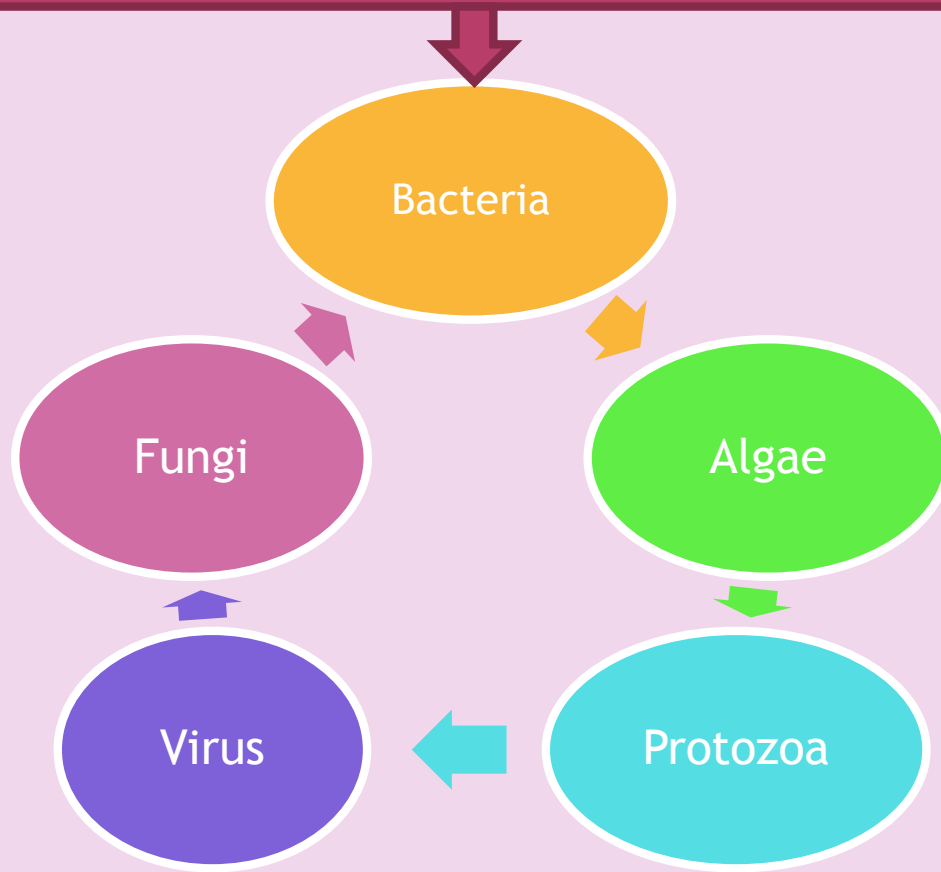




# K. L. INTERNATIONAL SCHOOL MEERUT

# MICROORGANISMS

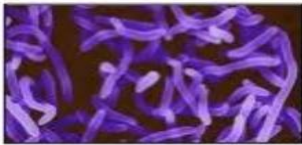
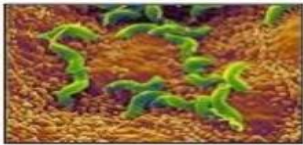
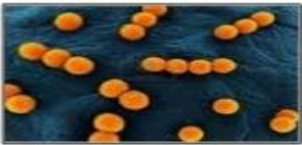
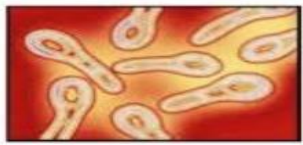
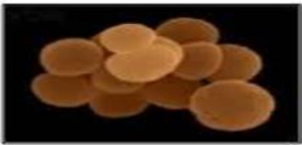
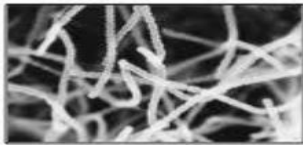
## TYPES OF MICROORGANISMS



# *BACTERIA(SINGULAR -BACTERIUM)*

Bacteria are found in three different shapes:

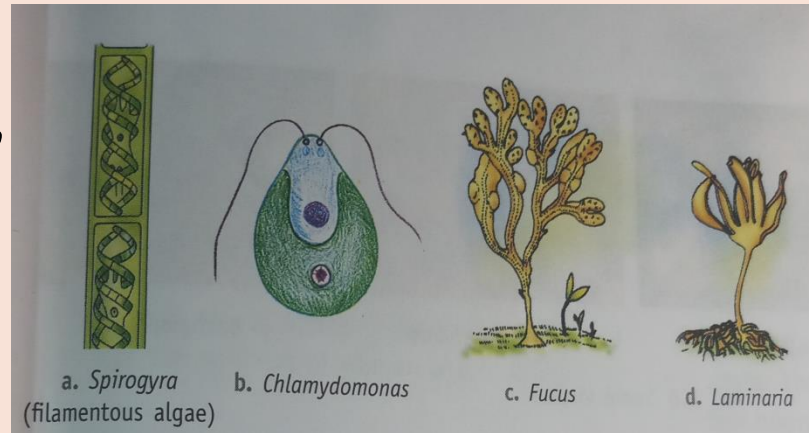
- ❖ rod shaped , called bacilli
- ❖ Spherical , called cocci
- ❖ Spiral , called spirilla

| Circular                                                                                                    | Rod-shaped                                                                                               | Curved Forms                                                                                                 | Other Shapes                                                                                                  |
|-------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------|
| <br>Diplo- (in pairs)      | <br>Coccobacilli (oval) | <br>Vibrio (curved rod)   | <br>Helicobacter (helical) |
| <br>Strepto- (in chains) | <br>Streptobacilli    | <br>Spirilla (coil)     | <br>Corynebacter (club)  |
| <br>Staphylo- (clusters) | <br>Mycobacteria      | <br>Spirochete (spiral) | <br>Streptomyces         |

# ALGAE (SINGULAR-ALGA)

## CHARACTERISTICS OF ALGAE:

- ❖ Algae are eukaryotic organisms
- ❖ Mostly photosynthetic
- ❖ They are almost marine, very few are freshwater.
- ❖ Algae can be unicellular or multicellular.
- ❖ Algae reproduce either by vegetative, asexual or sexual methods.



# PROTOZOA (SINGULAR-PROTOZOAN)

Characteristics of protozoa:

- ❑ Protozoa are unicellular
- ❑ Organisms that have animal like characteristics.
- ❑ They are eukaryotic microorganisms.
- ❑ They can move from place to place.
- ❑ Some protozoa live in fresh or salty water while others live in soil.



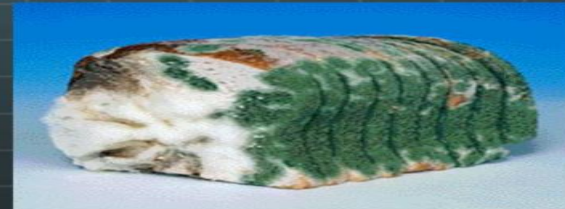
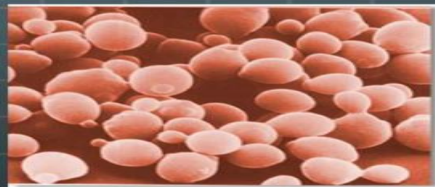
# FUNGI(SINGULAR-FUNGUS)

## Characteristics of fungi:

- Fungi are plant like organisms that do not contain chlorophyll.
- They may be unicellular or multicellular.
- They grow best in dark , warm and moist places.

 **There are Three main types of fungi:**

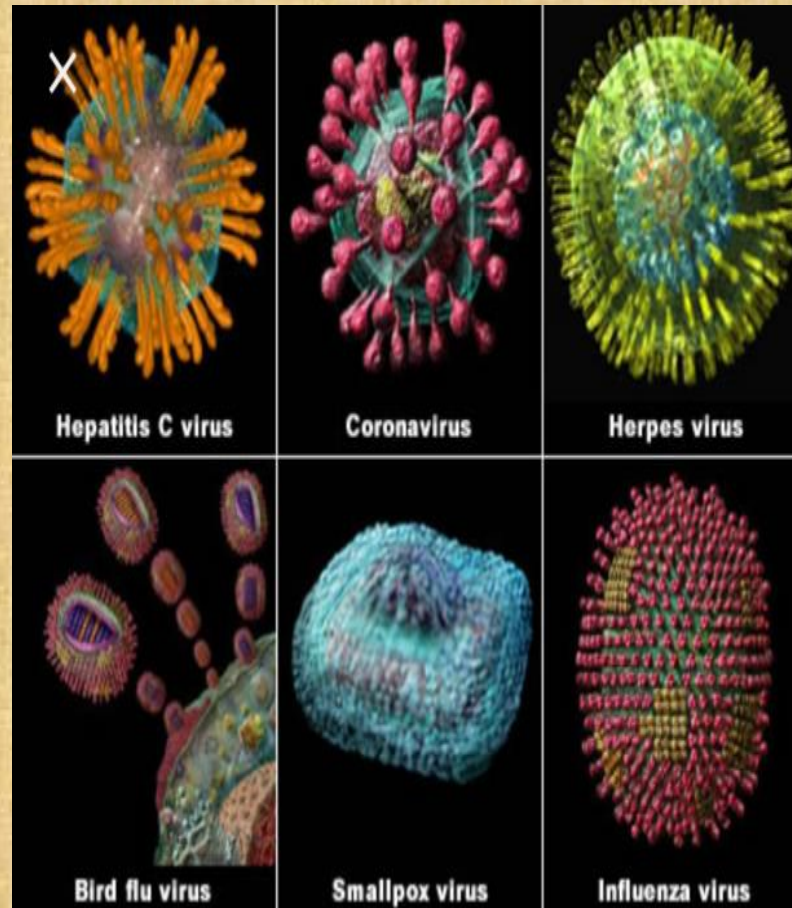
1. Mushrooms
2. Yeast
3. Molds



# VIRUSES(SINGULAR : VIRUS)

## Characteristics of viruses:

- Viruses can replicate only by infecting a host cell.
- They cannot reproduce on their own.
- They infect a wide variety of organisms , including both eukaryotes and prokaryotes.



# USEFUL & HARMFUL MICROORGANISMS

## USEFUL MICROORGANISMS

- ◉ *In food and beverage industry.*
- ◉ *In making medicines and vaccines.*
- ◉ *In agriculture.*
- ◉ *In cleaning the environment.*

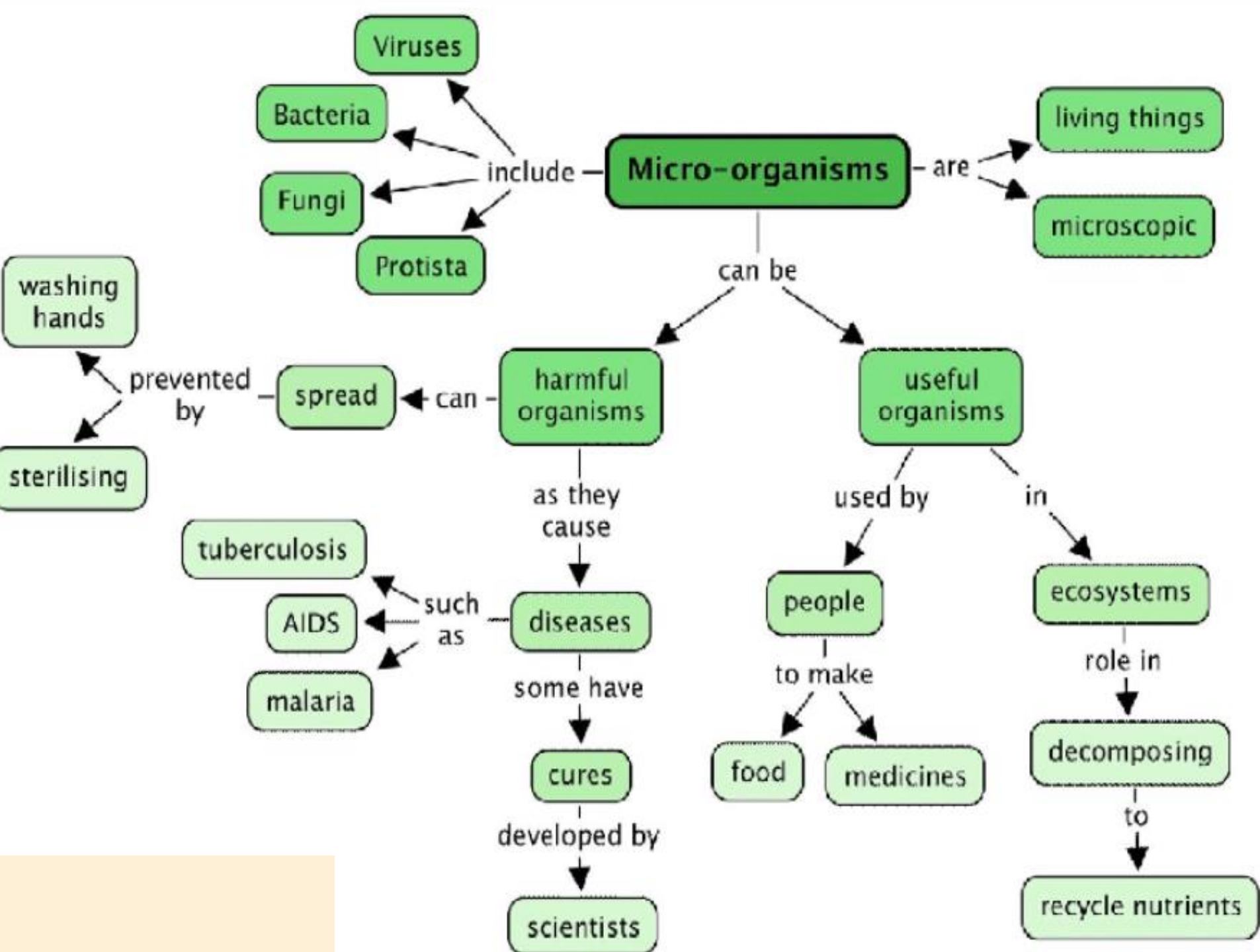
## HARMFUL MICROORGANISMS

- ◉ Human disease like common cold , tetanus, flu etc.
- ◉ Animal and plant disease like anthrax , citrus canker ,yellow vein mosaic etc.

# FOOD PRESERVATION

*Common methods of food preservation:*

- *Heating*
- *Pasteurization of milk*
- *Cooling*
- *Drying or Dehydration*
- *Canning*



**THANK YOU**