



Grade 9





Applications of Micro – organisms

Activity : **1. Let's Identify our enemies that can't be seen**

Materials necessary : Articles News Papers, Magazine, Internet facilities

Procedure :

- Explore about following diseases using different information sources.
 - Dengue, AIDS, Tuberculosis, Malaria
- Topics to be explored
 - Casuative agent (pathogen)
 - Disease vectors (spreading method)
 - The method how pathogen enters into our body
 - Disease symptoms
 - Number of annual deaths recorded due to the disease
 - Actions that can be taken / are taken to control spreading of the disease and to suppress the disease.
- Using collected information under each topic prepare a report about these diseases.
- Mark on a Sri Lanka map the areas where above diseases are spreaded widely

Activity : **2. Lets make unseen enemies friends**

Materials necessary : Articles News Papers, Internet facilities

Procedure :

- Explore about following topics using different information sources.
 - Beneficial effects of micro-organisms to man
 - Use of Gene Technology
 - Making compost
 - Producing anti biotic
 - Use of micro-organisms for industries
 - Production of bio gas
 - Prepare an attractive booklet using information you found.
 - Prepare a power point presentation using above information



- Make a table that contain sources of information you used to find information.
 - Ex :- 1919 / Government information centre / hand bills of department of agriculture
 - www.biogas.co.ke / www.biogas.info.uk

Activity : **3. Let's make a rope using fibers.**

Materials necessary : Coconut husk

Procedure :

- Soak some coconut husk in water for about week. (Take actions to prevent breeding of mosquitoes when soaking coconut husk in water)
- Beat coconust husks and separate fibres with guidance of adults.
- Try to beat and segregate fibres from coconut husk which were not soaked in water.
- Observe the nature of fibres obtained by both ways.
- Write a report on conviniences and inconvrniences you faced when obtaining fibres from both ways.
- Make a coir rope using dried coir fibres with the assistance of adults.
- Try to make few creations using ropes you made.

Assignment : **1. Answer the following questions**

1. Which method was easy, that you used to separate fibres by crushing coconut husk ?
2. What is the group of micro-organism that growing in the coconut husk when it rotted in water
3. Briefly described the activity of that living organisms on coconut husk.
 - If there are coconut or any other plant fiber factories in your area, write and article about plant fiber productions by gain experience through field trip.



- Activity : **4. Let's find information about COVID – 19**
- You will need : Articles, News papers, Magazine, leaflets from health department, Radio and Television, Internet facility
- Method : Prepare a booklet about new coronavirus disease by including following informations
- Scientific information about the virus
 - Symptomts of disease
 - Identification test for disease
 - The way of spreading the disease
 - High risk person of disease
 - About corona disease spread in world
 - The actions and rules that has taken to control the disease
 - Informations related to corona disease spread in Sri lanka
 - What can you do to prevent the spread of disease ?

Write the answers for following questions

- (a) Name four beneficial effects of micro-organisms to human
 - (b) Write examples for eachother.
 - (c) State the reasons that why you should not take the antibiotics without medical advice
- (a) State adverse effects of micro-organisms to human
 - (b) Covid – 19 caused by a virus. State actions briefly that can be done to control it.
 - (c) State why it is important a vaccine to control the COVID – 19
3. Bacteria and fungi are group of micro – organisms. State the similarities and dissimilarities between bacteria and fungi.
4. There is a opinion, soil infertility is caused by adding chemical fertilizers and pesticides in overdose. State the way of cause soil infertility by affecting the microbial activity.