TELANGANA TRIBAL WELFARE RESIDENTIAL DEGREE COLLEGE FOR WOMEN, THANGALAPALLY, RAJANNA SIRICILLA

ACTIVITIES REPORT
DEPARTMENT OF MICROBIOLOGY

AY-2022-23

Science knows no country, because knowledge belongs to humanity, and is the torch which illuminates the world.

- Louis Pasteur

ACTION PLAN FOR THE YEAR 2022-23			
Month	**Tentative**	**Proposed Program**	**Proposed Activities**

	Date		
August	8/16/2022	Class work	Classes started for III&IV SEM
	8/24/2022	Slip test	
	8/30/2022	Quiz competition	Question asked on microbiology related
September	9/16/2022	World ozone day	Rally led by all life sciences students
	9/24/2022	Blood grouping camp	Camp conducted for NCC students
October	10/17/2022	Internal exams	
November	11/12/2022	World pneumonia day	Student seminar conducted
	11/19/2022		
	11/26/2022	Slip test	
December	12/1/2022	World AIDS day	Pledge took by the students
	12/11/2022	Space on wheels programme	
January	1/3/2023	Class work	IV&VI SEMESTER Started
	1/3/2023	Student activity	E.coli microorganisms grown on media
	1/12/2023	Slip test	
February	2/28/2023	Science day	Poster presentation by the students
March	03/062023	Orientation class	Class took for students on future aspects
	3/16/2023	Vaccination day	Poster presentation done by MBZC lll year students
	3/17/2023	Blood grouping camp	Camp Organised for NCC students
	3/21/2023	Class work	Class work started for II SEM Students
	3/24/2023	World tuberculosis	Rally given by all life sciences students
April	4/5/2023	Guest lecture by fac	Guest lecture given on Future aspects of microbiology
	4/27/2023	Internals	

WORLD OZONE DAY CELEBRATIONS
16-09-2022

ABOUT THE PROGRAM:

Department of Microbiology in association with the Department of Botany and Zoology conducted World ozone day celebrations by conducting awareness program followed by Rally in the village.

OBJECTIVES:

- To educate students about the ozone layer and its significance.

- To bring awareness in the society in using of various electric devices releasing CFC.

- To promote actions that individuals and communities can take to protect the ozone layer.

PROGRAM OVERVIEW:

1. Awareness Class: Awareness class conducted on the Ozone layer depletion and concerned effects on the environment, Role of Microorganisms in safe guarding ozone layer.

2. Rally: A rally was conducted with more than 200 students in the village by giving slogans on awareness of the environmental issues.

BLOOD GROUPING CAMP 24-09-2022

INTRODUCTION:

The Department of microbiology Organized Blood grouping camp for NCC students. As a part of their academics the 2 nd year students have learned the blood grouping and they also practiced in the lab.

The knowledge they gained in the class and lab are implemented on the ground level.

OBJECTIVES:

- To provide the practical experience to the theory and lab knowledge the students have gained.
- To provide hands on experience to the students.
- To prepare the students for the job market.

OVERVIEW OF THE PROGRAM:

- Students have arranged all the required material and the equipment for the blood grouping
- Faculty and NCC students came one by one and took the blood grouping test.

WROLD CANCER DAY ON 07-11-2022

ABOUT THE PROGRAM:

The department of Microbiology in colloboration with the Department of Botany and Zoology had conducted the awareness program on the occasion of World cancer day on 7 th November in the college premises.

In this program the faculty has given valuable information about the Cancer, causes, Treatment and preventive measures.

Apart from the faculty the students also

OBJECTIVES:

- To give information on Cancer, it's caauses, treatment and preventive measures.
- To provide awareness on early detecting of Cancer.

PROGRAM OUTLINE:

As a part of this program all three years students have performed a skit in association with the Theatre Club of the college.

Students also presented posters showing the details of Cancer related information and also some students gave speech along with the faculty.


REDMI NOTE 7S


GPS Map Camera
Thangallapalli, Telangana, India
survey no, 79, Lakshmipuram Rd, behind Govt hospital, Thangallapalli, Telangana 505405, India
Lat 18.368391°
Long 78.82067°
07/11/23 04:31 PM GMT +05:30
Google

WORLD PNEUMONIA DAY 12-11-2022

ABOUT THE PROGRAMME:

On the occasion of World Pneumonia day, the department of Microbiology in collaboration with the Department of Zoology conducted awareness program to all the students of the college and also A rally was conducted in the village to give awareness in the Pneumonia disease, causative agents and preventive meassures.

OBJECTIVES:

- To give awareness about pneumonia disease, causative agent and preventive measures.
- To give awareness in the village about the disease.

PROGRAM OVERVIEW:

On the occasion of World Pneumonia day, an awareness program was arranged to all the students.

- In this program we have explained the students about pneumonia disease, causative agent, Vaccination, and the preventive measures
- Later A rally was taken by all the students in coordination with NSS and given slogans and charts through the entire rally.


TTWRDC (W), SIRICILLA
NATIONAL SERVICE SCHEME
(SATAVAHANA UNIVERSITY)
NOT ME- BUT YOU
REDMI NOTE 7S
AI DUAL CAMERA

FIELD VISIT TO BREAD INDUSTRY, KARIMNAGAR ON 15-11-2022

ABOUT THE PROGRAM:

The department of Microbiology took all the three years Microbiology students to the field visit to bread industry, Karimnagar for more understanding the subject what they are learning.

OBJECTIVES:

- To make the students understand the process of Bread making.
- To make the students understand the industrial operations and large scale production.
- To involve the students in the live conditions of Industrial microbiology.

VISIT DETAILS:

- Students were taken to the Mayur Bread Company located in the Karimnagar.
- Through the entire visit students have participated very interestingly.
- Students have interacted with the workers and the Microbiologists working in the industry asked questions.
- Students also observed the quality control measures they are practicing.
- Students have noted all the activities.

FEEDBACK:

- The tour is very helpful to us to understand the industrial production of Bread and we also came to know about the other processes like storing,packing, and marketing.

-Guguloth Lavanya.


MAYUR
MAYUR
Premium
Milk Bread

WORLD AIDS DAY ON 01-12-2022

ABOUT THE PROGRAM:

On the occasion of World AIDS Day on December 12th, The Department of Microbiology in association with the Department of Microbiology has conducted awareness program to the students and also participated in the rally in the village to create awareness in the village people.

OBJECTIVES:

- To give information on AIDS, it's causes, treatment and preventive measures.
- To provide awareness on early detecting of AIDS
- To provide awareness on Blood transfusion and sexula transmission.

PROGRAM OVERVIEW:

- Awareness Class: Awareness class conducted on the AIDS disease, causative agent, symptoms, treatment and preventive measures
- Rally: A rally was conducted with more than 200 students in the village by giving slogans on awareness of AIDS.

STUDENT SEMINAR 03-01-2023 ON THE TOPIC **MALARIA PARASITE**

ABOUT THE PROGRAM:

As a part of encouraging the students involvement in the class room student seminar was conducted by the department of Microbiology on the Topic MALARIA PARASITE which is a part of the Medical Microbiology and Immunology and invited Interested students to participate. The student K.Akhila from MZC 2nd Year came forward and gave the seminar.

OBJECTIVES:

- To involve the students in the subject.
- To implement experiential learning.
- To encourage the teaching skills in the students.

PROGRAM OUTLINE:

- The student prepared the material for the seminar with the help of the department and also by referring the books.
- On the Day of seminar the student gave the lecture by using PPT as well as black board.

TEACHING-LEARNING METHOD INVOLVED:

- **Experiential Learning-** By performing the test for number of times students experienced the topic by practicing it and understood very clearly.
- **Collaborative Learning-** As the Students performed the tests in a collective manner they have learned by discussing with each other.

TEACHING-LEARNING PRACTICES:

- **Active Learning-**Students involved in the program by making their own notes, PPTs and through Q &A session they have participated in the session.

Q & A SESSION:

- Students asked their doubts and the speaker cleared doubts and the faculty also helped to clear the student's doubts.

ICT-PPT CLASS 25-01-2023

ABOUT THE PROGRAM

On January 25, 2023, the Department of Microbiology conducted ICT – PPT class on Tuberculosis for 2nd year microbiology students. As the Tuberculosis subject was more difficult and needed visuals for understanding the topic to enable the students to understand the topic, the PPT class was taken to the students.

OBJECTIVES

- To educate students about the species of Mycobacterium

- To utilize ICT tools to make the learning process more engaging and effective.

- To highlight the staining procedure of tubercle bacilli, the symptoms of the disease, clinical significance, epidemiology, and prevention.

PROGRAM OUTLINE:

- The class prepared by the faculty U. Swathi of the Department of Microbiology. A detailed PowerPoint presentation was created, incorporating images, charts, and diagrams of the Tubercle bacteria.

The class includes

- Introduction to the bacteria
- Classification
- Epidemiology
- Symtoms
- Pathogenisis
- Treatment
- Ppeventive Measures
- At the end of the class students asked the doubts and were clarified.

TEACHING-LEARNING METHOD INVOLVED:

- **Blended Learning-** By performing the test for number of times students experienced the topic by practicing it and understood very clearly.
- **Collaborative Learning-** As the Students performed the tests in a collective manner they have learned by discussing with each other.

SCIENCE DAY CELEBRATIONS 28-02-2023

ABOUT THE PROGRAM:

On the occasion of Science Day celebrations on February 28th, 2023, the department of Microbiology in collaboration with the Department of Botany and Zoologyy has conducted the Quiz program on various science topics to the students.

OBJECTIVES:

- To encourage the students through Quiz activities
- To improve the knowledge on current science knowledge.
- To involve the students in the subject in more inclusive way.

PROGRAM OUTLINE:

- All the science students have gathered in the conference hall.
- All the faculty and librarian have prepared the quiz questions on prior day to the quiz.
- Faculty have divided the students in to 05 groups and given the names.
- Einstein
- CV Raman
- HG Khorana
- Venkataraman
- Vikram Sarabhai
- And the quiz questions have asked in the 05 rounds.
- At last tie up was happened with the two groups and for the two groups another round was conducted and finally the Einstein group was won the quiz.


2023.02.28 11:33

PG ORIENTATION CLASS 06-03-2023

Speaker: Dr. Kalajyothi, HOD Microbiology TTWRDC(W), Nizamabad

INTRODUCTION:

The Department of Microbiology conducted a career orientation program by inviting Dr. Kalajyothi, a distinguished Senior faculty, HOD of Microbiology, TTWRDC(W), Nizamabad.

OBJECTIVES:

- To give insights on EEE opportunities.
- To provide information on Higher education institutions which are providing M.Sc Microbiology and applied courses
- To give awareness on the employment opportunities in different industries and other companies.
- To give insights about the entrepreneurship opportunities in various fields.

OVERVIEW OF THE PROGRAM:

The Speaker started the session with her own career journey which motivated students and followed by the detailed overview of the each and every aspect about career aspects of a Microbiologist.

KEY TOPICS COVERED:

EDUCATION:

- Information on Higher education institutions which are providing M.Sc Microbiology and applied courses within the state and also in the Country.
- Tips to crack IIT JAM Biotechnology exams

EMPLOYMENT:

- Different job opportunities in different industries and salary package.
- Required skills for the job in Microbiology field.
- Required additional certificate courses that add value to the resume.

ENTRPRENEURSHIP:

- Details about the small scale businesses that can be run by Microbiologists.
- Skills to be gain to become entrepreneur.
- Opportunities to run Diagnostic centre or to establish Food and beverages companies.

FUTURE TRENDS IN MICROBIOLOGY:

- Insights on the emerging trends in Microbiology such as Metagenomics, proteomics, and Omics.

Q&A SESSION:

In the end of the program students asked their doubts regarding the programs, seat matrix, scholarships, and fee structures for which the speaker gave clarificactions.

CONCLUSION:

The career orientation program by Dr. Kalajyothi was highly informative and inspiring for the microbiology students. It provided a clear roadmap of the diverse career opportunities available and the skills needed to excel in them. Students left the session with a greater understanding of their potential career paths and a renewed motivation to pursue their professional goals.

FEEDBACK:

- Very Inspiring session and informative session. – B.Vennela
- I got much information on Colleges and universities providing PG Microbiology. – Anusha.

POSTER PRESENTATION PROGRAM ON THE VACCINATION DAY ON 16-03-2023

INTRODUCTION:

In appreciation of the frontline healthcare workers who are vaccinating every child in the country, the Government of India declared 16 March as national Vaccination day. On the occasion of vaccination day department of Microbiology conducted awareness program to the students about the Vaccine discovery, Vaccine preparation and different types of vaccines.

OBJECTIVES:

- To provide deep information on Vaccines discovery and history.
- To give information on the role of Microorganisms in vaccine preparation.
- To increase awareness among students about the significance of National Vaccination Day.
- To provide information about the benefits and safety of vaccines.
- To motivate students to actively participate in vaccination drives.

ACTIVITIES CONDUCTED:

- Poster Exhibition: A poster exhibition was organized showcasing the importance of vaccines in avoiding the diseases, Histroy of Vaccines and role of microbes.
- Orientation session.

TEACHING-LEARNING METHOD INVOLVED:

- **Active Learning-** By presenting the posters as a group students are actively involving in the presentations.
- **Collaborative Learning-** As the Students in a collective manner they have learned by discussing with each other they are learning in a collaborative manner.

BLOOD GROUPING CAMP- 17-03-2023

INTRODUCTION:

The Department of microbiology Organized Blood grouping camp for college students as well as for NCC students. As a part of their academics the 3 rd year students have learned the blood grouping and they also practiced in the lab.

The knowledge they gained in the class and lab are implemented on the ground level.

OBJECTIVES:

- To provide the practical experience to the theory and lab knowledge the students have gained.
- To provide hands on experience to the students.
- To prepare the students for the job market.

OVERVIEW OF THE PROGRAM:

- Students have arranged all the required material and the equipment for the blood grouping
- Students, faculty and NCC students came one by one and took the blood grouping test.

FEED BACK:

- Because of this program we got more practical knowledge on the blood grouping.

  -Miss. Kallem Akhila
- I was very happy to perform the tests for more than 100 students.

  -Miss. Kuleru Deepthi

TEACHING-LEARNING METHOD INVOLVED:

- **Experiential Learning-** By performing the test for number of times students experienced the topic by practicing it and understood very clearly.
- **Collaborative Learning-** As the Students performed the tests in a collective manner they have learned by discussing with each other.


WELFARE RESIDENTIAL
FOR WOMEN - SIRCILLA

WORLD TUBERCULOSIS DAY 24-03-2023

ABOUT THE PROGRAMME:

On the occasion of World Tuberculosis Day, the department of Microbiology in collaboration with the Department of Zoology conducted awareness program to all the students of the college.

OBJECTIVES:

- To give awareness about tuberculosis disease, causative agent and preventive measures.

PROGRAM OVERVIEW:

On the occasion of World Tuberculosis Day, an awareness program was arranged to all the students.

- In this program we have explained the students about Tuberculosis disease, causative agent, Vaccination, and the preventive measures.
- Using posters and charts we have given awareness to the faculty and students.

STUDENT SEMINAR ON 27-03-2023 ON THE TOPIC: PLATING TECHNIQUES

ABOUT THE PROGRAM:

As a part of encouraging the students involvement in the class room student seminar was conducted by the department of Microbiology on the Topic PLATING METHODS which is a part of the General Microbiology and invited interested students to participate. The student Miss. G.Pavani from MZC 1st Year came forward and gave the seminar.

OBJECTIVES:

- To involve the students in the subject.
- To implement experiential learning.
- To encourage the teaching skills in the students.

PROGRAM OUTLINE:

- The student prepared the material for the seminar with the help of the department and also by referring the books.
- On the Day of seminar the student gave the lecture by using PPT as well as black board.
- The students explained the following topics.
- Pour plate technique
- Streak plate technique
- Spread plate technique.

TEACHING-LEARNING PRACTICES:

- **Active Learning-**Students involved in the program by making their own notes, PPTs and through Q &A session they have participated in the session.

Q & A SESSION:

- Students asked their doubts and the speaker cleared doubts and the faculty also helped to clear the student's doubts.

RANGOLI COMPETITION ON VIRUSES ON 05-04-2023

ABOUT THE PROGRAM:

As a part of implementing creative methods to enrich the teaching learning process the Department of Microbiology is collaboration with the Department of Botany, Zoology, took the initiative of introducing the Rangoli competitions on Viruses.

OBJECTIVES:

- Imbibing creativity in the microbiology.
- Creating enthusiasm in the subject
- Involving students in the subject.

PROGRAM OVERVIEW:

- Students of Life sciences came with different colours and started the rangoli with their choice virus diagrams.
- Students have participated very actively in the entire program and enjoyed a lot.
- For coloring the viruses students dive deep in to the subject and they have drawn every minute detail.

TEACHING-LEARNING METHOD INVOLVED:

- **Active Learning-** Students engaged in the program through the entire program.
- **Collaborative Learning-** As the Students participated in the groups they have learned by discussing with each other.

FEEDBACK:

- The program was very excited and helped us to know more about the details of virus that we chosen.

  -A.Navya 3rd MZC
- The program was very nice and as a group we have participated very enthusiastically.

  -M.Anjali and Group Life Science 1st Year.


Viral envelope
capsid
Glyco
Reverse
RNA
HIV


Glycoprotein
DNA
Shell
membrane
Viral
capsid
THE STRUCTURE OF THE

THANK YOU

TELANGANA TRIBAL WELFARE RESIDENTIAL DEGREE COLLEGE FOR WOMEN, THANGALAPALLY, RAJANNA SIRICILLA

ACTIVITIES REPORT
DEPARTMENT OF MICROBIOLOGY

AY-2021-22

Science knows no country, because knowledge belongs to humanity, and is the torch which illuminates the world.

- Louis Pasteur

Teaching the topic: DNA Damage Using ICT- PPT On 20-07-2021

Introduction:

As a part of teaching in the online mode on the lockdown period, the department of Microbiology has conducted the online class through ZOOM using PPT. As the topic is very importamt and student has to understand in depth, it was decided to teach using PPT.

Objective:

- To make the students understand the topic more in depth.
- To show the 3D images and more visuals on the topic.
- To provide more information on the topic

Key Topics Covered:

1. Introduction to DNA Damage

- Definition and significance

- Overview of the structure of DNA

2. Types of DNA Damage

- Single-strand breaks

- Double-strand breaks

- Base modifications

- Cross-linking

3. Causes of DNA Damage

- Endogenous sources

  - Reactive oxygen species (ROS)

  - Replication errors

- Exogenous sources
  - UV radiation
  - Chemical mutagens
  - Ionizing radiation

4. Mechanisms of DNA Repair
- Direct repair
  - Photoreactivation
  - Alkyltransferases
- Excision repair
  - Base excision repair (BER)
  - Nucleotide excision repair (NER)
- Mismatch repair (MMR)
- Double-strand break repair
  - Homologous recombination (HR)
  - Non-homologous end joining (NHEJ)

5. Consequences of DNA Damage
- Mutations
- Cancer
- Aging
- Genetic diseases

6. Detection and Measurement of DNA Damage
- Comet assay

- TUNEL assay

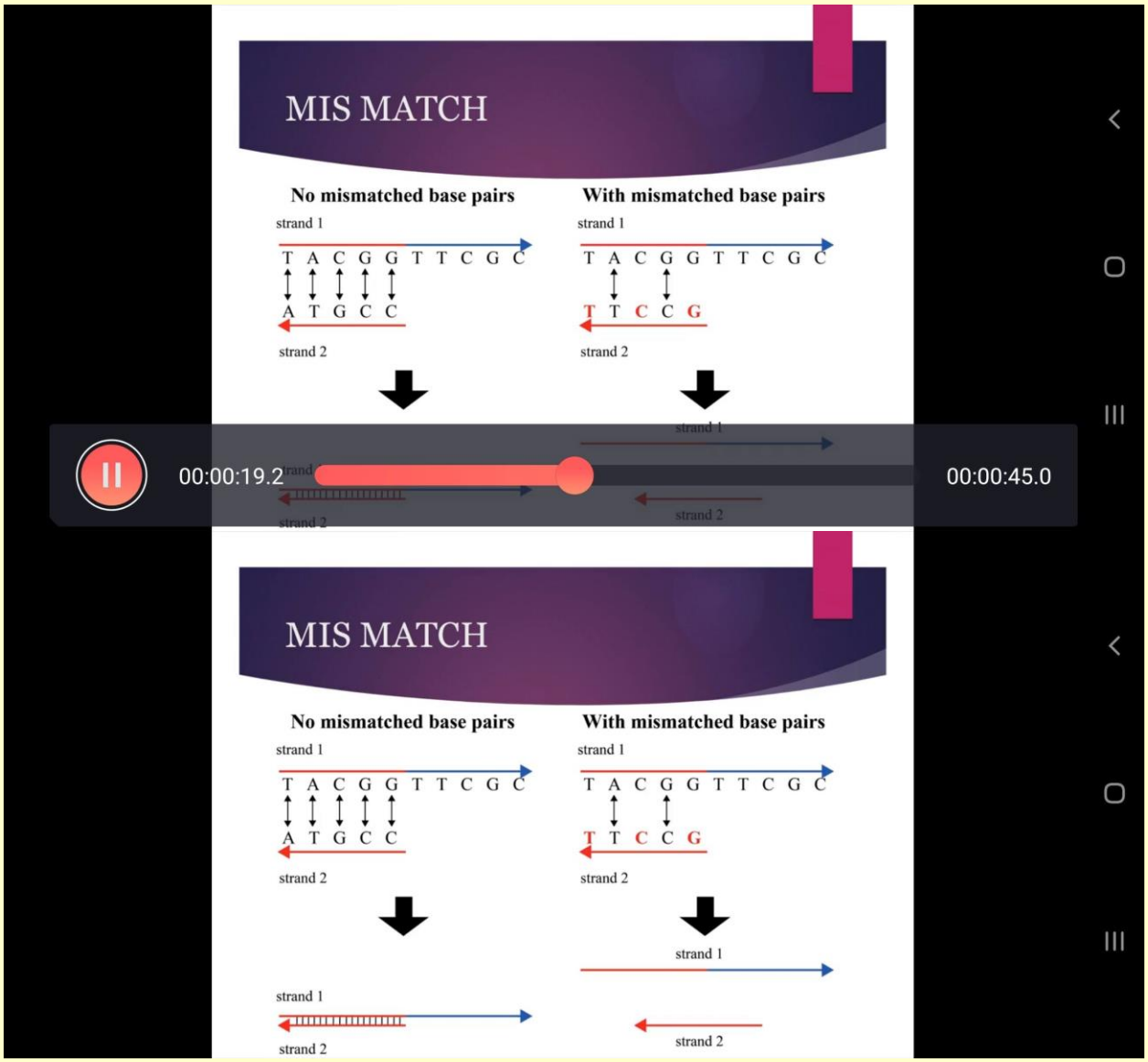
- γ-H2AX foci formation

7. Research and Clinical Implications

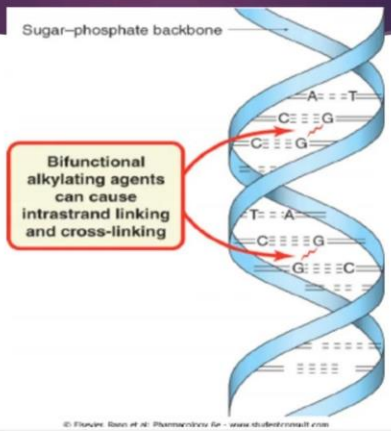
- DNA damage in cancer therapy

- Role of DNA repair mechanisms in aging and longevity

- Genetic engineering and CRISPR-Cas9 technology



CROSS LINKS

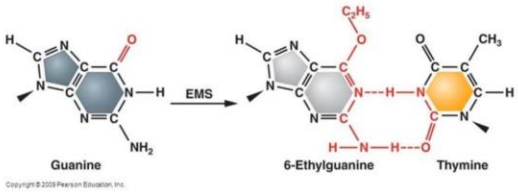


DAMAGE DUE TO ALKYLATING AGENTS

15.3 Induced Mutations Arise from DNA Damage Caused by Chemicals and Radiation

Alkylating Agents:

- Mustard gas is an example of an alkylating agent that adds alkyl groups to the purine or pyrimidine of the nucleotide.

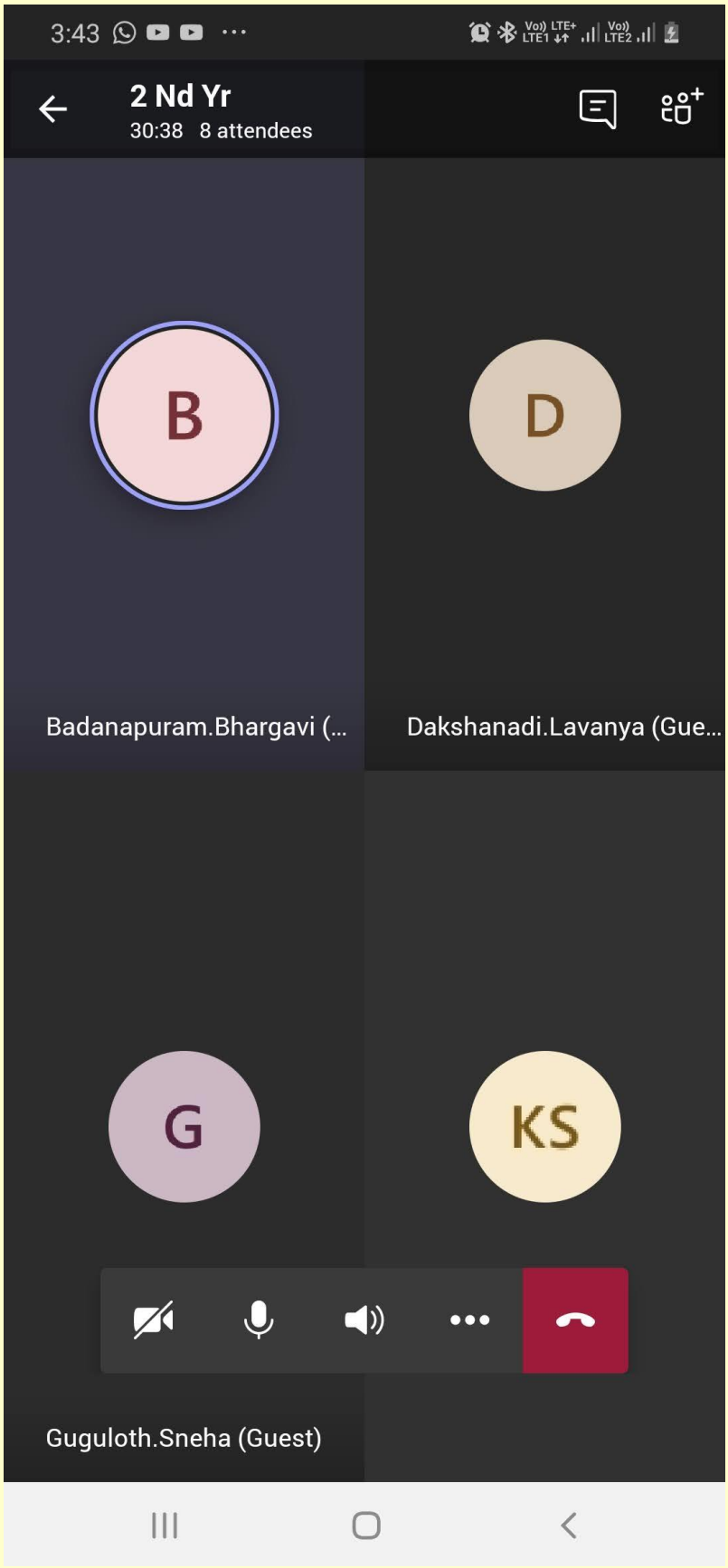


WHAT IS DNA DAMAGE ???

- THE CHEMICAL ALTERATIONS OCCURRED ON DNA IS CALLED DNA DAMAGE.
- DNA DAMAGE MAY BE CAUSED NATURALLY DURING CELL DIVISION OR CAUSED INTENTIONALLY USING MUTAGENS.
- MOST DAMAGES ARE CORRECTED BY THE CELL ITSELF.
- RARE CASES UN TREATED DAMAGE BECOME AS THE MUTATION.

DNA DAMAGE

K.RAJANIN DL IN MICROBIOLOGY
TTWRDC(W)
SIRICILLA


3:43
2 Nd Yr
30:38 8 attendees
B
D
Badanapuram.Bhargavi (...
Dakshanadi.Lavanya (Gue...
G
KS
Guguloth.Sneha (Guest)

WORLD OZONE DAY CELEBRATIONS 16-09-2021

ABOUT THE PROGRAM:

Department of Microbiology in association with the Department of Botany and Zoology conducted World ozone day celebrations by conducting awareness program followed by Rally in the village.

OBJECTIVES:

- To educate students about the ozone layer and its significance.

- To bring awareness in the society in using of various electric devices releasing CFC.

- To promote actions that individuals and communities can take to protect the ozone layer.

PROGRAM OVERVIEW:

1. Awareness Class: Awareness class conducted on the Ozone layer depletion and concerned effects on the environment, Role of Microorganisms in safe guarding ozone layer.

2. Rally: A rally was conducted with more than 200 students in the village by giving slogans on awareness of the environmental issues.

STUDENT SEMINAR 24-09-2021 ON THE TOPIC **BIOREACTOR**

ABOUT THE PROGRAM:

As a part of encouraging the students involvement in the class room, student seminar was conducted by the department of Microbiology on the Topic BIOEREACTOR which is a part of the Industrial Microbiology and invited Interested students to participate. The student Bhargavi from MZC 3rd Year came forward and gave the seminar.

OBJECTIVES:

- To involve the students in the subject.
- To implement experiential learning.
- To encourage the teaching skills in the students.

PROGRAM OUTLINE:

- The student prepared the material for the seminar with the help of the department and also by referring the books.
- On the Day of seminar the student gave the lecture by using black board.
- The topics covered in the seminar
- Design of a fermentor/ Bioreactor.
- Parts of Bioreactor
- Working Procedure
- Maintaining aeration and agitation
- Precautionary Measures to be taken while using Bioreactors.

TEACHING-LEARNING PRACTICES:

- **Active Learning-**Students involved in the program by making their own notes, PPTs and through Q &A session they have participated in the session.

Q & A SESSION:

- Students asked their doubts and the speaker cleared doubts and the faculty also helped to clear the student's doubts.

QUIZ COMPETITION ON THE TOPIC HISTORY OF MICROBIOLOGY ON 09-11-2021

Introduction

The Department of Microbiology organized a quiz competition on Spetember 11, 2024, focused on the topic of Microbial Nutrition. The competition aimed to enhance students' understanding of History of Microbiology and to encourage a healthy competitive spirit among them. This interactive event provided an engaging platform for students to showcase their knowledge and learn more about the History of microorganisms.

Objectives

- To reinforce students' knowledge of History of Microbiology.

- To encourage active learning and participation among microbiology students.

- To foster a spirit of healthy competition and teamwork.

Program Summary

a. Preparation and Organization

The quiz competition was meticulously planned by the faculty members of the Department of Microbiology. The quiz content was designed to cover various aspects of History of Microbiology like Evolution of Microbiology, contributions of Scientists, and Different discoveries and inventions. Students were informed about the competition in advance and were encouraged to prepare thoroughly.

b. Participants

The competition was open to all 3 Years microbiology students, and a total of 46 students participated. The participants were divided into 06 teams, each consisting of 6 members. This team-based approach encouraged collaboration and collective problem-solving.

c. Quiz Format

The quiz was structured into multiple rounds, each testing different aspects of the topic:

Quiz Rounds

- Round 1: Basic Concepts - Questions on the fundamental concepts of microbial nutrition.

- Round 2: Scientists and their Contributions

- Round 3: Chronological order of History of Microbiology

TEACHING-LEARNING PRACTICES:

- **Collaborative Learning-** As the students are participating as a team and discussing on the topic they are learning collaboratively.
- **Peer learning and Active learning-** by conducting the quiz we are enabling the peer learning and as well as active learning.

FIELD VISIT TO KARIMNAGAR DIARY INDUSTRY IN KARIMNAGAR ON 09-02-2022

Introduction:

As a part of enabling the Experiential learning to the students,the department of Microbiology took the students to field visit to the Diary Industry, Karimnagar. The purpose of the trip was to provide students with practical insights into the dairy industry, its operations, and its significance in the local economy.

Objectives:

1. To observe the various processes involved in dairy production, from milking to packaging.

2. To understand the technological advancements and best practices employed in dairy farming and processing.

3. To learn about the economic and social impact of the dairy industry on the region.

4. To interact with industry professionals and gain insights into career opportunities in the dairy sector.

Activities:

Upon arrival at the dairy industry, students were greeted by the management team who provided an overview of the facility and its operations. The itinerary included the following activities:

1. Facility Tour: Students were taken on a guided tour of the entire facility, including the milking parlors, processing units, quality control labs, and packaging section. First they observed the various stages involved in dairy production, from raw milk collection to the final product.

2. Interactive Sessions: Industry experts conducted interactive sessions where they explained the technological innovations and best practices adopted in dairy farming and processing. Students had the opportunity to ask questions and engage in discussions on topics such as hygiene standards, and product diversification.


4-B
4-A

3. Quality Assurance Demonstration: A demonstration on quality assurance and food safety measures was conducted, highlighting the importance of maintaining high standards throughout the production process. Students learned about quality control tests conducted at different stages to ensure the safety and purity of dairy products.

4. Career Guidance: The trip also included a career guidance session where students learned about the diverse career opportunities available in the dairy industry, including roles in production management, quality control, marketing, and research & development.

Conclusion:

The field trip to the dairy industry in Karimnagar proved to be an enriching and educational experience for the students of TTWRDC College. It provided them with valuable insights into the dairy production process, technological advancements, and career opportunities in the industry. The trip also underscored the importance of the dairy sector in the local economy and its role in providing livelihoods to rural communities. Overall, it was a memorable learning experience that complemented the theoretical knowledge gained in the classroom.

Teaching – Learning Practices:

1. Experiential Learning: Learning through direct experience and reflection.
   Activities: By observing the dairy processes in real-time, engaging in hands-on activities, and participating in quality control tests.
   Benefits: Provides a deeper understanding of concepts through practical application, enhances retention, and fosters critical thinking.
2. Observational Learning: Learning by watching others and noting behaviors, processes, and outcomes.
   Activities: Watching employees operate machinery, observing the milk processing stages, and seeing quality control checks in action.
   Benefits: Helps students to understand procedures and protocols, allows them to visualize theoretical concepts, and provides real-world context.
3. Inquiry-Based Learning- Learning driven by questioning, investigation, and problem-solving.
   Activities: Asking questions about processes, investigating how different machinery works, and exploring the reasons behind specific quality control measures.
   Benefits: Encourages curiosity, develops problem-solving skills, and fosters a deeper understanding of the subject matter.

4. Collaborative Learning-Learning through interaction and collaboration with peers and industry professionals.

Activities: Group discussions during and after the visit, collaborative note-taking, and joint presentations.
Benefits: Enhances communication and teamwork skills, allows for diverse perspectives, and improves understanding through peer learning.

SCIENCE DAY CELEBRATIONS 28-02-2022

ABOUT THE PROGRAM:

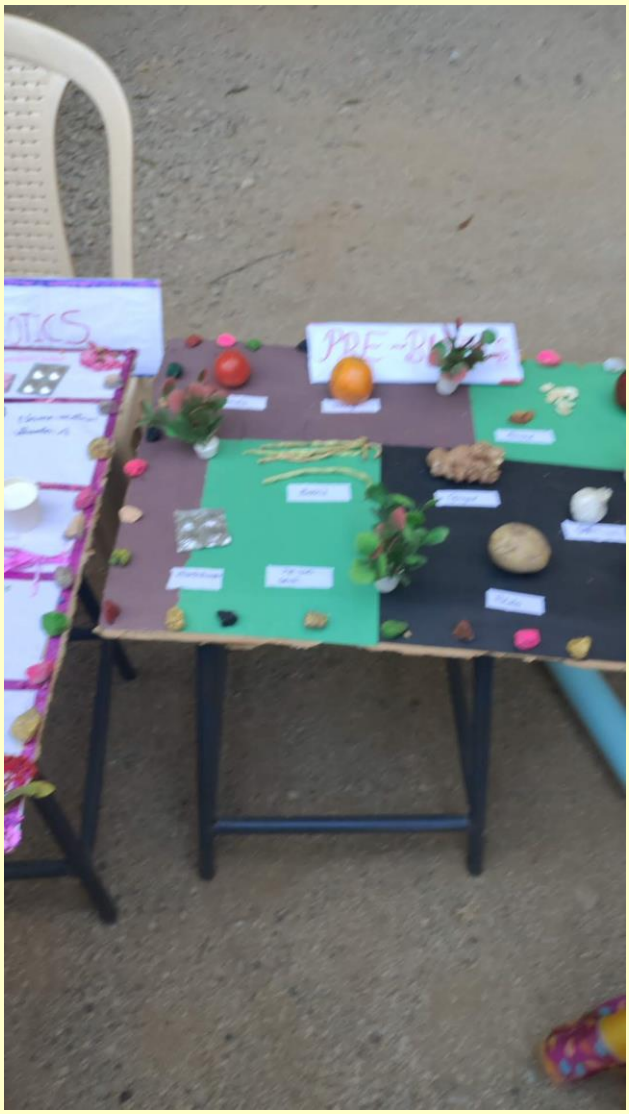
On the occasion of Science Day celebrations on February 28th, 2022, students from the Department of Microbiology have participated by performing many science experiments.

OBJECTIVES:

- To encourage the students through participating in the experiments.
- To improve the knowledge on experiments.
- To involve the students in the subject in more inclusive way.

PROGRAM OUTLINE:

- All the Microbiology students have participated in the science fair as groups.
- They have chosen their own interested topic from the Microbiology and related topics.
- The students made their experiments with some electrical material, stationary and waste items.
- Mostly they have recycled the waste material.



Projects exhibited:

1. Biodiversity working model
2. DNA model
3. Biogas experiment
4. Pro-Biotics & Pre-Biotics Poster presentation


PRO-BIOTICS
Name : Pomegranate
Name : Garlic
Vitamin : B6, C
Name : Almond
Vitamin : Thiamin
Vitamin = E
Name : Ginger
Vitamin : E
Name : Onion
Vitamin : C
Name : Tomato
Vitamin : A, C, B6

STUDENT SEMINAR 24-03-2022 ON THE TOPIC **TYPES OF IMMUNE CELLS**

ABOUT THE PROGRAM:

As a part of encouraging the students involvement in the class room, student seminar was conducted by the department of Microbiology on the Topic TYPES OF IMMUNE CELLS which is a part of the Medical Microbiology & Immunology and invited Interested students to participate. The student L.Lakitha from MZC 2rd Year came forward and gave the seminar.

OBJECTIVES:

- To involve the students in the subject.
- To implement experiential learning.
- To encourage the teaching skills in the students.

PROGRAM OUTLINE:

- The student prepared the material for the seminar with the help of the department and also by referring the books.
- On the Day of seminar the student gave the lecture by using black board.
- The topics covered in the seminar
- Introduction to immune cells
- Types of Immune cells
- Normal range within the body
- Importance of the Immune cells

TEACHING-LEARNING PRACTICES:

- **Active Learning-**Students involved in the program by making their own notes and through Q &A session they have participated in the session.

Q & A SESSION:

- Students asked their doubts and the speaker cleared doubts and the faculty also helped to clear the student's doubts.

TEACHING THROUGH ICT-PPT ON THE TOPIC HIV VIRUS STRUCTURE ON 02-04-2022

ABOUT THE PROGRAM

As a part of integrating technology on the academics for facilitating the easy understanding of the subject the Department of Microbiology conducted ICT – PPT class on HIV Virus for 1st year microbiology students. As the subject was complex in nature and needed visuals for understanding the topic to enable the students to understand the topic, the PPT class was taken to the students.

OBJECTIVES

- To educate students about the species of Mycobacterium

- To utilize ICT tools to make the learning process more engaging and effective.

- To highlight the staining procedure of tubercle bacilli, the symptoms of the disease, clinical significance, epidemiology, and prevention.

PROGRAM OUTLINE:

- The class prepared by the faculty U. Swathi of the Department of Microbiology. A detailed PowerPoint presentation was created, incorporating images, charts, and diagrams of the Tubercle bacteria.

The class includes

- Introduction to the virus
- Classification
- Epidemiology
- Symptoms
- Pathogenesis
- Treatment
- Preventive Measures
- At the end of the class students asked the doubts and were clarified.

TEACHING-LEARNING METHOD INVOLVED:

- **Blended Learning-** By performing the test for number of times students experienced the topic by practicing it and understood very clearly.
- **Collaborative Learning-** As the Students performed the tests in a collective manner they have learned by discussing with each other.

STUDENT SEMINAR 24-03-2022 ON THE TOPIC **TYPES OF IMMUNE CELLS**

ABOUT THE PROGRAM:

As a part of encouraging the students involvement in the class room, student seminar was conducted by the department of Microbiology on the Topic TYPES OF IMMUNE CELLS which is a part of the Medical Microbiology & Immunology and invited Interested students to participate. The student L.Lakitha from MZC 2rd Year came forward and gave the seminar.

OBJECTIVES:

- To involve the students in the subject.
- To implement experiential learning.
- To encourage the teaching skills in the students.

PROGRAM OUTLINE:

- The student prepared the material for the seminar with the help of the department and also by referring the books.
- On the Day of seminar the student gave the lecture by using black board.
- The topics covered in the seminar
- Introduction to immune cells
- Types of Immune cells
- Normal range within the body
- Importance of the Immune cells

TEACHING-LEARNING PRACTICES:

- **Active Learning-**Students involved in the program by making their own notes and through Q &A session they have participated in the session.

Q & A SESSION:

- Students asked their doubts and the speaker cleared doubts and the faculty also helped to clear the student's doubts.

TEACHING THROUGH ICT-PPT ON THE TOPIC HIV VIRUS STRUCTURE ON 02-04-2022

ABOUT THE PROGRAM

As a part of integrating technology on the academics for facilitating the easy understanding of the subject the Department of Microbiology conducted ICT – PPT class on HIV Virus for 1st year microbiology students. As the subject was complex in nature and needed visuals for understanding the topic to enable the students to understand the topic, the PPT class was taken to the students.

OBJECTIVES

- To educate students about the species of Mycobacterium

- To utilize ICT tools to make the learning process more engaging and effective.

- To highlight the staining procedure of tubercle bacilli, the symptoms of the disease, clinical significance, epidemiology, and prevention.

PROGRAM OUTLINE:

- The class prepared by the faculty U. Swathi of the Department of Microbiology. A detailed PowerPoint presentation was created, incorporating images, charts, and diagrams of the Tubercle bacteria.

The class includes

- Introduction to the virus
- Classification
- Epidemiology
- Symptoms

- Pathogenesis
- Treatment
- Preventive Measures
- At the end of the class students asked the doubts and were clarified.

TEACHING-LEARNING METHOD INVOLVED:

- **Blended Learning-** By performing the test for number of times students experienced the topic by practicing it and understood very clearly.
- **Collaborative Learning-** As the Students performed the tests in a collective manner they have learned by discussing with each other.

THANK YOU

TELANGANA TRIBAL WELFARE RESIDENTIAL DEGREE COLLEGE FOR WOMEN, THANGALAPALLY, RAJANNA SIRICILLA

ACTIVITIES REPORT
DEPARTMENT OF MICROBIOLOGY

AY-2020-21

Science knows no country, because knowledge belongs to humanity, and is the torch which illuminates the world.

- Louis Pasteur

As it was the Covid Pandemic and the Government of India announced lockdown, all the students were sent to home and as per the instructions of gurukulam, it is decided to conduct the academic activities, exams and other a0ctivities through online mode.

As per the instructions of gurukulam received on April 10th 2020, we have a meeting with principal and as per the instructions of the principal it was decided to conduct the classes, evaluation and interaction through zoom sessions and whatsapp groups.

In this scenario we have made an action plan according to the current situation and decided to follow it.

ONLINE AWARENESS PROGRAM ON WORLD HEALTH DAY ON 12-05-2020

ABOUT THE PROGRAM:

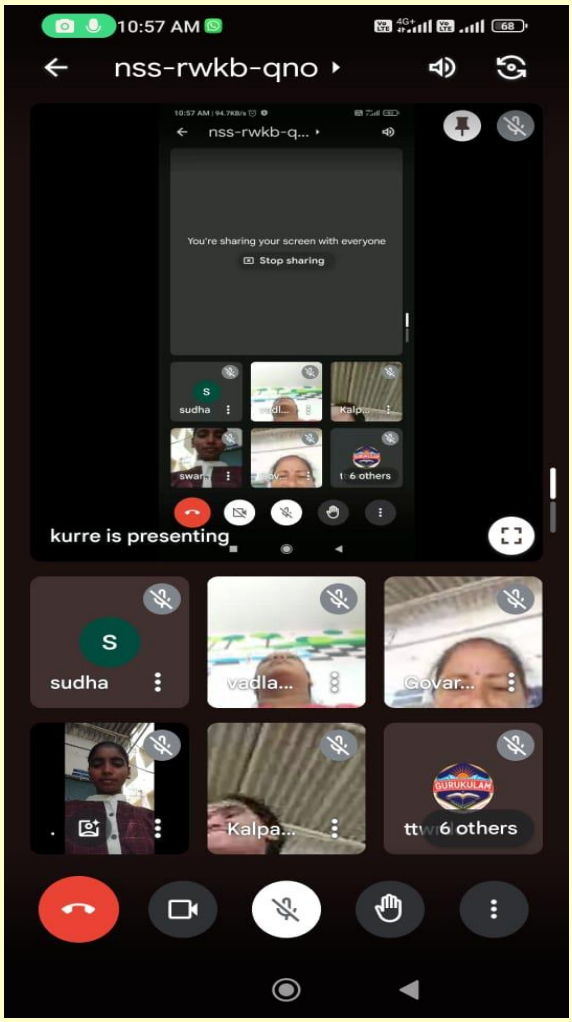
The department of Microbiology in colloboration with the Department of Botany and Zoology had conducted the awareness program on the occasion of World Health day on 12th May through online mode.
In this program the faculty has given valuable information about the world health day importance, types of health, importance of maintaining of good physical and mental health in this pandemic .

OBJECTIVES:

- To give information on physical health, mental health and spiritual health.
- To provide awareness on physical acativities, meditation and other activities.

PROGRAM OUTLINE:

- As a part of this program all three years students of the all three departments have participated in this program.
- Students also discussed with each other on the topic.
- Shown some websites those helpful in the Yoga, excersize and meditation.


10:57 AM
nss-rwkb-qno
You're sharing your screen with everyone
Stop sharing
kurre is presenting
sudha
vadla...
Govar...
Kalpa...
6 others

Online Student Seminar in the College YouTube Channel on the Topic: Sterilization

Date: 24-05-2020

Student: D.Lavanya MZC 3rd Year.

Introduction

In the Covid lockdown period as part of conducting the academics in the possible effective ways, we are conducting classes through Zoom meetings and Google meet apps. As a part of that to encourage the students in the subject and also to create interested environment the department of Microbiology invited the interested students to give online seminar on their interested topic. One of the students from 3rd MZC Lavanya came forward and given the seminar on the topic STERILIZATION.

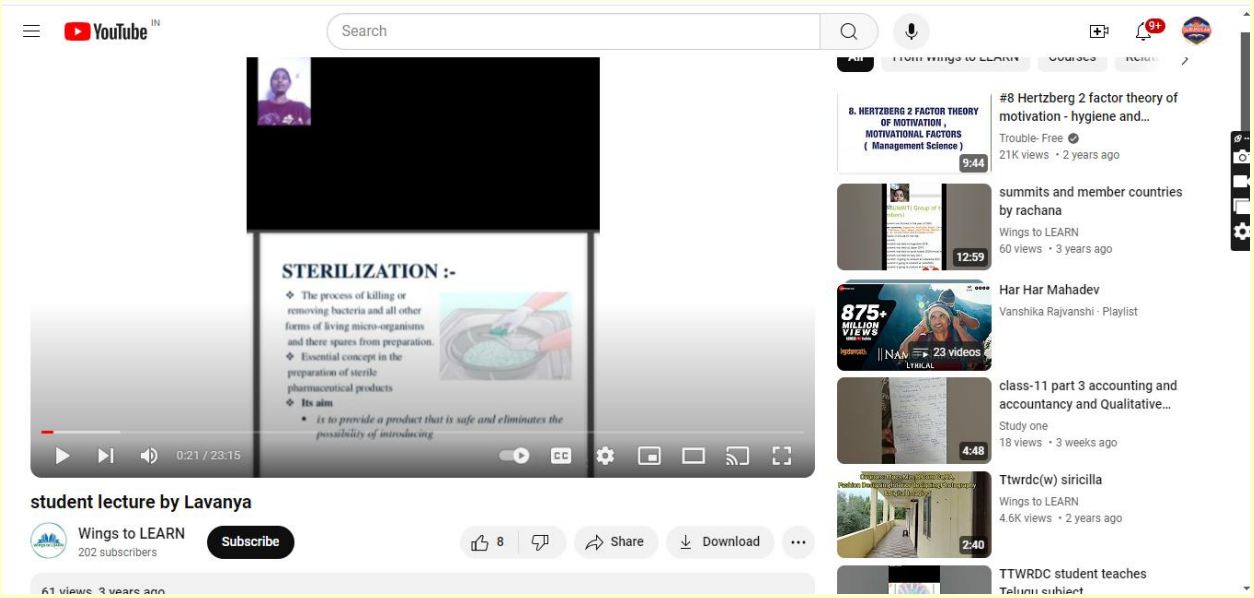
Objectives

- To provide knowledge on Sterilization techniques

- To discuss the role of sterilization in controlling infections.

- To engage students in interactive learning in the lockdown period.

- To utilize online platforms effectively to reach to the students of most interior aeras.



Content Overview

The seminar covered the following key points:

1. Introduction to Sterilization:

   - Definition and significance.

   - Historical background.

2. Methods of Sterilization:

   - Physical methods: Heat (dry and moist), radiation, filtration.

   - Chemical methods: Disinfectants, antiseptics, ethylene oxide gas.

Link for the Online Seminar: https://youtu.be/WY7zavrWnGg?si=joU7FKDSwo_uncGN

TEACHING-LEARNING METHOD INVOLVED:

Participative Learning- By making the presentation and by sharing with other students the students gain more knowledge on the topic and she also experienced the real life teaching ecperience.

ONLINE AWARENESS PROGRAM ON WORLD ENVIRONMENT DAY ON 05-06-2020

ABOUT THE PROGRAM:

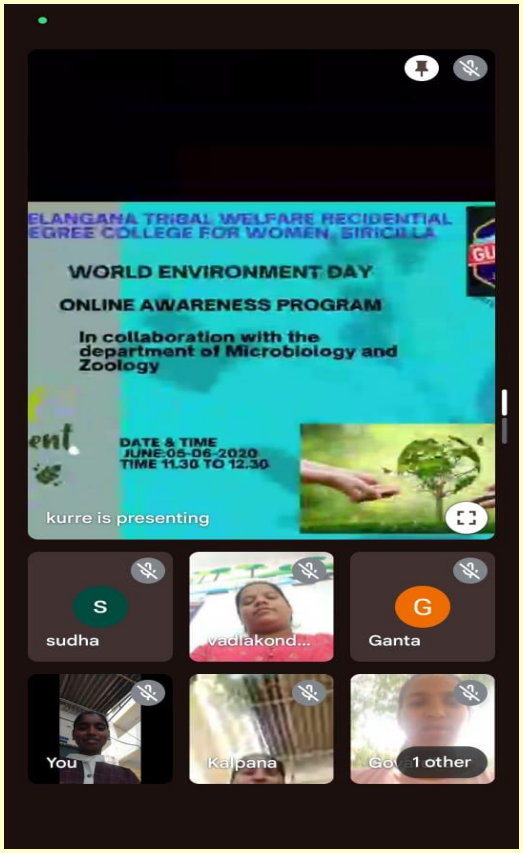
The department of Microbiology in colloboration with the Department of Botany and Zoology had conducted the awareness program on the occasion of World Environment day on 5th June through online mode. In this program the faculty has shared valuable insghits about the environment importance and the resons for the present disasters.

OBJECTIVES:

- To give information on environmental issues, the measures have to be taken.
- To provide awareness on sustainable development in evry aspect which helpful for the mothe earth.

PROGRAM OUTLINE:

- As a part of this program all three years students of the all three departments have participated in this program.
    - Students have shared their insghts in the view of protecting the environment.
    - Given awareness on usage of plastics, and other singles use plastics and thus causing sever effects on the earth.
- Effects of pollution on the global warming.



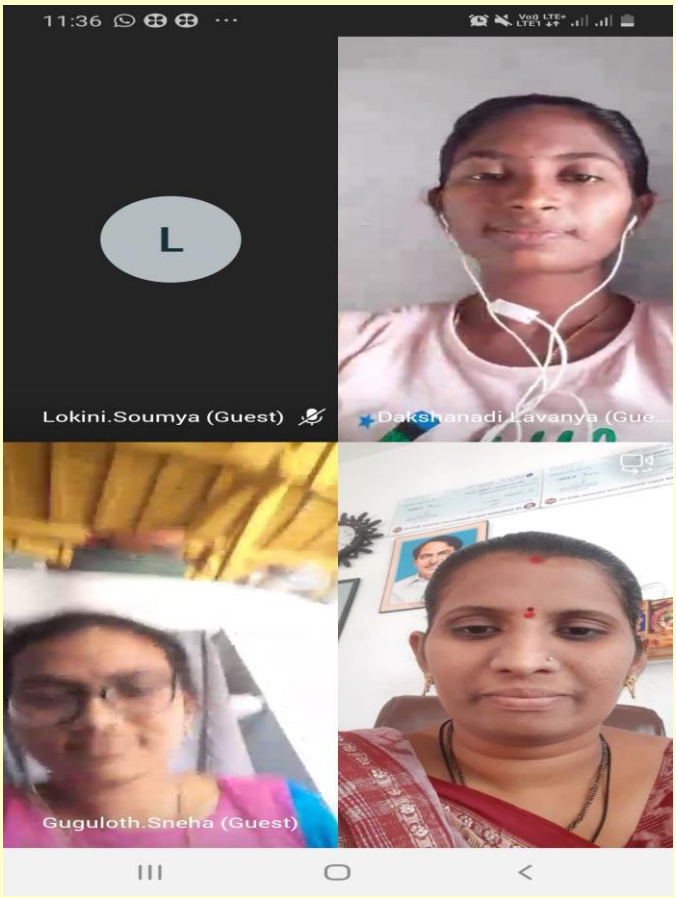
STUDENT WEBINAR ON INDUSTRIAL PRODUCTION OF BEER

Date: May 28, 2020

Presenter: Miss. Sneha , 3rd Year MZC Student

Introduction

In the lockdown period the Department of Microbiology, hosted a student webinar on the topic industrial production of beer, presented by Guguloth Sneha, a Third-year MZC student. The webinar aimed to provide an in-depth understanding of the beer production process, covering the fermentation, technological advancements in brewing, and the industry's economic impact



Webinar Content

Overview of Beer Production

Sneha began the webinar with a brief history of beer and highlighting its cultural significance over the centuries.

Ingredients Used in Beer Production

Water: The most significant component, constituting about 90-95% of beer.

Malt: Typically barley, which is germinated and dried to convert starches into fermentable sugars.

Hops: Added for bitterness, flavor, and aroma, and also acts as a natural preservative.

Yeast: The microorganism responsible for fermentation, converting sugars into alcohol and carbon dioxide.

Brewing Process

Malting: Soaking barley to germinate and then drying it to produce malt.

Mashing: Mixing malt with hot water to extract fermentable sugars.

Boiling: Boiling the wort and adding hops.

Fermentation: Adding yeast to the wort to produce alcohol and CO2.

Conditioning: Maturing the beer to develop flavor and carbonation.

Packaging: Bottling or canning the finished beer for distribution.

TEACHING-LEARNING PRACTICES:

- **Active Learning-**Students involved in the program by making their own notes, PPTs and through Q &A session they have participated in the session.

Q&A Session

Students have participated very actively in the entire session and also asked questions at the end of the webinar. The presenting student answered the questions.

ONLINE AWARENESS PROGRAM ON WORLD ENVIRONMENT DAY ON 05-06-2020

ABOUT THE PROGRAM:

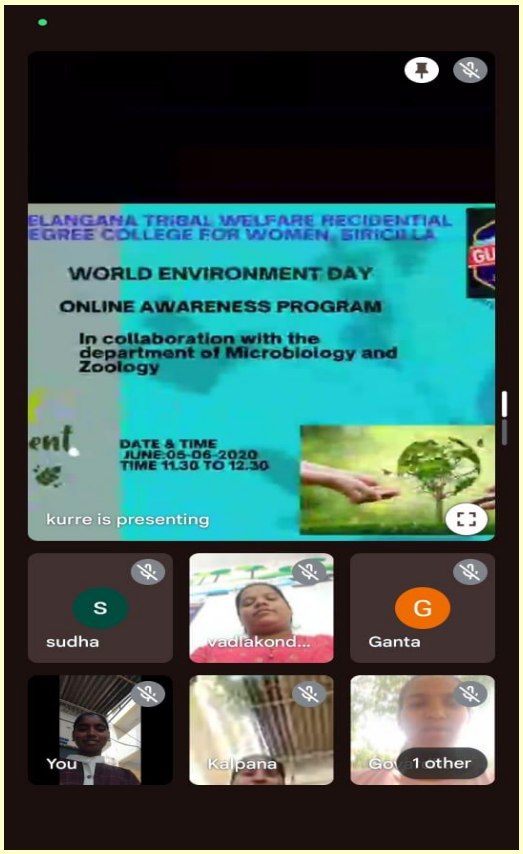
The department of Microbiology in colloboration with the Department of Botany and Zoology had conducted the awareness program on the occasion of World Environment day on 5th June through online mode. In this program the faculty has shared valuable insghits about the environment importance and the resons for the present disasters.

OBJECTIVES:

- To give information on environmental issues, the measures have to be taken.
- To provide awareness on sustainable development in evry aspect which helpful for the mothe earth.

PROGRAM OUTLINE:

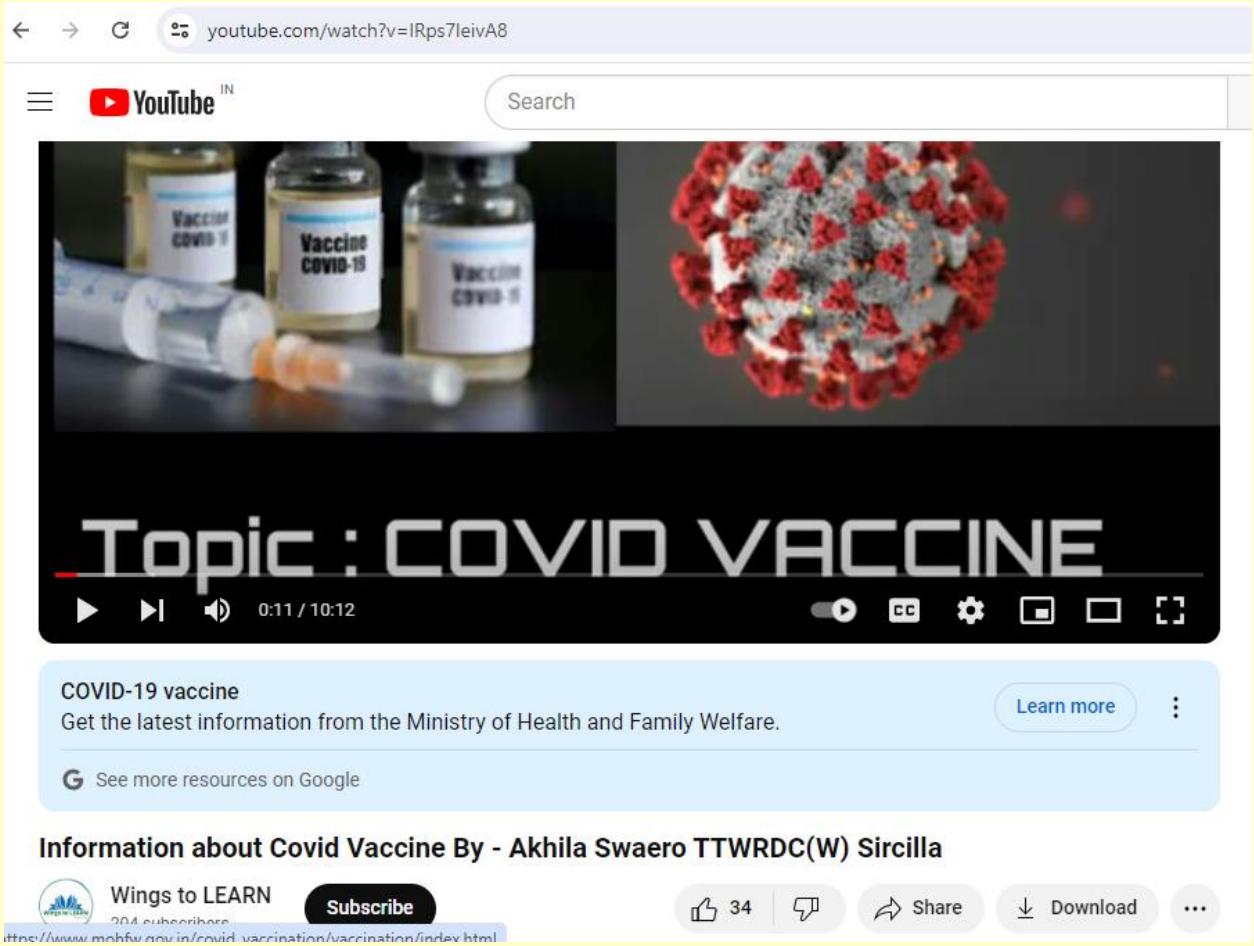
- As a part of this program all three years students of the all three departments have participated in this program.
- Students have shared their insghts in the view of protecting the environment.
- Given awareness on usage of plastics, and other singles use plastics and thus causing sever effects on the earth.
- Effects of pollution on the global warming.



ONLINE AWARENESS PROGRAM ON COVID VACCINATION PROGRAM BY THE STUDENT MISS. AKHILA ON 19-12-2020

ABOUT THE PROGRAM:

The department of Microbiology has conducted the awareness program on the Covid Vaccination program on 19th December through online mode. As the re are many doubts and myths are spreading among the people regarding COVID-19 Vaccination, as a part of Social responsibility being Microbiologists we the department of Microbiology planned for a awareness session on the COVID-19 Vaccination. Regarding this program the student M.Akhila came for ward and she has prepared the video with required slides and graphics wuth the help of the department and has successfully gave the presentation. We have uploaded the video in college channel whoch got huge Response.



OBJECTIVES:

- To give information on COVID-19 Vaccination to the students and as well as public.

- To provide awareness on COVID-19 and also to encourage the people to take the vaccination.
- To explain the importance of Vaccination.

PROGRAM OVERVIEW:

- The student Miss.M.Akhila has prepared well for the video program with all the required rersources like content slides, background music.
- She has started with the introduction to the COVID-19 causing disease and the effects.
- Later she continued with the importance of the Vaccination.
- She also explained about the type of vaccine and the company which is manufacturing the vaccine and the differences between the COVISHIELD and COVAXIN.
- Clearing the myths and fears about vaccination.

TEACHING & LEARNING PRACTICES:

- **Active Learning**- Student involved in the preparation of class and presentation of class so that students actively participated and learnt the topic more quickly.

ONLINE STUDENT LECTURE ON STRUCTURE OF DNA BY MISS. SOUMYA MZC III YR

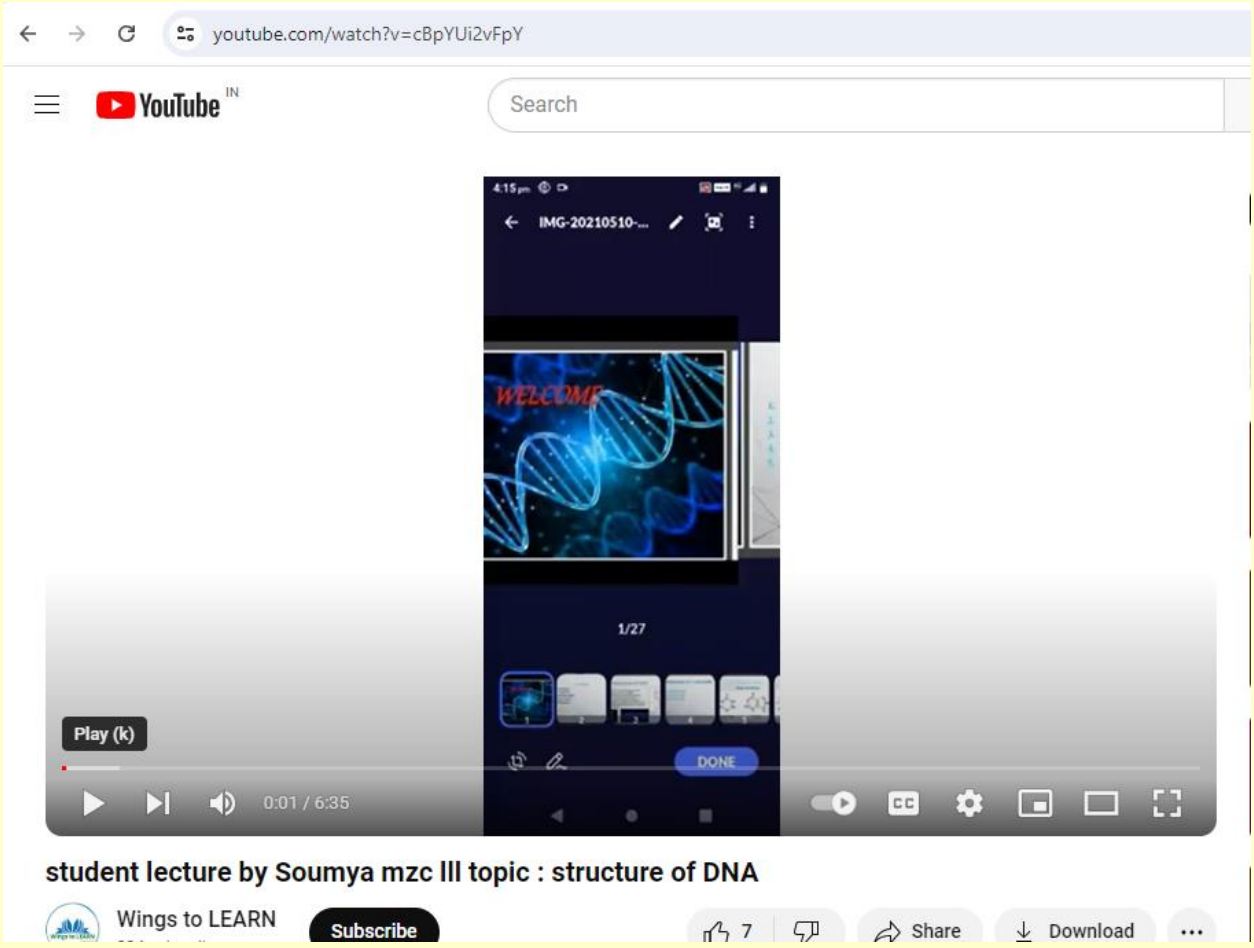
Introduction

In the lockdown period the Department of Microbiology has conducted student lecture series with interested students. As a part of the series

MZC III Yr students Miss. Soumya has given online lecture on the Topic: Structure of DNA.

Objectives:

- To involve the students participation the subject.
- To create collaborative environment among the students for presentation of the topic.
- To encourage the students to participate in the teaching process.



Program Overview:

The student Miss. Soumya has prepared for the lecture by collecting the required data and prepared the video using the software kinemaster. We also helped her for the content and video making. On

the day of presentation she has recorded her video and we have uploaded the video in the college YouTube channel. The link was shared in all the students' Whatsapp groups and instructed them to make the notes. Later a zoom meeting was conducted with the students and all together have discussed about the topic in the video.

TEACHING & LEARNING PRACTICES:

- **Active Learning**- Student involved in the preparation of class and presentation of class so that students actively participated and learnt the topic more quickly.

LINK : https://youtu.be/cBpYUi2vFpY?si=sAHtBrQWNwaGWPtJ

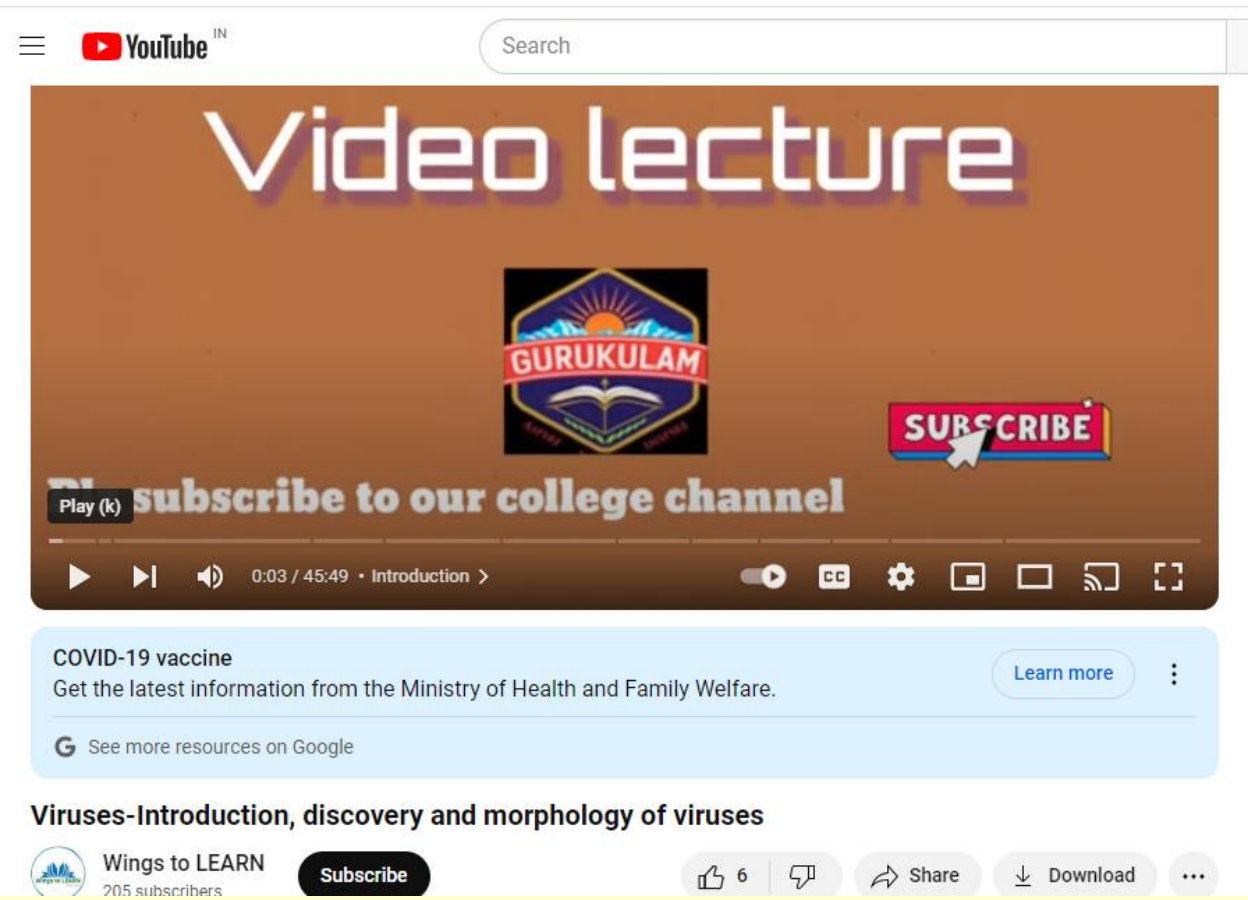
Teaching the topic: Viruses- Introduction, discovery and Morphology
Using ICT- PPT On 11-05-2021

Introduction:

As a part of teaching in the online mode on the lockdown period, the department of Microbiology has conducted the online class through ZOOM using PPT. As the topic is very basic knowledge required by the Microbiology students and needed more visuals to understand the topic, we used the PPT for the class.

Objective:

- To make the students understand the topic more in depth.
- To show the 3D images and more visuals on the topic.
- To provide more information on the topic



Video preparation & Key Topics Covered:

- All the content required for the video class was gathered and the suitable images and media content was gathered.
- According to the topic all the content was arranged and voice over given and uploaded in the college YouTube channel
- Viruses Discovery
- Scientists involved in the discovery of viruses
- Morphology of different viruses

Participants:

- All three years students have viewed the video

TEACHING & LEARNING PRACTICES:

- **Online Learning**- Student watched the video shared and made the notes with the content. They also watched the related images for more deep understanding.

Online Classes to the students using Online Resources

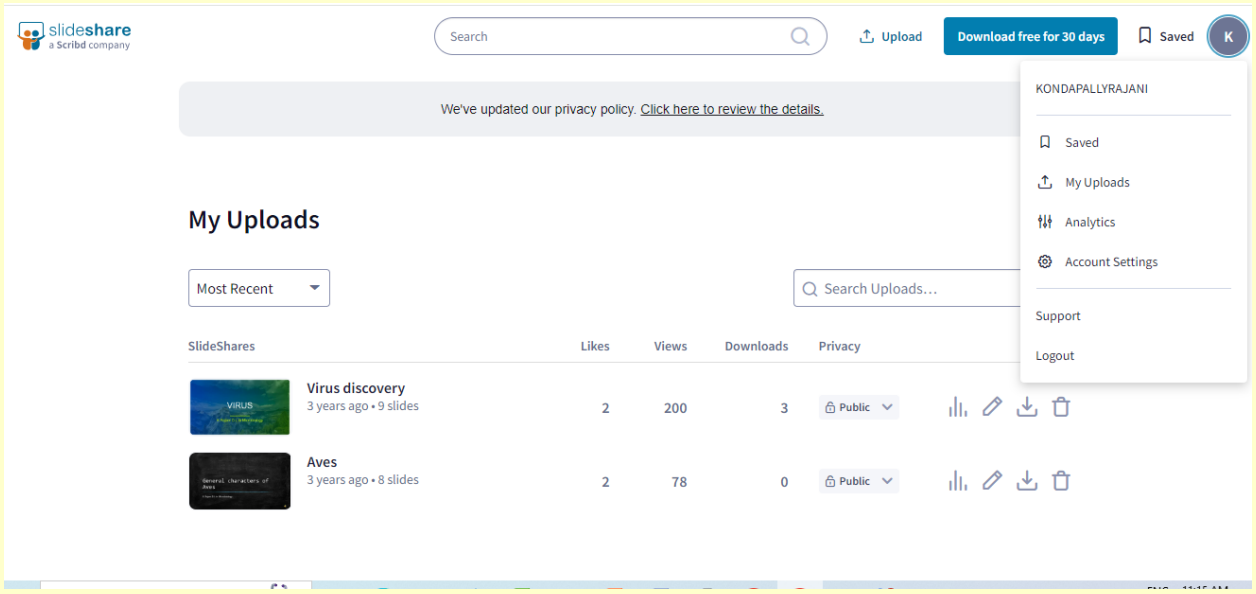
In the COVID-19 Pandemic to keep the students in active mode and to engage them with the academic activities, as per the instructions of the Gurukulam and the Principal, the department of Microbiology has conducted many online classes in the respective semester topics using black board as well as ICT PPT tools.

The following are the links for the classes taught by the faculty of the Department.

S.NO	NAME OF THE TOPIC	LINK FOR THE CLASS
1	History of Microbiology	https://youtu.be/KRPCqMCE-Sc?si=UZ-K_ucEW7yO0QAB
2	Rhizosphere Part-1	https://youtu.be/3YRoWcKLo_0?si=zWaQRcdE6sm_sgx2
3	Rhizosphere Part-2	https://youtu.be/t8rdMIyBqAA?si=ZctDUtYTpCY3ckxX
4	Immunoglobulins Part -1	https://youtu.be/qjQ-w9s5IDY?si=MjmIBhsmN2trLnXW
5	Immunoglobulins Part -2	https://youtu.be/cgkaUAWwy5k?si=ECalqo6U_cJIqI96
6	Physical properties of soil Part -1	https://youtu.be/_vVbWFMO0Xk
7	Physical properties of soil Part -2	https://youtu.be/zJvbvZ0Nje4
8	Fermented	https://youtu.be/g4cL7C-ZETA

	Foods -1	
9	Fermented Foods -2	https://youtu.be/3hhJ9Delr4A
10	Physical Properties of Soil	https://youtu.be/pMPIn0XEc9g
11	Chemical Properties of Soil	https://youtu.be/bcg_Qyw7Wr8
12	Rhizosphere Soil	https://youtu.be/JZc2CnAH4Gc
13	Porifera charecters	https://youtu.be/AEXZaa25Wm4

Along with the videos we also started to share PPTs through the “Slide Share” Website.



ONLINE STUDENT LECTURE ON VIRUSES By Miss.Akhila MZC II YR

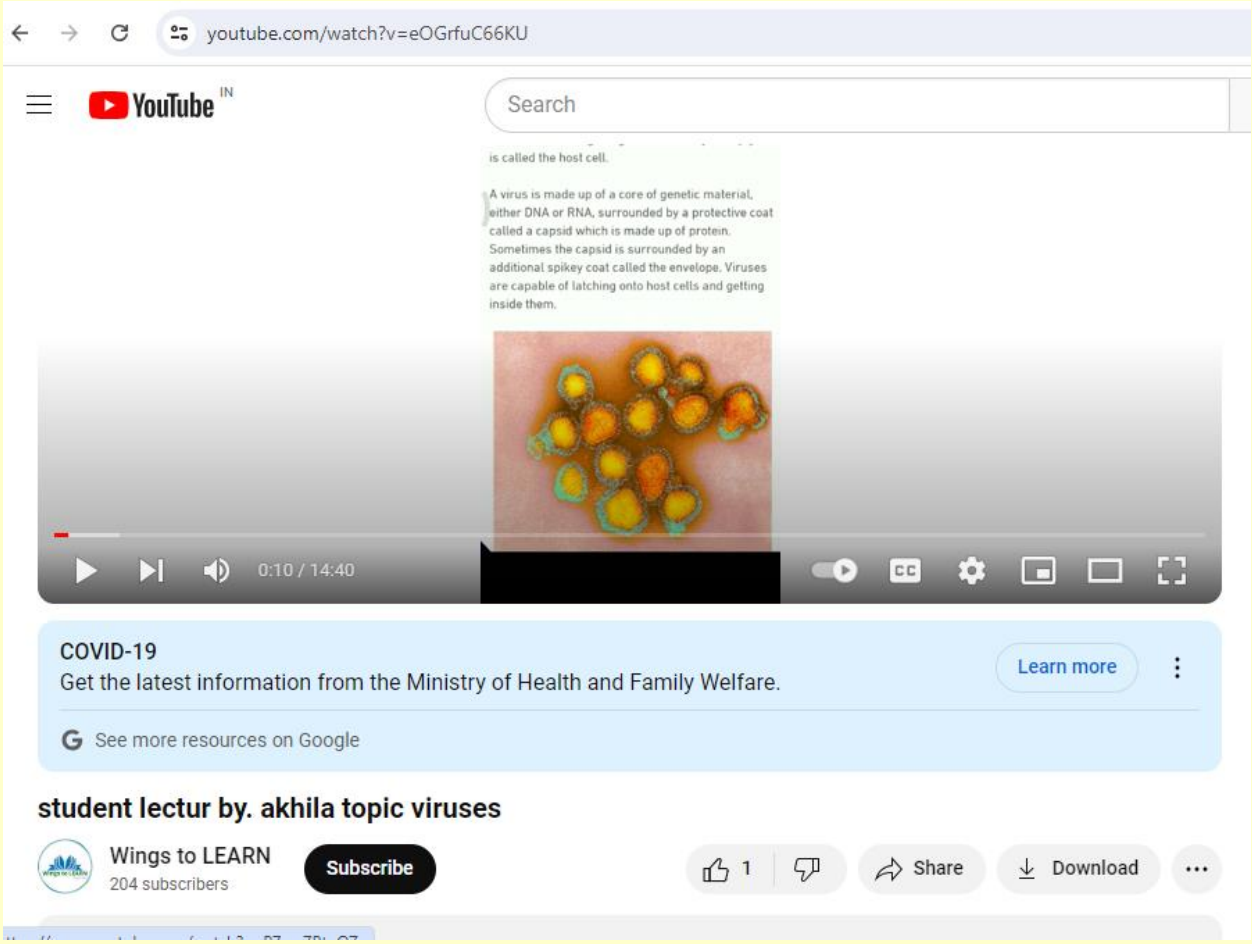
Introduction

In the lockdown period the Department of Microbiology has conducted student lecture series with interested students. As a part of the series, MZC II Yr student Miss. Akhila from MZC 2nd Year has given online lecture on the Topic: VIRUSES.

Objectives:

- To involve the students participation the subject.

- To create collaborative environment among the students for presentation of the topic.
- To encourage the students to participate in the teaching process.



Program Overview:

Miss. Akhila has prepared for the lecture by collecting the required data and prepared the video using the mobile. We also helped her for the content and video making. On the day of presentation she has recorded her video and we have uploaded the video in the college YouTube channel. The link was shared in all the students' Whatsapp groups and instructed them to make the notes. Later a zoom meeting was conducted with the students and all together have discussed about the topic in the video. Students got more information on the Viruses.

Link: https://youtu.be/eOGrfuC66KU?si=eL7sX_sm8H0Lfsvw

TEACHING & LEARNING PRACTICES:

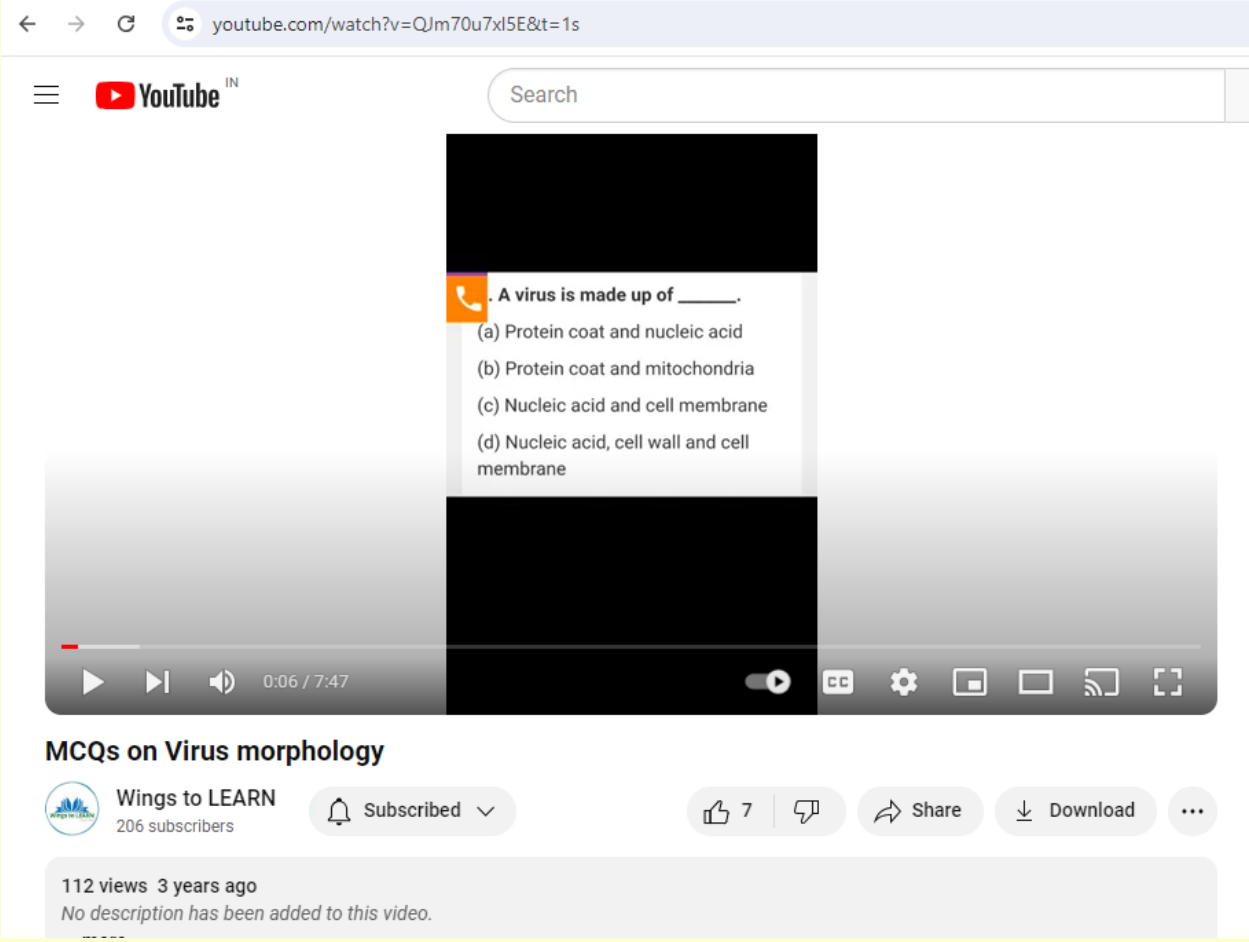
- **Active Learning**- Student involved in the preparation of class and presentation of class so that students actively participated and learnt the topic more quickly.

Online MCQs on Virus Morphology on 28-05-2021

About the Program:

After giving lectures on the Topic Viruses we have also provided MCQs on the related topic which helpful to the students to assess themselves on the knowledge they gained so far.

Link: https://youtu.be/QJm70u7xl5E?si=5e7NYwiRc4nVZtiH



Program overview:

- By sending the MCQ video to the students through the whatsapp and the students went through the video and they evaluated themselves.
- After sharing the video, meeting was held with the students through the zoom and discussed the point.

THNAK YOU

TELANGANA TRIBAL WELFARE RESIDENTIAL DEGREE COLLEGE FOR WOMEN, THANGALAPALLY, RAJANNA SIRICILLA

ACTIVITIES REPORT
DEPARTMENT OF MICROBIOLOGY

AY-2019-20

Science knows no country, because knowledge belongs to humanity, and is the torch which illuminates the world.

- Louis Pasteur

Microbiology Department's Agenda for 2019-20

As the academic year 2019-20 unfolds, the Microbiology Department stands poised to invigorate its students with a plethora of engaging activities aimed at nurturing their passion for the microbial world. With a steadfast commitment to academic excellence and holistic development, In the meeting held with Principal, the department has charted an ambitious course to enrich the learning experience of its students; the Department is planning to do the following activities in this academic year.

1. **Interactive Workshops and Seminars:** The cornerstone of our approach lies in fostering a culture of inquiry and exploration. To this end, the department will organize a series of workshops and seminars featuring renowned experts and scholars from the field of microbiology. These sessions will not only provide valuable insights into cutting-edge research but also offer students a platform to interact with industry professionals and gain practical knowledge.

2. **Hands-on Laboratory Sessions:** Understanding the intricacies of microbiological techniques is essential for budding scientists. In the coming academic year, the department plans to conduct regular laboratory sessions where students will have the opportunity to hone their practical skills under the guidance of experienced faculty members. From culturing microorganisms to molecular biology experiments, these hands-on sessions will instill confidence and proficiency among students.
3. **Field Trips and Excursions:** Learning extends beyond the confines of the classroom. Recognizing the importance of real-world exposure, the department will organize field trips and excursions to research institutions, biotechnology companies, and environmental sites of significance. These immersive experiences will not only broaden students' horizons but also provide them with valuable insights into the practical applications of microbiology in various domains.
4. **Student-led Initiatives:** The Microbiology Department believes in nurturing leadership and innovation among its students. To harness their creative potential, various student-led initiatives such as symposiums, poster presentations, and collaborative research projects will be encouraged. These initiatives will not only foster teamwork and camaraderie but also provide students with a platform to showcase their talent and initiative.

5. **Guest Lectures and Seminars:** In an era characterized by rapid advancements in technology and research, staying abreast of the latest developments is imperative. The department will organize guest lectures and webinars by eminent scholars and industry experts to acquaint students with emerging trends and technologies in the field of microbiology. These sessions will serve as catalysts for intellectual stimulation and scholarly discourse.

In essence, the Microbiology Department's agenda for the academic year 2019-20 is rooted in the belief that fostering a good environment for learning and innovation is paramount. By embracing a multifaceted approach encompassing academic rigor,

practical training, and experiential learning, the department endeavors to empower its students to become adept scientists and conscientious global citizens poised to make meaningful contributions to society.

TELANGANA TRIBAL WELFARE RESIDENTIAL DEGREE COLLAGE FOR WOMEN, THANGALLAPALLY, RAJANNA SIRICILLA			
DEPARTMENT ACTION PLAN (2019-20)			
MONTH	**DATE**	**ACTIVITY**	**DISCRIPTION**
AUGUST	8/20/2019	World Mosquito Day	To understand mosquito cause diseases
	8/21/2019	Quiz	To evaluate learning skills
	8/27/2019	World first aid day	students taken for rally to raise awareness among people about first aid
SEPTEMBER	9/16/2019	World ozone day	To get awearnes
	9/28/2019	Bridge Course	To boost the 1st years with new topics and subjects
OCTOBER	10/11/2019	Student seminar	To improve individual skills
	10/23/2019	World food Day	
	10/12/2019	Student seminar	enerating a situation for group to guided interaction among themselves
	10/16/2019	World Ozone Day	To get awareness about ozone depletion
NOVEMBER	11/7/2019	National Cancer Awareness Day	TO create awarnes about early detection prevention and treatment of cancer
	11/10/2019	World Science Day	importent role of science in socity
	11/11/2019	National Education Day	to aware importents of education in our socity
	11/12/2019	World Pneumonia Day	to create awaerness about pneumonia its symptoms causes and treatment
	11/17/2019	National Epilipsy Day	to get awerness about mental disorders
JANUARY	01-12-20219	World AIDS Day	Took pledge to spread awareness about AIDS
	1/29/2020	STUDENT SEMINAR	to enable student to improve their understanding of a topic by engaging with key issues
FEBRUARY	2/8/2020	FEILD TRIP	to observe habitate of insects in local area
	2/20/2020	weekly test	improve learning capabiliteis in students
	2/28/2020	science day celebrations	prepaired models and exhibition
MARCH	3/11/2020	Quiz	improve concentration
	3/25/2020	student seminar	generating a situation for group to guided interaction among themselves
APRIL	4/16/2020	remedial class	to encourage and help the learner prevent them failing
	4/23/2020	weekly test	improve learning capabiliteis in students
MAY	5/7/2020	Quiz	improve concentration
	5/10/2020	SEM PREPARATION	

K.Rajani

DL In Micro Biology

WORLD MOSQUITO DAY

On August 20, 2019

AWARENESS TO THE STUDENTS AND ANTI MOSQUITO PROGRAM IN THE COLLEGE

Introduction

World Mosquito Day is observed annually on August 20th to commemorate the discovery by Sir Ronald Ross in 1897 that female mosquitoes transmit malaria between humans. This day is a significant reminder of the impact of mosquitoes on public health and the importance of mosquito control efforts. In alignment with this, our college organized a comprehensive program to raise awareness and take practical steps towards mosquito control by involving students in activities such as removing bushes, cleaning stagnant water, and maintaining the cleanliness of the college premises.

Objectives

- To educate students and staff about the dangers posed by mosquitoes and the diseases they carry.
- To engage the college community in proactive measures to reduce mosquito breeding sites.
- To promote a culture of cleanliness and environmental responsibility within the college.

Activities Conducted

a. Awareness Session

The program began with an informative session held in the college auditorium. Experts from the local health department and faculty members gave presentations on the significance of World Mosquito Day, the lifecycle of mosquitoes, and the diseases they spread, including malaria, dengue, and Zika virus.

b. Removal of Bushes

Students, along with staff, participated in clearing overgrown bushes around the college premises. This activity was crucial as dense vegetation often serves as a breeding ground for mosquitoes. The clearing process was carried out methodically, ensuring all potential habitats for mosquitoes were removed.

c. Cleaning Stagnant Water

Another significant part of the program was identifying and eliminating stagnant water sources. Students were divided into groups and assigned specific areas within the campus. They emptied containers, unclogged drains, and ensured that water did not accumulate in any part of the college. This activity aimed to disrupt the breeding cycle of mosquitoes which lay eggs in stagnant water.

d. General Cleanliness Drive

Following the bush removal and water cleaning activities, a general cleanliness drive was conducted. Students picked up litter, disposed of garbage properly, and cleaned classrooms, corridors, and common areas. This initiative not only helped in mosquito control but also improved the overall hygiene and aesthetics of the college environment.

Participation

The program saw enthusiastic participation from both students and staff. Over 200 students from various departments took part in the activities. Faculty members and administrative staff also actively participated, demonstrating a collective effort towards achieving the program's objectives.

Outcomes

Immediate Impact: The immediate result was a significant reduction in potential mosquito breeding sites around the college premises. The environment looked cleaner and more organized, reducing the risk of mosquito-borne diseases.

Educational Impact: Students gained valuable knowledge about mosquito control and the importance of maintaining a clean environment. The awareness session and hands-on activities empowered them to take similar initiatives in their local communities.

Long-term Impact: The program fostered a sense of responsibility and community spirit among students. It also set a precedent for regular cleanliness drives, ensuring ongoing efforts towards a mosquito-free campus.

STUDENT SEMINAR
On the Topic
“Understanding Growth Phases in Bacteria”

Date: 05-09-2019

Presenter: Miss. Kavya

Topic: “Growth Phases in Bacteria”

Introduction:

The seminar on "Growth Phases in Bacteria" delivered by Miss.Kavya provided an insightful exploration into the lifecycle of bacterial growth. The presentation aimed to elucidate the various phases of bacterial growth and their significance in microbiology and biotechnology.

Key Points Covered:

1. Introduction to Bacterial Growth: The presenter commenced by introducing the concept of bacterial growth and highlighted its fundamental importance in various fields, including medicine, agriculture, and industry.

2. Exponential (Lag) Phase: The seminar delved into the initial lag phase, characterized by a period of metabolic adaptation and preparation for rapid growth. The presenter elucidated the factors influencing this phase and its implications for microbial culture.

3. Logarithmic (Exponential) Phase: The exponential phase, marked by rapid cell division and exponential growth, was thoroughly examined. The presenter elucidated the underlying mechanisms driving this phase, including nutrient availability and metabolic activity.

4. Stationary Phase: The presentation transitioned to the stationary phase, where bacterial growth reaches equilibrium due to nutrient depletion and accumulation of inhibitory by-products. The presenter discussed the physiological changes occurring during this phase and its relevance in biotechnological processes.

5. Death Phase: The seminar concluded with an exploration of the death phase, characterized by a decline in viable cell count due to cellular senescence and environmental stress. The presenter underscored the importance of understanding this phase for microbial control and preservation.

Interactive Session:

After the presentation, the students had discussion on various aspects of bacterial growth phases. They asked Questions pertaining to factors influencing growth kinetics, and other applications.

6.Teaching-learning practices:

- **Active Learning-**Students involved in the program by making their own notes, PPTs and through Q &A session they have participated in the session.

Closing ceremony of Bridge course for 1st years From 07-09-2019 to 13-09-2013

Introduction

The Bridge Course, conducted from September 7, 2019, to September 13, 2019, aimed to help first-year students transition smoothly into their degree programs by introducing them to the new topics they would encounter. The week-long course included lectures, interactive sessions, and hands-on activities designed to prepare students for their academic journey. The closing ceremony marked the culmination of this initiative, celebrating the students' efforts and achievements.

Objectives

- To familiarize first-year students with the curriculum and key topics of the Microbiology.
- To build a strong academic foundation and boost students' confidence.
- To facilitate the transition from school to college-level education.

Program Overview

As throughout the week, students attended sessions on various topics of Microbiology. The course was tailored to the specific students were enrolled in. Expert faculty members delivered lectures, and students participated in group discussions and practical exercises.

Mentorship and Support

Senior students and faculty members provided mentorship and support, helping the newcomers navigate the initial challenges of college life. This mentorship program fostered a sense of community and provided first-year students with valuable insights and guidance.

Closing Ceremony

The closing ceremony, held on September 13, 2019, was a celebratory event recognizing the students' hard work and marking the successful completion of the Bridge Course.

Welcome Address

The Principal,Sri. G.Ashok garu delivered the welcome address, highlighting the importance of the Bridge Course in easing students into their degree programs and commending their dedication throughout the week.

Student Experiences

Several first-year students shared their experiences and reflections on the Bridge Course. They spoke about the knowledge they gained, the friendships they formed, and how the course helped alleviate their initial anxieties about college.


PROUD TO BE A SWAERO

Poster Presentation Program on Awareness of Food Loss and Waste on The Occasion of WORLD FOOD DAY

Date: 23-10-2019

Organizers: Microbiology Department in association with Physics Department

Introduction:

As this is the Residential institution with above 200 students, to prevent food loss and food wastage The department of Microbiology in association with the Physics Department, the HOD is the MESS COMMITTEE In charge conducted the **Poster Presentation Program on "Awareness of Food Loss and Waste"** aimed to address the pressing issue of food loss and waste and foster awareness among students and faculty members. The event served as a platform for students to showcase their research findings, innovative solutions, and initiatives aimed at mitigating food loss and waste.

Presentations and Discussions:

The program featured a diverse array of posters highlighting various aspects related to food loss and waste, including its environmental impact, socio-economic ramifications, and technological interventions for reduction. Students from both the Microbiology and Physics departments exhibited commendable creativity and ingenuity in their presentations, demonstrating a deep understanding of the multifaceted challenges posed by food loss and waste.

The posters covered a wide range of topics, including:

1. **Microbial Interventions for Food Preservation:** Several posters elucidated the role of microbiology in developing novel strategies for food preservation, such as the use of probiotics, biocontrol agents, and antimicrobial packaging materials to extend shelf life and reduce spoilage.
2. **Physics-based Approaches for Food Storage and Transportation**: The Physics Department contributed posters focusing on the application of physics principles in optimizing food storage conditions, minimizing energy consumption in refrigeration, and enhancing the efficiency of transportation logistics to prevent food loss during transit.
3. **Community Initiatives and Sustainable Practices:** A significant emphasis was placed on community-driven initiatives and sustainable practices aimed at reducing food waste at the household, retail, and institutional levels. Posters showcased innovative approaches such as food recycling, surplus redistribution, and composting to divert organic waste from landfills.

4. **Interactive Session and Engagement**: Following the poster presentations, an interactive session provided attendees with the opportunity to engage in insightful discussions, exchange ideas, and seek clarifications from the presenters. The interdisciplinary nature of the event facilitated cross-disciplinary dialogue and collaboration, enriching the discourse on food loss and waste management.

5. Teaching-learning method involved:

- **Active Learning-** By presenting the posters as a group students are actively involving in the presentations.
- **Collaborative Learning-** As the Students in a collective manner they have learned by discussing with each other they are learning in a collaborative manner.

STUDENT SEMINAR
ON THE TOPIC “KREBS CYCLE”

Date: January 29, 2020

Venue: Class Room

Introduction:

The Department of Microbiology organized a student seminar on January 29, 2020, focusing on the Krebs Cycle, a fundamental topic in biochemistry. The seminar aimed to enhance students' understanding of this critical metabolic pathway and provide a platform for them to present their research and insights.

Objectives

- To deepen students' knowledge of the Krebs Cycle and its significance in cellular respiration.

- To encourage research and presentation skills among students.

- To foster academic discussion and collaborative learning.

Seminar Summary

Preparation

In preparation for the seminar, the student named took the topic Krebs Cycle. Topics included the discovery and history of the Krebs Cycle, the chemical reactions involved, its role in cellular metabolism, and its significance in health and disease. The students prepared from the reference book and we also helped her to present the topic provided.

Seminar Session

The seminar included:

1. History and Discovery of the Krebs Cycle - Covered the discovery by Hans Krebs in 1937 and the historical context of the research.

2. Chemical Reactions and Pathway- Detailed the step-by-step reactions in the Krebs Cycle, including the conversion of Acetyl-CoA into CO2 and the production of ATP, NADH, and FADH2.

3.Role in Cellular Metabolism- Explored how the Krebs Cycle fits into cellular respiration and its connection with glycolysis and the electron transport chain.

4. Krebs Cycle and Health - Discussed the implications of the Krebs Cycle in human health, its role in metabolic disorders, and its relevance in diseases such as cancer and diabetes.

Interactive Q&A Sessions

The Presentation was followed by a Q&A session, allowing students to engage in discussions, clarify doubts, and delve deeper into the topic

Outcomes

Enhanced Understanding: Students gained a comprehensive understanding of the Krebs Cycle, its biochemical pathways, and its importance in metabolism.

Skill Development: The seminar provided a platform for students to develop research, presentation, and public speaking skills.

TEACHING-LEARNING PRACTICES:

- **Active Learning-**Students involved in the program by making their own notes, PPTs and through Q &A session they have participated in the session.

QUIZ COMPETITION
On the Topic Microbial Nutrition

Date: January 24, 2020

Introduction

The Department of Microbiology organized a quiz competition on May 15, 2024, focused on the topic of Microbial Nutrition. The competition aimed to enhance students' understanding of microbial nutrition and to encourage a healthy competitive spirit among them. This interactive event provided an engaging platform for students to showcase their knowledge and learn more about the nutritional requirements and metabolic processes of microorganisms.

Objectives

- To reinforce students' knowledge of microbial nutrition.

- To encourage active learning and participation among microbiology students.

- To foster a spirit of healthy competition and teamwork.

Program Summary

a. Preparation and Organization

The quiz competition was meticulously planned by the faculty members of the Department of Microbiology. The quiz content was designed to cover various aspects of microbial nutrition, including macronutrients, micronutrients, growth factors, and metabolic pathways. Students were informed about the competition in advance and were encouraged to prepare thoroughly.

b. Participants

The competition was open to all 3 Years microbiology students, and a total of 36 students participated. The participants were divided into 06 teams, each consisting of 6 members. This team-based approach encouraged collaboration and collective problem-solving.

c. Quiz Format

The quiz was structured into multiple rounds, each testing different aspects of microbial nutrition:

1. Preliminary Round

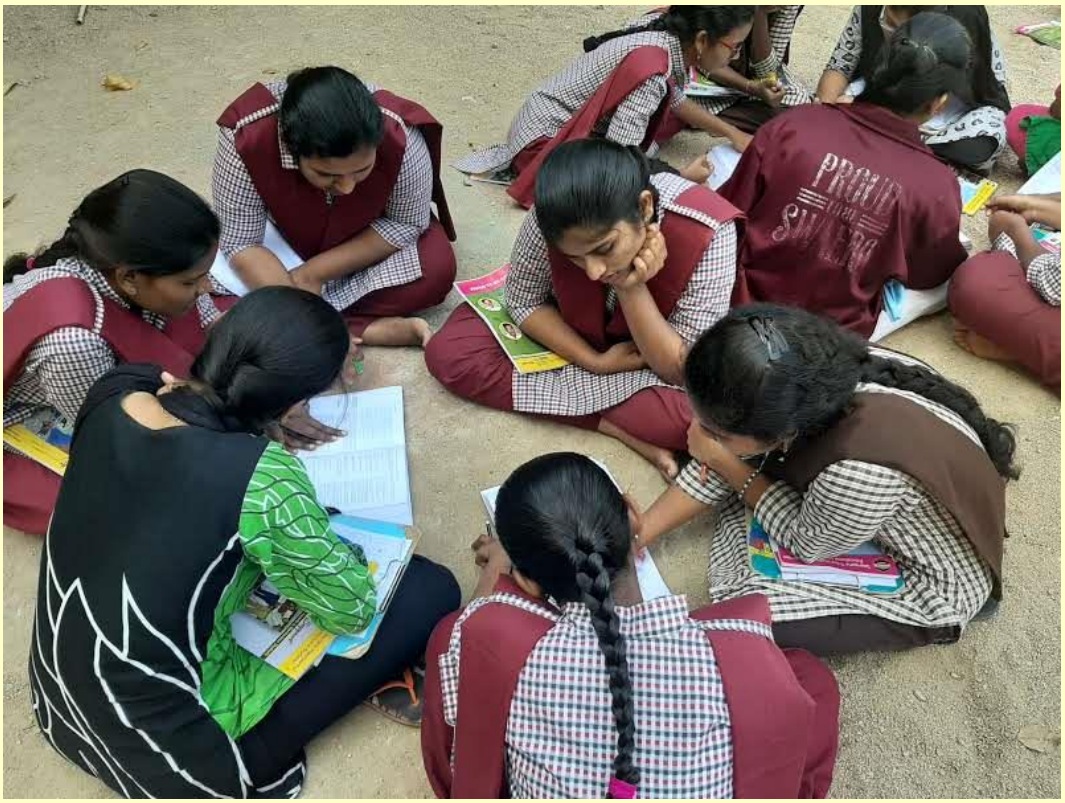
- A written test consisting of multiple-choice questions (MCQs) to shortlist the top six teams for the next rounds.

2. Main Quiz Rounds

- Round 1: Basic Concepts - Questions on the fundamental concepts of microbial nutrition.

- Round 2: Nutrient Uptake and Transport - Focused on the mechanisms of nutrient uptake and transport in microorganisms.

- Round 3: Metabolic Pathways - In-depth questions about the metabolic pathways involved in microbial nutrition.



3. Final Round

- A rapid-fire round with challenging questions to test the quick thinking and depth of knowledge of the top three teams.

d. Judging and Scoring

The quiz was judged by a panel of faculty members from the Department of Microbiology and Department of Zoology. Points were awarded based on the accuracy and speed of the responses. The scores from each round were tallied to determine the winning team.

Teaching-Learning Methods-

Collaborative learning- Students are learning in the peer and actively participating in the session.

Results and Awards

- First Place: Team 2

- Second Place: Team 1

- Third Place: Team 3

The winning teams were awarded with cash prizes.

Outcomes

Enhanced Knowledge: The quiz competition significantly enhanced students' understanding of microbial nutrition.

Skill Development: Participants improved their critical thinking, problem-solving, and teamwork skills.

Increased Engagement: The interactive format of the quiz fostered greater interest and engagement in the subject matter.

Feedback and Future Recommendations

Feedback from participants and faculty was overwhelmingly positive. Students appreciated the opportunity to test their knowledge in a competitive yet supportive environment. Suggestions for future events included:

- Organizing similar quizzes on other microbiology topics.

- Increasing the frequency of such competitions.

- Incorporating more interactive elements, such as practical demonstrations.

Acknowledgements

The Department of Microbiology extends its gratitude to all the participants, faculty members, and organizing committee for their efforts in making this event a success. Special thanks to the judging panel for their valuable contributions and to the administration for their support.

TEACHING THROUGH ICT-PPT

Date: February 26, 2020

Introduction

On February 26, 2020, the Department of Microbiology conducted an informative class on Pneumococcal Strains for 2nd year microbiology students. The session utilized Information and Communication Technology (ICT) tools, specifically a PowerPoint presentation (PPT), to enhance the learning experience and provide a comprehensive understanding of the topic.

Objectives

- To educate students about the different strains of Streptococcus pneumoniae (pneumococcus).
- To utilize ICT tools to make the learning process more engaging and effective.
- To highlight the clinical significance, epidemiology, and prevention of pneumococcal infections.

Class Summary

Preparation and Organization

The class prepared by the faculty K.Rajani of the Department of Microbiology. A detailed PowerPoint presentation was created, incorporating images, charts, and diagrams to visually represent key concepts related to pneumococcal strains.

The class covered the following key topics:

1. Introduction to Streptococcus pneumoniae

- Overview of the bacterium, its morphology, and general characteristics.

2. Classification of Pneumococcal Strains

- Detailed explanation of the different serotypes of pneumococcal strains.
- Discussion on the genetic diversity and virulence factors of various strains.

3. Epidemiology

- Global and regional prevalence of different pneumococcal strains.
- Epidemiological trends and patterns in pneumococcal infections.

4. Pathogenesis and Clinical Manifestations

- Mechanisms of infection and disease caused by different strains.

- Common clinical presentations, including pneumonia, meningitis, and otitis media.

5. Diagnosis and Laboratory Identification

- Laboratory techniques for identifying and differentiating pneumococcal strains.

- Use of molecular methods and serotyping.

6. Prevention and Vaccination

- Overview of pneumococcal vaccines, including PPSV23 and PCV13.

- Efficacy and recommendations for vaccination programs.

Teaching Methods

-PowerPoint Presentation (PPT): The main teaching tool, featuring slides with text, images, and diagrams to illustrate key points.

-Interactive Q&A: Students were encouraged to ask questions throughout the presentation, fostering an interactive learning environment.

- Case Studies: Real-life case studies were presented to highlight the clinical relevance and application of the information.

TEACHING-LEARNING PRACTICES:

- **Active Learning-**Students involved in the program by making their own notes, PPTs and through Q &A session they have participated in the session.

Outcomes

-Enhanced Understanding: Students gained a thorough understanding of pneumococcal strains, their clinical significance, and prevention strategies.

-Engagement: The use of ICT tools, particularly the visually appealing PPT, kept students engaged and facilitated better comprehension.

-Interactive Learning: The interactive Q&A sessions encouraged active participation and helped clarify doubts in real-time.

Feedback and Recommendations

Feedback from students was highly positive. They appreciated the visual aids and interactive format, which made complex information easier to grasp. Recommendations for future classes included:

- Incorporating more multimedia elements, such as videos and animations, to further enhance understanding.

- Providing access to the PPT slides after the class for review and study purposes.

Conclusion

The class on Pneumococcal Strains, utilizing ICT PPT tools, was a successful educational initiative. It achieved its objectives of enhancing knowledge, engaging students, and promoting interactive learning. The positive feedback and active participation of students underscored the effectiveness of integrating ICT tools in the teaching process.

STUDENT SEMINAR
ON THE TOPIC PRIMARY STRUCTURE OF DNA

Date: March 03, 2020

Introduction

On March 03, 2020, the Department of Microbiology hosted a student seminar on the topic "Structure of DNA." The seminar was presented by Bhukya Jyothi, a 2nd Yr MZC microbiology student. The objective of the seminar was to deepen the understanding of DNA's structure among students and to provide a platform for student-led learning and presentation.

Objectives

- To explain the detailed structure of DNA.

- To discuss the historical discoveries leading to the understanding of DNA structure.

- To enhance students' presentation and communication skills.

Seminar Summary

a. Preparation and Organization

The seminar was well-prepared by [Student's Name] with guidance from faculty mentors. The presentation included a PowerPoint slide deck, visual aids, and a Q&A session. The seminar was attended by students and faculty members of the Department of Microbiology.

b. Content Covered

The seminar was structured to cover the following key topics:

1. Introduction to DNA

- Basic definition and significance of DNA in living organisms.
- The role of DNA in heredity and genetic information storage.

2. Historical Background

- Discovery of DNA by Friedrich Miescher in 1869.

- Key experiments leading to the understanding of DNA structure, including the contributions of Rosalind Franklin, James Watson, and Francis Crick.

3. Chemical Composition of DNA

- Description of nucleotides, the building blocks of DNA.

- Detailed explanation of the components of a nucleotide: phosphate group, deoxyribose sugar, and nitrogenous bases (adenine, thymine, cytosine, and guanine).

4. Double Helix Structure

- Watson and Crick's model of the DNA double helix.

- Description of the antiparallel strands and the helical shape.

- Hydrogen bonding between complementary bases (A-T and C-G).

c. Interactive Q&A Session

Following the presentation, an interactive Q&A session was held. Students asked questions related to DNA structure and historical experiments.

The presenter, B.Jyothi, along with the faculty, provided detailed answers, further enriching the learning experience.

TEACHING-LEARNING PRACTICES:

- **Active Learning-**Students involved in the program by making their own notes, PPTs and through Q &A session they have participated in the session.

Participation

The seminar saw active participation from around 24 students. The engaging presentation and the subsequent Q&A session highlighted the students' interest in the topic and their eagerness to learn.

Outcomes

Enhanced Understanding: Students gained a comprehensive understanding of the structure of DNA and its biological significance.

Presentation Skill: The presenting student, Bhukya Jyothi, showcased excellent presentation skills, setting a benchmark for peers.

Interactive Learning: The interactive format encouraged active participation and facilitated a deeper exploration of the topic.

Feedback and Future Recommendations

Feedback from attendees was highly positive. Students appreciated the clarity and depth of the presentation. Some recommendations for future seminars included:

- Incorporating more interactive elements such as quizzes or live demonstrations.

- Expanding the topics to include more advanced aspects of molecular biology.

THANK YOU