CLASIFFICATION OF MICROORGANISMS

Topic 1.1

Review

Learning Outcomes

¥1. List the characteristics of various types of microorganisms

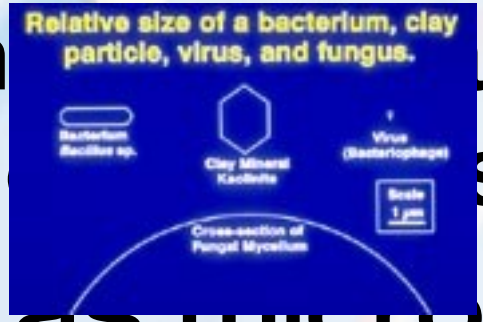
¥2. Classify microorganisms into bacteria, fungi, protozoa, viruses and algae

¥3. Describe the characteristics of each

Review

Microorganisms

¥1. Microorganisms are tiny organism[illegible]n only be seen und[illegible]scope



¥2. Called as [illegible]

¥3. Found in surround of the air, water, soil, other object and in the bodies of other organisms.

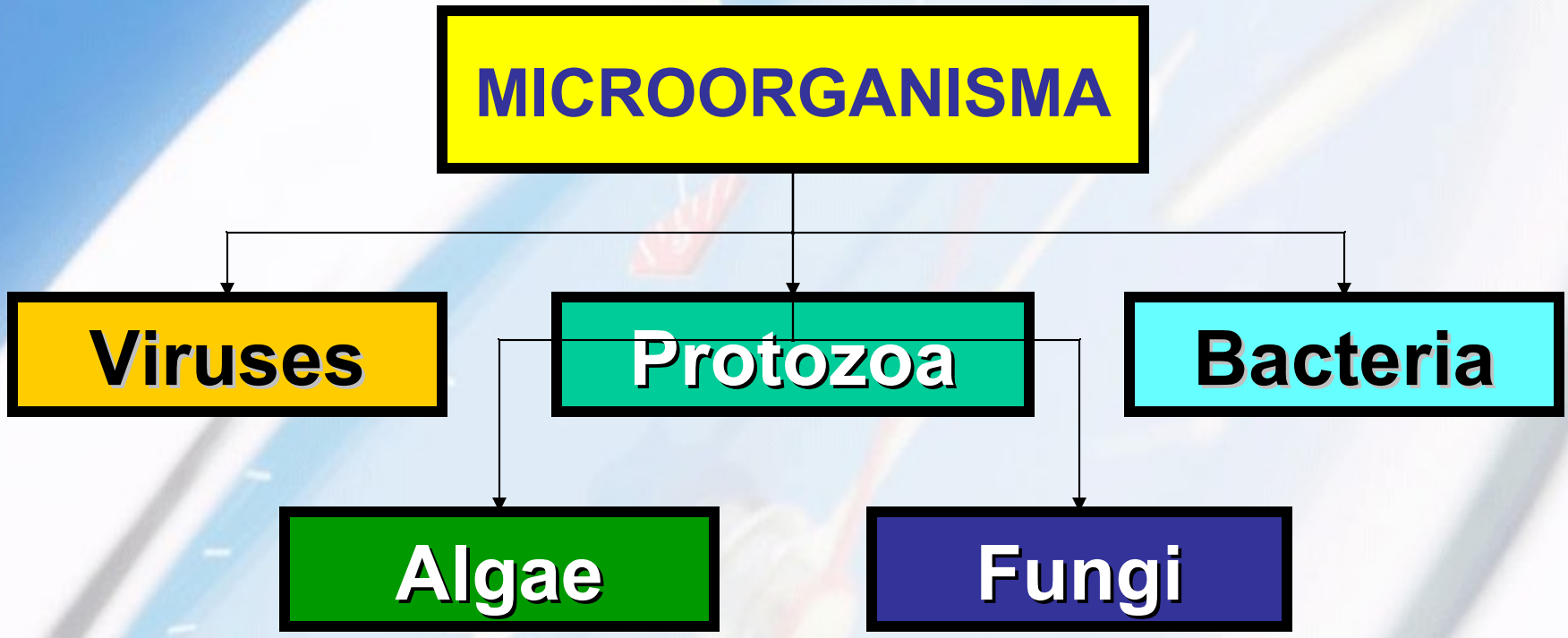
Review

CLASSIFICATION OF MICROORGANISMS BY THIER CHARACTERISTICS

- Form
- Size
- Habitats
- Nutrition
- Method of Reproduction

Review

TYPES OF MICROORGANISMS




VIRUSES
Virus

Size of Viruses

¥1. Smallest microorganisms.

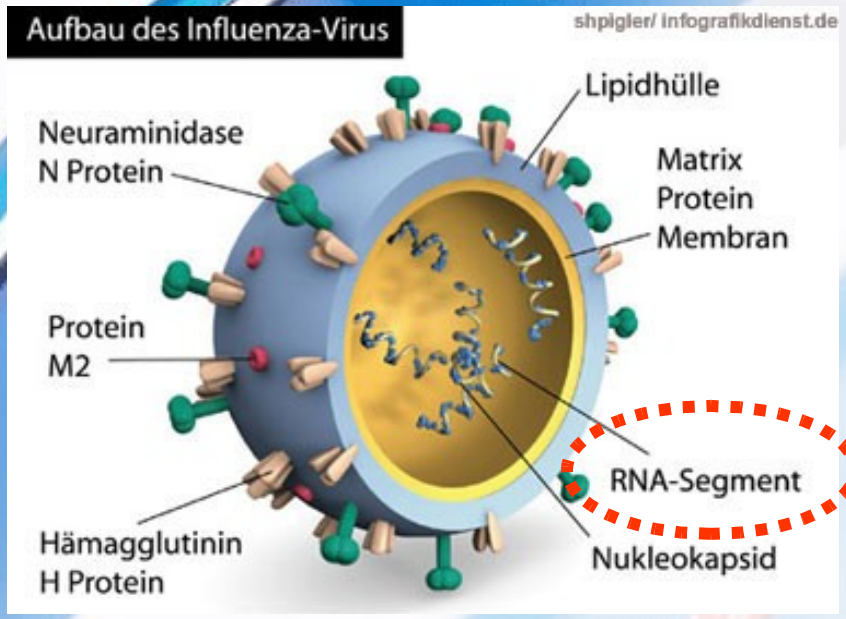
¥2. Visible under electron microscope.

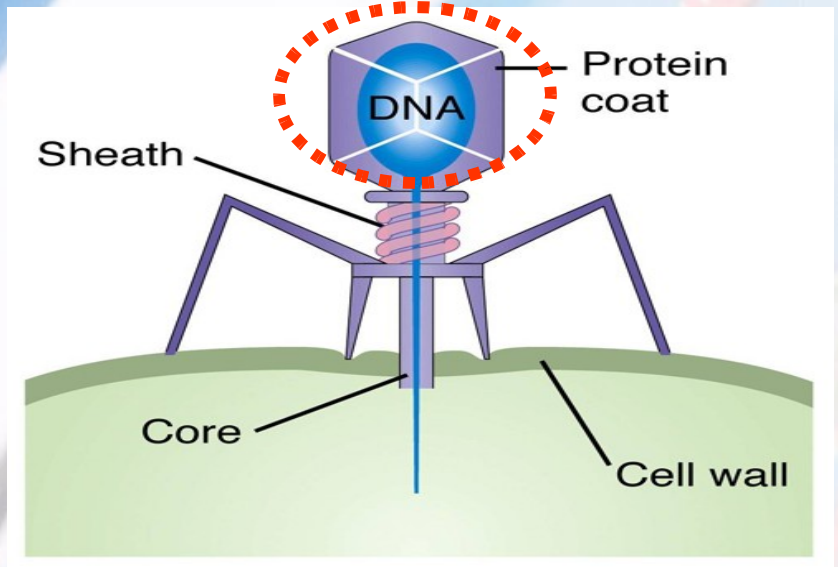
¥3. Different types of viruses have different shapes.

¥4. Size: 0.0006 μm Đ [illegible]
μm / (6 Đ 400 nm)

Review

Structure of Viruses





¥Basically, has a strand of genetic material either DNA or RNA and surrounded by a protein coat.

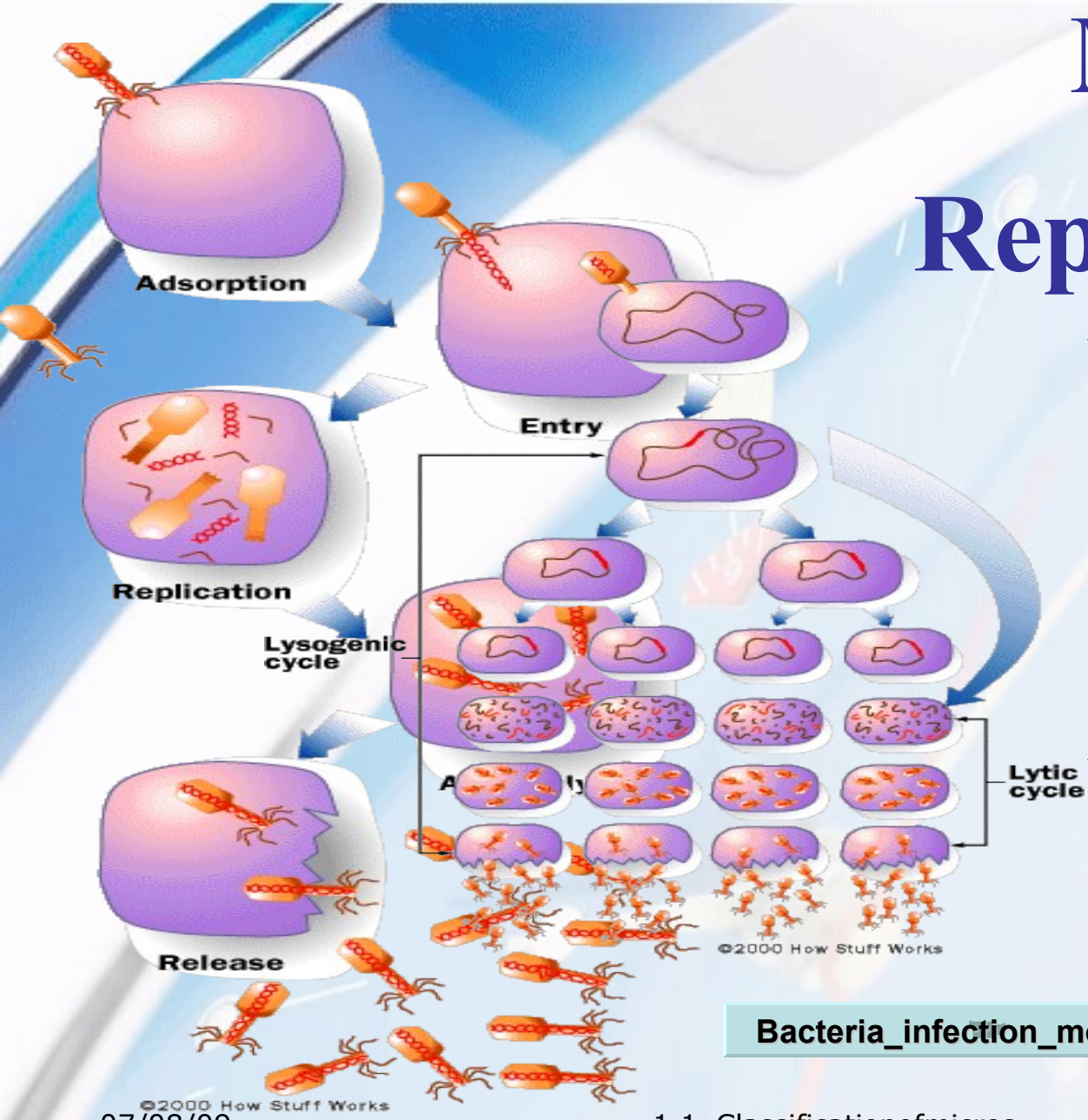
Review

Viruses Nutrition

¥Are non-living things because they DO NOT feed, respire, grow and

Review

Method of Reproduction

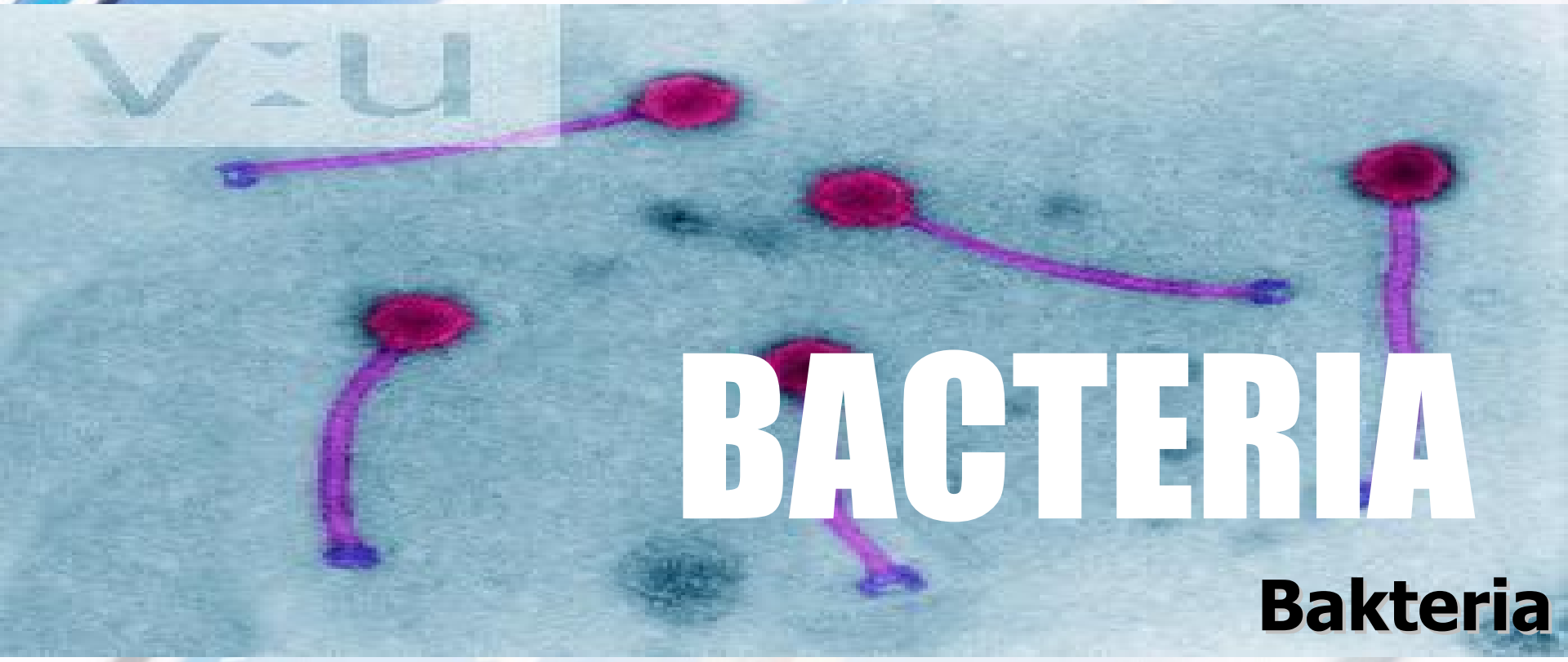


¥1. Virus are PARASITIC.

¥2. Reproduce in the HOST CELL

Bacteria_infection_movie_go!

Review



BACTERIA

Bakteria

Review

Size of Bacteria

¥1. Tiny unicelullar organisms *(bersel tunggal)*

¥2. Size: 0.2 µm Ð 10.0 µm.

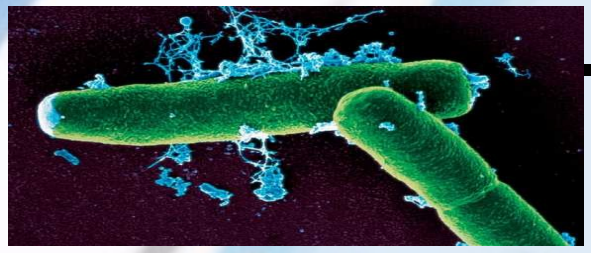
¥3. named and classified by their shapes.

Review

Shapes of Bacterium

Cocci Đ spherical bacteria

Spirilla Đ spiral bacteria

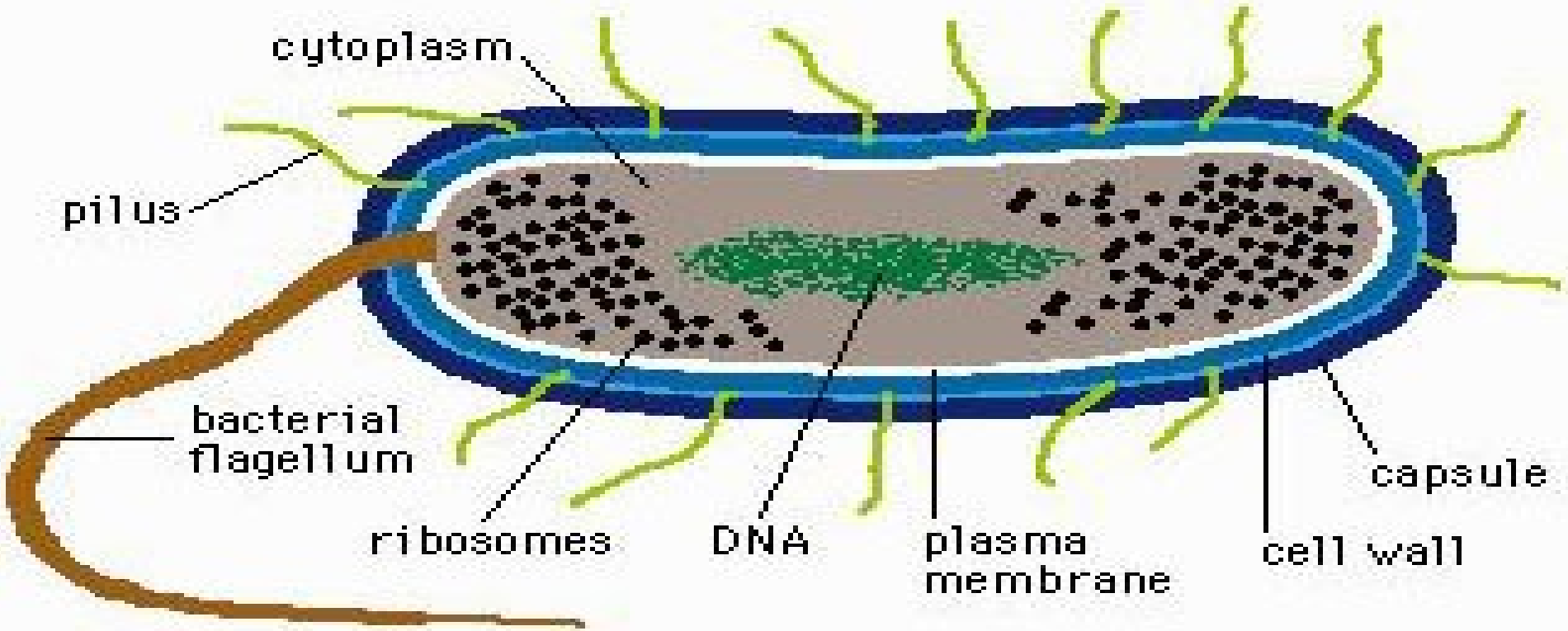


Bacilli Đ rod-shaped bacteria

Vibrios Đ comma-shaped bacte

Review

Structure of Bacteria



Habits of Bacteria

¥1. Classified as living things.

¥2. Live in the air, water, soil, food and decaying organic matter.

¥3. Able to survive unfavourable (extreme) environmental condition (extreme temperature, drought, scarcity) by

Review

Nutrition of Bacteria

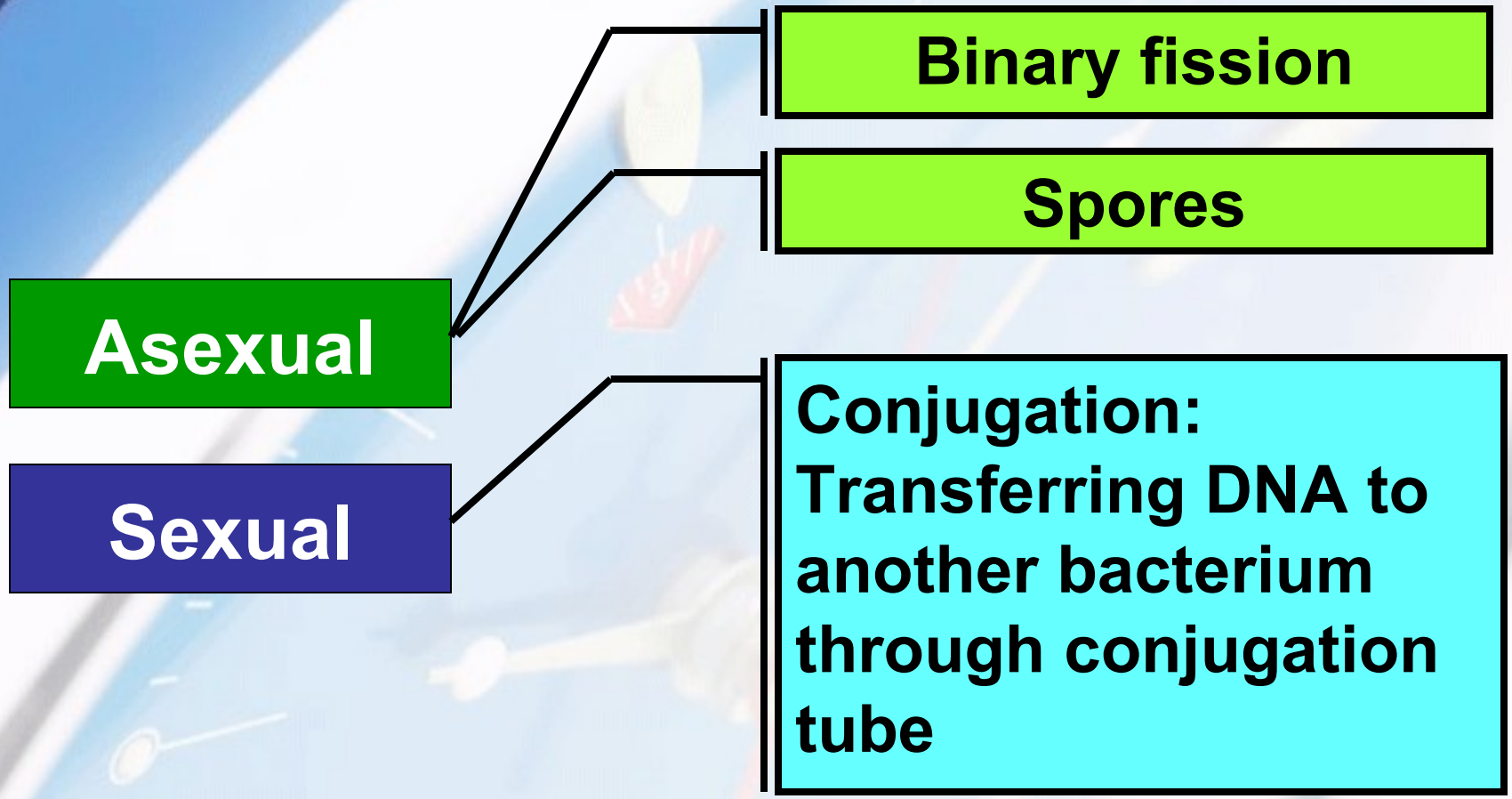
¥1. Different types of them obtain nutrients in the different ways.

¥a. Autotrophic bacteria:

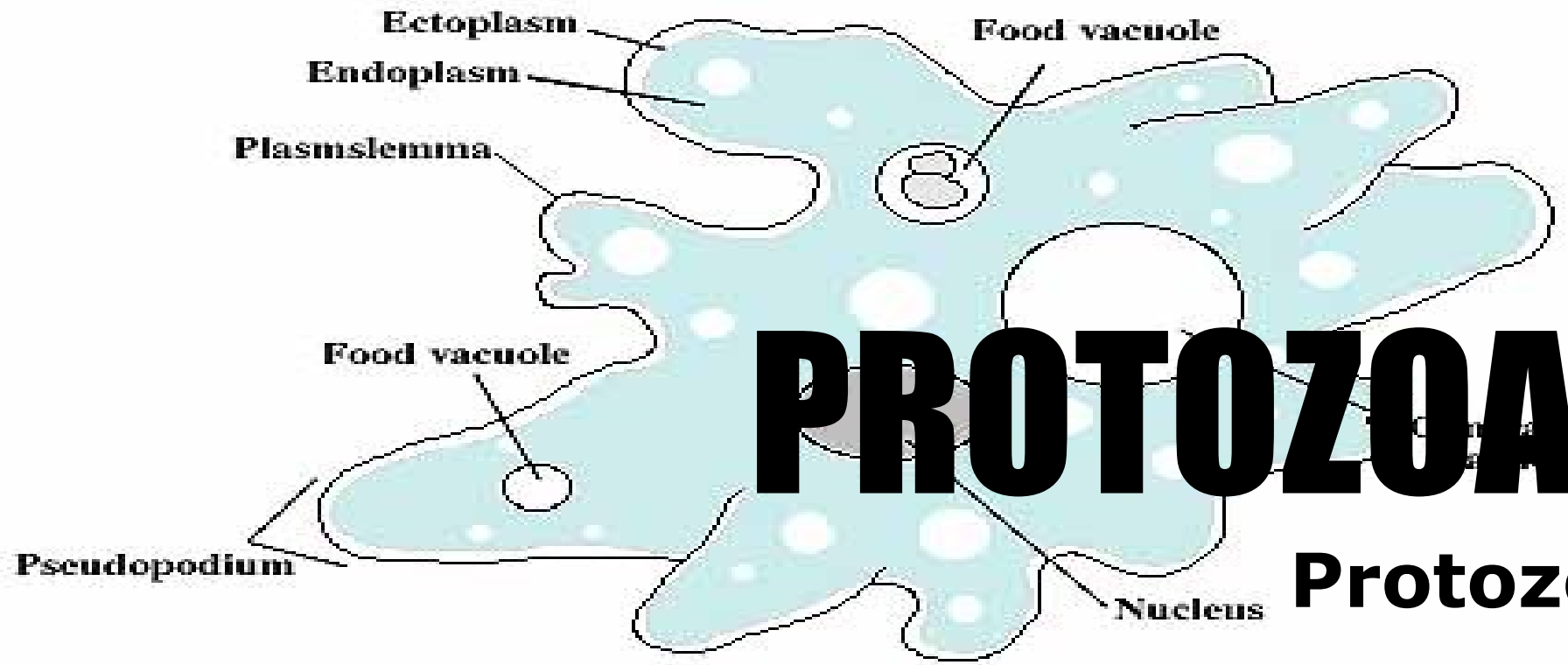
¥b. Parasitic bacteria:

Review

Method of Reproduction



Review



PROTOZOA

Protozoa

Review

Size of Protozoa

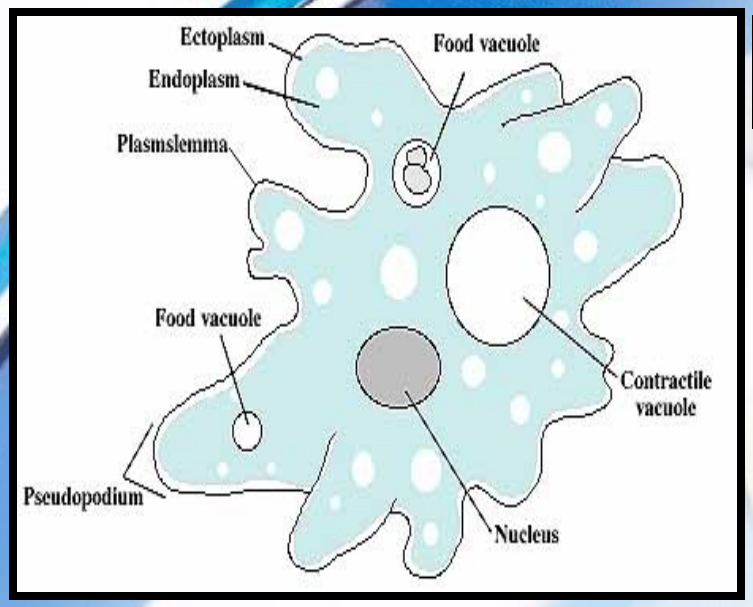
¥1. Unicelullar organisms.

¥2. Size: 5 μm Ð 250 μm.

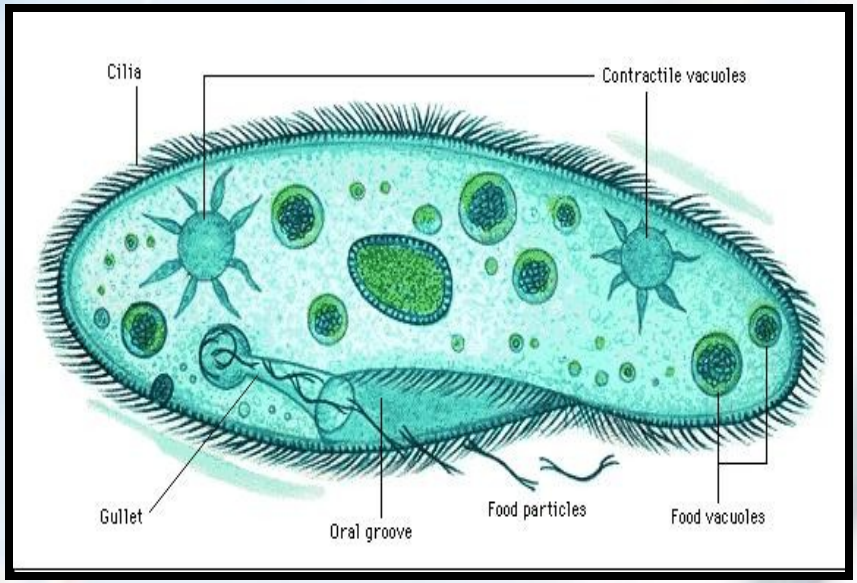
¥3. Shape: various type Ð round, spherical, spindle-shaped.

Review

Structure of Protozoa



1?



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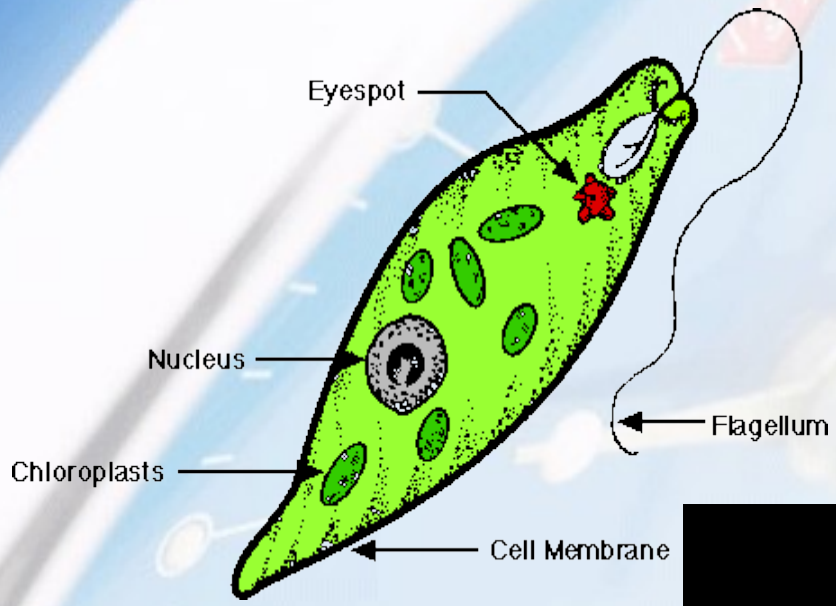


3?

Review

Habits of Protozoa

¥1. Live in the bodies of other living things, in the sea, fresh water and damp soil.

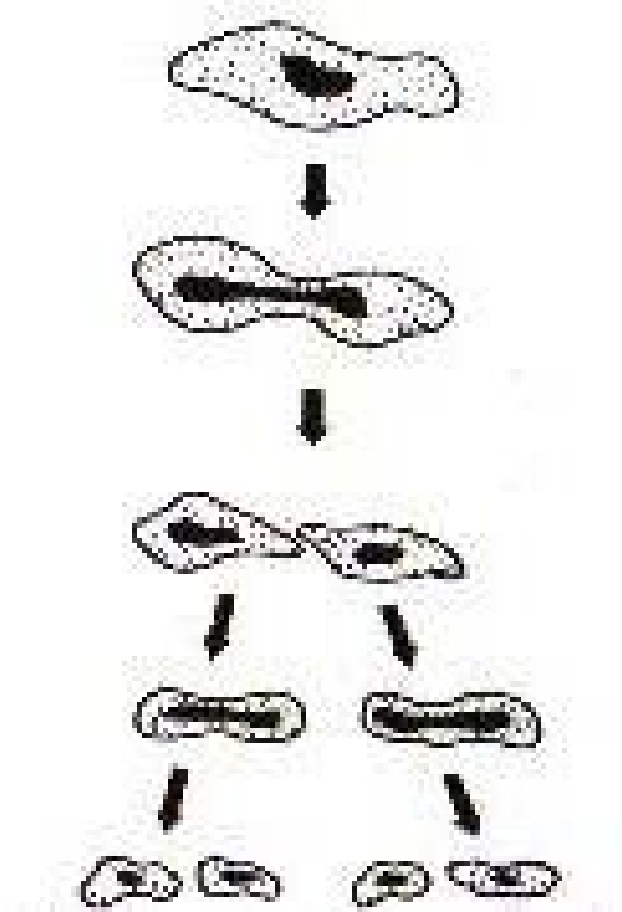
Nutrition of Protozoa

¥1. Most of them are parasitic and feed on other living things.

¥2. Some of protozoa which contains chlorophyll carry out photosynthesis.

Review

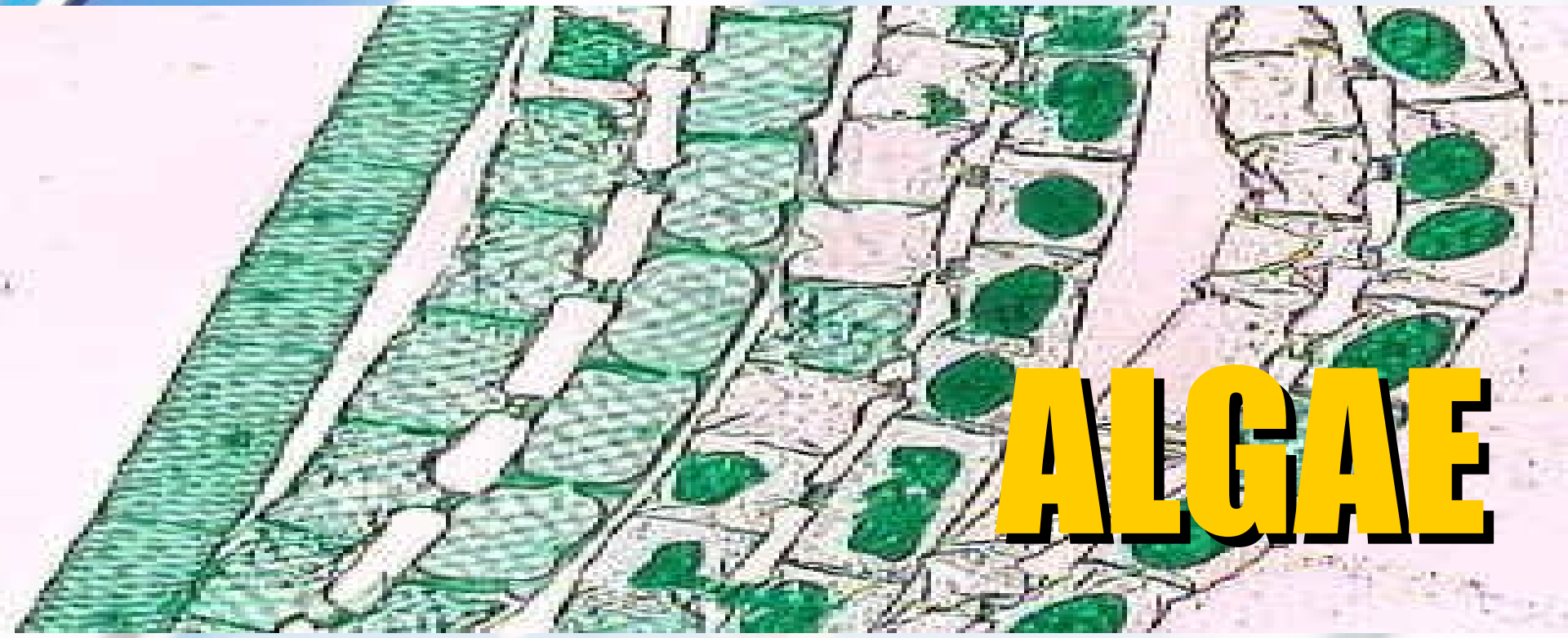
Method of Reproduction



¥1. Most reproduce asexually by binary fission.

¥2. Some protozoa reproduce sexually through conjugation

Review



Alga

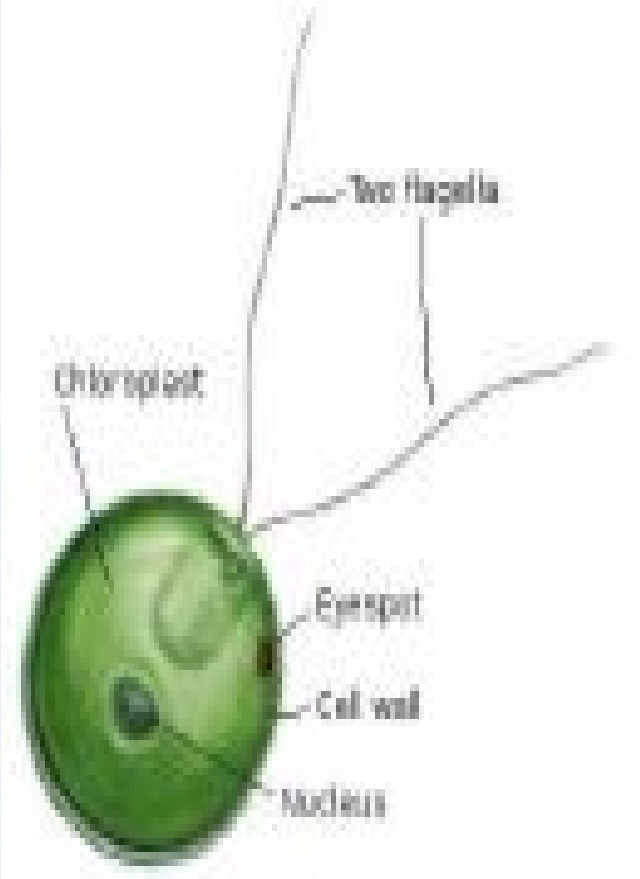
Review

Size of Algae

¥1. Can be unicellular (chlamydomonas) / multicellular (seaweeds) plants.

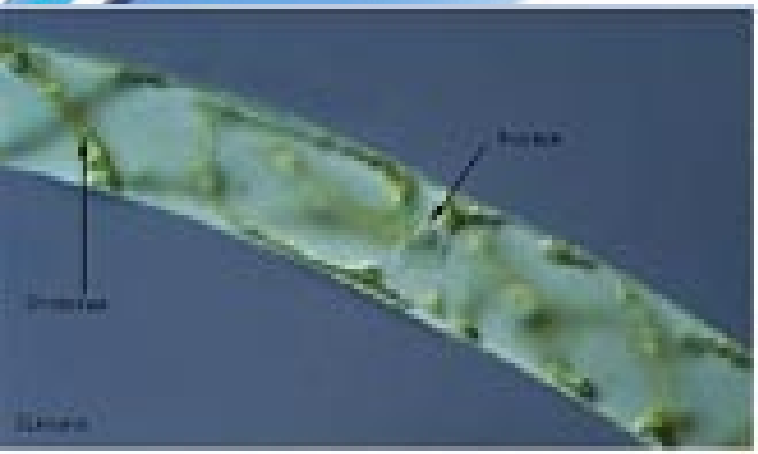
¥2. have / no chlorophyll.

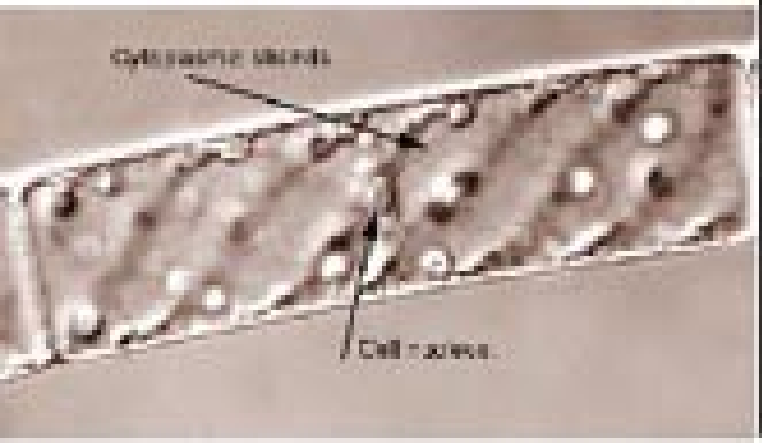
¥3. Size: 1 µm Ð 10 000 µm.

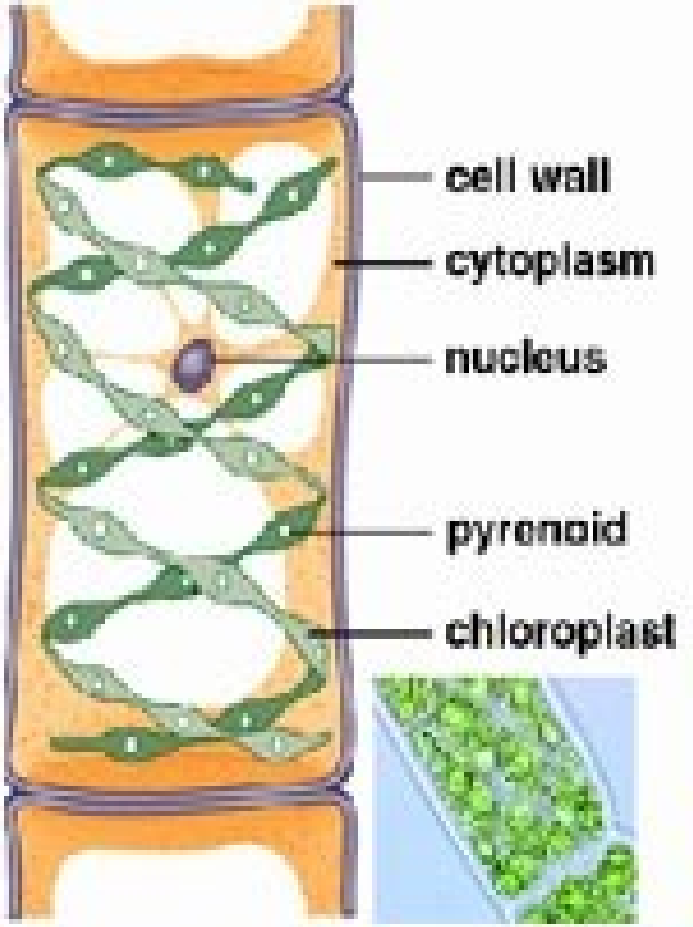


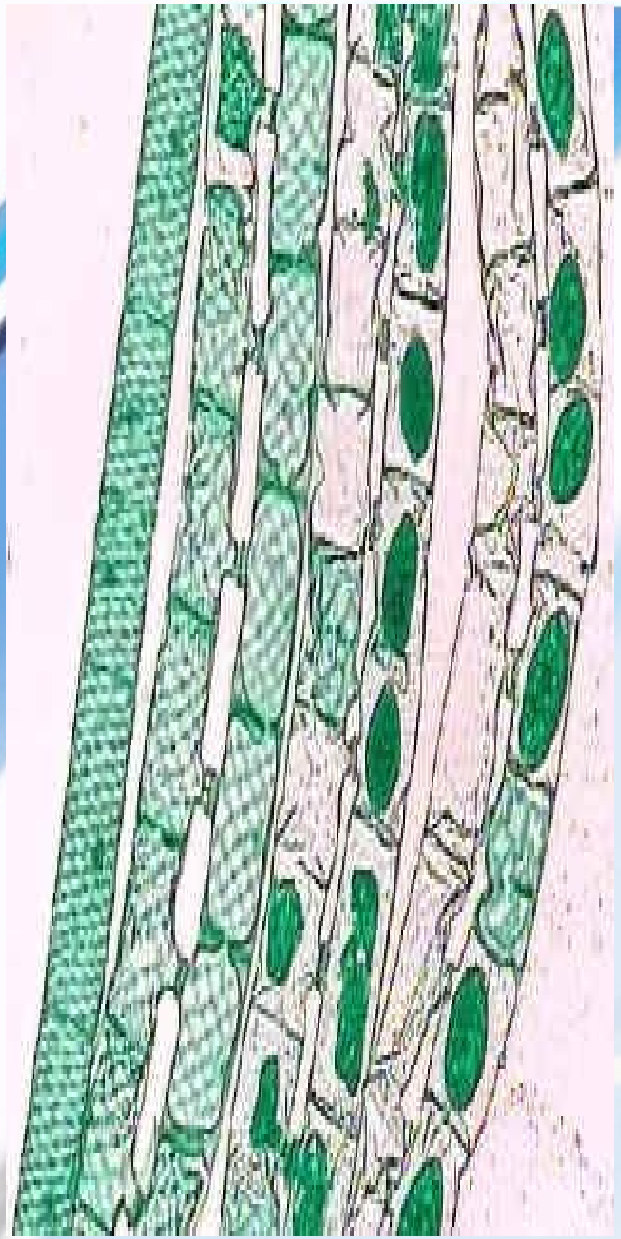
Review

Structure of Algae







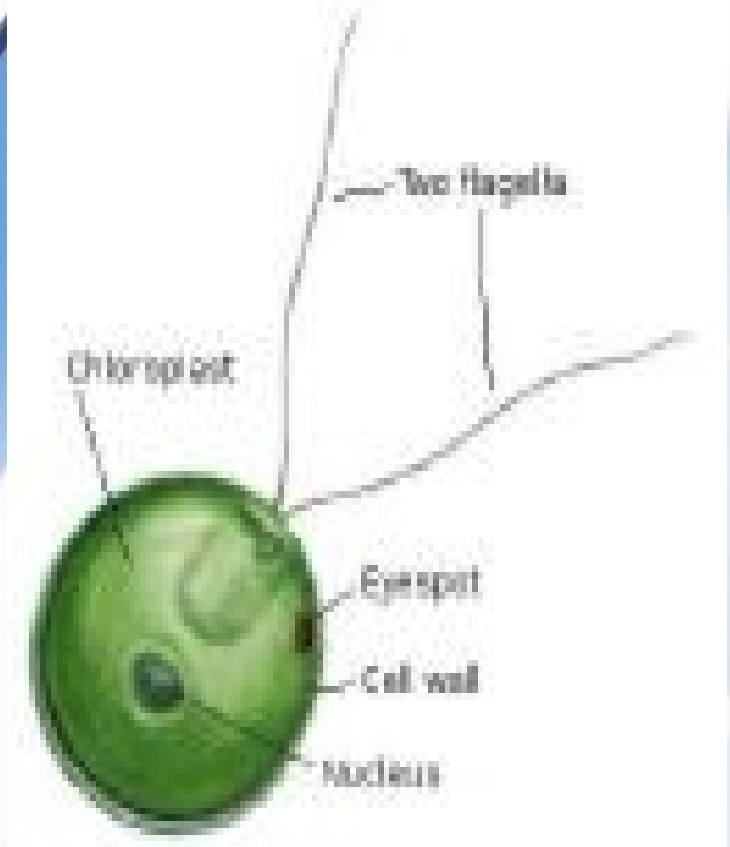


Habits of Algae

¥Microscopic algae live in fresh water, sea water, damp soil and on the barks of trees

Review

Nutrition of Algae



¥1. Some have nuclei and chloroplasts (green pigments).

¥2. Make their own food by carry out photosynthesis.

Review

Method of Reproduction

Movie 1

Movie 2

¥1. Asexual: by binary fission, fragmentation and spore formation.

¥2. Sexual: by conjugation

Review

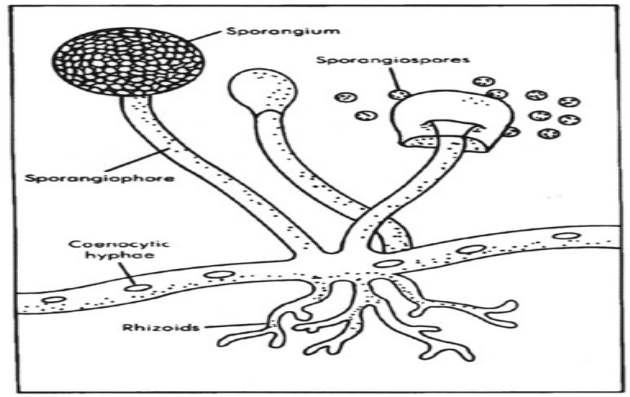
Kulat

Size of Fungi

¥1. Type: unicellular (yeast) / multicellular (mucor).

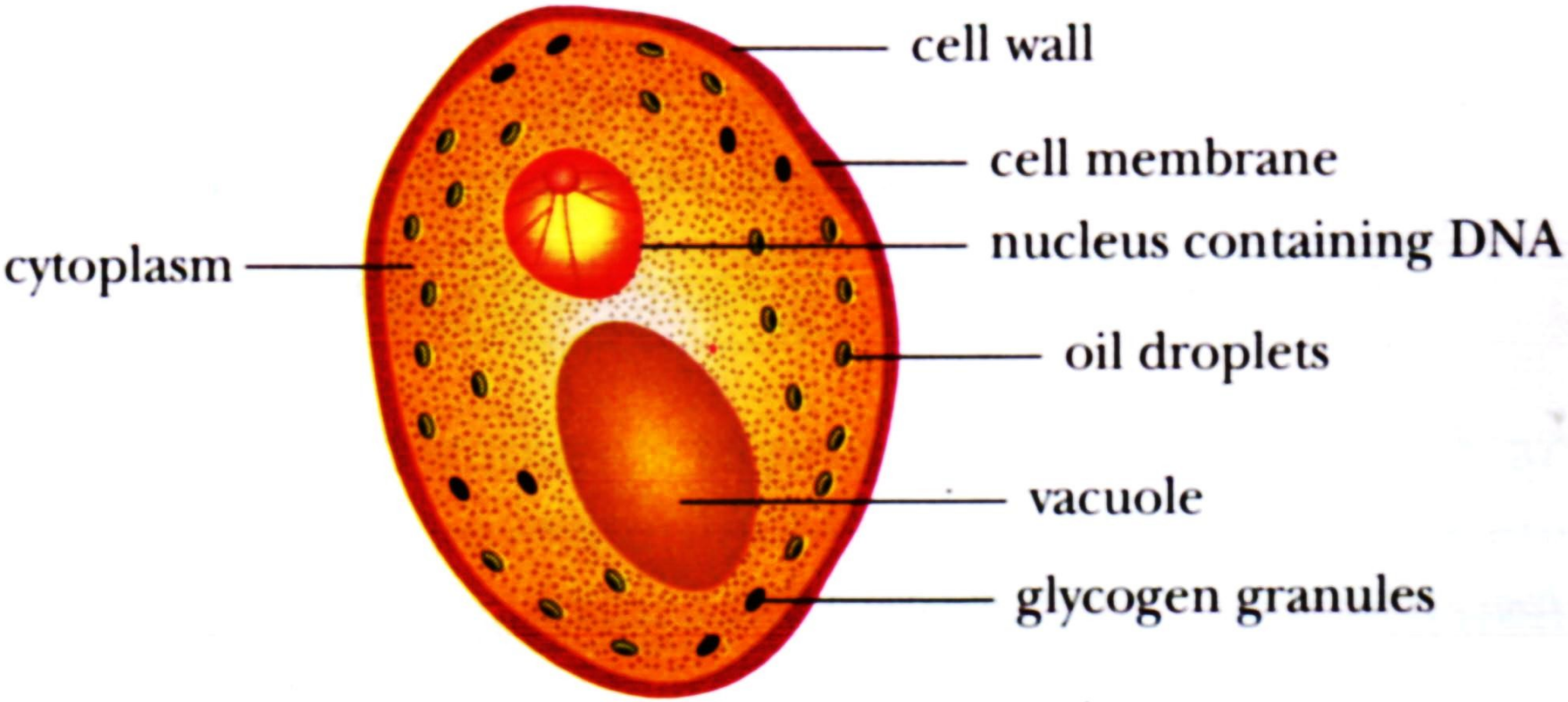
¥2. Range: 10 µm Ð 100 µm.

¥3. Have various shapes, sizes



Review

Structure of Fungal Cell



Habits of Fungi

¥1. Decaying organic matter.

¥2. Found in outside / inside of

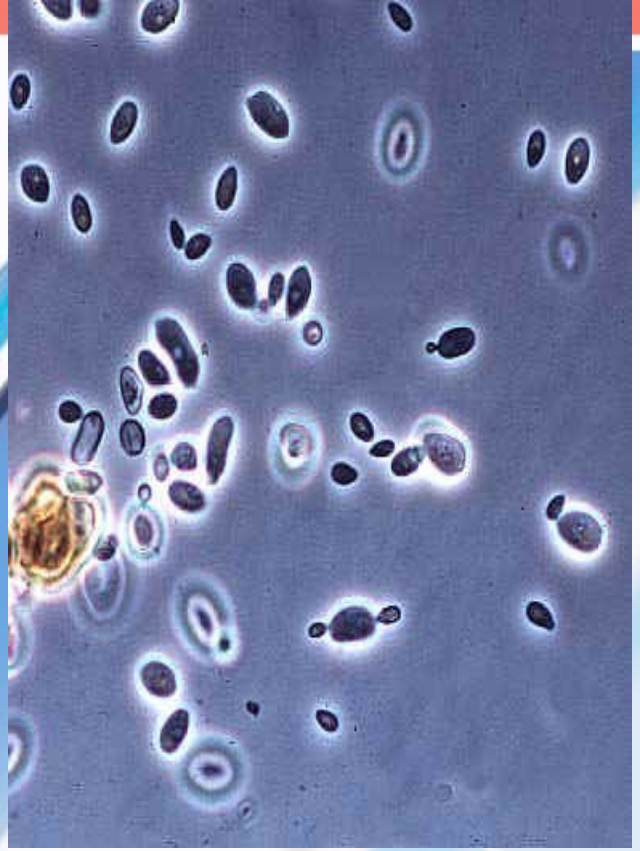
Nutrition of Fungi

¥1. Do not have chlorophyll.

¥2. Feed on other organisms as parasites /

movie

Review

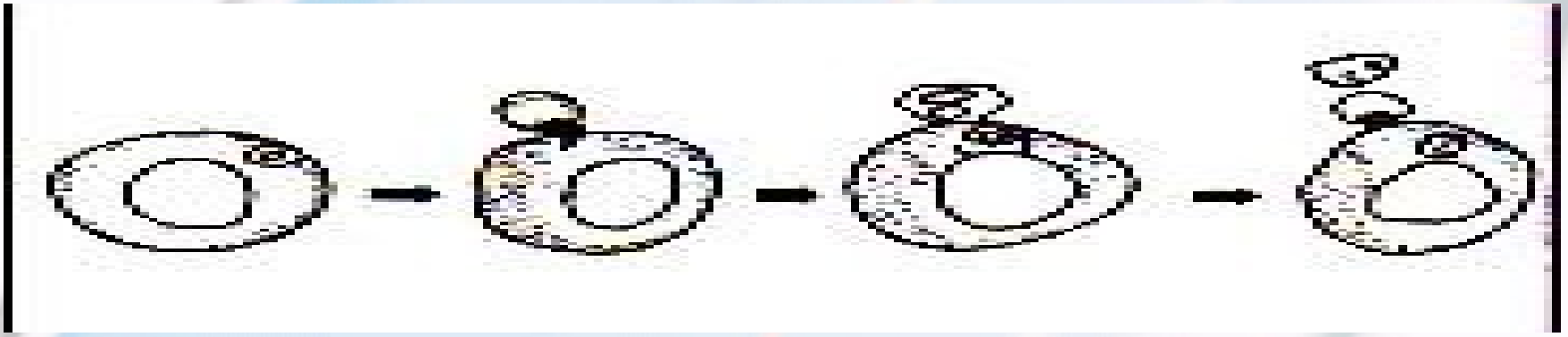


Method of Reproduction

¥1. Asexual: produce spores, budding

movie

¥2. Sexual:



Classification of Microorganisms

- Learning outcomes
- 1.0 Microorganisms
- 1.1 Viruses
- 1.2 Bacteria
- 1.3 Protozoa
- 1.4 Algae
- 1.5 Fungi
- Exercise 1.1

Review 1.1

EXIT

Practice 1.1

¥1. Viruses differ from other types of microorganisms because they É

¥A. are not classified as living things

¥B. can reproduce

¥C. cannot be seen with our eyes

Review

¥2. Which of the following shows the microorganisms in descending order of size from the largest to

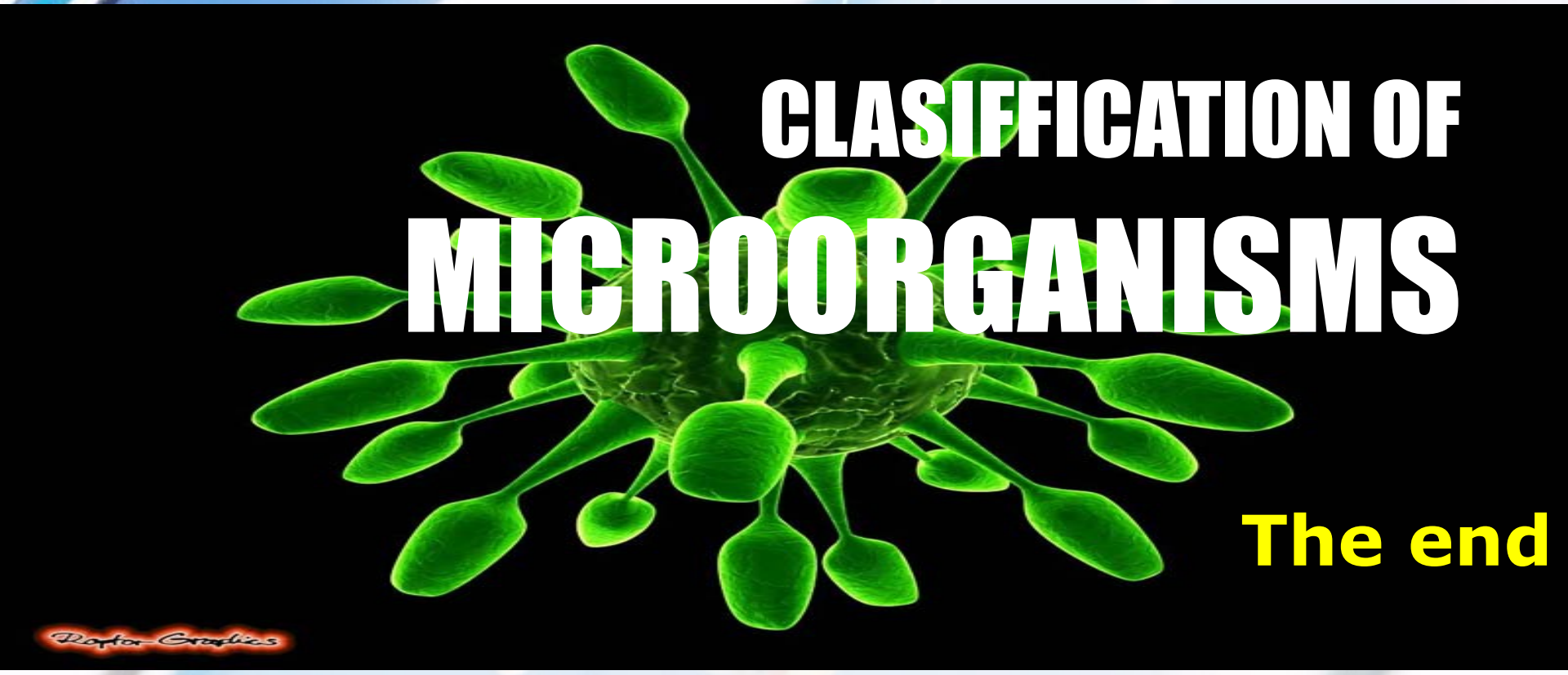
¥A. Bacteria, fungi, viruses

¥B. Fungi, bacteria, viruses

¥C. Viruses, fungi, bacteria

¥D. Viruses, bacteria, fungi

Review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The end