4 members each Group Details of Participants: Group 1 : Mehak, Sejal, Khushi, Mitali

Group: II Daljit, Rajneesh, Kiran, Aastha

## Assessment Rubrics -

			Ratings		Points
5	4	3	1	1	
Correct Solution with excellent explanation and correct answers to all logical asked questions during presentation	Correct Solution with good explanation failed to answer one basic question asked during explanation	Correct Solution with limited explanation, failed to answer two OR more than two basic questions asked during explanation	Partially correct solution to the problem with limited explanation	Wrong solution with no/partial explanatio n	5
5	4	3	2	1	
Poster/ Map prepared with correct	Poster prepared with	Poster prepared with	Poster prepared with Partially correct design and	No Poster prepared with	5
	5 Correct Solution with excellent explanation and correct answers to all logical asked questions during presentation 5 Poster/ Map prepared with correct	54CorrectSolutionCorrectSolutionwithSolutionwithSolutionwith goodexplanationexplanationand correctfailed toanswers toanswer oneall logicalaskedquestionsduringpresentationexplanation54Poster/ MapPosterpreparedwithwith correctwith	543Correct SolutionCorrect SolutionSolution with good explanation and correctCorrect Solution with good explanation failed to answers to all logical asked during presentationCorrect Solution with good explanation failed to answer one basic question asked during explanationCorrect Solution with limited explanation failed to answer two OR more than two basic questions asked during explanation543Poster/ Map prepared with correctPoster prepared withPoster prepared with	5431Correct Solution with excellent and correct all logical during presentationCorrect Solution with good explanation failed to answer one asked during presentationCorrect Solution with limited explanation, failed to answer two OR more than two basic questions during explanationPoster Poster Poster prepared with with with correct5432Poster/Map prepared with correctPoster with with with with with with with with with with correct during explanationPoster prepared with with with with	5431Correct Solution with excellent and correct all logical during presentationCorrect Solution with good explanation and correct failed to answer one during presentationCorrect Solution with limited explanation failed to answer two on OR more than two basic questions during presentationWrong solution with no/partial explanation n543111Poster/Map prepared with correctPoster prepared withPoster prepared withPoster prepared withNo Poster prepared with

points & neat & complete explanation	correct points or design & incomplete explanation	partially correct points or design & incomplete explanation	poor explanation	incorrect design and explanatio n	φ
•		Total			10

#### **Outcomes of the activity:**

This activity helped the students in developing various essential qualities among them such as, team work, discussion, involvement, thinking on critical topics and presentation skills. Students were motivated to work well and produce good results. All the team members were involved and participated equally. Student's involvement was good and satisfactory performance was observed during the presentations.

The current activity helped the students to understand the real-world applications of the techniques they are learning in this subject, their advantages and disadvantages. The students drew an outline on different applications of the techniques they selected and other students asked relevant questions.

# Photos of activity:



Students having discussion in groups





UNIFICATION ELECTROSTATIC & MAGNETISM ... Mariadi 's fair equation of Unification OF Electrostatics, Magnetism & Their Unitedion. Group-1 Electric field: Magnetic Group-1 Electricity 1 Gaus' law = f = sh = ground It dealt with charges on glass and for, Botheres, lightnay the Magnetism: Meaning . The electric field stepping to equal to comprising division by form there.  $\stackrel{{}_{\scriptstyle 2}}{=} \cdot G_{\rm and}$  low Plagadism :-  $\oint \overline{F} \, \overline{K} \, = 0$ It is succeed as interactions of mamoria, Having: The met snagnetic flox ant of son closed Surface is no. These is no such thing a majorite memory. BUE THE DANSHE Q IS NOT AND THE STORE lion filings, comfass wireds etc. C and the particle of the anti-anti-anti-anti-anti-anti-light burble of the state of the state of the state of the theory did not disclosed for the state of the state of the the state the state to be the dimensional of the state of the contractions Ornsted Findings De found that a compass medie is follated by galong an electric cause through were placed man medie  $\frac{3}{2}, \frac{\text{Amphasis law: }}{\text{Marken s may refer field with a charging close by the set of the$ g = j = i , rein, due fe the state N And a for the second se 1) Grand Law of Electrostation Law of the second states and the se C. House M. E. Constant and Con # Electric change in notion fredere magniturful  $\frac{4}{2}: \quad \text{fareday's law :- } \quad \text{fe st}^2 = \frac{-d}{4!} \frac{d}{d!}$ we an mote en electric field with a darging Maxwell & Lorentz Theory The unification we obtained of Personal and Accords in which they should interdependents of cleduicity and momentary. This field is called for -H Ancers Hansel Law Cranges Classes find a draw magneti Jield. Grave Mensers Hundrey Kan onerte Rejeat Starme coupo Edict Kan onerte Ruhta boyay Male: Khushi DibolSo Mutali DibolSo Muhab DibolS Sejal Dibili uu Sei chuminani (h. y Terror <u>1999)</u> ( Terror salar of lat San (Terror Joseph ) ( An Olex salar of lat "Electro mognitum"

## Mind Map prepared by students



Points of	earned by each	group:		DAV Un	Registrar versity, Jalandhar
SI No	Group No.	Criteria	a Ratings	Points Acquired	<b>Total Points</b>
		1	2		
1	I	5	4	9	10
2	II	4	4	8	10

# Critics:

\*

**Following are the observation related to Mind map activity** Feedback has been taken from students orally and through Google form **Positive observations** – Students liked team work, involvement and polishing of their presentations skills Students learned to cooperate in a team Communication skills will be improved

# **Result of Google form feedback from Participants:**

# Critics:

The feedback of the above activity has been taken by Google form whose link was shared to the class. This feedback is required for the improvement/refinement of planned activity, and delivery.

Yes No

did you like the activity 8 responses



CAY: 2022-23

	ACADEMIC YEAR: 2022-23	Moderator: Dr. Rajdeep Kaur Assistant Professor
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# Name of the Activity: Discussion MS Excel and Its Features.

# Participants: All students of BPED 6th Semester

# COMPUTER APPLICATIONS IN PHYSICAL EDUCATION Course Code: CSA265

<u>Context:</u> The activity has been designed so that each student must become aware of design of flowcharting comprehend the debugging and testing, and insight into data types and array in C.

- 1. There were total 34 students in the class. Seven groups were made, Six groups with 5 students and 1 group consist of 4 students
- 2. They were asked to collect information regarding the above topic.
- 3. They discussed the topics with each other in the group.
- 4. Then each group prepared a chart based on the topic.
- 5. After chart preparation, the participants have understood about the subject.
- 6. The whole group was asked to present and explain their topic.

This is a group activity. It would involve reading, thinking, discussing and reporting back to the group.

## Practice (Problem Statement, Rubrics):

There were five topics given for collecting information and presenting to the class:

1. Study the MS Excel.

Questions :

2. Explain the features of MS Excel.

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Question 1. What is MS Excel?

Question 2. Explain various features of MS Excel?

Signature of Subject In-charge: 14

CAY: 2022-23

# Assessment Rubrics -

Criteria	Rating				
	10	09	06	04	
Poster preparation and presentation	Excellent Poster presentation and explanation and with good answers to queries asked.	Moderate Poster presentation and explanation on the given topic	Moderate Poster presentation with limited explanation on the given topic	Poster presentatio n only without much explanatio n	10

#### Evidence of Success / Outcome / Post reflection:

- The activity was quite successful in terms of understanding of the topic of flowchart, debugging and testing, C constants, datatypes and array.
- The various types of debugging, constant array, and datatype are now very clearly imbibed by the students of the class.
- Overall, this activity gave a increase their self-confidence and perception level of a topic.
- There are very good speakers/presenters found in class after this activity
- All the participants liked this activity as it was different from tedious lecture delivering.

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CAY: 2022-23

Photos of the activity:



Participants presenting in front of the Peer Group

Critics:

The feedback of the above activity has been taken by Google form whose link was shared to the class. This feedback is required for the improvement/refinement of planned activity, and delivery.

The following Google form link:

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This feedback has been treated as critics of the activity. Some of the responses have been shown below:

CAY: 2022-23



# DAV UNIVERSITY, JALANDHAR

# DEPARTMENT OF COMPUTER SCIENCE & APPLICATIONS ACTIVITY REPORT

Name of Activity	Mind Map Activity For Students	
Class	MCA/MSc.CS (Semester 2)	
Academic Year	2022-23	
Course name	Design and Analysis of Algorithms (CSA577)	
Date of Activity	21-3-23	
Mapping with Cos	CO-2	
Faculty Incharge	Dr. Hiteshwari Sabrol	

**Context:** The basis of the activity is for each participant to become aware of the problem in the cited subject & derive the learning from the topic discussed and then share that information to their peers. We have group all the participants randomly and not according to their choice. It can be an excellent resource when you need to convey a lot of information in a short amount of time and it helps build up "team work" and "coordination" among students.

1. Group the participants and give each group a paper to record the summary and regarding the aspect of the subject.

2. Have the participants read the information online within the stipulated time of 10 minutes and take notes to help them organize the information. This should be followed by 5 minutes for a team meeting among the team members and then another 10 minutes for recording information on chart papers, followed by presentations by allgroups.

3. The tricky part is numbering adequately. For example, if you have 36 participants, there should not be more than 3-5 participants in each group.

4. In the groups, the "participants" will have to teach their peers about the information (again, it is best for all participants to have noted down the key points & the lessons learnt and more importantly, how they map the topic to their real-life situation.

5. In the end, evaluate what the participants have understood about the subject.

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# This is a group activity. It would involve reading, thinking, discussing and reporting back to the group.

# Practice (Problem Statement, Rubrics):

String Matching Algorithm is also called "String Searching Algorithm." This is a vital class of string algorithm is declared as "this is the method to find a place where one is several strings are found within the larger string." Given a text array, T [1....n], of n character and a pattern array, P [1....m], of m characters. The problems are to find an integer s, called **valid shift** where  $0 \le s < n-m$  and T [s+1....s+m] = P [1....m]. In other words, to find even if P in T, i.e., where P is a substring of T. The item of P and T are character drawn from some finite alphabet such as {0, 1} or {A, B .....Z, a, b..... z}.

Given a string T [1.....n], the **substrings** are represented as T [i.....j] for some  $0 \le i \le j \le n-1$ , the string formed by the characters in T from index i to index j, inclusive. This process that a string is a substring of itself (take i = 0 and j =m).

The proper substring of string T [1,...,n] is T [1,...,j] for some  $0 \le j \le n-1$ . That is, we must have either i > 0 or  $j \le m-1$ .

Using these descriptions, we can say given any string T [1.....n], the substrings are

1. T[i....,j] = T[i] T[i+1] T[i+2].....T[j] for some  $0 \le i \le j \le n-1$ . And proper substrings are

1. T[i...,j] = T[i] T[i+1] T[i+2]...,T[j] for some  $0 \le i \le j \le n-1$ .

Note: If i>j, then T [i.....j] is equal to the empty string or null, which has length zero. Algorithms used for String Matching:

There are different types of method is used to finding the string

- 1. The Rabin-Karp-Algorithm
- 2. The Knuth-Morris-Pratt Algorithm
- 3. The Boyer-Moore Algorithm

### <u>Questions :</u>

Question 1. What is the need of string matching algorithms?

Question 2. Which principle is used by RKP?

Question 3. What is difference between three algorithms?

Question 4. Explain the working of algorithms with Mind Map.

Question 5. What are the applications of these algorithms?

#### **Details of Participants:**

<u>S. No.</u>	Group-I participants	Group-II participants	Group-III participants
1	Satinder Kaur	Garima	Simran
2	Akshipa	Nitin	Kiran
3	Loveleen	Manpreet	Manvi
4	Janiket	Amrik	Anita
5	Rubby	Privanka	
S. No.	<b>Group-IV</b> participants	Group-V participants	Group-VI participants
1	Dimple	Ramandeep kaur	Manit
2	Himanshu	Satnam	Megha
3	Preet Kaur	Maninder kaur	laslen
4	Neha	Sunil	Ranian
5		Naval	Dilieet

# Assessment Rubrics -

Criteria	Ratings				
	10	08	06	04	
Poster preparation and presentation	Excellent Poster presentation and explained the topic with proper description and gave answers to all questions asked during the presentation.	Moderate Poster presentation and good explanation and gave answers to all questions asked during the presentation.	Moderate Poster presentation with limited explanation and gave answers to all questions asked during the presentation.	Moderate Poster presentation with partial explanation and didn't give answers to all questions	10

Evidence of Success / Outcome / Post reflection:

- The final discussion is critical for several reasons. First, the main points can be drawn out, bringing the activity to a logical conclusion, the topic learnt and more importantly, how they map the topic to their example.
- Moreover, participants can still learn from other groups, as it is unlikely that each group had the same discussion and derive the lessons from it. Importantly, the final discussion allows the moderator to clarify points and address issues or limitations, and in this sense allows for assessment of participants' learning, as well as evaluation of the effectiveness of the process itself.
- Timing can be challenging, and there will be a need for keeping participants on track. It may be useful to have a timer, or clock.

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Photos of the activity:





Participants having discussions in the group





Participants presenting in front of the Peer Group



Mind Map(s) prepared by the participant

# Critics:

We need to take feedback on the above activity. This feedback can be taken from participants.

This feedback will be treated as critics of the activity. This feedback is required for the improvement/refinement of planned activity, and delivery using google forms.

Please use the following Google form link or QR Code for valued feedback:

https://forms.gle/j9puRC7CobcmtkL9A



One of the most challenging things you find to explain/ relate the concept?

- Nothing
- Nothing
- Few topics are there which are not properly explained by other groups
- I learn new things

# Give us the three positive aspects of this mind map activity

- · Build up confidence, teamwork, improvement in public confidence
- Giving knowledge
   Build up in confide
- Build up in confidence Improvement in public communication skills Team work
- Build up in confidence Improvement in public communication skills Team work
   Build up in Confidence improvement in public communication skills Team work
- Build up in Confidence, improvement in public communication, teamwork
   Helps to boost the confidence.
- Helps to boost the confidence
   Teamwork
- Teamwork
- More ideas and knowledge I gain from this activity

# Give us the three negative aspects of this mind map activity

- Sometimes time management is quite difficult
- Some topics need full attention but there are simply covered in these activities
- Time consuming

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CSA577-Mind Map Activity 🗀 🏠

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Nothing

Did you understand the topic with this mind map activity? 35 responses

Yes
No

Questions Responses 🚯 Settings

ner

#### DAV UNIVERSITY, JALANDHAR

Name of Activity	Mind Map Activity For Students
Activity Topic	Image Compression Techniques
Class	MCA/MSc.CS (Semester 4)
Academic Year	2022-23
Course name	Digital Image Processing (CSA678)
Date of Activity	09-3-23
Mapping with Cos	CO-4
Faculty Incharge	Dr. Hiteshwari Sabrol

# **DEPARTMENT OF COMPUTER SCIENCE & APPLICATIONS** ACTIVITY REPORT

**Context:** The basis of the activity is for each participant to become aware of the problem in the cited subject & derive the learning from the topic discussed and then share that information to their peers. We have group all the participants randomly and not according to their choice. It can be an excellent resource when you need to convey a lot of information in a short amount of time and it helps build up. "team work" and "coordination" among students.

1. Group the participants and give each group a paper to record the summary and regarding the aspect of the subject.

2. Have the participants read the information online within the stipulated time of 10 minutes and take notes to help them organize the information. This should be followed by 5 minutes for a team meeting among the team members and then another 10 minutes for recording information on chart papers, followed by presentations by allgroups.

3. The tricky part is numbering adequately. For example, if you have 36 participants, there should not ATTESTED be more than 3-5 participants in each group.

4. In the groups, the "participants" will have to teach their peers about the information (again, it is best for all participants to have noted down the key points & the lessons learnt apdinore importantly, how 5. In the end, evaluate what the participants have understood about the subject.

This is a group activity. It would involve reading, thinking, discussing and reporting back to the group.

Practice (Problem Statement, Rubrics):

Image compression has two prime categories - lossless and lossy image compression. These vary based on the image file resizing process. While the former ensures the image quality remains intact, the latter removes some parts to get a smaller size.

Lossless Compression: Lossless compression refers to a process of resizing the images into a smaller version. This technique does not fiddle with the image quality. Though it is an excellent method to resize your image files, the outcome may still not be too small. That is because lossless compression does not eliminate any part of the image. For example, it will convert an image of 15 MB to 10 MB. However, it will still be too large to display on a webpage. Lossless image compression is particularly useful when compressing text. That is because a small change in the original version can dramatically change the text or data meaning.

Lossy Compression: Lossy compression reduces the image size by removing some of the image parts. It eliminates the tags that are not very essential. If you opt for this method, you can get a significantly smaller version of an image with a minimal quality difference. Additionally, you can enjoy a faster loading speed.Lossy compression works with a quality parameter to measure the change in quality. In most cases, you have to set this parameter. If it is lower than 90, the images may appear low quality to the human eye. For example, you can convert an image of 15 MB into 2200 Kb as well as 400 Kb.That said, Image optimization services like Gumlet do not require you to enter the quality parameter. We use a new technique developed through machine learning - Perceptually Lossless Compression.

## <u>Ouestions :</u>

Question 1. What is Image Compression?

Question 2. Why Do We Need Image Compression?

Question 3. Basic steps in image compression?

Question 4. What is a transformation?

Question 5. Why Transformation of the Image is Important?

Question 6. What are compression techniques?

Question 7. How lossless compression is different from lossy?

S. No.	Group-I participants	Group-II participants	Group-III participants
1	Manjiner Kaur	Shalini	Jaskaran Singh
2	Neeti Kumari	Jaskamal Singh	Rahmeet kaur
3	Sakshi	Mahima	Jasdeep kaur
4		Sunanda	Rakshit Pangotra
5		Anjali	Kuber Passi
6	:	Rajveer	Loveleen Kaur
S. No.	<b>Group-IV</b> participants	Group-V participants	Group-VI particinants
1	Devansh	Prabhir kaur	Aavsush
2	Rohini	Vishal Ghai	Ankita
3	Komal Thakur	Alka	Samiksha
4	Naisi Kumari	Ritik Shrama	Manpreet Kaur
5	Komalpreet	Tanvi	Kanika Raiput
6	Anmol	Kunal Singh	

## **Details of Participants:**

# Assessment Rubrics -

Criteria	Ratings				
	10	08	06	04	
Poster preparation and presentation	Excellent Poster presentation and explained the topic with proper description and gave answers to all questions asked during the presentation.	Moderate Poster presentation and good explanation and gave answers to all questions asked during the presentation.	Moderate Poster presentation with limited explanation and gave answers to all questions asked during the presentation.	Moderate Poster presentation with partial explanation and didn't give answers to all questions	10

# Evidence of Success / Outcome / Post reflection:

- The final discussion is critical for several reasons. First, the main points can be drawn out, bringing the activity to a logical conclusion, the topic learnt and more importantly, how they map the topic to their example.
- Moreover, participants can still learn from other groups, as it is unlikely that each group had the same discussion and derive the lessons from it. Importantly, the final discussion allows the moderator to clarify points and address issues or limitations, and in this sense allows for assessment of participants' learning, as well as evaluation of the effectiveness of the process itself.
- Timing can be challenging, and there will be a need for keeping participants on track. It may be useful to have a timer, or clock.



Participants having discussions in the group

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# <u>Ouestions :</u>

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- Question 3. Basic steps in image compression?
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3	Sakshi	Mahima	Jasdeep kaur
4		Sunanda	Rakshit Pangotra
5		Anjali	Kuber Passi
6		Rajveer	Loveleen Kaur
S. No.	<b>Group-IV</b> participants	<b>Group-V</b> participants	Group-VI participants
1	Devansh	Prabhir kaur	Aaysush
2	Rohini	Vishal Ghai	Ankita
3	Komal Thakur	Alka	Samiksha
4	Naisi Kumari	Ritik Shrama	Manpreet Kaur
5	Komalpreet	Tanvi	Kanika Rajput
6	Anmol	Kunal Singh	

#### **Details of Participants:**



# Participants presenting in front of the Peer Group





Mind Map(s) prepared by the participant

#### Critics:

We need to take feedback on the above activity. This feedback can be taken from participants. This feedback will be treated as critics of the activity. This feedback is required for the improvement/refinement of planned activity, and delivery using google forms. Please use the following Google form link or QR Code for valued feedback:







0 0

Ouestions Responses 🔞 Settings

Give us the three negative aspects of this mind map activity 15 responses

No negative aspects

Less time and less interaction

Don't know

Group activity, Questions answer, team efforts

Time-consuming. It can get messy.

Time consuming Some time topics are not clear that much to us Less content

Time consuming Sometimes topics are not clear Less content

Faculty Incharge (ININ)

Coordinate



1 p

Name of Activity	Group Discussion & Seminar
Activity Topic	<ul> <li>Object Oriented Programming</li> <li>Multi Threading</li> <li>Exception Handling</li> <li>Applet Programming</li> <li>File Handling</li> </ul>
Class	BCA/BSc.CS (Semester 6)/PGDCA(Semester 2)
Academic Year	2022-23
Course name	Core Java (CSA302/CSA510P)
Date of Activity	31-3-23
Mapping with Cos	CO-2, CO-3, CO-4
Faculty Incharge	Dr. Hiteshwari Sabrol

# DEPARTMENT OF COMPUTER SCIENCE & APPLICATIONS <u>ACTIVITY REPORT</u>

**Context:** The groups are created on the marks obtained in MST exam and topic for discussion is given on the basis of marks (Advanced Learners and Slow Learners). Group I (20-25), Group II(15-20), . Group III (10-15) and Group (Below 10).

# Group I : Multi Threading and Applet Programming

**Group II: Exception Handling** 

Group III: File Handing

Group IV: Concepts of Object Oriented Programming using Java

# Details of Participants:

S. No.	Group-I participants	Group-II participants	Group-III participants	Group-IV participants
1	ADARSH RAJ	AMANVIR	AMANDEEP SINGH	LOVEDEEP SINGH
	SANDEEP KAUSHAL	ANDEEP KAUSHAL ONISHA	SIMRAN SAINI	PRABHJOT
		RAHUL KASHYAP	SIMRAN	TARUN
		NIRVAIR KAUR	JASPREET KAUR	DASHAN PREET SINGH
		RISHAV SHARMA	JASVIR SINGH	BISHIT CHAWLA
		SANAMPREET SINGH	ANAMIKA THAKUR	RAJINDER KUMAR
		AGAMJOT SINGH	RIMPLE RCO	SAHIL PRAJAPATI
		MANKARANDEEP KAUR SANOVA CHAUDHARY SIMAR BHARDWAJ	ISHAN BHUTANIVERS	GURSEWAK SINGH MUNDH
				VARINDER SINGH
			AMANDEEP ARORA	RAKSHIT
		SAHIL KUMAR	ROHIT JOSHI	DIVISHA
	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1		URVASHI SHARMA	SHUBHAM RAM
	1. S. C.	1	AKASH KUMAR RAM	MANTHAN CHOPRA
	1 L L 1 L		MANISH KUMAR	TARANPREET SINGH
			ADITI	KARAN SINGH GEHLON
				RAJINDER KUMAR

# Assessment Rubrics -

Criteria	Ratings	Pts.
	Subject Knowledge (5)	
Group	Skills and Confidence (5)	
Discussion	Attitude (5)	
	Listening power, presenting & sharing knowledge (5)	

# Photos of the activity:



Participants having discussion

Faculty Incharge 10-14 (1514123)

DAV University, Jalandhar ordinator

# Details of Participants:

S. No.	Group-I participants	Group-II participants	Group-III participants	Group-IV participants	Group V participants	Group VI participants
1	Neelam	Nikhil Chadha	Aryan	Shivam Babbar	Muskan	Rahul Sharma
2	Ashish Dadwal	Muskan	Kamalpreet	Garima	Sunaina	Suman
3	Karan	Ankush	Navneet	Rushil	Tarandeep	Amisha
4	Sapna	Rupali	Rachit	Jastin Mathew	Simran Nishu	Rachita
6	Jayant	Nikhil Walia	Siddharth	Bhawna	Sonia	Rahul Kalia
7		Ashish Sharma	Nischay			

# Assessment Rubrics -

Criteria			R	tings		Points
	5	4	3	1	1	
1. Understanding the topic	Correct Solution with excellent explanation and correct answers to all logical asked questions during presentation	Correct Solution with good explanation failed to answer one basic question asked during explanation	Correct Solution with limited explanation, failed to answer two OR more than two basic questions asked during explanation	Partially correct solution to the problem with limited explanation	Wrong solution with no/partial explanation	5
2. Quality of	5	4	3	2	1	- 11
presentation	Poster/ Map prepared with correct points & neat & complete explanation	Poster prepared with correct points or design & incomplete explanation	Poster prepared with partially correct points or design & incomplete explanation	Poster prepared with Partially correct design and poor explanation	No Poster prepared with incorrect design and explanation	5
			Total			10

# Outcomes of the activity:

This activity helped the students in developing various essential qualities among them such as, team work, discussion, involvement, thinking on critical topics and presentation skills. Students were motivated to work well and produce good results. All the team members were involved and participated equally. Student's involvement was good and satisfactory performance was observed during the presentations.

# Photos of activity:

# Group I: Discussion and Presentation



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# Group III: Discussion and Presentation

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#### Points earned by each group:

Asther:

SI No	Group No.	oup No. Criteria Ratings		Points Acquired	Total Points
		201 I	2	Hard Mer Steel 1 (1997)	
1	I	5	4	9	10
2	II	4	4	8	10
3	III	5	4	9	10
4	IV	4	2	8	10
5	V	5	4	9	10
6	VI	. 5	4	9	10

# Critics:

#### Following are the observation related to Mind map activity

a state and

Feedback has been taken from students orally and through Google form Positive observations –

- Students liked team work, involvement and polishing of their presentation's skills
- Students learned to cooperate in a team
- Communication skills will be improved
- Students develop problem identification and solving abilities

## Result of Google form feedback from Participants:

Did you find it interesting? 33 responses





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# Positive Accepts of this Activity (Collected from Feedback Form)

- Improved confidence
- New way of Learning
- Collecting ideas from others thinking

Negative Accepts of this Activity (Collected from Feedback Form)

- Time Consuming
- Activity must be standalone i.e. 1-1 manner

# **Overall Activity Performance**

How well was your engagement in the activity? <sup>33 responses</sup>



D	Poor
0	Fair
9	Good

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# DAV UNIVERSITY, JALANDHAR

# DEPARTMENT OF <MATHEMATICS>

#### ACTIVITY REPORT

Activity Type	Mind Map
Activity Topic	Fundamental theorem of finitely generated abelian group, Dihedral group and Symmetric group, Sylow's First Theorem
Class	M.Sc. (Hons.) Mathematics
Semester	11
Academic Year	2023
Course Name	Algebra-I
Course Code	MTH552
Date	16-03-2023
Mapping with Co's	CO2, CO3
Faculty In-charge	Mr. Arun Kochar
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#### Context:

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In this Mind Map activity, which is a group activity, the students of M.Scl (Hons.) Mathematics Sem-II were divided into three groups and each group was asked to select of a topic of their choice from the syllabus of MTH552 and create a mind map on the real-world applications of the selected techniques/topic. The activity included student involvement, thinking on problem statement, group discussion among the team and identification of solution. Team formation was done as per the choice of students and comfort zone to get better outcome. The students themselves selected the topics and discussed the same with the faculty in-charge, after which the topics were finalized. One hour was given to the students to study on the topic individually, discuss in the group and create the mind map. Students sat together and prepared the solutions for the selected problem statement. Once the solution was ready, the students drew the complete details on Board or chart paper and presented in front of the complete class. Other students asked questions and got involved in each other's work. Faculty in-charge also discussed with the students and clarified the queries of the students on the given topics.

#### Activity Description:

The activity involved following steps

Step1 - Selection of team members as per your choice and comfort level

Step 2- Finalization of topic in coordination of team members

Step 3- Discussion on solution finding and functioning of it.

Step 4- Finalization of most suitable solution

Step 5- Drawing the complete flow diagram, solution and advantages, disadvantages on chart/board

Step 6- Presentation of the topic in front of the class

Step 7- Discussion and answering the questions by friends and teacher.

The students were divided into 3 groups namely – Grp I, Grp II and Grp III with 3 members each.

#### **Details of Participants:**

S. No.	Group-I participants	Group-II participants	Group-III participants
<u>l</u>	Anamika (12201056)	Shivani (12201133)	Tanvi Jain(12201258)
2	Sonali (12201303)	-Gunjita (12200046)	Anjali (12200591)
3	Vishva (12201340)	Lakhwinder (12201335)	Anshika Thakur (12201145)

#### Assessment Rubrics -

Criteria			R	atings		Points
	5	4	3	1	. 1	
1. Understanding the topic	Correct Solution with excellent explanation and correct answers to all logical asked questions during presentation	Correct Solution with good explanation failed to answer one basic question asked during explanation	Correct Solution with limited explanation, failed to answer two OR more than two basic questions asked during explanation	Partially correct solution to the problem with limited explanation	Wrong solution with no/partial explanation	<b>15</b>
2. Quality of mind-	5	4	3	2	l	
presentation	Poster/ Map prepared with correct points & neat & complete explanation	Poster prepared with correct points or design & incomplete explanation	Poster prepared with partially correct points or design & incomplete explanation	Poster prepared with Partially correct design and poor explanation	No Poster prepared with incorrect design and explanation	5
		Т	otal			10

#### Outcomes of the activity:

This activity helped the students in developing various essential qualities among them such as, team work, discussion, involvement, thinking on critical topics and presentation skills. Students were motivated to work well and produce good results. All the team members were involved and participated equally. Student's involvement was good and satisfactory performance was observed during the presentations.

The current activity helped the students to understand the real-world applications of the techniques they are learning in this subject, their advantages and disadvantages. The students drew an outline on different applications of the techniques they selected and other students asked relevant questions.

## Photos of activity:







Students having discussion in groups



Group-I presentation and Mind Map



Group-II presentation and Mind Map



#### Points earned by each group:

SI No	Group No. Criteria Ratings Points Acquired		Points Acquired	<b>Total Points</b>		
		1 2				
1	I	4	4	8	10	
2	II	4.5	4	8.5	10	
3	III	4	4.5	8.5	10	

# Critics:

#### Following are the observation related to Mind map activity

Feedback has been taken from students orally and through Google form Positive observations –

- Students liked team work, involvement and polishing of their presentations skills
- Students learned to cooperate in a team
- Communication skills will be improved
- Students develop problem identification and solving abilities

#### Result of Google form feedback from Participants:

#### List two advantages of the activity:

- 1. Build confidence
- 2. Boost confidence
- 3. Helps to boost the confidence
- 4. Helps to boost our confidence, enhances team work
- 5. It enhances the confidence level and helps in understanding the topic better
- 6. Boost our confidence
- 7. Boost our confidence
- 8. It helps in enhancing the confidence level.
- Build confidence Good for teaching skills

Write two suggestions for enhancing the exercise:

- 1. NIL
- 2. Use of ICT
- 3. Use of ICT
- 4. Use of ICT
- 5. No
- 6. No
- 7. No
- 8. Use of ICT
- 9. Nil..

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Do you think this activity was useful in enhancing your knowledge and interest in the subject?

17 responses



These activities should be carried out more frequently in all the subjects. 17 responses



You were able to corelate the topics in the activity with real-life problems.

#### 17 responses



Since two positive aspects of this activity	Give two negative aspects of this activity.	Give you suggestions on scope of improvements in such activities.
		Cond
Group discussion and team work	No	0000
Sood mind map making	No	Got to know new facts and something interesting
Easy to understand the topics	No negative aspect	No suggestion
- Caral James to work with to are	No penative aspect in it	
Uvercome tear and learn to work with team Spowledge enhancement and overcoming tear or		
public speaking	No negative aspects	•
Bood and interesting mind map making	No negative aspects	No suggestions
Will enhance the ability to interact with each other	easily so i don't think so their are amy	
socially 2 will make intellectual definitely.	negatives	Weightage should be given more on discussions.
		the design life build a of activities
encourage to work in teams	No	need to decrease the burden or adumnes.
Encourage to work in teams	No	Νσ
	Time concursing and Confusion	
Students learned the team work, and interaction with	recording the topic	Distribution of the topic one day before
the classmates		
Tanana	Time consuming and	Topic must distribute and discuss one day before
learn work	Lather villess knowledge because of flow	should also discuss the topic at last so that students can
1 Extension - His speaking 2 develop team work	charts	grab more knowledge about important points that are left by
LEnnance public speaking 2 develop realin work	we have to cooperate with other subjects	
Learn work, interaction, group discussion, better	as well	Distribution of topic must be done one day before.
understanding of the concept		
Interaction with friends	Extra burden	Give the topic one day before activity
	Activities should start from next semester	
	as exams are from next month so students	
Teamwork and self confidence increases	are focusing less in studies	No

Rate your overall experience in the activity.

17 responses



# DAV UNIVERSITY, JALANDHAR

#### DEPARTMENT OF MATHEMATICS

#### ACTIVITY REPORT

Activity Type	Mind Map
Activity Topic	Applications of Vector calculus
Class	B.Sc. (Hons.) (Mathematics)
Semester	VI
Academic Year	2022-2023
Course Name	Multivariate Calculus
Course Code	MTH321
Date	27-03-2023
Mapping with Co's	CO4
Faculty In-charge	Mr. Arun Kochar

#### Context:

In this Mind Map activity, which is a group activity, the students of B.Sc. (Hons.) (Mathematics) Sem-VI were divided into 6 groups and a topic of "Applications of Vector calculus" from the syllabus of MTH321 given to them. The activity included student involvement, thinking on problem statement, group discussion among the team and identification of solution. Students sat together and prepared the solutions for the selected problem statement. Once the solution was ready, the students drew the complete details on chart paper and presented in front of the complete class. Other students asked questions and got involved in each other's work. Faculty in-charge also discussed with the students and clarified the queries of the students on the given topics.

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#### Activity Description:

The activity involved following steps

Step1 - Selection of team members as per your choice and comfort level

Step 2- Finalization of topic in coordination of team members

Step 3- Discussion on solution finding and functioning of it.

Step 4- Finalization of most suitable solution

Step 5- Drawing the complete flow diagram, solution and advantages, disadvantages on chart/board

Step 6- Presentation of the topic in front of the class

Step 7- Discussion and answering the questions by friends and teacher.

The students were divided into 6 groups namely – Grp I, Grp II, Grp III and Grp IV Grp V and Grp VI. Grp I- Grp IV contain 5 members each and Grp V, and Grp VI contain 6 members each.

## **Details of Participants:**

S. No.	Group-I participants	Group-II participants	Group-III participants	Group-IV participants	Group-V participant s	Group-VI participant s
1	Ashish 12000021	Muskan 12000065	Rahul 12000389	Nikhil Walia 12000346	Navneet 12000569	Nikhil 12000896
2	Sunaina 12000035	Kamalpreet 12000132	Ashish 12000632	Muskan 12000552	Shivam 12001346	Aryan 12000989
3	Neelam 12000062	Sonia 12000055	Tarandeep 12000534	Rahul Kalia 12000401	Suman 12000880	Amisha 12000828
4	Simran 12000667	Justin Mathew 12000095	Nischay 12000788	Bhawna 12000637	Ankush 12000770	Rachita 12000840
5	Sapna 12000110	Rushil 12000027	Rupali 12000141	Rachit Sharma 12000823	Karan 12000831	Jayant 12000452
6				· · · · ·	Garima 12000365	Siddharth 12000885
	l		·	1		<u></u>

### Assessment Rubrics -

Criteria	Ratings					Points
	5	4	3	1	1	
1. Understanding the topic	Correct Solution with excellent explanation and correct answers to all logical asked questions during presentation	Correct Solution with good explanation failed to answer one basic question asked during explanation	Correct Solution with limited explanation, failed to answer two OR more than two basic questions asked during explanation	Partially correct solution to the problem with limited explanation	Wrong solution with no/partial explanation	5
<u> </u>	5	4	3	2	1	

2.	Quality of mind-map and presentation	Poster/ Map prepared with correct points & neat & complete explanation	Poster prepared with correct points or design & incomplete explanation	Poster prepared with partially correct points or design & incomplete explanation	Poster prepared with Partially correct design and poor explanation	No Poster prepared with incorrect design and explanation	5
	Total						10

### Outcomes of the activity:

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This activity helped the students in developing various essential qualities among them such as, team work, discussion, involvement, thinking on critical topics and presentation skills. Students were motivated to work well and produce good results. All the team members were involved and participated equally. Student's involvement was good and satisfactory performance was observed during the presentations.

The current activity helped the students to understand the real-world applications of the techniques they are learning in this subject, their advantages and disadvantages. The students drew an outline on different applications of the techniques they selected and other students asked relevant questions.

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Students having discussion in groups









Group-IV presentation and Mind Map



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Group-VI presentation and Mind Map

#### Points earned by each group:

S. No Group No.		Criteria Ratings		Points Acquired	Total Points	
		1	2			
1	I	4.5	4.5	9	10	
2	11	4.5	4	8.5	10	
3	111	4.5	4	8.5	10	
4	IV	4	4.5	8.5		
5	V	3.5	5	8.5	10	
6	VI	4.5	4	8.5		

## Critics:

# Following are the observation related to Mind map activity

Feedback has been taken from students orally and through Google form Positive observations -

- Students liked team work, involvement and polishing of their presentation's skills
- Students learned to cooperate in a team.
- Communication skills will be improved
- Students develop problem identification and solving abilities

# Result of Google form feedback from Participants:

#### List two advantages of the activity.

- 1. Confidence building and creative thinking
- 2. Engaging and fun
- 3. Boost confidence and better understanding of topic
- 4. Enhance confidence, and presenting skills
- 5. 1) this topic has not covered yet in class by sir 2)sir asked practical life examples.

6. Enhances concept and speaking skills

- 7. 1 Enhance leadership qualities 2 enchance our skills
- 8. Enhance confidence
- 9. Boosts confidence and understanding to the topic
- 10. It helps to remember a topic.
- 11. Boost confidence and help in remember the topic
- 12. Increase confidence and manner of presentation.
- 13. the topic is well prepared
- 14. Boosted Confidence

- 15. Helps in better coordination and in understanding properly
- 16. Topic revised and self confidence
- 17. Learn more things Confidence boost
- 18. Helps to build confidence
- 19. Made it more understanding to understand the concept
- 20. Boost confidence and enhance team spirit
- 21. Confidence booster activity
- 22. Helps in boosting confidence

#### Write two suggestions for enhancing the exercise.

- 1. Equal representation and more creative
- 2. More practical usage can be given of the topic and more participation of students
- 3. Should be less time consuming
- 4. Presentation chat should be neat and understandable
- 5. Non.
- 6. No comments
- 7. 1 make it more competitive 2.add debate activities in it
- 8. No suggestions
- 9. Chart preparation should not be included
- 10. Healthy participation of all members of group should be there.
- 11. Participation should be fair
- 12. Fair participation should be there
- 13. None
- 14. It should be less time consuming
- 15. Gaining personality
- 16. More efforts of students
- 17. No suggestions, activity went well
- 18. More activities like these to be conducted
- 19. Everything was fine
- 20. It should be conducted before mse

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# DAV UNIVERSITY, JALANDHAR

#### **DEPARTMENT OF MATHEMATICS**

#### ACTIVITY REPORT

Activity Type	Mind Map		
Activity Topic	Applications of Partial differential equations		
Class	M.Sc. (Hons.) (Mathematics)		
Semester	IV		
Academic Year	2023		
Course Name	Partial differential equations		
Course Code	MTH677		
Date	24-03-2023		
Mapping with Co's	CO3, CO4		
Faculty In-charge	Mr. Arun Kochar		

#### Context:

In this Mind Map activity, which is a group activity, the students of M.Sc. (Hons.) (Mathematics) Sem-IV were divided into three groups and a topic of "Applications of Partial differential equations" from the syllabus of MTH677 given to them. The activity included student involvement, thinking on problem statement, group discussion among the team and identification of solution. Students sat together and prepared the solutions for the selected problem statement. Once the solution was ready, the students drew the complete details on Board or chart paper and presented in front of the complete class. Other students asked questions and got involved in each other's work. Faculty in-charge also discussed with the students and clarified the queries of the students on the given topics.

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#### Activity Description:

The activity involved following steps

Step1 - Selection of team members as per your choice and comfort level

Step 2- Finalization of topic in coordination of team members

Step 3- Discussion on solution finding and functioning of it.

Step 4- Finalization of most suitable solution

DAV University, Jalandhar Step 5- Drawing the complete flow diagram, solution and advantages, disadvantages on chart/board

Step 6- Presentation of the topic in front of the class

Step 7- Discussion and answering the questions by friends and teacher.

The students were divided into 3 groups namely - Grp I, Grp II and Grp III with 4 members each Group.

Sr. Group-I No. participants		Group-II participants	Group-III participants	
1	Tania	SIMRAN	Reena Kumari	
	12100331	12100609	12100415	
2	MANSI	SURBHA CHAUDHARY	AMOL GULERIA	
	12100550	12100610	12101215	
3	BHAVYA	SHABNAMDEEP	SUMEDHA	
	Thakur	KAUR	SHARMA	
	12100889	12100509	12101335	
4	SIMRAN	SHUBHAM	KINJAL VACHHER	
	12101205	12100783	12100566	

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### **Details of Participants:**

# Assessment Rubrics –

Criteria	Ratings				1 01111	
	5	4 .	3	1	1	
1. Understanding the topic 2. Quality of mind-map and presentation	Correct Solution with excellent explanation and correct answers to all logical asked questions during presentation	Correct Solution with good explanation failed to answer one basic question asked during explanation	Correct Solution with limited explanation, failed to answer two OR more than two basic questions asked during explanation	Partially correct solution to the problem with limited explanation	Wrong solution with no/partial explanation	5
	5	4	3	2	1	
	Poster/ Map prepared with correct points & neat & complete explanation	Poster prepared with correct points or design & incomplete explanation	Poster prepared with partially correct points or design & incomplete explanation	Poster prepared with Partially correct design and poor explanation	No Poster prepared with incorrect design and explanation	5
Total						10

#### Outcomes of the activity:

The basis of the activity is for each participant to become aware of different ways to solve Heat equation, Wave equation and Laplace equation.

Background The three basic linear partial differential equations with constant coefficients are

(1) The Heat Equation, also called the Diffusion Equation:

$$\frac{\partial u}{\partial t} = \frac{\partial^2 u}{\partial x^2}.$$
(1)

(2) The Wave Equation:

$$\frac{\partial^2 u}{\partial t^2} = \frac{\partial^2 u}{\partial x^2}.$$
(2)

(3) Laplace's Equation:

$$\frac{\partial^2 u}{\partial t^2} + \frac{\partial^2 u}{\partial x^2} = 0. \tag{3}$$

These types of the equations are helpful to solve many engineering problems. Solution of Heat equation, wave equation and Laplace equation is useful for experiment seismologist in exploration of valuable materials such as mineral, crystal and metals.

This activity helped the students in developing various essential qualities among them such as, team work, discussion, involvement, thinking on critical topics and presentation skills. Students were motivated to work well and produce good results. All the team members were involved and participated equally. Student's involvement was good and satisfactory performance was observed during the presentations.

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#### Points earned by each group:

Group No.	o Group	No. Criter	ia Ratings	Points Acquired Total Points			
1		1	2				
I	I	4	4	8	10		
	I	4	4	8	10		
111		4.5	4	8.5	10		
111	11	4.5	4	8.5			

#### Critics:

# Following are the observation related to Mind map activity

Feedback has been taken from students orally and through Google form Positive observations -

- Students liked team work, involvement and polishing of their presentation's skills
- Students learned to cooperate in a team
- Communication skills will be improved
- Students develop problem identification and solving abilities

# Result of Google form feedback from Participants:

#### List two advantages of the activity:

- 1. Boost confidence; better understanding
- 2. Helps in understand the concept more effectively.
- 3. Boost confidence, better understanding
- 4. Team work and increase confidence
- 5. It boosts our confidence and helps to understand the topic well
- 6. Learn to communicate with other, emphasize key points
- 7. good communicating skills
- 8. team work and boosten up confidence.
- 9. Increases Confidence

### Write two suggestions for enhancing the exercise:

- 1. No
- 2. None
- 3. no
- 4. Everything is perfect so need of any suggestion
- 5. Nothing
- 6. Positive Interaction between students



# DAV UNIVERSITY, JALANDHAR

#### **DEPARTMENT OF MATHEMATICS**

#### ACTIVITY REPORT

Activity Type	Mind Map
Activity Topic	Boolean Algebra, Fundamental Product & Complete Sum of Products
Class	M.Sc.(Hons)(Maths)
Semester	4 <sup>th</sup>
Academic Year	2023
Course Name	Discrete Mathematics
Course Code	MTH666A
Date	27-03-2023
Mapping with Co's	CO4
Faculty In-charge	Dr. Vinod Kumar

#### Context:

In this Mind Map activity, which is a group activity, the students of M.Sc. (Hons.)(Mathematics),Sem-IV were divided into four groups and a topic of "Boolean Algebra, Fundamental Product and Complete Sum of Products" from the syllabus of MTH666 given to them. The basis of this activity to learn the Boolean Algebra. This is a group activity so that activity would be helpful in building "team work" and "coordination" among the students. It would involve reading, thinking, discussing, solving and reporting back to the group.

#### Activity Description:

The activity involved following steps

Step1 – Selection of team members as per your choice and comfort level

Step 2- Finalization of topic in coordination of team members

Step 3- Discussion on solution finding and functioning of it.

Step 4- Finalization of most suitable solution

Step 5- Drawing the complete flow diagram, solution and advantages, disadvantages on chart/board

Step 6- Presentation of the topic in front of the class

Step 7- Discussion and answering the questions by friends and teacher.

The students were divided into 03 groups namely – Group I, Group II, Group III, and 04 members each in a group.

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### Details of Participants:

Group-I participants	Group-II participants	Group-III participants
Tania (12100331)	Amol (12101215)	Shabnamdeep Kaur (12100509)
Mansi	Reena	Shubham
Bhavya	Kinjal	Simran
Simran Rana	Sumedha	Surbha
	Group-I participants Tania (12100331) Mansi Bhavya Simran Rana	Group-I participantsGroup-II participantsTania (12100331)Amol (12101215)MansiReenaBhavyaKinjalSimran RanaSumedha

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#### Assessment Rubrics -

Criteria			Ra	tings		Points
	5	4	3	1	1	
1. Understanding the topic	Correct Solution with excellent explanation and correct answers to all logical asked questions during presentation	Correct Solution with good explanation failed to answer one basic question asked during explanation	Correct Solution with limited explanation, failed to answer two OR more than two basic questions asked during explanation	Partially correct solution to the problem with limited explanation	Wrong solution with no/partial explanation	5
2. Quality of	5	4	3	2	1	
mind-map and presentation	Poster/ Map prepared with correct points & neat & complete explanation	Poster prepared with correct points or design & incomplete explanation	Poster prepared with partially correct points or design & incomplete explanation	Poster prepared with Partially correct design and poor explanation	No Poster prepared with incorrect design and explanation	5
			Total			10

#### Outcomes of the activity:

This activity helped the students in developing various essential qualities among them such as, team work, discussion, involvement, thinking on critical topics and presentation skills. Students were motivated to work well and produce good results. All the team members were involved and participated equally. Student's involvement was good and satisfactory performance was observed during the presentations.

The current activity helped the students to understand Boolean Algebra, Fundamental Product and Complete Sum of Products.

#### Photos of activity:

BOOLEAN ALGEBRA Definitions - Boolean Algebra it a branch of mathe that deals with approxilans on legical values with binary vaniables. Atenal: It is a vertable or complemented variable the training the booken expression FUNCTIONTIAL PRODUCT By fundamental product we wave a literal are a product of two an wore literals in which no two literal involve a come works ENAMPLE: IY'I , yz', x'yz NONELANGLE : XY'IX', XY'IY SUPPOR PRODUCT the filter on and to a barbary signification of the solution o Contract and the contract Contract and the formation the formation and the state ATTESTED The second is they start and the second seco Registrar Go rol : Data (merri), Hang Canerol, anatas (Doors), So-GPS Map Camerav University, Jalandhar **EGPS Map Camera** Sarmastpur, Punjab, India Sarmastour, Puniab, India DAV University **DAV University** Lat 31.419774° Lat 31,419774° Long 75.62103° Long 75.62103° 0000 27/03/23 02:38 PM GMT +05:30 0000 27/03/23 02:38 PM GMT +05:30











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Group-III presentation and Mind Map

#### Points earned by each group:

SLNo	Group No.	Criter	ia Ratings	Points Acquired Total Points
		1	2	
1	I	5	4	6
2	11	4	4	<b>8</b> (1997) <b>8</b> (1997) <b>1</b> (1)
3	11I	5	4	8

#### Critics:

### Following are the observation related to Mind map activity

Feedback has been taken from through Google form Positive observations –

- Students liked team work, involvement and polishing of their presentation's skills
- Students learned to cooperate in a team
- Communication skills will be improved
- Students develop problem identification and solving abilities

Did the presentation boost your confidence? 11 responses



Yes O No

### Positive Accepts of this Activity (Collected from Google Feedback Form)

- Confidence level and team work
- Enhances the confidence level, helps in understanding the concept more efficiently
- · Boosts confidence; better understanding
- Interesting and knowledgeable
- Learn to communicate better and emphasize key points

### Negative Accepts of this Activity (Collected from Google Feedback Form)

- · Equal participation for every student and time wastage in making charts
- Time management and equal distribution of good students in every group to make them feel confident

O Poor Fair Good

#### **Overall Result**

How well was your engagement in the activity? 11 responses

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# DAV UNIVERSITY, JALANDHAR

DEPARTMENT OF MATHEMATICS

#### ACTIVITY REPORT

Activity Type	Mind Map
Activity Topic	Chebychev inequality and Weak Law of Large Numbers
Class	M.Sc.(Hons.) Math
Semester	2nd
Academic Year	2023
Course Name	Mathematical Statistics
Course Code	MTH557A
Date	29-03-2023
Mapping with Co's	CO2
Faculty In-charge	Anmol Bajaj

#### Context:

In this Mind Map activity, which is a group activity, the students of M.Sc. (Hons.) Math Sem-II were divided into three groups and a topic of "Chebychev inequality and weak law of large Numbers" from the syllabus of MTH557A given to them. The basis of this activity to learn about application of chebychev inequality and weak law of large numbers. This is a group activity so that activity would be helpful in building "team work" and "coordination" among the students. It would involve reading, thinking, discussing, solving and reporting back to the group.

#### Activity Description:

The activity involved following steps



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Step1 - Selection of team members as per your choice and comfort level

- Step 2- Finalization of topic in coordination of team members
- Step 3- Discussion on solution finding and functioning of it.
- Step 4- Finalization of most suitable solution
- Step 5- Drawing the complete flow diagram, solution and advantages, disadvantages on chart/board
- Step 6- Presentation of the topic in front of the class
- Step 7- Discussion and answering the questions by friends and teacher.

CAY: 2022-23

The students were divided into 03 groups namely – Group I, Group II, Group III and 03 members each in a group.

**Details of Participants:** 

<b>S</b> .	Group-i	Group-II	Group-III
No.	participants	participants	participants
1	Sonali	Shivani	Anshika Thakur
	(122001303)	(12201133)	(12201145)
2	Lakhvinder	Anjali	Tanvi Jain
	(12201335))	(12200591)	(12201258)
3	Gunjita	Vishva	Anamika
	(12200046)	(12201340)	(12201056))
	1		l

Assessment Rubrics -

Criteria			Ra	tings		Points
	5	4	<b>3</b> •	1	1	
1. Understanding the topic	Correct Solution with excellent explanation and correct answers to all logical asked questions during presentation	Correct Solution with good explanation failed to answer one basic question asked during explanation	Correct Solution with limited explanation, failed to answer two OR more than two basic questions asked during explanation	Partially correct solution to the problem with limited explanation	Wrong solution with no/partial explanation	
	5	4	3	2	1	

#### CAY: 2022-23

2.	Quality of mind- map and presentation	Poster/ Map prepared with correct points & neat & complete explanation	Poster prepared with correct points or design & incomplete explanation	Poster prepared with partially correct points or design & incomplete explanation	Poster prepared with Partially correct design and poor explanation	No Poster prepared with incorrect design and explanation	5
	49 		-	Total			10

#### Outcomes of the activity:

This activity helped the students in developing various essential qualities among them such as, team work, discussion, involvement, thinking on critical topics and presentation skills. Students were motivated to work well and produce good results. All the team members were involved and participated equally. Student's involvement was good and satisfactory performance was observed during the presentations.

The current activity helped the students to understand that what is Chebychev's inequality and weak law of large numbers.

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CAY: 2022-23

#### Photos of activity:







# DAV University, Jalandhar **Department: Mathematics** CAY: 2022-23 17/8 MBY SHEVS THE QUALITY WEAK LAD OF LARGER MAINS. WEAR FAR SAME H. CHER'S there is a new set. GPS Map Can Sarmastpur, Punjab, India CJ9C+XCH, Sarmastpur, Punjab 144025, India Lat 31.41996° GPS Map C Sarmastpur, Punjab, india CJ9C+XCH, Sarmastpur, Punjab 144025, India Lat 31.419975° Long 75.621186° 29/03/23 03:15 PM GMT +05:30 Long 75.621182° 29/03/23 03:07 PM GMT +05:30 Group-II presentation and Mind Map

ATTESTED Registrar DAV University, Jalandhar

CAY: 2022-23

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CAY: 2022-23

P	oints	earn	ed l	oy (	eact	ı gr	oup:		÷	÷ .
								15		

SI No	Group No.	Criteria	Ratings	Points Acquired	Total Points
   		1	2		
1	1	5	4	9	10
2	11	4	4	8	10
3		5	4	9	10

### Following are the observation related to Mind map activity

Feedback has been taken from through Google form

Positive observations -

- Students liked team work, involvement and polishing of their presentation's skills
- Students learned to cooperate in a team
- Communication skills will be improved
- Students develop problem identification and solving abilities

### Result of Google form feedback from Participants:



Yes

CAY: 2022-23

Did it help you to understand and remember the topic?

Copy

5 responses

### Positive Accepts of this Activity (Collected from Google Feedback Form)

5 responses

1.Boost our confidence.2increased self learning power

Boost confidence and increase communication skills

Make the topic more clear and learned a lot more things

Boost confidence

Build confidence and improve communication skills

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Negative Accepts of this Activity (Collected from Google Feedback Form)

CAY: 2022-23

5 responses

1.Use of technology.2.brainstorming session

Use of projectors and brain storming sessions

1. It should be done in playway manner

2. Various questions should be asked during the activity

Use of ICT should be there

No

#### **Overall Result**

How well was your engagement in Copy the activity?





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CAY: 2022-23

# DAV UNIVERSITY, JALANDHAR

DEPARTMENT OF MATHEMATICS

#### **ACTIVITY REPORT**

Activity Type	Mind Map		
Activity Topic	Hamiltonian and Hamilton Equations of Motion		
Class	M.Sc. (Hons.) (Mathematics)		
Semester	IV		
Academic Year	2023		
Course Name	Classical Mechanics		
Course Code	MTH675		
Date	24-03-2023		
Mapping with Co's	CO3		
Faculty In-charge	Mr. Anmol Bajaj		

#### Context:

In this Mind Map activity, which is a group activity, the students of M.Sc. (Hons.) (Mathematics) Sem-IV were divided into four groups and a topic of "Hamilton Equations of motion" from the syllabus of MTH675 given to them. The activity included student involvement, thinking on problem statement, group discussion among the team and identification of solution. Students sat together and prepared the solutions for the selected problem statement. Once the solution was ready, the students drew the complete details on Board or chart paper and presented in front of the complete class. Other students asked questions and got involved in each other's work. Faculty in-charge also discussed with the students and clarified the queries of the students on the given topics.

#### Activity Description:

The activity involved following steps

Step1 – Selection of team members as per your choice and comfort level

Step 2- Finalization of topic in coordination of team members

Step 3- Discussion on solution finding and functioning of it.

Step 4- Finalization of most suitable solution

Step 5- Drawing the complete flow diagram, solution and advantages, disadvantages on chart/board

Step 6- Presentation of the topic in front of the class

Step 7- Discussion and answering the questions by friends and teacher.

The students were divided into 4 groups namely - Grp I, Grp II and Grp III with 4 members each in Group I, II, III.



CAY: 2022-23

### **Details of Participants**

S.	Group-l	Group-II	Group-III
No.	participants	participants	participants
1	Tania	Shabnam	Amol Guleria
	(12100331)	(12100509)	(12101215)
2	Bhavya	Surbha	Sumedha Sharma
	(12100889)	(12100610)	(12101335)
3	Mansi	SIMRAN	Reena Kumari
	(12100550)	(12100610)	(12100415)
4	Simran	Shubham	Kinjal Vachhar
	(12101205)	(12100783)	(12100566)

CAY: 2022-23

#### Assessment Rubrics -

Criteria		Ratings				Points
	5	4	3	1	1	
1. Understanding the topic	Correct Solution with excellent explanation and correct answers to all logical asked questions during presentation	Correct Solution with good explanation failed to answer one basic question asked during explanation	Correct Solution with limited explanation, failed to answer two OR more than two basic questions asked during explanation	Partially correct solution to the problem with limited explanation	Wrong solution with no/partial explanation	5
2. Quality of mind- map and	5	4	3	2	1	
presentation	Poster/ Map prepared with correct points & neat & complete explanation	Poster prepared with correct points or design & incomplete explanation	Poster prepared with partially correct points or design & incomplete explanation	Poster prepared with Partially correct design and poor explanation	No Poster prepared with incorrect . design and explanation	5
Total				ATTEST	ED	10

Outcomes of the activity:

The basis of the activity is for each participant to become aware of Hamiltonian and Hamilton equation of motion. Further its applications are discussed in case of simple pendulum, spherical pendulum, Atwood Machine ctear

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This activity helped the students in developing various essential qualities among them such as, team work, discussion, involvement, thinking on critical topics and presentation skills. Students were motivated to work well and produce good results. All the team members were involved and participated equally. Student's involvement was good and satisfactory performance was observed during the presentations.



CAY: 2022-23



Group-I presentation and Mind Map

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CAY: 2022-23





Group-III presentation and Mind Map

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CAY: 2022-23

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Yes

Points earned by each group:

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S. No	Group No.	Criteria Ratings		Points Acquired Total Points
		1	2	
1		4	4	9 10
2	- <b>[]</b> -	4	4	8 10
3	[]]	4.5	4	8.5 10

### Critics:

### Following are the observation related to Mind map activity

Feedback has been taken from students orally and through Google form

Positive observations -

- Students liked team work, involvement and polishing of their presentation's skills
- Students learned to cooperate in a team
- Communication skills will be improved.
- Students develop problem identification and solving abilities

#### Result of Google form feedback from Participants:

Did you find it interesting?

8 responses



CAY: 2022-23

List two advantages of the activity.

8 responses

team work and confidence

Increase confidence level and team work

It boots our confidence and helps to understand the topic well.

Good

Yahhoo

Enhance the ability to present effectively

Increase confidence

Increases Confidence, positive Interaction between students
## DAV University, Jalandhar Department: Mathematics

CAY: 2022-23

Write two suggestions for enhancing the activity. 8 responses

no

No suggestion

All members should participate actively in the activity

Good

Huree

None

Postive interaction between students

Positive Interaction between students

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# DAV UNIVERSITY, JALANDHAR

### DEPARTMENT OF MICROBIOLOGY

#### ACTIVITY REPORT

Activity Type	Jigsaw Activity
Activity Topic	Microscopy
Class	B.Sc (Hons.)Microbiology
Semester	II
Academic Year	2022-23
Course Name	Bacteriology
Course Code	MIC 113
Date	27/3/23,4/4/23
Mapping with Co's	C01
<b>Faculty In-charge</b>	Ms Saloni

#### Context:

The Jigsaw method is a form of cooperative learning, in which students are actively involved in the teaching-learning process that improves the long-term retention of acquired knowledge. It exposes the students to different topics and provides them with opportunities for interaction, consultation, cooperation, discussion, and debate with themselves and their teacher so that they can develop their power of thinking and participation.

Each team member reads his or her section/topic. The students in a group then discuss their own sub-topics with each other. The students teach their sub-topics to each other and write their sections together to form a collective topic. Since the only way all the students can learn section/topic, other than their own, is to listen carefully to other teams. The individual team presented their presentations in the class. The students are motivated to support their peers and show interest in one another's work.

#### **Activity Description**

Topic of Jigsaw Activity: Microscopy

1. The students were briefed about the activity and topic was given.

2. Three home groups were made randomly. In 2 home groups, there were 4 students and in remaining third group only three students were there.

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3. The main topic in each home group was divided further into expert groups as follows:

Topic	Home Group						
Microscopy	Group 1 Group 2		Group 3				
	Bright and Microscopy	dark	field	Phase fluoresc	contrast ence Microsc	and opy	Electron Microscopy

4. In each group, subtopics were assigned to each student.

5. The material and necessary resources were provided to students to learn about their topics and become "experts" and were also briefed about the topic prior to activity.

6. On the day of the activity different expert groups sit together and shared their knowledge on their specific sections and then finally students sit according to their home group and discussed their subtopics to their team members.

7. In the end, each expert student in their home groups presented their divided subtopics one by one.

8. At the end of the presentation by each group, the topic was open to questions.

#### Assessment Rubrics -

Criteria	Ratings			
	2	1	2	
1. Introduction on microscopy (Light and electron microscope)	Discussed definition, types and parts of microscope and well explained	Proper definition, discussed types but not fully explained the parts of microscope.		
	5	2.5	5	
2.Principle of light and electron microscope along with its merits and demerits.	Explained the principle along with its merits and demerits.	Discussed the principle but not with merits and demerits.		
	3	1.5 ATTESTE	3	

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3. Applications of light and electron microscope	Discussed all the applications and well explained them.	Discussed but not explained properly.	
	Total		10

## PHOTOS OF THE ACTIVITY

## PHOTOS OF GROUP 1



PHOTOS OF GROUP 2



## PHOTOS OF GROUP 3



## Overall benefits of the jigsaw technique

- Students are directly engaged with the material, instead of having material presented to them, which fosters depth of understanding.
- Students gain practice in self-teaching, which is one of the most valuable skills we can help them learn.
- Students gain practice in peer teaching, which requires them to understand the • material at a deeper level than students typically do when simply asked to produce
- During a jigsaw, students speak the language of the discipline and become more • fluent in the use of discipline-based terminology.
- Each student develops an expertise and has something important to contribute to . the group.
- The group task that follows individual peer teaching promotes discussion, . problem-solving, and learning.
- Jigsaw encourages cooperation and active learning and promotes valuing all • students' contributions.
- Jigsaw can be an efficient cooperative learning strategy. Although the jigsaw assignment takes time in class, the instructor does not need to spend as much time lecturing about the topic. If planned well, the overall time commitment to using the jigsaw technique during class can be comparable to lecturing about a topic.

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Activity Type	Jigsaw activity
Activity Topic	Contribution of scientists to development of Immunology
Class	B.Sc Microbiology and B.Sc Biotechnology
Semester	$6^{th}$ and $2^{nd}$
Academic Year	2022-2023
Course Name	Basics of Immunology
Course Code	MIC 333A
Date	20.03.2023
Mapping with Co's	4
Faculty In-charge	Dr. Amandeep Brar

#### Context:

The Jigsaw method is a form of cooperative learning, in which students are actively involved in the teaching-learning process that improves the long-term retention of acquired knowledge. It exposes the students to different topics and provides them with opportunities for interaction, consultation, cooperation, discussion, and debate with themselves and their teacher so that they can develop their power of thinking and participation. The student is responsible not only for his learning but also for the learning of others. The students work in small groups to help one another learn the topic, carry out group projects, and master different topics by cooperating and consulting with their peers and transferring their knowledge to each other. This is a group activity involving thinking, discussing, teaching and solving.

Each team member reads his or her section/topic. The students in a group then discuss their own sub-topics with each other. The students teach their sub-topics to each other and write their sections together to form a collective topic. Since the only way all the students can learn section/topic, other than their own, is to listen carefully to other teams. The individual team presented their presentations in the class. The students are motivated to support their peers and show interest in one another's work.

#### Activity Description

The basis of the activity is to impart knowledge of contributions of different scientists to the development of immunology. The contribution of scientists is of immense importance to any field and students should know the major events associated with the noble laurates in their field.

- 1. The students according to their roll numbers were grouped together randomly (10 groups).
- 2. 10 scientists were randomly allotted to all the students as per their turn.
- 3. The time was given to students to prepare the subject.

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4. In each group, the three or four students discussed their scientist with each other and finally clubbed the whole material together to form a worksheet of all the components.

6. In the end from each group, every member presented the organelle with its structure and function using chalk an board.

7. At the end of the presentation by each group, the topic was open to questions

#### Practice (Problem Statement, Rubrics)

- 1. The various scientists were introduced in the class with reference to their early life, major findings and category of nobel prize awarded.
- 2. In each group, subtopics were assigned to each student.
- 3. All the students were given a framework for managing their time on the various parts of the jigsaw task.
- 4. The students were provided with key questions required to cover the topic.
- 5. The material and necessary resources were provided to students to learn about their topics and become "experts".
- 6. The students were instructed to prepare their own set of information, discuss the same with their group and to prepare the collective information module of the same in written assignment form.
- 7. The topics were presented in the class step by step.

Que. No.	Question Description	Marks	CO No.	BT Level
1	About the scientist	3	1	3
2	Major findings	5	1	3
3	Nobel prize and historical prospective	2	1	4
	Total	10		

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#### **Rubrics of the Activity**

Rubrics for Jigsaw Activity on Instruments

Criteria	Ratings				Pts
This criterion is linked to a Learning Outcome About the scientist	2 pts Full Marks Possible cause	l pts Only rave	0 pts No Marks No Descriptio	on	3 pts
This criterion is linked to a major findings	5 pts All questions are correct Explained				5 pts
This criterion is linked to a Learning Outcome historical prospective and Nobel prize	2 pts Full Marks Complete lif Way of prese	è history of the organi ntation 1 pt	sm	1 pt. If not explained well	2 pts
		Total I	Points: 10		

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### Evidence of Success / Outcome / Post reflection:

The final presentation of the activity is critical for several reasons. First, the students in the class will become aware about the contributions of different scientists to the field of immunology. They can understand the findings of these scientists in a better way. This will impart them with the knowledge of the historical prospective of Immunology. Importantly, the final discussion allows the teacher to clarify points and address issues or limitations, and in this sense allows for assessment of students' learning, as well as evaluation of the effectiveness of the process itself.

• Timing can be challenging, and there will be a need for keeping students on track as they were given enough time for the same

• The back-up plan for the absentees was to have their activity in the next practical class.

Photos of the activity:

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Overall benefits of the jigsaw technique

- Students are directly engaged with the material, instead of having material presented to them, which fosters depth of understanding.
- Students gain practice in self-teaching, which is one of the most valuable skills we can help them learn.
- Students gain practice in peer teaching, which requires them to understand the material at a deeper level than students typically do when simply asked to produce on an exam.
- During a jigsaw, students speak the language of the discipline and become more fluent in the use of discipline-based terminology.
- Each student develops an expertise and has something important to contribute to the group.

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- The group task that follows individual peer teaching promotes discussion, problem-solving, and learning.
- Jigsaw encourages cooperation and active learning and promotes valuing all students' contributions.
- Jigsaw can be an efficient cooperative learning strategy. Although the jigsaw assignment takes time in class, the instructor does not need to spend as much time lecturing about the topic. If planned well, the overall time commitment to using the jigsaw technique during class can be comparable to lecturing about a topic.

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Activity Type	Jigsaw activity
Activity Topic	Data analysis and research ethics
Class	M.Sc Microbiology
Semester	2 <sup>nd</sup>
Academic Year	2022-2023
Course Name	Research Methodology and Aptitude
Course Code	MIC 540
Date	3 <sup>rd</sup> and 5 <sup>th</sup> April 2023
Mapping with Co's	2
Faculty In-charge	Dr. Amandeep Brar

#### Context:

The Jigsaw method is a form of cooperative learning, in which students are actively involved in the teaching-learning process that improves the long-term retention of acquired knowledge. It exposes the students to different topics and provides them with opportunities for interaction, consultation, cooperation, discussion, and debate with themselves and their teacher so that they can develop their power of thinking and participation. The student is responsible not only for his learning but also for the learning of others. The students work in small groups to help one another learn the topic, carry out group projects, and master different topics by cooperating and consulting with their peers and transferring their knowledge to each other. This is a group activity involving thinking, discussing, teaching and solving.

Each team member reads his or her section/topic. The students in a group then discuss their own sub-topics with each other. The students teach their sub-topics to each other and write their sections together to form a collective topic. Since the only way all the students can learn section/topic, other than their own, is to listen carefully to other teams. The individual team presented their presentations in the class. The students are motivated to support their peers and show interest in one another's work.

#### Activity Description

The basis of the activity is to impart knowledge data analysis and research ethics. To make students understand the concept of data analysis and research ethics, the class of 7 students was divided onto 2 groups.

1. The students according to their roll numbers were grouped together randomly (2 groups).

2. Each student was given these topics

3. The time was given to students to prepare the subject.

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4. In each group, the two students discussed topic with each other and finally clubbed the whole material together to form a worksheet of all the components.

6. In the end from each group, every member presented the organelle with its structure and function using chalk an board.

7. At the end of the presentation by each group, the topic was open to questions

### Practice (Problem Statement, Rubrics)

- 1. The data analysis and research ethics were introduced in the class.
- 2. The topics were distributed in the class and later those who got the same were grouped together randomly.
- 3. In each group, subtopics were assigned to each student.
- 4. All the students were given a framework for managing their time on the various parts of the jigsaw task.
- 5. The students were provided with key questions required to cover the topic.
- 6. The material and necessary resources were provided to students to learn about their topics and become "experts".
- 7. The students were instructed to prepare their own set of information, discuss the same with their group and to prepare the collective information module of the same in written assignment form.
- 8. The topics were presented in the class step by step.

Que. No.	Question Description	Marks	CO No.	BT Level
1	About the topic	2	2	3
2	Concept and clarity	3.5	2	3
3	Knowledge	3.5	2	4
4	Participation	1	2	5
	Total	10		

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## **Rubrics of the Activity**

Rubrics for J	igsaw Activity on Instruments			
Criteria	Ratings	Pts		
This criterion is linked to a Learning Outcome About the topic	Image: Solution of the second state of the second			
This criterion is linked to a concept and clarity	3.5 pts All questions are correct Explained			
This criterion is linked to a Learning Outcome Knowledge and presentation	3.5 pts Full Marks Complete life history of the organism Way of presentation 1 pt	4.5 pts		
	Total Points: 10			

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#### **Evidence of Success / Outcome / Post reflection:**

The final presentation of the activity is critical for a number of reasons. First, the students in the class will become aware about the data analysis and ethics in research. They can understand the value of research ethics and how to analyse the data. This will impart them with the knowledge of the Research Methodology. Importantly, the final discussion allows the teacher to clarify points and address issues or limitations, and in this sense allows for assessment of students' learning, as well as evaluation of the effectiveness of the process itself.

• Timing can be challenging, and there will be a need for keeping students on track as they were given enough time for the same

• The back-up plan for the absentees was to have their activity in the next practical class.

#### Photos of the activity:



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#### Overall benefits of the jigsaw technique

- Students are directly engaged with the material, instead of having material presented to them, which fosters depth of understanding.
- Students gain practice in self-teaching, which is one of the most valuable skills we can help them learn.
- Students gain practice in peer teaching, which requires them to understand the material at a deeper level than students typically do when simply asked to produce on an exam.
- During a jigsaw, students speak the language of the discipline and become more fluent in the use of discipline-based terminology.
- Each student develops an expertise and has something important to contribute to the group.
- The group task that follows individual peer teaching promotes discussion, problem-solving, and learning.
- Jigsaw encourages cooperation and active learning and promotes valuing all students' contributions.

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• Jigsaw can be an efficient cooperative learning strategy. Although the jigsaw assignment takes time in class, the instructor does not need to spend as much time lecturing about the topic. If planned well, the overall time commitment to using the jigsaw technique during class can be comparable to lecturing about a topic.

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Activity Type	Jigsaw activity
Activity Topic	Anti-viral strategies and viral host interation
Class	M.Sc Microbiology and M.Sc Biotechnology
Semester	$4^{th}$ and $2^{nd}$
Academic Year	2022-2023
Course Name	Virology
Course Code	BTY 681
Date	5 <sup>th</sup> and 6 <sup>th</sup> April
Mapping with Co's	4 and 5
Faculty In-charge	Dr. Amandeep Brar

#### **Context:**

The Jigsaw method is a form of cooperative learning, in which students are actively involved in the teaching-learning process that improves the long-term retention of acquired knowledge. It exposes the students to different topics and provides them with opportunities for interaction, consultation, cooperation, discussion, and debate with themselves and their teacher so that they can develop their power of thinking and participation. The student is responsible not only for his learning but also for the learning of others. The students work in small groups to help one another learn the topic, carry out group projects, and master different topics by cooperating and consulting with their peers and transferring their knowledge to each other. This is a group activity involving thinking, discussing, teaching and solving.

Each team member reads his or her section/topic. The students in a group then discuss their own sub-topics with each other. The students teach their sub-topics to each other and write their sections together to form a collective topic. Since the only way all the students can learn section/topic, other than their own, is to listen carefully to other teams. The individual team presented their presentations in the class. The students are motivated to support their peers and show interest in one another's work.

#### **Activity Description**

The basis of the activity is to impart knowledge of viral host interaction and anti-viral strategies to prevent and control viral diseases. To make the students understand the concept of viral host interaction and anti-viral strategies, the class of 51 students were randomly divided into 7 groups.

1. The students according to their roll numbers were grouped together randomly (7 groups).

2. Each student was assigned a subtopic and based on their topic, 8 students were grouped together for each group.

3. The time was given to students to prepare the subject.

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4. In each group, the 8 students discussed their topic with each other and finally clubbed the, whole material together to form a worksheet of all the components.

6. In the end from each group, every member presented the topic using chalk and board.

7. At the end of the presentation by each group, the topic was open to questions

#### Practice (Problem Statement, Rubrics)

- 1. The different antiviral strategies and host-viral interactions were presented in the class.
- 2. The subtopics such as trends in management and control of viral diseases, application of plant and animal viruses, host response to viral diseases etc. were discussed.
- 3. In each group, subtopics were assigned to each student.
- 4. All the students were given a framework for managing their time on the various parts of the jigsaw task.
- 5. The students were provided with key questions required to cover the topic.
- 6. The material and necessary resources were provided to students to learn about their topics and become "experts".
- 7. The students were instructed to prepare their own set of information, discuss the same with their group and to prepare the collective information module of the same in written assignment form.

Que. No.	Question Description	Marks	CO No.	BT Level
1	About the topic	2	2	3
2	Content and concept	-3.5	2	3
3	knowledge	3.5	2	4
4	Historical prospective if any	1	2	5
	Total	10		

8. The topics were presented in the class step by step.

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**Rubrics of the Activity** 

**Rubrics for Jigsaw Activity on Instruments** 

Criteria	Ratings				Pts
This criterion is linked to a Learning Outcome About the topic	is 2 pts a Full Marks 1 pts Possible Only rave e Cause No Description				2 pts
This criterion is linked to a content and concept	3.5 pts All questions are correct Explained			3.5 pts	
This criterion is linked to a Learning Outcome Knowledge with its historical prospective	3.5 pts Full Marks Complete l Way of pres	ife history of th sentation 1 pt	e organism	1 pt. If not explained well	4.5 pts
			Total Points: 10		

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#### **Evidence of Success / Outcome / Post reflection:**

The final presentation of the activity is critical for a number of reasons. First, the students in the class will become aware about the host viral interactions and anti-viral strategies used. They can understand the management and control of viral disease in a better way. This will impart them with the knowledge of the virology. Importantly, the final discussion allows the teacher to clarify points and address issues or limitations, and in this sense allows for assessment of students' learning, as well as evaluation of the effectiveness of the process itself.

• Timing can be challenging, and there will be a need for keeping students on track as they were given enough time for the same

• The back-up plan for the absentees was to have their activity in the next practical class.

#### Photos of the activity:





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Google



#### Overall benefits of the jigsaw technique

- Students are directly engaged with the material, instead of having material presented to them, which fosters depth of understanding.
- Students gain practice in self-teaching, which is one of the most valuable skills we can help them learn.
- Students gain practice in peer teaching, which requires them to understand the material at a deeper level than students typically do when simply asked to produce on an exam.
- During a jigsaw, students speak the language of the discipline and become more fluent in the use of discipline-based terminology.
- Each student develops an expertise and has something important to contribute to the group.

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- The group task that follows individual peer teaching promotes discussion, problem-solving, and learning.
- Jigsaw encourages cooperation and active learning and promotes valuing all students' contributions.
- Jigsaw can be an efficient cooperative learning strategy. Although the jigsaw assignment takes time in class, the instructor does not need to spend as much time lecturing about the topic. If planned well, the overall time commitment to using the jigsaw technique during class can be comparable to lecturing about a topic.

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## DAV UNIVERSITY, JALANDHAR

### DEPARTMENT OF MICROBIOLOGY

### **ACTIVITY REPORT**

Activity Type	Jigsaw Activity
Activity Topic	Cell Organelles
Class	B.Sc (Hons.)Microbiology
Semester	II &VI
Academic Year	2022-23
Course Name	Cell Biology
Course Code	BTY 121
Date	31/3/23 ,6/4/23 ,7/4/23 ,8/4/23
Mapping with Co's	CO 2 & CO 3
Faculty In-charge	Ms Saloni

#### Context:

The Jigsaw method is a form of cooperative learning, in which students are actively involved in the teaching-learning process that improves the long-term retention of acquired knowledge. It exposes the students to different topics and provides them with opportunities for interaction, consultation, cooperation, discussion, and debate with themselves and their teacher so that they can develop their power of thinking and participation.

Each team member reads his or her section/topic. The students in a group then discuss their own sub-topics with each other. The students teach their sub-topics to each other and write their sections together to form a collective topic. Since the only way all the students can learn section/topic, other than their own, is to listen carefully to other teams. The individual team presented their presentations in the class. The students are motivated to support their peers and show interest in one another's work.

#### **Activity Description**

### Topic of Jigsaw Activity: Cell Organelles

1. The students were briefed about the activity and topic was given.

2. Four home groups were made randomly. In 3 home groups, there were 5 students and in the remaining one group there were four students.

3. The main topic in each home group was divided further into expert groups as follows:

Topic		Home	Group	
	Group 1	Group 2	Group 3	Group 4
Cell Organelles	Endoplasmic reticulum	Mitochondria	Ribosomes	Nucleus

4. In each group, subtopics were assigned to each student.

5. The material and necessary resources were provided to students to learn about their topics and become "experts" and were also briefed about the topic prior to activity.

6. On the day of the activity different expert groups sit together and shared their knowledge on their specific sections and then finally students sit according to their home group and discussed their subtopics to their team members.

7. In the end, each expert student in their home groups presented their divided subtopics one by one.

8. At the end of the presentation by each group, the topic was open to questions.

#### Assessment Rubrics -

Criteria	Ra	utings	Points
	2	1	2
1. Introduction of cell organelles	Well explained proper Definition along with history related to cell organelle	Proper definition, only rave discussion on history.	
2. Structure and chemical	3	1.5	3
composition of cell organelles	Explained the structure, types and chemical composition of all organelles with examples.	Explained the structure, types and chemical composition but not with proper Examples	
3. Functions of cell	5	2.5 ATTESI	5

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organelles	Discussed all the functions and well explained.	Discussed the important components but not fully explained the functions	
	Total		10

### PHOTOS OF THE ACTIVITY

## PHOTOS OF GROUP 1



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## PHOTOS OF GROUP 2



## PHOTOS OF GROUP 3



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## PHOTOS OF GROUP 4



## Overall benefits of the jigsaw technique

- Students are directly engaged with the material, instead of having material presented to them, which fosters depth of understanding.
- Students gain practice in self-teaching, which is one of the most valuable skills we can help them learn.
- Students gain practice in peer teaching, which requires them to understand the material at a deeper level than students typically do when simply asked to produce on an exam.
- During a jigsaw, students speak the language of the discipline and become more fluent in the use of discipline-based terminology.
- Each student develops an expertise and has something important to contribute to the group.
- The group task that follows individual peer teaching promotes discussion, problem-solving, and learning.
- Jigsaw encourages cooperation and active learning and promotes valuing all students' contributions.
- Jigsaw can be an efficient cooperative learning strategy. Although the jigsaw assignment takes time in class, the instructor does not need to spend as much time lecturing about the topic. If planned well, the overall time commitment to using the jigsaw technique during class can be comparable to lecturing about a topic.

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# DAV UNIVERSITY, JALANDHAR

### DEPARTMENT OF MICROBIOLOGY

### **ACTIVITY REPORT**

Activity Type	Jigsaw Activity
Activity Topic	Types of Bacterial Recombination
Class	B.Sc (Hons.)Microbiology
Semester	IV
Academic Year	2022-23
Course Name	Fundamentals of Microbial Genetics
Course Code	MIC 225A
Date	28/3/23, 3/4/23, 5/4/23
Mapping with Co's	CO 3
<b>Faculty In-charge</b>	Ms Saloni

#### Context:

The Jigsaw method is a form of cooperative learning, in which students are actively involved in the teaching-learning process that improves the long-term retention of acquired knowledge. It exposes the students to different topics and provides them with opportunities for interaction, consultation, cooperation, discussion, and debate with themselves and their teacher so that they can develop their power of thinking and participation.

Each team member reads his or her section/topic. The students in a group then discuss their own sub-topics with each other. The students teach their sub-topics to each other and write their sections together to form a collective topic. Since the only way all the students can learn section/topic, other than their own, is to listen carefully to other teams. The individual team presented their presentations in the class. The students are motivated to support their peers and show interest in one another's work.

#### Activity Description

Topic of Jigsaw Activity: Types of Bacterial recombination

1. The students were briefed about the activity and topic was given.

2. Three home groups were made randomly. In 2 home groups, there were 4 students and in the remaining third group only three students were there.

3. The main topic in each home group was divided further into expert groups as follows:

Topic		Home Group	
Types of	Group 1	Group 2	Group 3

Bacterial recombination	Bacterial Transformation	Bacterial Conjugation	Bacterial Transduction
			* *

4. In each group, subtopics were assigned to each student.

5. The material and necessary resources were provided to students to learn about their topics and become "experts" and were also briefed about the topic prior to activity.

6. On the day of the activity different expert groups sit together and shared their knowledge on their specific sections and then finally students sit according to their home group and discussed their subtopics to their team members.

7. In the end, each expert student in their home groups presented their divided subtopics one by one.

8. At the end of the presentation by each group, the topic was open to questions.

#### Assessment Rubrics -

Criteria	Ra	tings	Points	
	2	1	2	
1. Introduction on each type of bacterial recombination	Proper definition and well explained history related to transformation, conjugation and transduction.	Proper definition, only rave discussion on history		
3. Mechanism of	5	2.5	5	
transfer of genetic material by transformation, conjugation and transduction	Well explained mechanism with examples.	Discussed the mechanism but not fully explained with examples.	•	
	3	1.5	3	
3. Applications of transformation, conjugation and transduction	Discussed all the applications and well explained.	Discussed but not properly explained the applications.		
	Total		10	

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# PHOTOS OF THE ACTIVITY

PHOTOS OF GROUP 1



## PHOTOS OF GROUP 2



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## PHOTOS OF GROUP 3



# Overall benefits of the jigsaw technique

- Students are directly engaged with the material, instead of having material presented to them, which fosters depth of understanding.
- Students gain practice in self-teaching, which is one of the most valuable skills we
- Students gain practice in peer teaching, which requires them to understand the material at a deeper level than students typically do when simply asked to produce
- During a jigsaw, students speak the language of the discipline and become more fluent in the use of discipline-based terminology.
- Each student develops an expertise and has something important to contribute to
- The group task that follows individual peer teaching promotes discussion, •
- Jigsaw encourages cooperation and active learning and promotes valuing all
- Jigsaw can be an efficient cooperative learning strategy. Although the jigsaw assignment takes time in class, the instructor does not need to spend as much time lecturing about the topic. If planned well, the overall time commitment to using the jigsaw technique during class can be comparable to lecturing about a topic.



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#### DEPARTMENT OF ELECTRICAL ENGINEERING

Activity Type	Mind Map Preparation
Activity Topic	HOUSE WIRIRNG AND INSTALLATIONS
Class	B.Tech CSE B10B
Semester	2
Academic Year	22232
Course Name	BASIC ELECTRICAL ENGINEERING
Course Code	ELE105
Date	4/3/23
Mapping with Co's	4
Faculty In-charge	Simran Kaur

#### **ACTIVITY REPORT**

#### **Context:**

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In this Mind Map activity, which is a group activity, the students of B.Tech first year were divided into seven groups and each group was asked to visualize topic of electrical installations and house wiring from the syllabus of ELE105 and create a mind map on the real-world applications of the selected techniques/topic. The activity included student involvement, thinking on problem statement and team effort. Team formation was done as per the choice of students and comfort zone to get better outcome. The teams were given various floors of academic block and student center to identify various switchgears. One hour was given to the teams to study on the topic individually, discuss in the group and create the mind map representation based on the designated floor . Students sat together and prepared the solutions for the selected problem statement. Once the solution was ready, the students drew the complete details on Board or chart paper and presented in front of the complete class. Other students asked questions and got involved in each other's work. Faculty in-charge also discussed with the students and clarified the queries of the students on the given topics.

#### **Activity Description:**

The activity involved following steps

Step1 - Selection of team members as per your choice and comfort level

Step 2- Finalization of topic in coordination of team members and visiting the designated floors.

Step 3- Discussion on solution finding and functioning of it.

Step 4- Finalization of most suitable solution

Step 5- Drawing the complete flow diagram, circuit diagrams, solution and advantages, disadvantages on chart/board ATTESTED

Step 6- Presentation of the topic in front of the class

Step 7- Discussion and answering the questions by friends and teacher.

The students were divided into 6 groups with 9 to 10 members each Group.

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## **Details of Participants:**

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Group -1	Group -2	Group -3
simran (12200364)	Bhavsagar (206)	Amrit pal (1104)
saksham chadha(891)	Abishek menka (249)	Sagar Chaudhary(1185)
riya (610)	Sagar sidhu (250)	Himanshu vyas(1159)
anushka (884)	Harsh(114)	Priyanshu(974)
tanish(1259)	Abishek Rana (183)	Tarun (919)
raghu(265)	Sachin sharma (332)	Ujjwal (145)
abhishek sandhu(208)	Pardeep singh (446)	Saksham thakur(858)
navjot (739)	Himanshu (698)	Manoj (520)
rupam priya (791)	Lal singh (1230)	Lakshya (518)
arshdeep(759)	Pardeep Kumar (1352)	Ashish(158)
Group -4	Group -5	Group -6
Yashika (425)	Neeraj 12200981	Mehul 12200360
Shivani (256)	Aryan 12200918	Arushi 12200841
Prince (813)	Barman 12200936	Rosy 12200724
Manisha (304)	Pushp 12200336	Komalpreet k. 12200066
Aastha (818)	Sirish 12200945	Pratibha 12200601
Parveen (525)	Rudra 459	Jannat 12200040
Gurleen (526)	Surbhi 395	Komal saini 12200302
Komalpreet Kaur (913)	Kiran 181	Amit 12200324
Himanshi (052)	Kanwar 1457	Anmol 12200587
Gitish(049	Vikarsh 670	Abhinav 12200479

### Assessment Rubrics -

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Criteria			Ra	tings		Points
	5	4	3	1	1	
1. Understanding the topic	Correct Solution with excellent explanation and correct answers to all logical asked questions during presentation	Correct Solution with good explanation failed to answer one basic question asked during explanation	Correct Solution with limited explanation, failed to answer two OR more than two basic questions asked during explanation	Partially correct solution to the problem with limited explanation	Wrong solution with no/partial explanation	5
2. Quality of mind-	5	4	3	2	1	6 TA
map and presentation	Poster/ Map prepared with correct points & neat & complete explanation	Poster prepared with correct points or design & incomplete	Poster prepared with partially correct points or design &	Poster prepared with Partially correct design and poor explanation	No Poster prepared with incorrect design and explanation	5

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explanation	incomplete explanation	35.0
Total		10

#### **Outcomes of the activity:**

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This activity helped the students in developing various essential qualities among them such as, team work, discussion, involvement, thinking on critical topics and presentation skills. Students were motivated to work well and produce good results. All the team members were involved and participated equally. Student's involvement was good and satisfactory performance was observed during the presentations.

The current activity helped the students to understand the real-world applications of the techniques they are learning in this subject, their advantages and disadvantages. The students drew an outline on different applications of the techniques they selected and other students asked relevant questions.

#### Photos of activity:



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#### Points earned by each group:

SI No Group No.		<b>Criteria Ratings</b>		Points Acquired	Total Points
		1	2		I Utal I Utilis
1	1	5	4	9	10
2	2	4	4	8	10
3	3	5	4	9	10
4	4				10
5	5				
6	6				

## **Critics:**

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# Following are the observation related to Mind map activity

Feedback has been taken from students orally and through Google form Positive observations -

- Students liked team work, involvement and polishing of their presentations skills
- Students learned to cooperate in a team
- Communication skills will be improved
- Students develop problem identification and solving abilities

## Result of Google form feedback from Participants:

# HOW WELL YOU PARTICIPATED IN THE ACTIVITY 24 responses

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# WHAT DID YOU ENJOY THE MOST IN ACTIVITY 24 responses



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DO YOU THINK THIS ACITIVITY WAS USEFUL IN ENHANCING YOUR KNOWLEDGE AND INTEREST IN THE SUBJECT 24 responses



HOW WELL YOU PARTICIPATED IN THE ACTIVITY 24 responses





#### WHAT DID YOU ENJOY THE MOST IN ACTIVITY 24 responses

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MAP PREPARATION
TEAM WORK
PRESENTATION
WORKING IN GROUP

DO YOU THINK THIS ACITIVITY WAS USEFUL IN ENHANCING YOUR KNOWLEDGE AND INTEREST IN THE SUBJECT 24 responses



STRONGLY AGREE
AGREE
DISAGREE
STRONGLY DISAGREE

# THESE ACTIVITIES SHOULD BE PERFORMED FREQUENCTLY IN EVERY SUBJECT 24 responses





YOU WERE ABLE TO CORELATE THE TOPIC IN DAILY LIFE PROBLEMS 24 responses





RATE YOU EXPEREINCE IN THE ACTIVITY 24 responses

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<b>EXCELLENT</b>	
Good	
Fair	
Poor	

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## DEPARTMENT OF ELECTRICAL ENGINEERING

Activity Type	MIND MAP ACTIVITY
Activity Topic	
Class	B.TECH
Semester	4
Academic Year	22232
Course Name	Electromagnetic Field Theory
Course Code	ELE 204
Date	Applications of Electromagnetic fileds
Mapping with Co's	2
Faculty In-charge	SIMRAN KAUR

#### **ACTIVITY REPORT**

#### Context:

In this Mind Map activity, which is a group activity, the students of B.Tech 4<sup>th</sup> sem were divided into three groups and each group was asked to select of a topic of their choice from the syllabus of ele204 and create a mind map on the real-world applications of the selected techniques/topic. The activity included student involvement, thinking on problem statement, group discussion among the team and identification of solution. Team formation was done as per the choice of students and comfort zone to get better outcome. The students themselves selected the topics and discussed the same with the faculty in-charge, after which the topics were finalized. One hour was given to the students to study on the topic individually, discuss in the group and create the mind map. Students sat together and prepared the solutions for the selected problem statement. Once the solution was ready, the students drew the complete details on Board or chart paper and presented in front of the complete class. Other students asked questions and got involved in each other's work. Faculty in-charge also discussed with the students and clarified the queries of the students on the given topics.

#### Activity Description:

The activity involved following steps

Step1 - Selection of team members as per your choice and comfort level

Step 2- Finalization of topic in coordination of team members

Step 3- Discussion on solution finding and functioning of it.

Step 4- Finalization of most suitable solution

Step 5- Drawing the complete flow diagram, solution and advantages, disadvantages on chart/board

Step 6- Presentation of the topic in front of the class

Step 7- Discussion and answering the questions by friends and teacher.

The students were divided into 3 groups namely - Grp I and Grp II with 4 members each.

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## **Details of Participants:**

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S. No.	Group-I participants	Group-II participants
1	Aryan Thakur	X7: 1 1
2	Dinak	Visnal
3	Dipan	Jatin
3	Dharampreet	Himesh
4	Shubham	Kulvir

#### Assessment Rubrics -

Cinterna			R	atings		Points
	5	4	3	1	1	1 Onto
1. Understanding the topic	Correct Solution with excellent explanation and correct answers to all logical asked questions during presentation	Correct Solution with good explanation failed to answer one basic question asked during explanation	Correct Solution with limited explanation, failed to answer two OR more than two basic questions asked during explanation	Partially correct solution to the problem with limited explanation	Wrong solution with no/partial explanation	5
2. Quality of mind- map and	5	4	3	2	1	
presentation	Poster/ Map prepared with correct points & neat & complete explanation	Poster prepared with correct points or design & incomplete explanation	Poster prepared with partially correct points or design & incomplete explanation	Poster prepared with Partially correct design and poor explanation	No Poster prepared with incorrect design and explanation	5
		Тс	otal			10

#### Outcomes of the activity:

This activity helped the students in developing various essential qualities among them such as, team work, discussion, involvement, thinking on critical topics and presentation skills. Students were motivated to work well and produce good results. All the team members were involved and participated equally. Student's involvement was good and satisfactory performance was observed during the presentations.

The current activity helped the students to understand the real-world applications of the techniques they are learning in this subject, their advantages and disadvantages. The students drew an outline on different applications of the techniques they selected and other students asked relevant questions.

#### Photos of activity:

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#### Points earned by each group:

Sl No	Group No.	Criteria	a Ratings	Points Acquired	<b>Total Points</b>
		1	2		
1	I	5	4	9	10
2	П	4	4	8	10
3	III	5	4	9	10

## **Critics:**

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#### Following are the observation related to Mind map activity

Feedback has been taken from students orally and through Google form Positive observations -

- Students liked team work, involvement and polishing of their presentations skills
- Students learned to cooperate in a team
- Communication skills will be improved
- Students develop problem identification and solving abilities

#### **Result of Google form feedback from Participants:**

YOU WERE ABLE TO CORELATE THE TOPIC IN DAILY LIFE PROBLEMS 3 responses





#### HOW WELL YOU PARTICIPATED IN THE ACTIVITY 3 responses





#### WHAT DID YOU ENJOY THE MOST IN ACTIVITY 3 responses

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DO YOU THINK THIS ACITIVITY WAS USEFUL IN ENHANCING YOUR KNOWLEDGE AND INTEREST IN THE SUBJECT 3 responses





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THESE ACTIVITIES SHOULD BE PERFORMED FREQUENCTLY IN EVERY SUBJECT 3 responses



## DEPARTMENT OF ELECTRICAL ENGNIEERING

Activity Type	Mind Map	
Activity Topic	Generation of High Voltages	-
Class	B.Tech	
Semester	8	
Academic Year	22232	
Course Name	High Voltage Engineering	
Course Code	ELE307A	-
Date	3/4/23	-
Mapping with Co's	3	-
Faculty In-charge	Simran Kaur	-

#### **ACTIVITY REPORT**

#### Context:

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In this Mind Map activity, which is a group activity, the students of B.Tech 8<sup>th</sup> sem were asked to select of a topic of their choice from the syllabus of ELE 307 and create a mind map on the real-world applications of the selected techniques/topic. The activity included student involvement, thinking on problem statement, group discussion among the team and identification of solution. Team formation was done as per the choice of students and comfort zone to get better outcome. The students themselves selected the topics and discussed the same with the faculty in-charge, after which the topics were finalized. One hour was given to the students to study on the topic individually, discuss in the group and create the mind map. Students sat together and prepared the solutions for the selected problem statement. Once the solution was ready, the students drew the complete details on Board or chart paper and presented in front of the complete class. Other students asked questions and got involved in each other's work. Faculty in-charge also discussed with the students and clarified the queries of the students on the given topics.

#### Activity Description:

The activity involved following steps

Step1 - Selection of team members as per your choice and comfort level

Step 2- Finalization of topic in coordination of team members

- Step 3- Discussion on solution finding and functioning of it.
- Step 4- Finalization of most suitable solution

Step 5- Drawing the complete flow diagram, solution and advantages, disadvantages on chart/board

Step 6- Presentation of the topic in front of the class

Step 7- Discussion and answering the questions by friends and teacher.

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#### **Details of Participants:**

S. No.	Group-I participants	
1	Gurmukh	
2	Maheshwar	

#### Assessment Rubrics -

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Criteria			R	atings		Point
	5	4	3	1	1	
1. Understanding the topic	Correct Solution with excellent explanation and correct answers to all logical asked questions during presentation	Correct Solution with good explanation failed to answer one basic question asked during explanation	Correct Solution with limited explanation, failed to answer two OR more than two basic questions asked during explanation	Partially correct solution to the problem with limited explanation	Wrong solution with no/partial explanation	5
2. Quality of mind-	5	4	3	2	1	
presentation	Poster/ Map prepared with correct points & neat & complete explanation	Poster prepared with correct points or design & incomplete explanation	Poster prepared with partially correct points or design & incomplete explanation	Poster prepared with Partially correct design and poor explanation	No Poster prepared with incorrect design and explanation	5
		T	otal			10

#### Outcomes of the activity:

This activity helped the students in developing various essential qualities among them such as, team work, discussion, involvement, thinking on critical topics and presentation skills. Students were motivated to work well and produce good results. All the team members were involved and participated equally. Student's involvement was good and satisfactory performance was observed during the presentations.

The current activity helped the students to understand the real-world applications of the techniques they are learning in this subject, their advantages and disadvantages. The students drew an outline on different applications of the techniques they selected and other students asked relevant questions.

#### Photos of activity:

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## Points earned by each group:

SI No	Group No.	Criteria	Ratings	Points Acquired	Total Points
		1	2		
1	I	5	4	9	10

## **Critics:**

## Following are the observation related to Mind map activity

Feedback has been taken from students orally and through Google form Positive observations –

- Students liked team work, involvement and polishing of their presentations skills
- Students learned to cooperate in a team
- Communication skills will be improved
- Students develop problem identification and solving abilities

## Result of Google form feedback from Participants:

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# HOW WELL YOU PARTICIPATED IN THE ACTIVITY 2 responses



# WHAT DID YOU ENJOY THE MOST IN ACTIVITY 2 responses

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THESE ACTIVITIES SHOULD BE PERFORMED FREQUENCTLY IN EVERY SUBJECT 2 responses





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DO YOU THINK THIS ACITIVITY WAS USEFUL IN ENHANCING YOUR KNOWLEDGE AND INTEREST IN THE SUBJECT 2 responses

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# RATE YOU EXPEREINCE IN THE ACTIVITY 2 responses

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#### **DEPARTMENT OF <Electrical Engineering>**

Activity Type	Mind Map Activity
Activity Topic	Combined Operation of Power Plants
Class	B.Tech (ELE)
Semester	8th
Academic Year	2022 - 23 🎹
Course Name	Power Plant Engineering
Course Code	ELE407
Date	27.3.23
Mapping with Co's	C05
Faculty In-charge	Seema Sharma

#### **ACTIVITY REPORT**

#### Context:

In this Mind Map activity, which is a group activity, the students of B.Tech (Electrical)Sem-8<sup>th</sup> worked in a single group. There were total 3 students in the class, so only one group was made with 2 students in1group (one student is on OJT) and the group was given the above topic from the syllabus of ELE407 and create a mind map on the real-world applications of the selected techniques/topic. The activity included student involvement, thinking on problem statement, group discussion among the team and identification of solution. The students discussed the topics and discussed the same with the faculty in-charge. One hour was given to the students to study on the topic individually, discuss in the group and create the mind map. Students sat together and prepared the solutions for the selected problem statement. Once the solution was ready, the students drew the complete details on chart paper and presented. Faculty in-charge also discussed with the students and clarified the queries of the students on the given topics.

#### **Activity Description:**

The activity involved following steps

Step1 - Selection of team members as per your choice and comfort level

Step 2- Finalization of topic in coordination of team members

Step 3- Discussion on solution finding and functioning of it.

Step 4- Finalization of most suitable solution

Step 5- Drawing the complete flow diagram, solution and advantages, disadvantages on chart/board

Step 6- Presentation of the topic in front of the class

Step 7- Discussion and answering the questions by friends and teacher.

The students formed 1 group namely - Grp I

#### **Details of Participants:**

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S.No	Roll No	University Regd.	Names	
1.	G114A01	11900023	Gurmukh	
2.	G114A02	11900024	Maheshwar	

#### Assessment Rubrics -

Criteria			R	atings		Points
	5	4	3	1	1	
1. Understanding the topic	Correct Solution with excellent explanation and correct answers to all logical asked questions during presentation	Correct Solution with good explanation failed to answer one basic question asked during explanation	Correct Solution with limited explanation, failed to answer two OR more than two basic questions asked during explanation	Partially correct solution to the problem with limited explanation	Wrong solution with no/partial explanation	5
2. Quality of mind-	5	4	3	2	1	
presentation	Poster/ Map prepared with correct points & neat & complete explanation	Poster prepared with correct points or design & incomplete explanation	Poster prepared with partially correct points or design & incomplete explanation	Poster prepared with Partially correct design and poor explanation	No Poster prepared with incorrect design and explanation	5
		Т	otal			10

#### **Outcomes of the activity:**

This activity helped the students in developing various essential qualities among them such as, team work, discussion, involvement, thinking on critical topics and presentation skills. Students were motivated to work well and produce good results. All the team members were involved and participated equally. Student's involvement was good and satisfactory performance was observed during the presentations.

The current activity helped the students to understand the real-world applications of the techniques they are learning in this subject, their advantages and disadvantages. The students drew an outline on different applications of the techniques they selected and other students asked relevant questions.

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#### Photos of activity:





#### Students having discussion in groups

#### Group-I presentation and Mind Map



Points earned by each group:

Sl No	Group No.	o. Criteria Ratings Points Acqui		Criteria Ratings		Points Acquired	<b>Total Points</b>
		1	2				
1	I	4	4	8	10		

## **Critics:**

1

#### Following are the observation related to Mind map activity

Feedback has been taken from students orally and through Google form Positive observations –

- Students liked team work, involvement and polishing of their presentations skills
- Students learned to cooperate in a team
- Communication skills will be improved
- Students develop problem identification and solving abilities

#### Result of Google form feedback from Participants:







#### Rate your overall Experience in the activity

Сору

2 responses

1



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#### **DEPARTMENT OF <Electrical Engineering>**

#### **ACTIVITY REPORT**

Activity Type	Mind Map Activity
Activity Topic	Bio Telemetery and Telemedicine
Class	B.Tech (ELE)
Semester	6th
Academic Year	2022-23-2
Course Name	Biomedical Engineering
Course Code	ELE333
Date	29.3.23
Mapping with Co's	CO5
Faculty In-charge	Seema Sharma

#### Context:

In this Mind Map activity, which is a group activity, the students of B.Tech (Electrical)Sem-VI were divided into three groups . There were total 8 students in the class. Three groups were students groups and 1 group with 2 in two made with 3 and each group was given the above topic from the syllabus of ELE333 and create a mind map on the real-world applications of the selected techniques/topic. The activity included student involvement, thinking on problem statement, group discussion among the team and identification of solution. Team formation was done as per the choice of students and comfort zone to get better outcome. The students discussed the topics and discussed the same with the faculty in-charge. One hour was given to the students to study on the topic individually, discuss in the group and create the mind map. Students sat together and prepared the solutions for the selected problem statement. Once the solution was ready, the students drew the complete details on chart paper and presented in front of the whole class. Other students asked questions and got involved in each other's work. Faculty in-charge also discussed with the students and clarified the queries of the students on the given topics.

#### **Activity Description:**

The activity involved following steps

Step1 – Selection of team members as per your choice and comfort level

Step 2- Finalization of topic in coordination of team members

Step 3- Discussion on solution finding and functioning of it.

Step 4- Finalization of most suitable solution

Step 5- Drawing the complete flow diagram, solution and advantages, disadvantages on chart/board

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Step 6- Presentation of the topic in front of the class

Step 7- Discussion and answering the questions by friends and teacher.

The students were divided into 3 groups namely – Grp I, Grp II and Grp III with 3 members each Group II & III and 2 members in Group I.

#### **Details of Participants:**

S. No.	Group-I participants	Group-II participants	Group-III participants
1	Diksha	Abhinandan	Sandeep
2	Simran Kaur	Chandani	Pritush
3	RaviBir		Gaurav

#### <u>Assessment Rubrics –</u>

6

Criteria			Ra	atings		Point
	5	4	3	1	1	
1. Understanding the topic	Correct Solution with excellent explanation and correct answers to all logical asked questions during presentation	Correct Solution with good explanation failed to answer one basic question asked during explanation	Correct Solution with limited explanation, failed to answer two OR more than two basic questions asked during explanation	Partially correct solution to the problem with limited explanation	Wrong solution with no/partial explanation	5
2. Quality of mind-	5	4	3	2	1	
presentation	Poster/ Map prepared with correct points & neat & complete explanation	Poster prepared with correct points or design & incomplete explanation	Poster prepared with partially correct points or design & incomplete explanation	Poster prepared with Partially correct design and poor explanation	No Poster prepared with incorrect design and explanation	5
		<u>г</u>	otal			10

#### **Outcomes of the activity:**

This activity helped the students in developing various essential qualities among them such as, team work, discussion, involvement, thinking on critical topics and presentation skills. Students were motivated to work well and produce good results. All the team members were involved and participated equally. Student's involvement was good and satisfactory performance was observed during the presentations.

The current activity helped the students to understand the real-world applications of the techniques they are learning in this subject, their advantages and disadvantages. The students drew an outline on different applications of the techniques they selected and other students asked relevant questions.

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#### **DEPARTMENT OF <Electrical Engineering>**

Activity Type	Mind Map Activity
Activity Topic	Performance of transmission lines
Class	B.Tech (ELE)
Semester	4th
Academic Year	2022-23 -2
Course Name	Power System—I(Transmission & Distribution)
Course Code	ELE217A
Date	27.3.23
Mapping with Co's	CO5
Faculty In-charge	Seema Sharma

#### **ACTIVITY REPORT**

#### Context:

In this Mind Map activity, which is a group activity, the students of B.Tech (Electrical) Sem-IV were divided into three groups . There were total 10 students in the class. Three students were absent, so groups were made with 3 students in one group and 2 groups with 2 students and each group was given the above topic from the syllabus of ELE217A and create a mind map on the real-world applications of the selected techniques/topic. The activity included student involvement, thinking on problem statement, group discussion among the team and identification of solution. Team formation was done as per the choice of students and comfort zone to get better outcome. The students discussed the topics and discussed the same with the faculty in-charge. One hour was given to the students to study on the topic individually, discuss in the group and create the mind map. Students sat together and prepared the solutions for the selected problem statement. Once the solution was ready, the students drew the complete details on Board or chart paper and presented in front of the whole class. Other students asked questions and got involved in each other's work. Faculty in-charge also discussed with the students and clarified the queries of the students on the given topics.

#### **Activity Description:**

The activity involved following steps

Step1 - Selection of team members as per your choice and comfort level

- Step 2- Finalization of topic in coordination of team members
- Step 3- Discussion on solution finding and functioning of it.
- Step 4- Finalization of most suitable solution
- Step 5- Drawing the complete flow diagram, solution and advantages, disadvantages on chart/board
- Step 6- Presentation of the topic in front of the class

Step 7- Discussion and answering the questions by friends and teacher.

The students were divided into 3 groups namely – Grp I, Grp II and Grp III, with 3 members in group III and Group I & II with 2 members each

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#### **Photos of activity:**







Students having discussion in groups



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#### Group-I presentation and Mind Map



#### Group-II presentation and Mind Map



Group-III presentation and Mind Map



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#### Points earned by each group:

SI No	Group No. Cr		a Ratings	Points Acquired	<b>Total Points</b>
		1	2		
1	I	5	4	9	10
2	II	. 5	3	7	10
3	III	4	4	8	10

## **Critics:**

#### Following are the observation related to Mind map activity

Feedback has been taken from students orally and through Google form Positive observations –

- Students liked team work, involvement and polishing of their presentations skills sity, Jalandhar
- Students learned to cooperate in a team
- Communication skills will be improved
- Students develop problem identification and solving abilities

#### Result of Google form feedback from Participants:







esponses	
Nothing	
Nothing	
Team work	

Give two suggestions on scope of improvement in these activities 7 responses

Confidence and skills Nothing needs to be improved Nothing needed to be improved No need to improve No need improve Skills and confidence

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#### DEPARTMENT OF <Electrical Engineering>

Activity Type	Mind Map Activity
Activity Topic	Methods of Direct Energy Conversion
Class	B.Tech (ELE)
Semester	4th
Academic Year	2022-23 - 2
Course Name	Renewable Energy Sources and Management
Course Code	ELE214
Date	17.3.23
Mapping with Co's	CO5
Faculty In-charge	Seema Sharma

#### **ACTIVITY REPORT**

#### Context:

In this Mind Map activity, which is a group activity, the students of B.Tech (Electrical) Sem-IV were divided into three groups . There were total 10 students in the class. Two students were absent, so groups were made with 3 students in two groups and 1 group with 2 students and each group was given the above topic from the syllabus of ELE214 and create a mind map on the real-world applications of the selected techniques/topic. The activity included student involvement, thinking on problem statement, group discussion among the team and identification of solution. Team formation was done as per the choice of students and comfort zone to get better outcome. The students discussed the topics and discussed the same with the faculty in-charge. One hour was given to the students to study on the topic individually, discuss in the group and create the mind map. Students sat together and prepared the solutions for the selected problem statement. Once the solution was ready, the students drew the complete details on Board or chart paper and presented in front of the whole class. Other students asked questions and got involved in each other's work. Faculty in-charge also discussed with the students and clarified the queries of the students on the given topics.

#### Activity Description:

The activity involved following steps

Step1 - Selection of team members as per your choice and comfort level

- Step 2- Finalization of topic in coordination of team members
- Step 3- Discussion on solution finding and functioning of it.
- Step 4- Finalization of most suitable solution
- Step 5- Drawing the complete flow diagram, solution and advantages, disadvantages on chart/board
- Step 6- Presentation of the topic in front of the class

Step 7- Discussion and answering the questions by friends and teacher.

The students were divided into 3 groups namely – Grp I, Grp II and Grp III with 3 members in group III and Group I & II with 2 members each

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#### **Details of Participants:**

S. No.	Group-I participants	Group-II participants	Group-III participants
1	Kulvir	Dharampreet	Jatin
2	Vishal	Himesh	Shubham
3	Deepak	Aryan	

#### Assessment Rubrics -

Criteria			Ra	atings		Points
	5	4	3	1	1	
1. Understanding the topic	Correct Solution with excellent explanation and correct answers to all logical asked questions during presentation	Correct Solution with good explanation failed to answer one basic question asked during explanation	Correct Solution with limited explanation, failed to answer two OR more than two basic questions asked during explanation	Partially correct solution to the problem with limited explanation	Wrong solution with no/partial explanation	5
2. Quality of mind-	5	4	3	2	1	
map and presentation	Poster/ Map prepared with correct points & neat & complete explanation	Poster prepared with correct points or design & incomplete explanation	Poster prepared with partially correct points or design & incomplete explanation	Poster prepared with Partially correct design and poor explanation	No Poster prepared with incorrect design and explanation	5
-			otal			10

#### Outcomes of the activity:

This activity helped the students in developing various essential qualities among them such as, team work, discussion, involvement, thinking on critical topics and presentation skills. Students were motivated to work well and produce good results. All the team members were involved and participated equally. Student's involvement was good and satisfactory performance was observed during the presentations.

The current activity helped the students to understand the real-world applications of the techniques they are learning in this subject, their advantages and disadvantages. The students drew an outline on different applications of the techniques they selected and other students asked relevant questions.

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#### **Photos of activity:**







#### Group-I presentation and Mind Map





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#### Group-II presentation and Mind Map



Group-III presentation and Mind Map



#### Points earned by each group:

SI No	Group No.	Criteria Ratings		Points Acquired	<b>Total Points</b>
		ĺ	2		
1	I	5	4	9	10
2	II	5	3	8	10
3	III	. 4	3	7	10

## **Critics:**

#### Following are the observation related to Mind map activity

Feedback has been taken from students orally and through Google form Positive observations –

- Students liked team work, involvement and polishing of their presentations skills
- Students learned to cooperate in a team
- Communication skills will be improved
- Students develop problem identification and solving abilities

#### **Result of Google form feedback from Participants:**

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## Some thing you could improve on?

6 responses

 Learning

 Communication

 Presentation skills

 Communication skills

 Skills

 Communication skill

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