



GOVERNMENT DEGREE COLLEGE (MEN)

ACCREDITED BY NAAC WITH B++ (CGPA 2.90)

Srikakulam - 532001, Andhra Pradesh, India

ph. 28942 222983 e-mail: info@gdcmen.ac.in website: https://www.gdcmen.ac.in



## Department of Physics

# Brainstorming Session

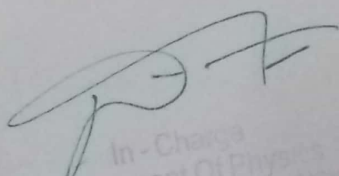
Date and Time	08.12.2023
Class	III B.Sc (MPCS)
No.of students participated	27
Name of the Activity	Brainstorming Session
Title	When you sit at a campfire,how do you get heat?
Objective	<p>The objective of a brainstorming session focused on the topic of "When you sit at a campfire,how do you get heat?" could be to explore, discuss, and generate ideas and hypotheses related to this question.</p> <p>It promotes Critical Thinking,Engage Curiosity,Highlight Scientific Method,and Promote Further Study.</p>
Teacher Activity in this session	<ol style="list-style-type: none"><li>1. Asking Questions during this session like below<ol style="list-style-type: none"><li>a. In how many ways does heat transfer?</li><li>b. What is Conduction of heat ,explain its characteristics?</li><li>c. What is the convection of heat,explain its characteristics?</li><li>d. What is the radiation of heat,explain its characteristics?</li><li>e. Is air a thermal conductor or insulator?</li><li>f. Conclude the topic in brief?</li></ol></li><li>2. Encourage students to share their thoughts and ideas without filtering them.</li></ol>

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	<p>3. Encourage Divergent Thinking Prompt students to think outside the box and consider unconventional solutions or perspectives. Encourage them to push the boundaries of their creativity.</p> <p>4. Emphasise Learning: Remind participants that the goal of the session is not necessarily to arrive at a definitive answer but to promote curiosity, critical thinking, and a deeper understanding of scientific principles.</p>
Student Activity in this Session	<p>1. Group Sharing :</p> <p>Students in the groups can discuss and refine their hypotheses based on the input from their peers.</p> <p>2. Debate and Discussion:</p> <p>Organise a debate where students can argue for or against the idea that air forms a shadow. Assign some students to argue in favour of the hypothesis and others against it. This encourages critical thinking and helps students consider different perspectives.</p> <p>3. Record Ideas:</p> <p>As ideas are generated, write them down on a whitepaper . Ensure that all ideas are captured without judgement or evaluation at this stage.</p>
Documental evidences	<p><a href="https://drive.google.com/file/d/1MQhI0rBWN7iyRH-wE6io_SA_W0J24QLA_/view?usp=drive_link">https://drive.google.com/file/d/1MQhI0rBWN7iyRH-wE6io_SA_W0J24QLA_/view?usp=drive_link</a></p>
Name of the Lecturers who planned & conducted the activity	<p>Sri.M.V.Satyanarayana Sri R.Ravi kumar Sri B.Mohana Rao Dr.GVS Jayapala Rao</p>

  
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Date : 8 - 12 - 2023

Class : III MPES

Day : Friday.

Semester : IV

### Brain Storming Session

: 12:40 PM to  
1:20 PM

TOPIC : When you sit at Camp fire, how you get heat?

Ans . Heat is felt by body when we sit at camp fire due to "thermal radiation".

→ In how many ways you transfer heat?

Ans Heat is transferred in three ways.

→ Conduction

→ Convection

→ Radiation

→ What is conduction of heat ; explain it?

Ans Transfer of <sup>(heat)</sup> energy with direct contact is known for conduction.

Since it occurs through the collision of atoms of (or) molecules which are neighbored with each other.

→ Generally these occur mostly in liquid solids rather than gases.

→ What is convection of heat ; explain it?

Ans Transfer of heat by a molecular motion of fluid [liquid (or) gas]. It is occurred with direct contact of fluid.



→ What is radiation of heat; explain it?

Ans The process where transfer of heat occurs in the form of waves; that may be absorbed, reflected or transmitted.

In general this process of transfer heat helps in heating the surface of the earth.

→ Is air a thermal conductor or Insulator.

Ans Air is an Insulator.

As it is a gaseous substance. Due to the distance between the molecules it prevents transfer of heat. So we can define it as a poor conductor of heat.

<u>Name</u>	<u>Roll NO.</u>	<u>Group</u>	<u>Signature</u>
K. Mohan	2122001050019	MPCS	K. Mohan
P. Nileep	2122001050035	MPCS	P. Nileep
K. Maheswari	2122001050017	MPCS	K. Maheswari
Ch. Sri Rajya Lakshmi	2122001050008	MPCS	Ch. Sri Rajya Lakshmi
Paidi Devika	2122001050031	MPCS	Devika Paidi

CONCLUSION

Date : 8-12-2023

Group : III MPCC

Day : Friday.

Semester: V.

Time: 12:40 PM to 1:20 PM.

→ when we sit near a camp fire, why heat is transferred only through radiation.  
why not conduction and convection.

For Radiation we require no medium so we get heat through it.

For Conduction we require medium for heat transfer.

Here we have Air as medium, but air is an insulator so no transfer through conduction.

For Convection we require fluid or gas, but here when the camp fire sets up.

The air above it gets heated up, which gives rise in density.

So that the ~~air~~ above it hotter not the neighbouring one.

Hence we can't feel it by standing beside.

These are the reasons for it.

## CONCLUSION.

This Brainstorming session helped in boosting up the memory.

It includes involvement and interaction with co-team members.

Interested in joining for the further session.  
Appreciation for the faculty [Sir] for conducting this sort of activities.

Name	Roll NO	Group
P. Devika	2122001050031	II BSEM PCS
Ch. Sri Rajya Lakshmi	2122001050008	II BSC MPCs
K. Maheshwari	2122001050014	II BSC MPCs
P. Dileep	2122001050035	II BSC MPCs
K. Mohan	2122001050019	II BSC MPCs



Time: 12:40 pm → 1:20 pm.

Class: III MPCs

Date: 8-12-2023 (Friday)

Semester: V

### Brain Storming Session

Topic:- When you sit at campfire, How you get heat?

1. In how many you transfer heat?
2. What is conduction of heat and explain?
3. What is Convection of heat and explain?
4. What is radiation of heat and explain?

→ When sit by campfire, most of the heat are receiving from the fire does not come from hot air. It comes from thermal radiation. Generally there are three ways that heat can travel.

1. 3 Types transfer heat.

- \* Conduction
- \* Convection
- \* Radiation.

2. Heat flows from hotter body colder body is called Conduction. It is also called thermal equilibrium.

3. Convection is defined by transfer of heat between two bodies by movement of gas or fluid.

4. Transfer of heat energy from a hot body to cold body, directly, without heating the medium. between two bodies.

5. Does air is thermal conductor or Insulator?

Air is a good insulator, Because air is a mixer of gases. It resists heat transfer to some degree.

6. Why the heat does not transfer conductor?

~~the heat~~

Air is a Poor thermal Conductor, you would not receive much heat from the Campfire via Conduction unless you stick your hand in the fire.

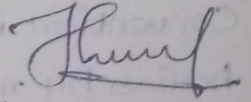
Conclusion:-

→ We know about different types of heat transformations.

→ We know about Conduction  
Convection  
Radiation.

→ We newly know about air is insulator.

Signatures:-

<u>Names</u>	<u>H.t NO</u>	<u>Groups</u>	<u>Signatures</u>
S. Pavan Kumar	2122001050037	I MPCs	S. Pavan Kumar.
Jt purushottam	2122001050015	II MPCs	
K. Lakshmi parasanna	2122001050021	III MPCs	K. parasanna.



Date :- 8/12/2023

Day :- Friday

Class :- III<sup>rd</sup> MPC8

Semester :- V

## Brain storming session

Topic :- When you sit at campfire, how you get heat?

A) Radiation

1) In how many ways you transfer heat?

A) They are three ways 1) Conduction

2) Radiation

3) Convection

2) What is Conduction of heat and explain?

A) Conduction means they pass energy from one particle to another particle being in direct contact with each other. Ex:- Ironing of clothes

3) What is Convection of heat and explain?

A) The movement of fluid molecules from higher temperature region to lower temperature.

Ex:- Boiling of water.

4) What is Radiation of heat and explain?

A) The heating of the earth by the sun is an example of transfer of energy by Radiation.

5) Does Air is a thermal conductor (or) insulator?

A) Air is a Good insulator, because it is a gaseous substance, therefore its spread-out molecular configuration resist heat transfer to some degree.

## Conclusion :-

- 1) This session makes fun with friends.
- 2) This session can accomplish the perspective (or) way of thinking of one person to other persons.
- 3) It will helps to testing our brain.
- 4) It is very joyful to search in Google and find answers.

P. Manasa	2122001050033
P. Neeraja	2122001050036
J. Sravani	2122001050016
N. Mamatha	2122001050026
B. Haritha	2122001050006

Manasa  
P. Neeraja  
J. Sravani  
N. Mamatha  
B. Haritha

08.12.2023

class: III MPC

Friday

Semester: V

Brainstorming session

Time: 12:40 pm to 1:20 pm

Topic: When you sit at campfire, how you get heat?

Q. Ans:- Radiation and ~~Air acts as thermal~~ conductor.

1. In how many you transfer heat?

Ans: Three processes :- 1) conduction 2) convection 3) Radiation

2. What is conduction of heat and explain?

Ans: The transfer of energy through physical contact between matters. ex:- ice cube when we hold in our hand.

3. What is convection of heat and explain?

Ans: The transfer of heat through fluids causing by molecular motion. ex:- Boiling of water.

4. What is radiation of heat and explain?

Ans: Energy that transmit in the form of rays or waves of particles. ex:- sunlight.

5. Does Air is a thermal conductor or insulator?

Ans: ~~thermal conductor~~, insulator

Q.

Conclusion:-

\* Due to this session we know the facts about transfer of heat.

\* It is helpful to know the conduction, convection, radiation

\* We know the use of Air in transfer of heat etc.



<u>Name</u>	<u>H.T. No</u>	<u>Group</u>	<u>Signature</u>
B. Sirisha	2122001050003	MPCS	<del>21</del> B. Sirisha
S. Dhilleswari	2122001050038	MPCS	S. Dhilleswari
N. Sandhyarani	2122001050028	mPCS	N. Sandhyarani
K. Ganesh	2122001050020	MPCS	K. Ganesh
G. Sudeep Kumar	2122001050012	MPCS	G. Sudeep ;
N. Neelachalam	2122001050027	MPCS	<u>N. Neela</u>

Time: 12:40 to 1:20

08/12/2023

Friday

class: III MPC5

semester: V

## Brain storming session

Topic:

When you sit at campfire, how you get heat?

A) due to radiation we get heat.

because we are not contact with campfire. we sit far from campfire. transfer heat from highly temperature campfire to low temperature of our bodies.

Q) ~~what is~~

In how many you transfer heat?

A) 3 ways, conduction, convection, radiation.

Q) what is conduction of heat and explain.

A) transfer of heat from high temperature to low temperature to get equilibrium state when two bodies are contact with each other.

Q) what is convection of heat & explain.

A) transfer of heat b/w two bodies by currents of moving fluid to get equilibrium.

Q) what is radiation of heat & explain.

A) transfer of heat from high temperature bodies to low temperature bodies.

when bodies are not ~~thermo~~ physically  
contact with each other.

- 5) Is air is thermal conductor or insulator  
A) Conductor.

Conclusion ① It is very useful.

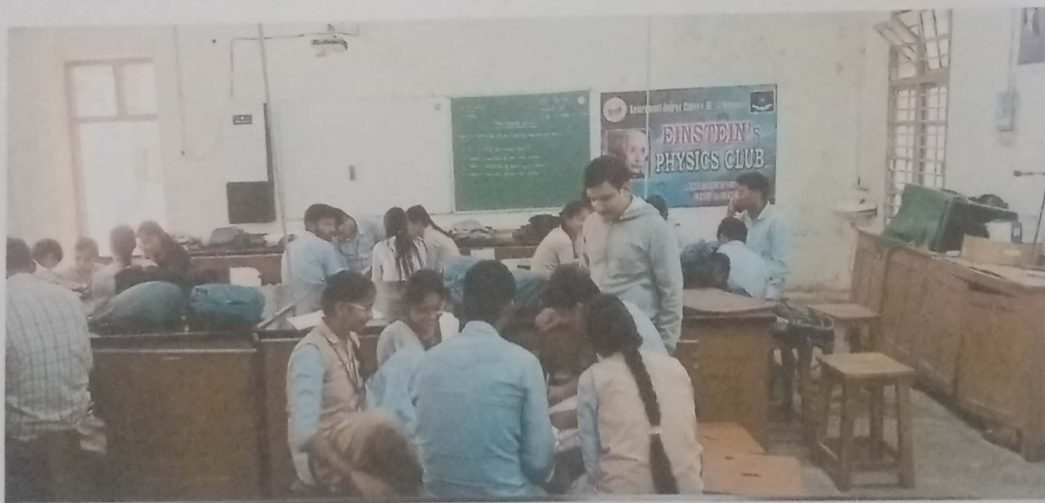
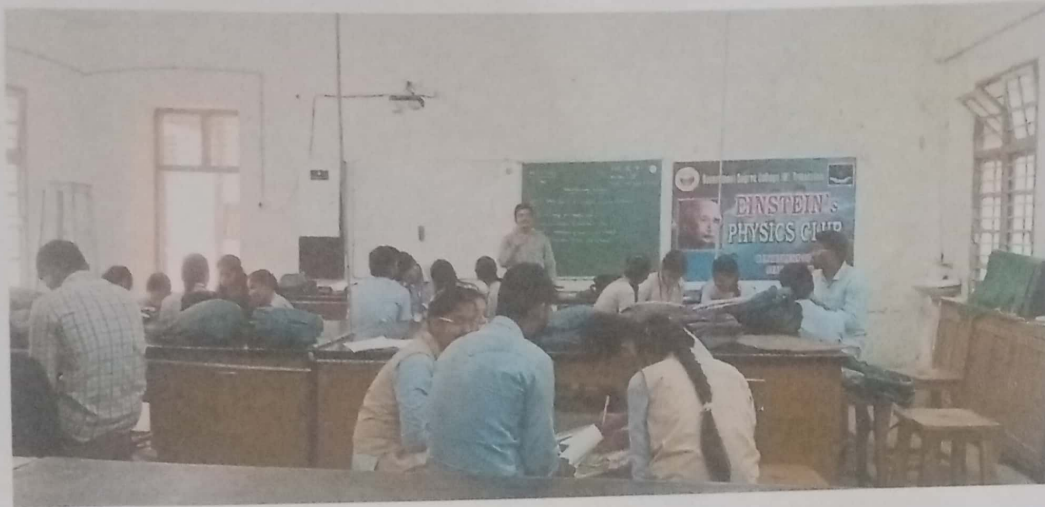
② we know different types  
of heat transformations.

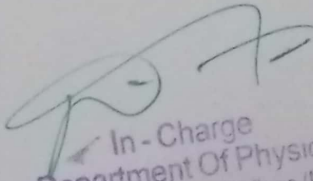
③ we know air is  
insulator.

① B. Thansi	2122001050004	III mpes	B. Thansi
② B. Bhumiika	2122001050005	III mpes.	B. Bhumiika
③ k. Aditya	2122001050018	III <sup>rd</sup> mpes	k. Aditya
④ T. Yathreen Yathreen	2122001050044	III <sup>rd</sup> mpes	T. Yathreen
⑤ G. Rameswar	2122001050011	III mpes	G. Rameswar



Photo Gallery :



  
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