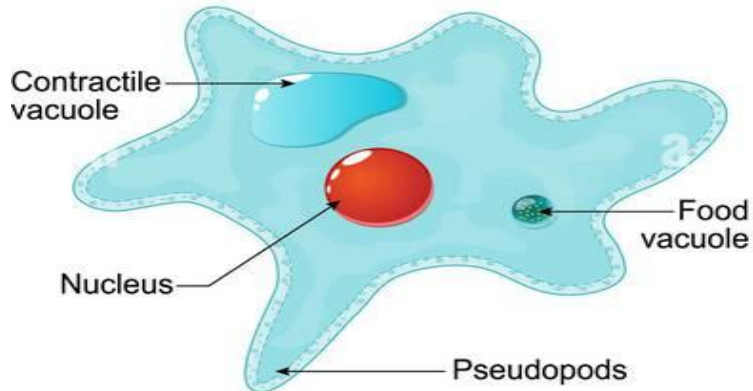
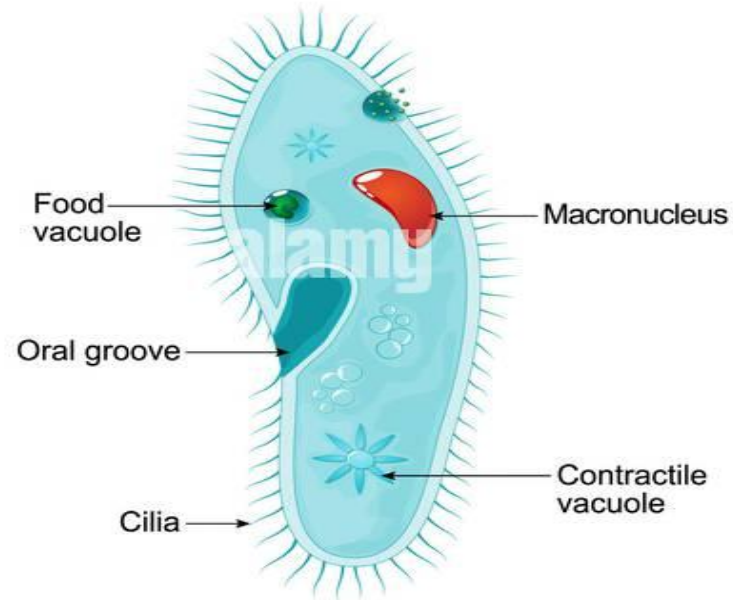


Protista

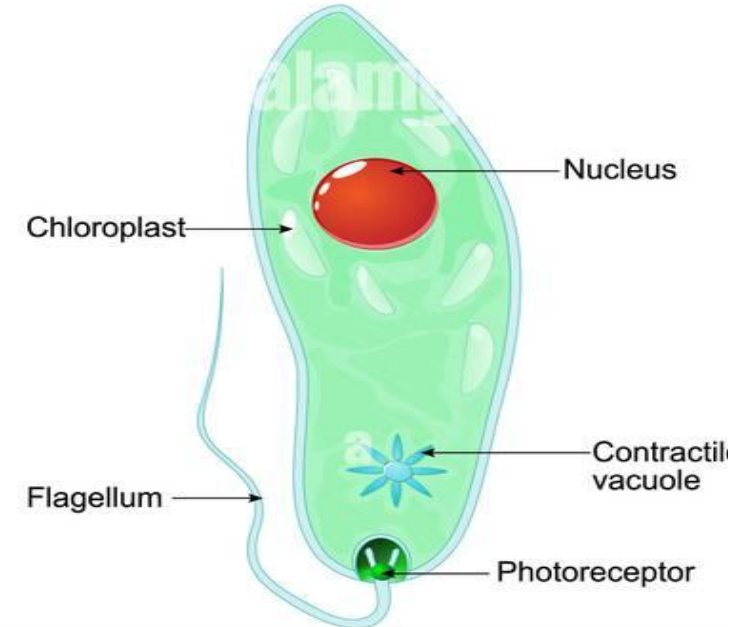
Amoeba



Paramecium



Euglena



Note- photoreceptor help euglena to move towards lights (phototaxis)
Mention locomotory organ in each case.
Draw diagram in copy

Fungi

1. Habitat- Moist, warm and dark environments rich in organic matters
2. They are multicellular eukaryotic organism. [except yeast, which is unicellular organism]
3. Mode of nutrition- Heterotrophic nutrition i.e., saprophytic nutrition, some fungi acts as decomposers, parasites as well

Structure and Physiology of Penicillium

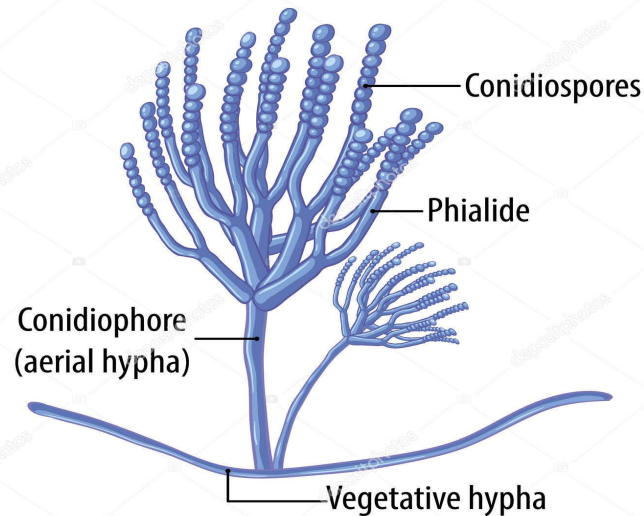


Fig – Peni

[draw diagram in your science copy]

Structure and Physiology of Bread Mold

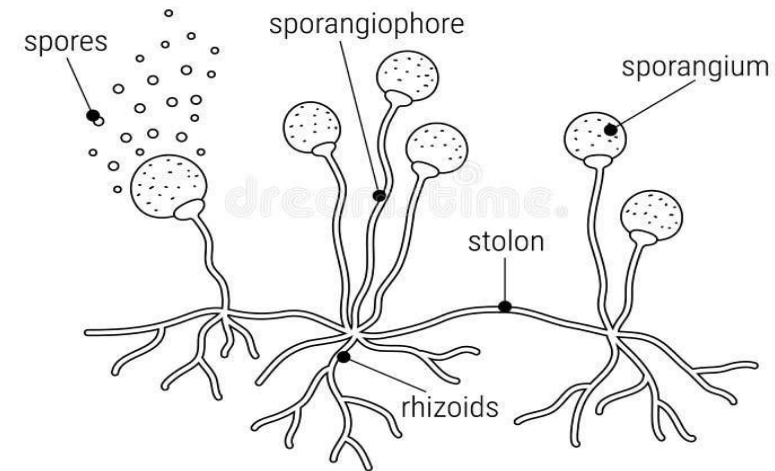


fig- _____

Useful Fungi

- In baking and brewing - with Yeast food items like breads, cakes and pastries can be made (process known as baking)
- In production of antibiotic- Fungus Penicillium notatum is used to make antibiotic penicillin
- Edible mushrooms- Agaricus
- Used as immunosuppressive agent in organ transplantation patients to avoid organ rejection by patient's body. [Trichoderma polysporum]
- Used as blood cholesterol lowering agents. [Monascus purpureus]

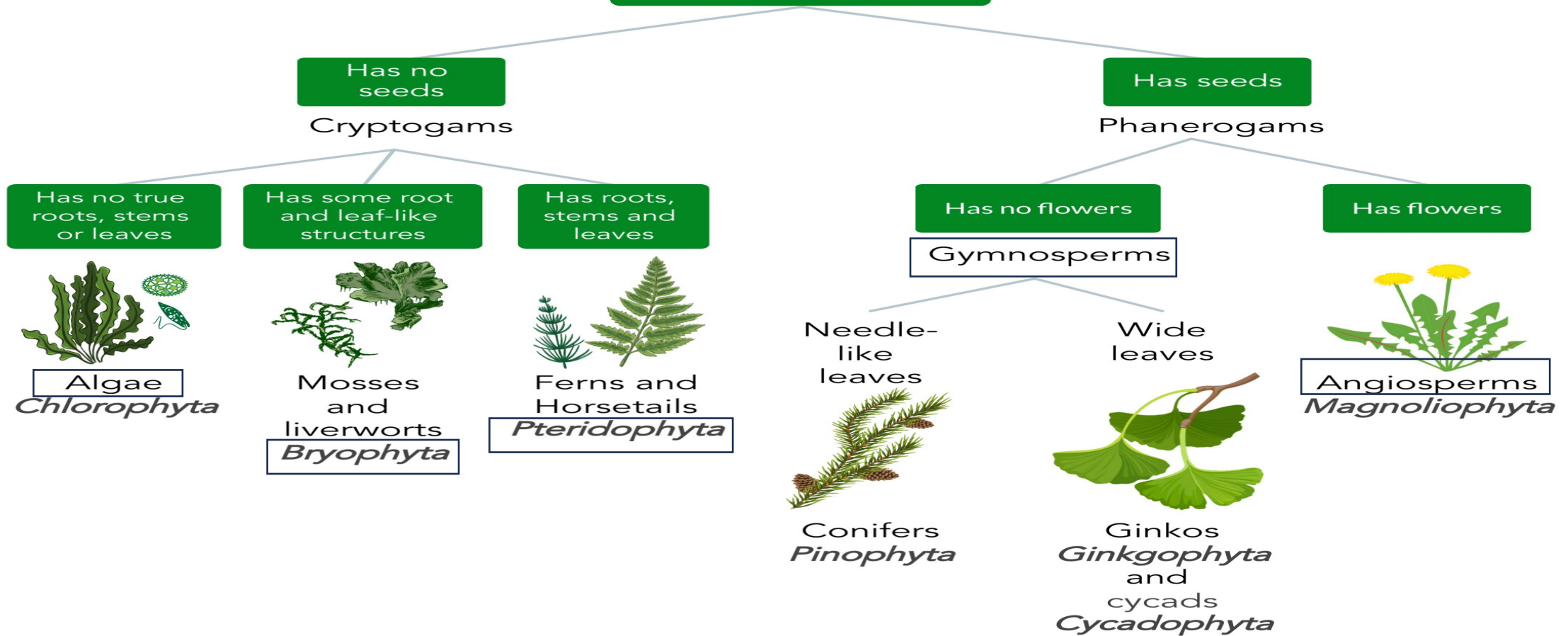
Harmful fungi

- Bread mould
 - In humans, Ringworms disease is caused by fungi
 - In plants, fungi is responsible for causing disease like rusts and smuts
 - Some fungi are infectious or spoil food.
-

Questions

1. Are we using yeast in making batter of idli and dosa? Name the organism and process by which we are able to get fluffy batter.
2. When we buy yeast from shop it is visible inside the container but we know yeast is microscopic living organism. Give explanation. [Hint- dormant stage, compare with grains and piles of sand]

Kingdom Plantae



Note-

1. Bryophyta is also known as Amphibians of plants because they live in terrestrial area but need water for sexual reproduction to complete their life cycle.
2. Pteridophyta – reproduce by producing spores.
3. Gymnosperm – produce naked seed and no flowers are formed.
4. Angiosperm- flower producing plants, seeds are present inside the fruits.

Algae

- Habitat- they are primarily aquatic organisms thriving in both freshwater(ponds, lakes, rivers) and marine environments (oceans and seas)
- Some are unicellular and multicellular algae and eukaryotic organism
- They are photosynthetic in nature having chlorophyll can make their own food.
- Some algae may also have specialized structures for movement, such as flagella, which help them to swim

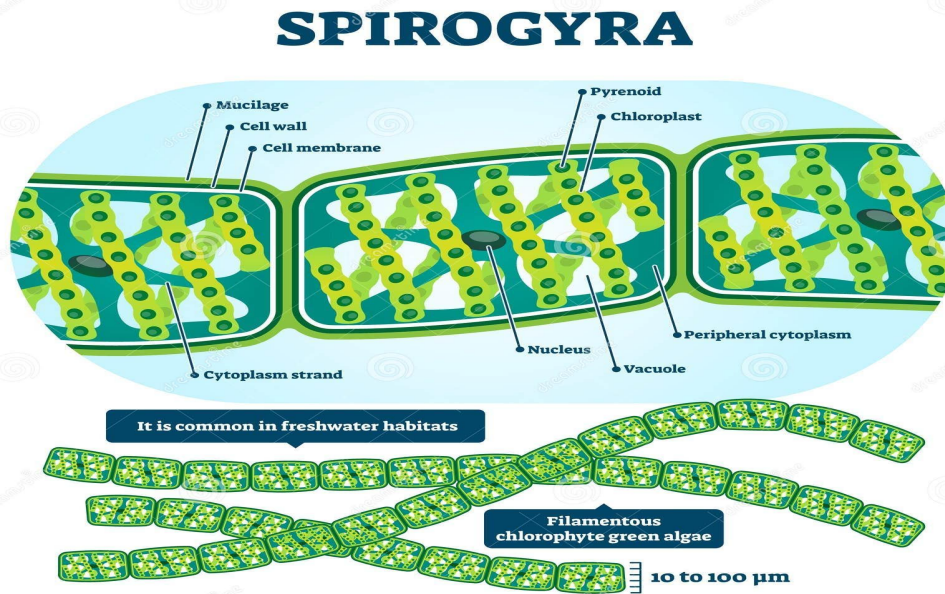


Fig Spirogyra (multicellular)

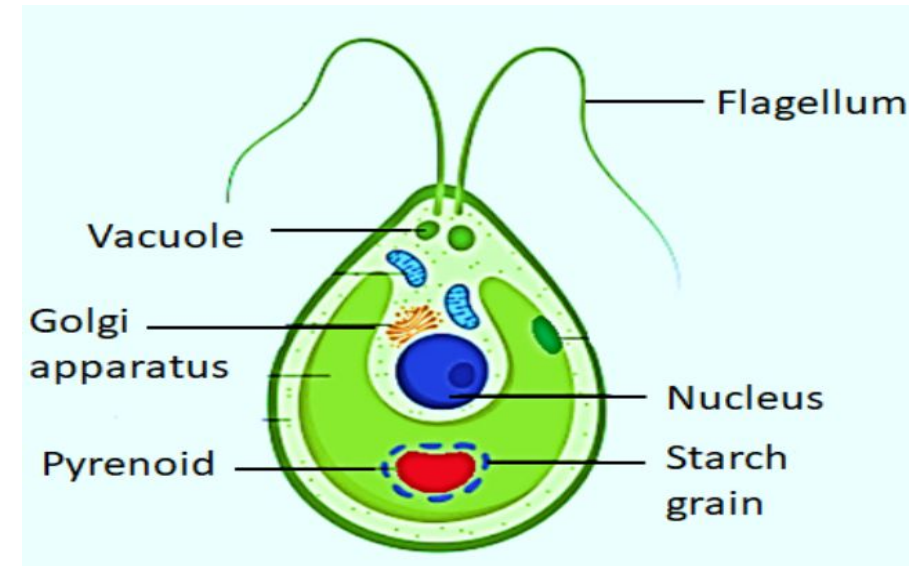


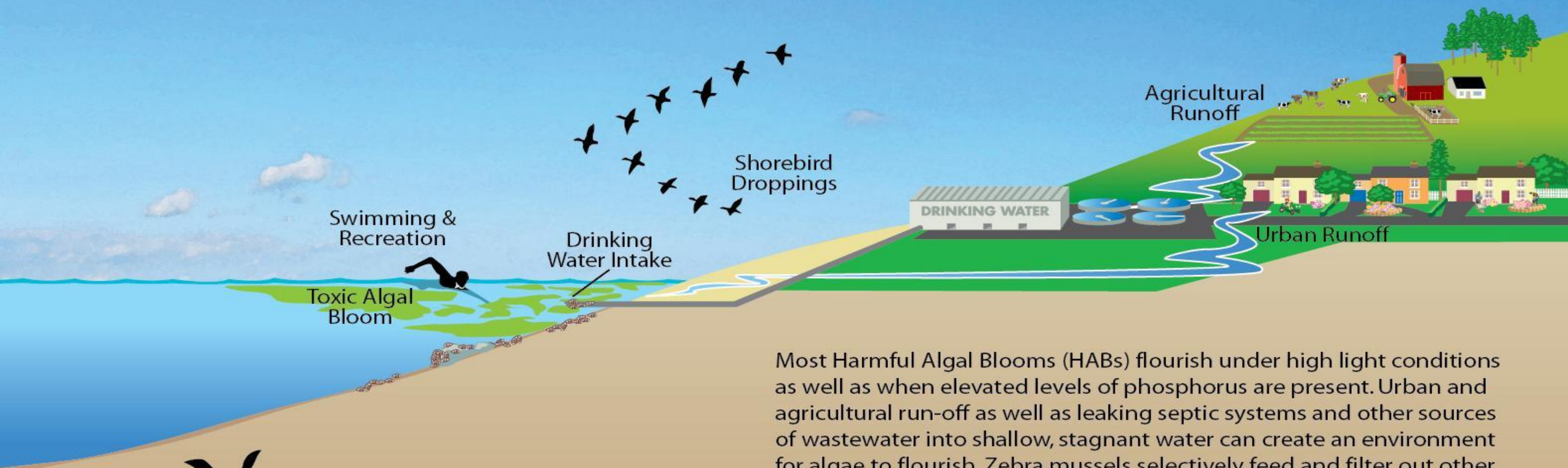
fig – Chlamydomonas (unicellular)

Useful algae

- Help in oxygen production-
- Microalgae help in cleaning water
- Used as biofuel
- Nutrition supplements- like Spirulina, Chlorella, and Diatoms are rich in proteins, vitamins and minerals. It is often called as superfood because it is havinf excellent source of vit **B 12**.



Factors Influencing the Growth of **HARMFUL ALGAL BLOOMS**



Most Harmful Algal Blooms (HABs) flourish under high light conditions as well as when elevated levels of phosphorus are present. Urban and agricultural run-off as well as leaking septic systems and other sources of wastewater into shallow, stagnant water can create an environment for algae to flourish. Zebra mussels selectively feed and filter out other algae, which enables HABs to flourish.

Impacts of Harmful Algal Blooms



Human Health

Exposure can cause irritation & illness

Animal Lives

Exposed pets, livestock, & wildlife can die



Environment

Habitat, water quality, & recreation are impacted

CLIMATE  CENTRAL



Toxic Algae Harmful Algal Bloom

Harmful algae

1. Algal bloom.

Occupies the surface of water and do not allow the sunlight to enter in the water bodies. Thus, hamper aquatic life.

Virus

- Microscopic and acellular organism
- Outside the body of host, they are non living but inside the body they are living organism.

Some advantages of virus-

1. Used in medical fields for making vaccines by use dead, weak or spike proteins of virus.
2. Viruses can be used as vectors to deliver healthy genes into the cells to treat genetic disorders.
3. Bacteriophages (virus that infect bacteria) help to regulate bacterial population in natural environments
4. They are also used to control pests in agricultural.

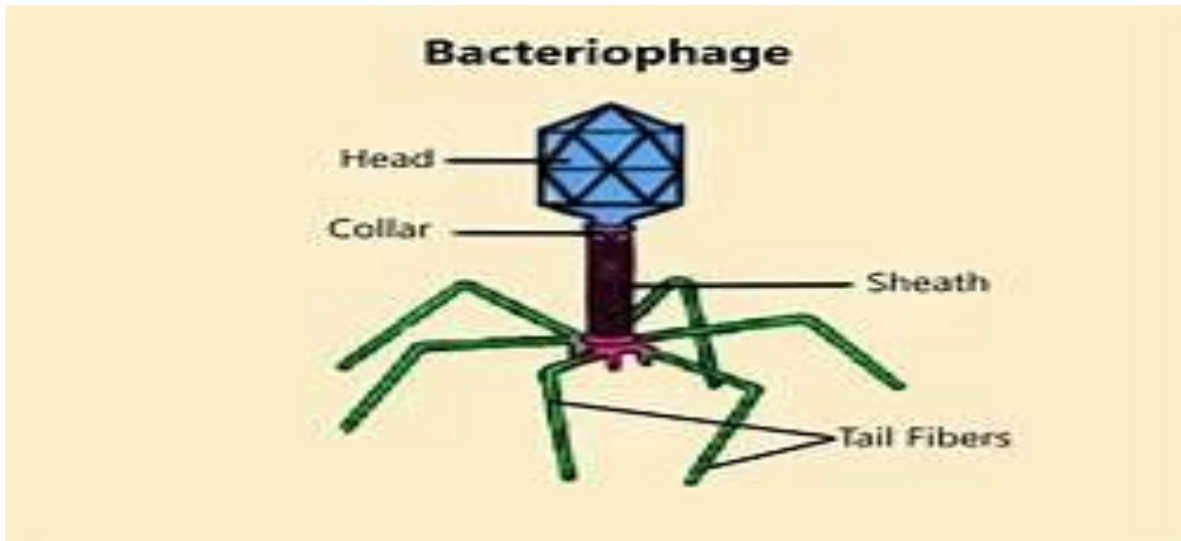


Fig- Bacteriophage



fig- Bacteriophage infecting bacteria

Preservation

Preservatives

Types of preservation



1. Write short note on microbes as friend and foe (write it in point wise)
(take help from previous notes in science classwork copy and slide)