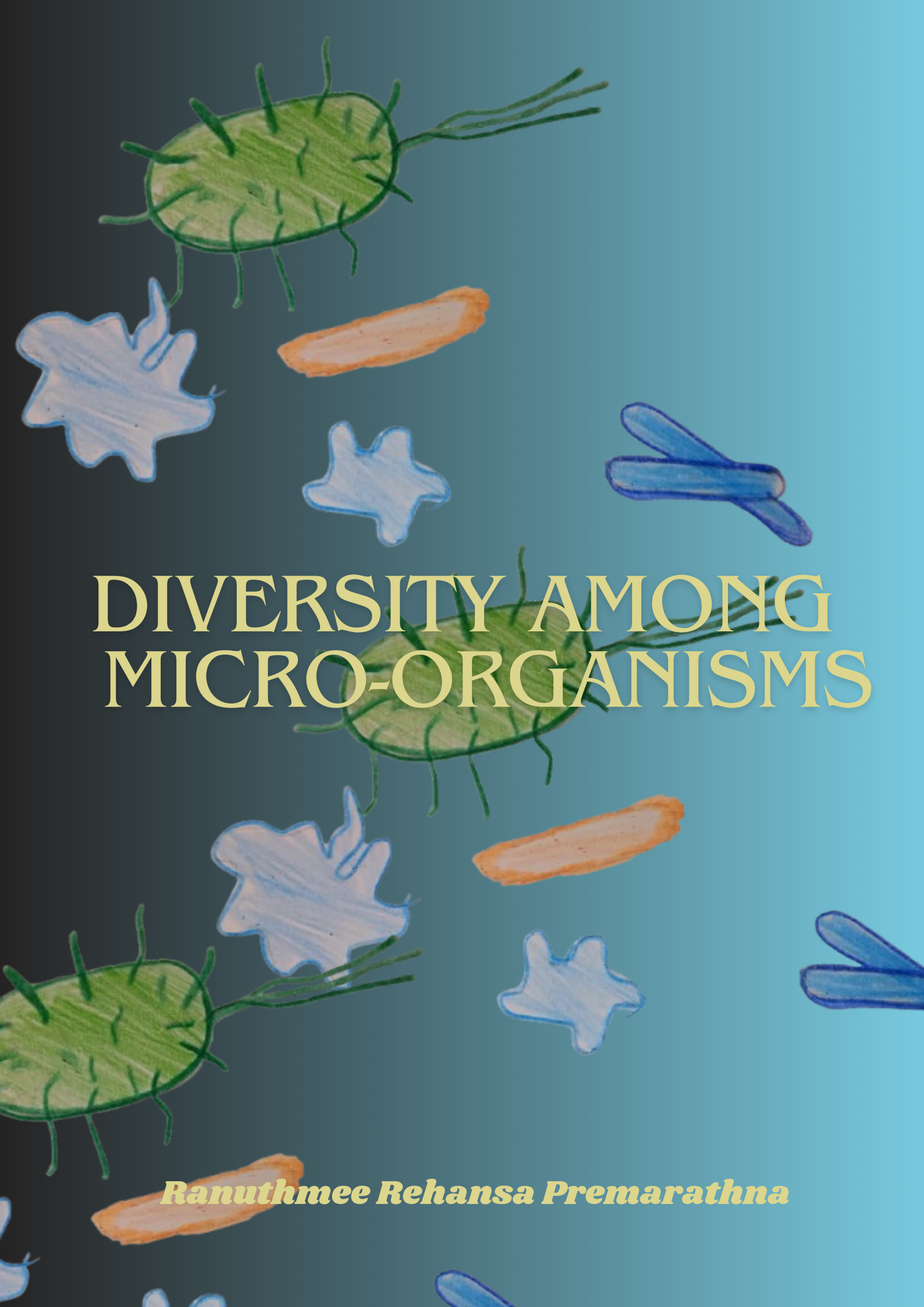
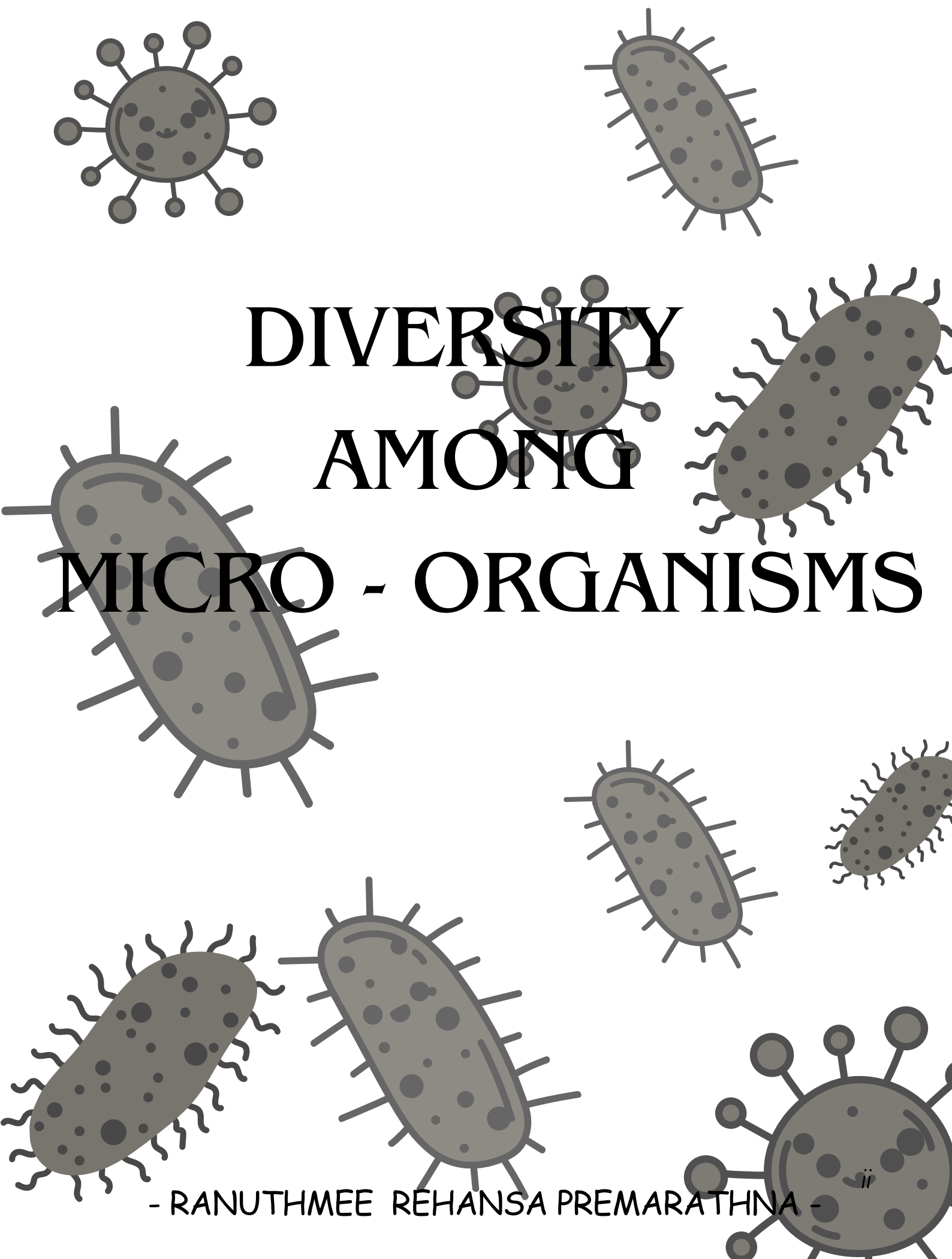


The background of the slide is a light blue gradient. It is decorated with several hand-drawn illustrations of microorganisms. There are green, oval-shaped organisms with many short, thin flagella and a few longer ones. There are also orange, rod-shaped organisms. Some organisms are blue, including one with a Y-shape and others with star-like or irregular shapes. The text 'DIVERSITY AMONG MICRO-ORGANISMS' is written in a large, yellow, serif font, centered on the slide. Below the title, the author's name 'Ranuthmee Rehansa Premarathna' is written in a smaller, yellow, italicized serif font.

DIVERSITY AMONG MICRO-ORGANISMS

Ranuthmee Rehansa Premarathna



DIVERSITY AMONG MICRO - ORGANISMS

- RANUTHMEE REHANSA PREMARATHNA -

DIVERSITY AMONG MICRO ORGANISMS

Ranuthmee Rehansa Premarathna
(Author)

Author' s other publications

- අත්පොත නිවස

ISBN - 978 - 624 - 211 - 071 - 4

School -Mahamaya Girls' College - Kandy

Class -8E

Date of the publication of the book - 2026.05.10

Dedication

To my loving parents, for their endless support and strength.

*To my dear brother, for being my constant
friend.*

To my inspiring science teacher, for lighting the path of knowledge.

*And to all who study science—keep questioning, discovering,
and shining bright.*

✨ ✨ With gratitude and curiosity ✨ ✨

Foreword



In an increasingly complex global future, the "Hemamala Upahara" book project, led by Mahamaya Girls' College, stands as a turning point in girls' education. Over a decade, it has successfully nurtured thousands of children to become young authors.

This year, by collaborating with other schools, we aimed to provide students with a wealth of new experiences. The goal was to develop multi-faceted skills, including communication, values, and creative growth. As a result, children have written books that pay tribute to Princess Hemamala, who brought the Sacred Tooth Relic—the supreme symbol of the Buddhist world—to the Hill Country (Kandy).

I extend my gratitude to everyone involved, including the students who contributed their creativity and the teachers who guided them.

Shashikala Senadhira

Principal

Mahamaya Girls' College

Congratulatory Message

It is a great honor for me, as the Governor of the Central Province, to send a congratulatory message for the launch of the books created through the Hemamala Tribute Book Creation Project initiated by Mahamaya Girls' College, Kandy.

Education is the fundamental foundation for the progress of society, and it is further strengthened through books and literary creations. It is clearly commendable that students' talents, creativity, and intellectual abilities are emerging through projects such as this.

I believe that this book creation project will provide valuable knowledge and a precious literary contribution not only to the students but to the entire society. Furthermore, I hope that through such efforts, future writers who will bring pride to Sri Lanka will emerge.

I extend my heartfelt appreciation and blessings to the Principal, the academic staff, the students, and everyone involved who dedicated themselves to this successful endeavor. I wish this project and the book launch ceremony great success.

Sarath B.S. Abeykoon
Governor, Central Province
Emeritus Professor, University of Peradeniya
2026-05-10
Congratulatory Message

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Congratulatory Message

I highly appreciate the noble and outstanding effort of the Principal and the academic staff of Mahamaya Girls' College, Kandy, the student daughters, the students of other participating schools, and everyone who dedicated themselves to plan and implement this book publication project. The project was organized under the leadership of Mahamaya Girls' College, Kandy, with the participation of other schools in the Kandy Zone, with the aim of encouraging children toward book creation within the current school system, as a tribute to Hemamala Kumariya who brought the Sacred Tooth Relic to Sri Lanka.

For several decades, Sri Lanka has been committed to providing free, compulsory, quality, and equitable education to all children, thereby producing a future generation of intelligent and skilled citizens. In such a context, this book creation program for school children helps develop creative ability, critical thinking, and other positive qualities for a balanced and well-rounded personality, and contributes to building a future knowledge-based society.

May all activities of the Hemamala Tribute Book Creation Project be successful through the blessings of the Sacred Tooth Relic.

Pradeep Nilanga Dela
Diyawadana Nilame,
Sri Dalada Maligawa.
2026.05.10.

Content

1.WHO ARE THE MICRO- ORGANISMS

2.HOW CAN BE CATEGORIES THEM

i. Based on type

ii. Based on shape

iii. Based on function

iv. Based on oxygen requirement

3. WHERE CANBE FIND THEM

4. SOME PICTURES

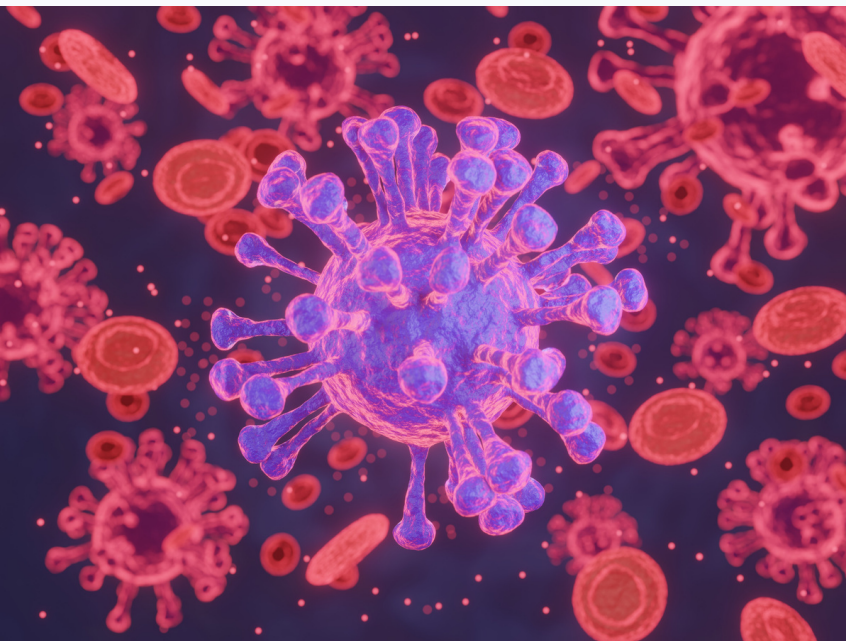
5. NOW TEST YOUR KNOWLADGE

1. Who are the microorganisms

Microorganisms are too small to be seen by our naked eye.

They can only be seen with a microscope.

They can be found everywhere - in water, air, soil and even inside our body



2. How can be categories them

1. Based on type

2. Based on shape

3. Based on function

4. Based on oxygen requirement



i. Based on type

1. *Bacteria – Single-celled, found everywhere*
2. 👉 *Example: Lactobacillus*
3. *Viruses – Very small, live only inside host cells*
4. 👉 *Example: Influenza virus*
5. *Fungi – Can be unicellular or multicellular*
6. 👉 *Example: Yeast, Mould*
7. *Protozoa – Single-celled, animal-like*
8. 👉 *Example: Amoeba*
9. *Algae – Photosynthetic microorganisms*
10. 👉 *Example: Chlamydomon*



ii. Based on shape

1. Cocci – Round or spherical
2. 👉 Example: Streptococcus
3. Bacilli – Rod-shaped
4. 👉 Example: Escherichia coli (E. coli)
5. Spirilla – Spiral-shaped
6. 👉 Example: Spirillum
7. Vibrios – Comma-shaped
8. 👉 Example: Vibrio cholerae

iii. Based on function

a) Useful Microorganisms

Help in digestion

Make food (curd, bread)

Produce medicines

👉 Example: *Lactobacillus* (makes curd)

b) Harmful Microorganisms

Cause diseases

Spoil food

👉 Example: *Plasmodium* (causes malaria)

c) Decomposers

Break down dead plants and animals

👉 Example: Bacteria and fungi

iv. Based on oxygen requirement

a) Aerobic microorganisms

Need oxygen to live

👉 Example: Mycobacterium

b) Anaerobic microorganisms

Do not need oxygen

👉 Example: Clostridium

c) Facultative anaerobes

Can live with or without oxygen

👉 Example: Yeast

3. Where can be find them

In Air

Floating dust particles

Droplets from coughing and sneezing

👉 *Example: Bacteria, viruses*

2. In Water

Rivers, lakes, ponds, seas

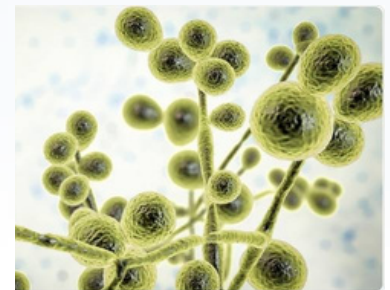
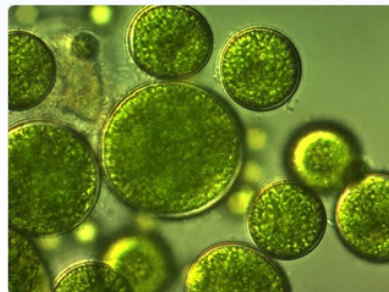
Drinking water (if not treated)

👉 *Example: Algae, bacteria*

3. In Soil

Garden soil, farmland

👉 *Example: Bacteria, fungi (help plants grow)*



4. In and On Living Organisms

Inside human body (mouth, intestine, skin)

On animals and plants

👉 Example: Helpful gut bacteria

5. On Food

Milk, bread, fruits, cooked food (if kept open)

👉 Example: Yeast, mould

6. In Extreme Environments

Hot springs 

Polar ice 

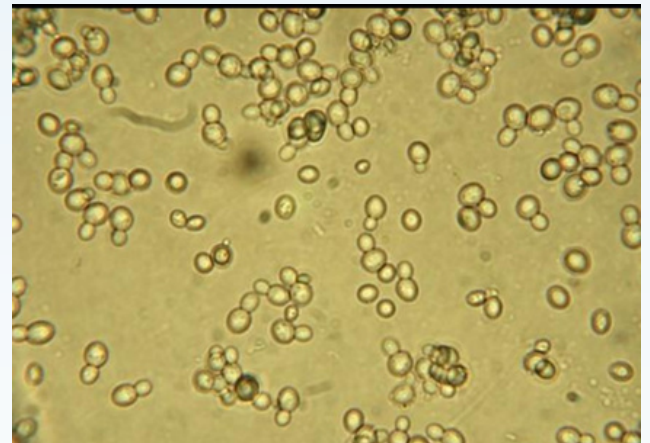
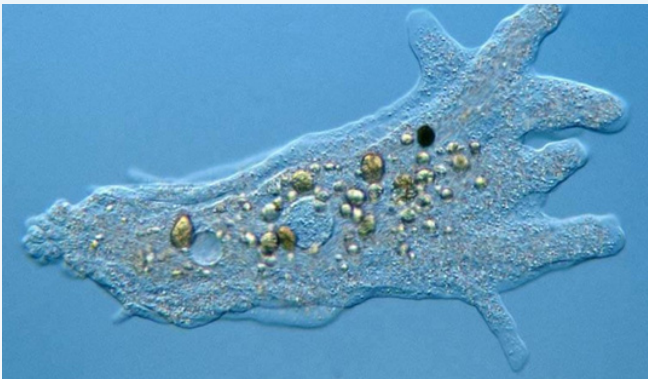
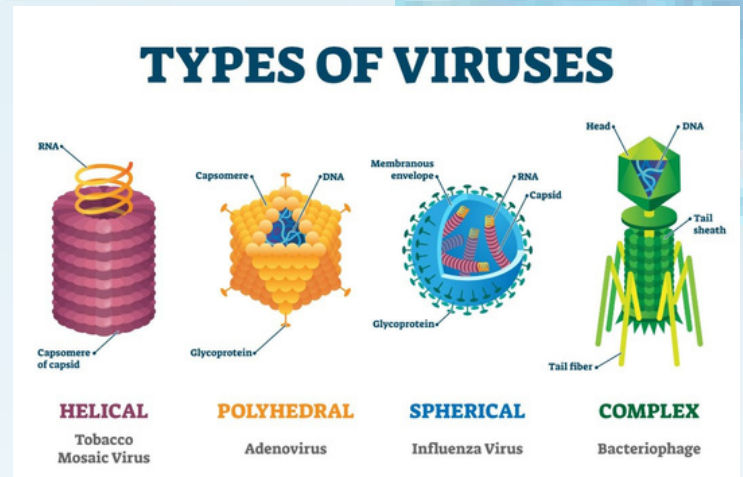
Deep oceans 

👉 Example: Special bacteria (extremophiles)

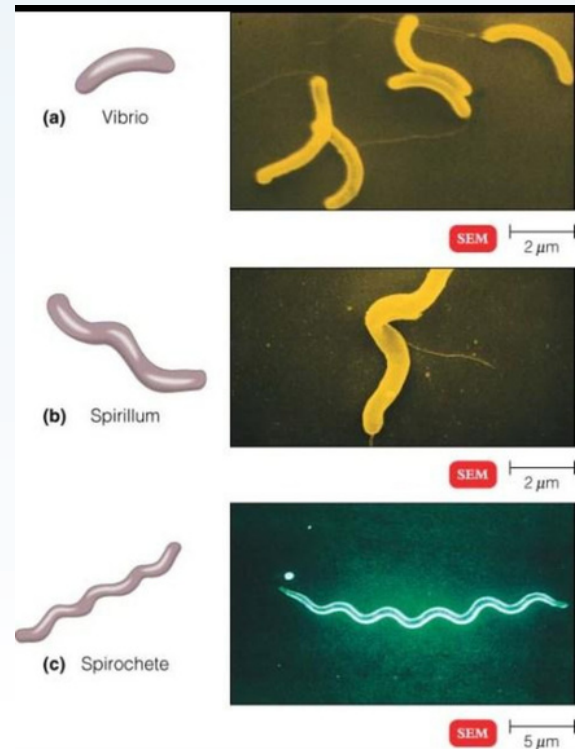
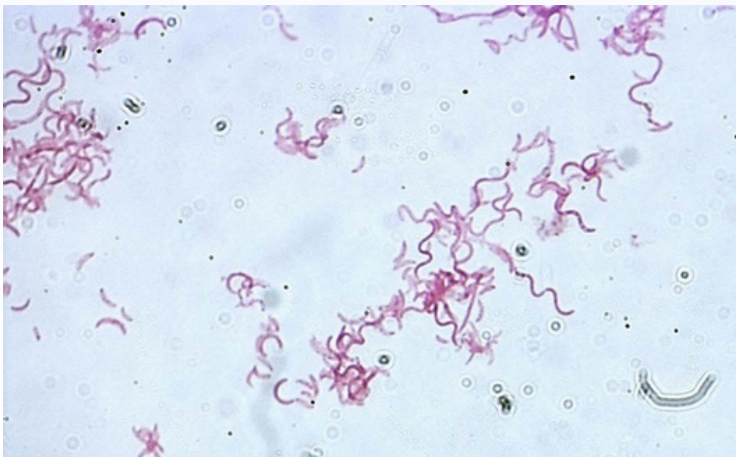
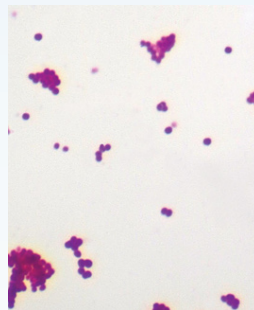
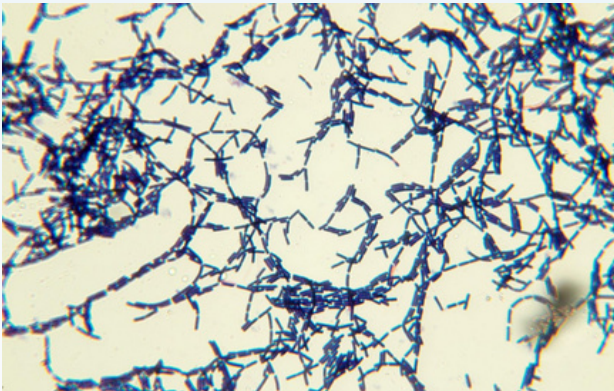
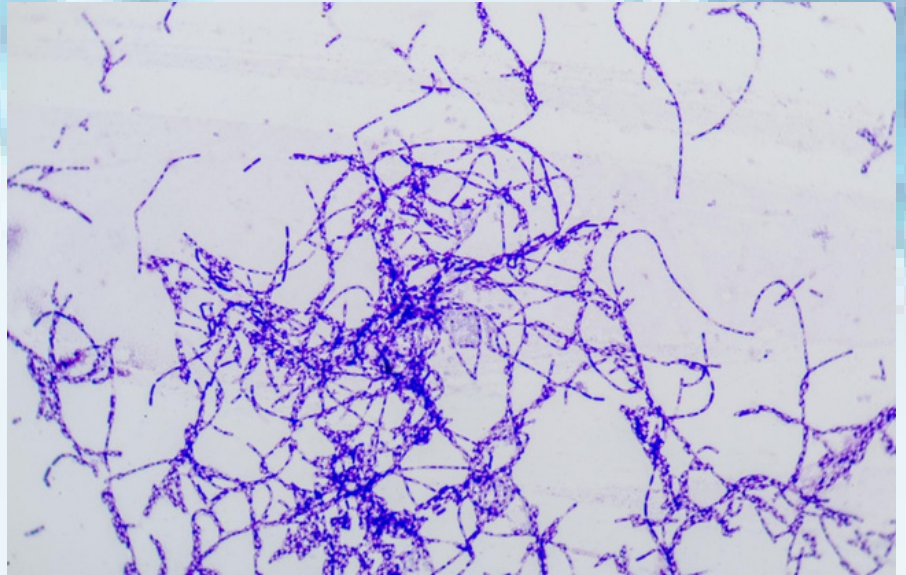
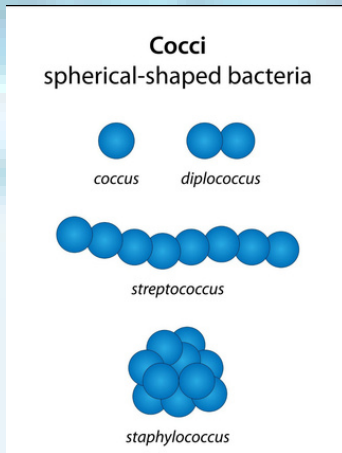


SOME **PICTURES**

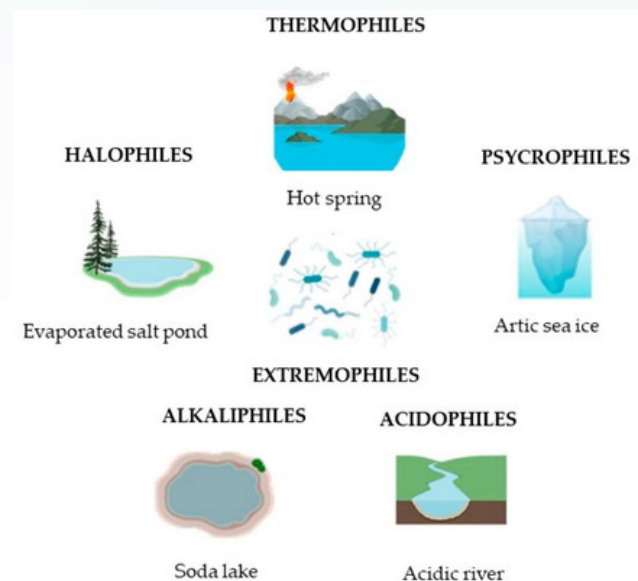
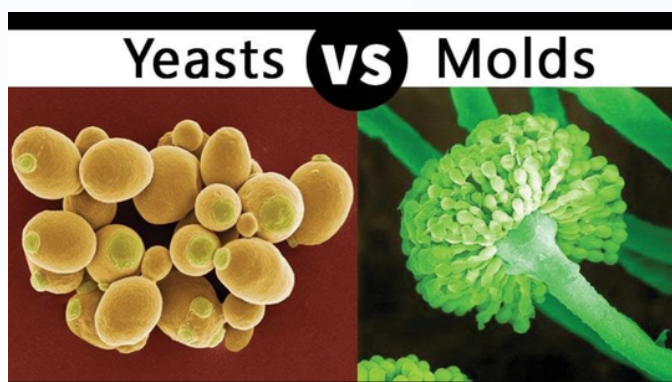
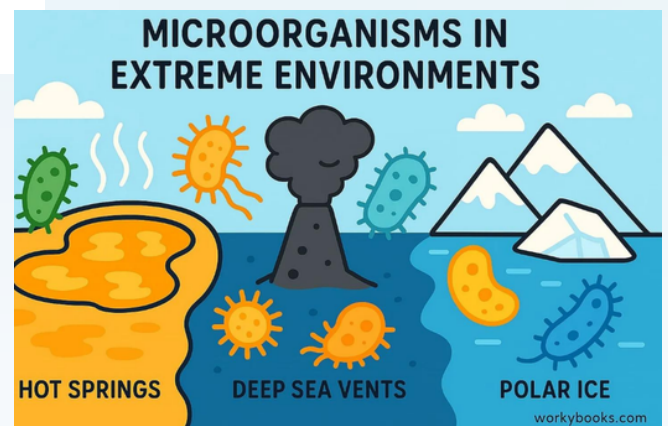
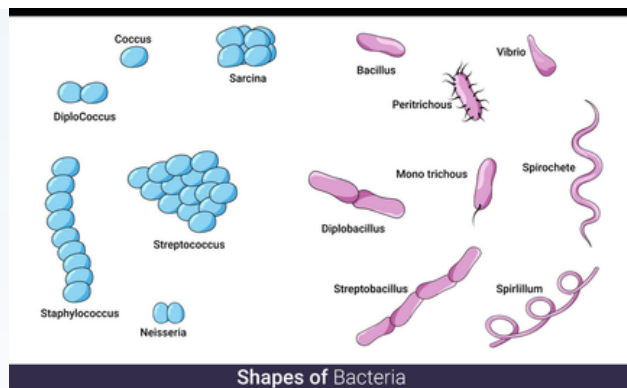
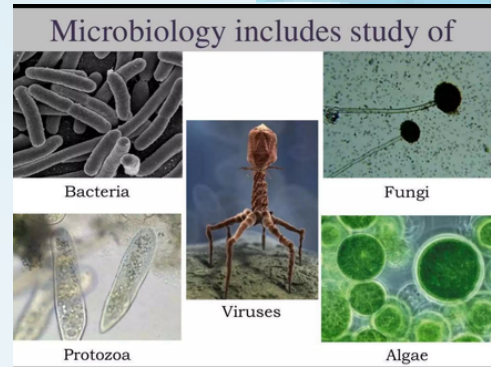
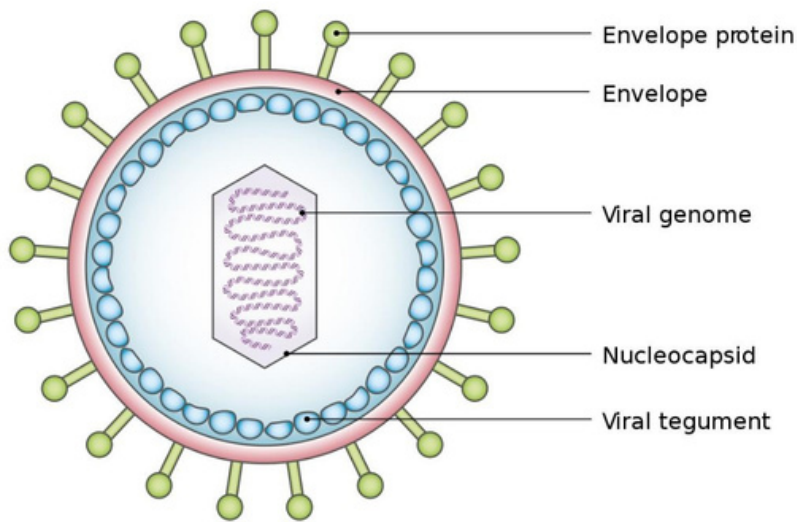
Types of micro organisms



Diversity in shape



Diversity between several Categories



Now test your knoweladge....

1 Who are the microorganisms ?



.....

.....

2 How can be categorized them ?



.....

.....

3 What are the types of micro organisms ?



.....

.....

4 How can we categorized them based on shape ?



.....

.....

5 How can we categorize them based on function ?

✓
.....

6 How can we categorize them based on oxygen rerequirement ?

✓
.....

7 Where can be find them ?

✓
.....

8 Give examples for each group

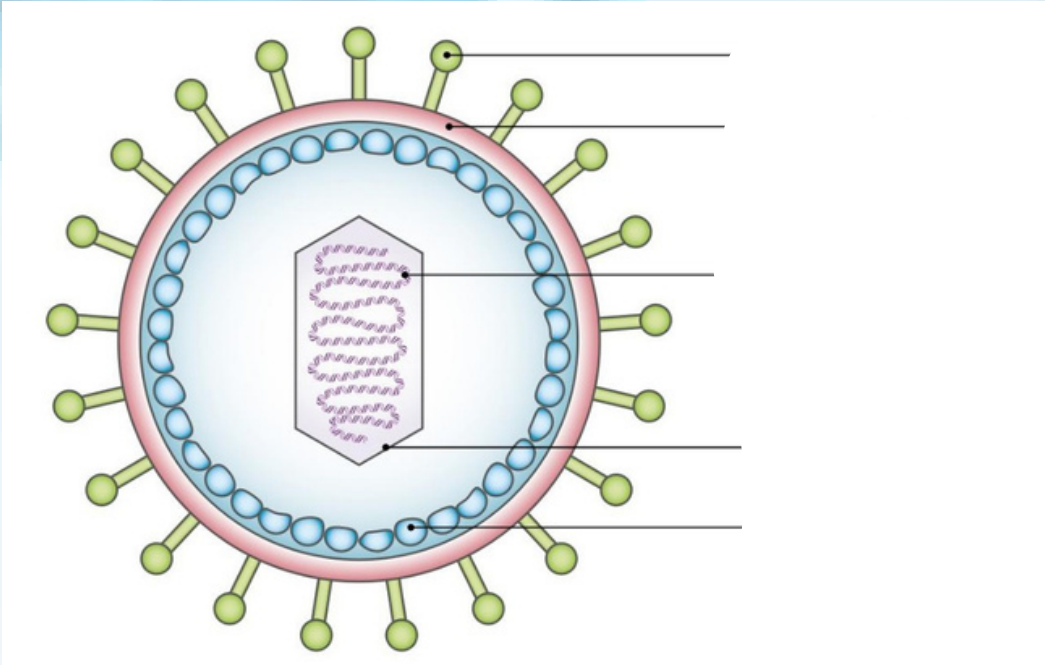
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9 What can be use to observe micro organisms ?

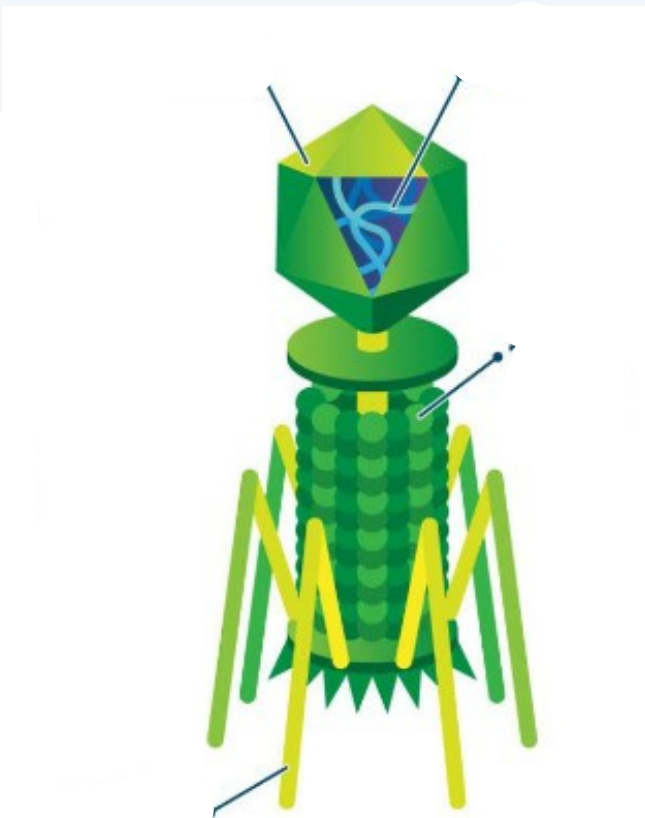
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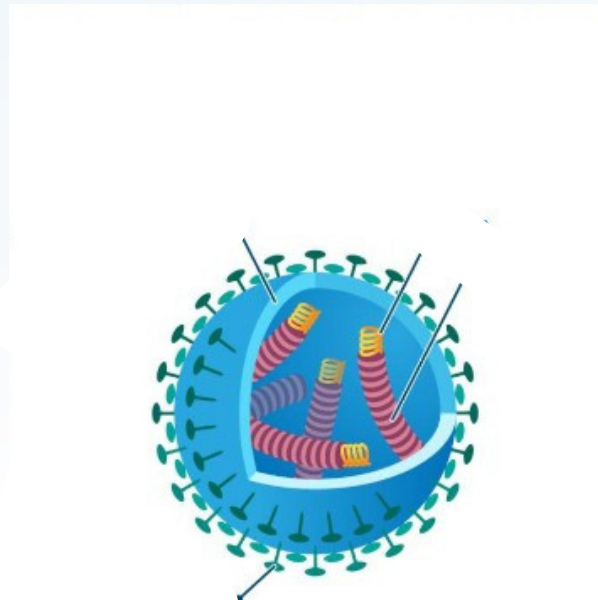
i



ii



iii



Afterword



With the approval of the Ministry of Education, this research-based project has empowered thousands of student authors for over ten years. Educationists recognize it as a program that significantly enhances the quality of school education.

In alignment with modern educational reforms, encouraging students to author a research work is a milestone in this journey. In this digital age of "Smart" technology, the modern school must demonstrate through research that books and technology should be used together. This is because the unique joy a child receives from a book cannot be replaced by anything else.

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To prevent children from drifting away from books—which remain our primary educational tool and storehouse of human knowledge—Mahamaya Girls' College has spearheaded the "Hemamala Upahara" project for many years. Its primary objectives are to foster academic discipline, promote values, and pay tribute to Princess Hemamala, who fulfilled a historic mission to empower women.

We express our gratitude to the Principal, teachers, parents, alumni of Mahamaya Girls' College, representatives of other schools, the Diyawadana Nilame, and the staff of the Sri Dalada Maligawa (Temple of the Sacred Tooth Relic) for their support.

Seneviratne Mahalekam
(Project Creator)