

Dept. of Microbiology
Best Practice No. I
A BACTERIUM PER WEEK

Objective of the Practice:

1. To make the students familiar with the scientific names of bacteria.
2. To create curiosity about the organism.
3. To enable the students to learn and memorize the names of important bacteria.

The Context:

- Bacteria are unicellular and ultra-microscopic organisms, yet they play an important role in nature. They are of tremendous importance to man.
- They play an important role in agriculture, medicine, environment, industries etc. Some are beneficial to man directly or indirectly, few others are very harmful as they cause various plant and animal diseases.
- Microbiology students study about bacteria that are important in various branches of microbiology.
- Hence, it is essential for a microbiology student to learn the scientific names of bacteria in addition to their common names during their course of study. By displaying the scientific name of a bacterium in week they are able to remember it properly.

The practice:

- Name of a bacterium is displayed in the class room and on the notice board.

Evidence of Success:

- Students are able to remember the names of bacteria that are displayed.

Problems encountered and Resources:

- Problems encountered are nil.
- Scientific names of bacteria are taken from the resource is from <http://www.bacterio.net/>

List of Scientific names of Bacteria displayed

- *Escherichia Coli*
- *Clostridium Botulinum*
- *Bacillus subtilis*
- *Bacillus anthracis*
- *Enterococcus faecalis*

- *Lactobacillus Acidophilus*
- *Lactococcuslactis*
- *Bifidobacteriumbifidum*
- *Leuconostocmesenteteroides*
- *Azotobactervinelandii*
- *Bacillus Thuringiensis*
- *Clostridium tetani*
- *Corynebacteriumdiphtheriae*
- *Haemophilusinfluenzae*
- *Klebsiellapneumoniae*
- *Lactococcuslactis*
- *Mycobacterium tuberculosis*
- *Neisseria gonorrhoeae*
- *Pseudomonas aeruginosa*
- *Pseudomonas putida*
- *Rhizobium leguminosarum*
- *Salmonella typhimurium*
- *Shigelladysenteriae*
- *Streptococcus pneumoniae*
- *Staphylococcus aureus*
- *Staphylococcus epidermidis*
- *Streptococcus faecalis*
- *Treponemapallidum*
- *Vibrio cholerae*
- *Pseudomonas Aeruginosa*

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Dept. of Microbiology
Best Practice No. II
CONDUCTING BLOOD GROUPING CAMPS

Objective of the Practice:

1. To inculcate a sense of social responsibility among students.
2. To make the students to extend their knowledge and skills towards welfare of people around them in the society.

The Context:

- Students, staff and public are addressed regarding importance of blood grouping. Many people don't know what bloodtype they have.
- There are several reasons that everyone should know their blood groups because to avoid incompatible blood transfusion during medical emergencies or other medical need.
- Getting an incompatible blood type can cause blood cells to clump, which is life-threatening. Rh-incompatibility in pregnant women leads to hemolytic disease or hemolytic anemia, and it can be very serious for the baby.
- One of the most valuable reasons to know about our blood type is to help others as there is a constant need for blood donations. It's important to know our blood type so that we can donate blood to others during emergency and when there is low supply particular blood group.
- Knowing Hemoglobin percentage is very important as low concentration of
- hemoglobin leads to anemia which drastically affects the general health.

The practice:

- Identifying the blood group of individuals by BSc Microbiology students at blood grouping camps.

Evidence of Success:

- Appreciation from staff, students and public

Problems encountered and Resources:

- Staff, students, NGOs and blood grouping kits etc

Academic year 2014 to 15

Blood Grouping Camp to Non Teaching Staff By I Year Students On 12-08-2014



Academic year 2017 to 18

Blood Grouping Camp At Kurnutala Village On 10-01-2018

The camp was conducted for villagers where identification of blood groups and estimation of hemoglobin was done. Staff gave the suggestions to the villagers who are identified with anemia



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Dept. of Microbiology
Best Practice No. III
SAMISHTI LECTURES

Objective of the Practice:

1. To enrich a course through the inclusion of relevant, specialized knowledge which that course's normal lecturer does not possess.

Context:

- A Samishti lecture is given by a faculty member who possesses advanced knowledge and expertise of a particular subject area within the college.
- Generally, the purpose of this arrangement is to enrich a course through the inclusion of relevant, specialized knowledge which that course's normal lecturer does not possess.
- For instance, a teacher teaching a course in Botany or Zoology may invite a colleague from Microbiology department to deliver a guest lecture on cultivation of microorganisms.
- The information contained in the lecture may then broaden students' understanding of growth requirements and cultivation techniques of microorganisms

The practice:

- Some interdisciplinary topics are covered by inviting a teacher from other departments who has expertise in that particular topic.

Evidence of Success:

- The lectures are with admiration by the students.

Problems encountered and Resources:

- Staff, students, Laboratory equipment, ICT tools.

Academic year 2014 to 15


SAMISSI
Name of the activity (To Botany department)

Topic: Sterilization by physical & chemical methods
Name of the department: Microbiology (Department of Botany)

Date: 19/8/14
Time: 2:30 - 3:45 PM

Concerned lecturer/Guest lecturer/Resource person: C. Madhavi (Microbiology)

Participants: B. Sc. Students



Description in 4 lines:
The process of complete elimination or killing of microorganisms is called sterilization. This can be achieved by physical methods (Ex: Autoclave, Hot air oven, laminar air flow cabinet) on the basis of the principle filtration.

Signature of principal: _____
Signature of lecturer: C. Madhavi
19/8/14


SAMISSI
Name of the activity (By Dep. of Biotechnology)

Topic: SYNTHESIS OF RNA
Name of the department: Biotechnology

Date: 21/10/14
Time: 11-12 AM

Concerned lecturer/Guest lecturer/Resource person: Smt. K. Geethanjali
Lecturer in Biotechnology, G.C.W.

Participants: B. Sc. Students



Description in 4 lines:
DNA is the genetic material in some virus. Alkaline end which is present in living organisms are of 3 types: (1) N RNA (2) mRNA (3) t RNA. These types of RNA play an important role in protein synthesis.

Signature of principal: _____
Signature of lecturer: _____


SAMISSI
Name of the activity (To Department of Zoology)

Topic: Gene cloning principles & applications
Name of the department: Microbiology

Date: 25.10.2014
Time: 10-11 AM

Concerned lecturer/Guest lecturer/Resource person: C. MADHAVI
Lecturer in Microbiology, G.C.W.

Participants: III B.Sc. 'C' section



Description in 4 lines:
"Gene cloning principles & applications" were discussed in detail. Synthesis of new genes (or, new form) is called genetic engineering. The organisms that are genetically engineered with the foreigner are called transgenics.

Signature of principal: _____
Signature of lecturer: C. Madhavi
25/10/14


SAMISSI
Name of the activity

Topic: General characters of bacteria
Name of the department: Microbiology

Date: 21/10/14
Time: 11-12 AM

Concerned lecturer/Guest lecturer/Resource person: Bro. K. Sushritha
I, B, B3, B5 & C (Religion teacher)

Participants: B. Sc. Students



Description in 4 lines:
A class was taken for Botany students on General characteristics of bacteria under Sem IV program. Nutrition, metabolism, reproduction and economic importance of bacteria were discussed.

Signature of principal: _____
Signature of lecturer: Bro. K. Sushritha
21-10-14
(B. BALI REDDY)

Academic year 2015 to 16

Academic year 2016 to 17

Activity: A guest lecture on Applications of microbiology was given under Samishtiprogramme.

Name of the Lecturer: Dr. K. Sucharita

Class: I Semester B.Sc BZC

Date : 16-10-15



Activity: A Samishti class on General Characters of Algae was given by Mrs. D. Uma, Lecturer in Botany to I BSc MZC & BZC students

Name of the Lecturer: Dr. K. Sucharita

Class: I Semester B.Sc BZC

Date : 30-09-16



Activity: A Samishti class on A class on DNA Finger printing to I MSc Zoology students

Name of the Lecturer: Dr. K. Sucharita

Class: IM.Sc Zoology Students

Date : 28-10-16



Academic year 2017 to 18

Objective of the programme:

Interdisciplinary Departmental activity on 07. Sep.2017

Participants:

B.Z.C (EM) and (TM) students



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Dept. of Microbiology
Best Practice No. IV
**Conducting Extension Activities To Develop Interest And
Scientific Attitude Among School Children.**

Objective of the Practice:

1. To develop interest and scientific attitude among school children.
2. To encourage the students to disseminate their knowledge in the society and create scientific temperament in the society.

Context:

- Many schools especially government schools do not have proper practical exposure or advanced learning techniques due to lack of proper facilities in the school.
- As part of institutional social responsibility our College has adopted few schools in the surrounding. This activity was introduced in 2017 academic year

The practice:

- We are bringing these school children to our laboratory providing the activity based learning experiences.
- Our students are educating them by giving PPT presentations and talks about health and hygiene. We are also conducting competitions and distributing prizes to encourage them to develop scientific attitude.

Evidence of Success:

- Appreciation from staff and students of the school. Able to motivate to pursue their future education in the field of science and research

Problems encountered and Resources:

- Staff, students, Laboratory equipment, ICT tools.

Creating Awareness on Health and Hygiene to Govt Primary School Children on 10-01-18



Explaining About Microorganisms to J.R.M Municipal High Schools Students



**PPT presentation To J.R.M Municipal High Schools Students By
III B.sc Student S. Swati on Water borne diseases**



**Elocution competitions to J.R.M municipal High School
Students In View Of National Science Day On 28-02-018**



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