

TENDER HEART HIGH SCHOOL, SEC - 33B, CHDClass - VIISubject - BiologyChapter - 2Classification of PlantsTeacher - Ms. Nidhi Rana

Good Morning children! Hope advancing well in understanding the chapter and at the same time staying safe also. In the last lecture we have discussed about the Bacteria and how it is useful and harmful to us. Today we are going to discuss about the kingdom Protista.

Kingdom Protista

Kingdom Protista consists of unicellular eukaryotic organisms. (having organised nucleus) Some are animal-like (do not make their own food - Amoeba, Paramecium) Some are plant-like (can make their own food, since they have chloroplast - Euglena, diatoms) Let us discuss Amoeba in detail.

- Amoeba is a unicellular, microscopic protist found in ponds, ditches and other places with stagnant water.
- Amoeba has an irregularly shaped body covered by thin plasma membrane. It contains a well-defined nucleus enclosed within a double nuclear membrane.
- It also contains a contractile vacuole, which regulates the water content of the cell and several food vacuoles enclosing particles of food.
- The most prominent feature of Amoeba is the

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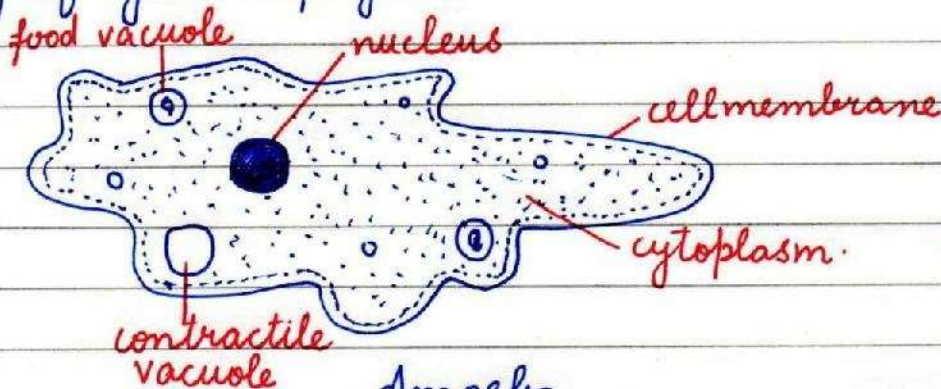
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presence of temporary, finger-like cytoplasm filled projections called pseudopodia (false feet). They are used for locomotion and for engulfing the prey.



Amoeba

Locomotion Amoeba moves by means of pseudopodia. The flow of cytoplasm decides the direction of movement. This is called amoeboid movement.

Step-1 When an Amoeba moves, it forms pseudopodia from the cytoplasm in the direction of movement.

Step-2. The pseudopodia extend due to the flow of cytoplasm in that particular direction. These extensions continue to grow more by the flow of cytoplasm.

Step-3. When Amoeba changes its direction of movement, a new pseudopodia is formed in the direction of the new movement and the old pseudopodia disappears.

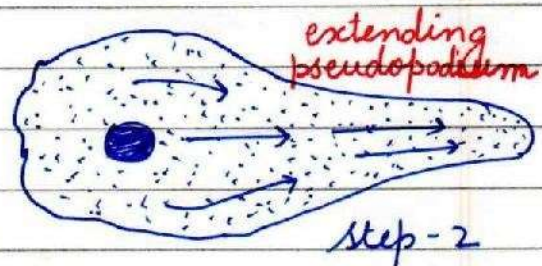
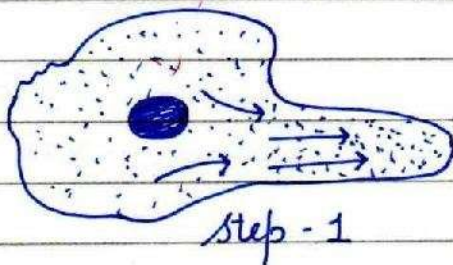
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locomotion in
Amoeba.

Nutrition Amoeba feeds on microscopic organisms found in water bodies. Nutrition in Amoeba takes place in the following steps:

Ingestion - When an Amoeba senses food, it forms pseudopodia in the direction of the food particle. The pseudopodia engulf the food particle and fuses over it to form a food vacuole in cytoplasm.

Digestion - Digestion occurs within the cell. Digestive enzymes are secreted within the food vacuole. These enzymes break the food into simple, soluble form that can be easily absorbed by the cell.

Absorption - The soluble form of digested food are absorbed within the cytoplasm.

Assimilation - These nutrients are then used to build new protoplasm and obtain energy.

Egestion - The undigested wastes are present

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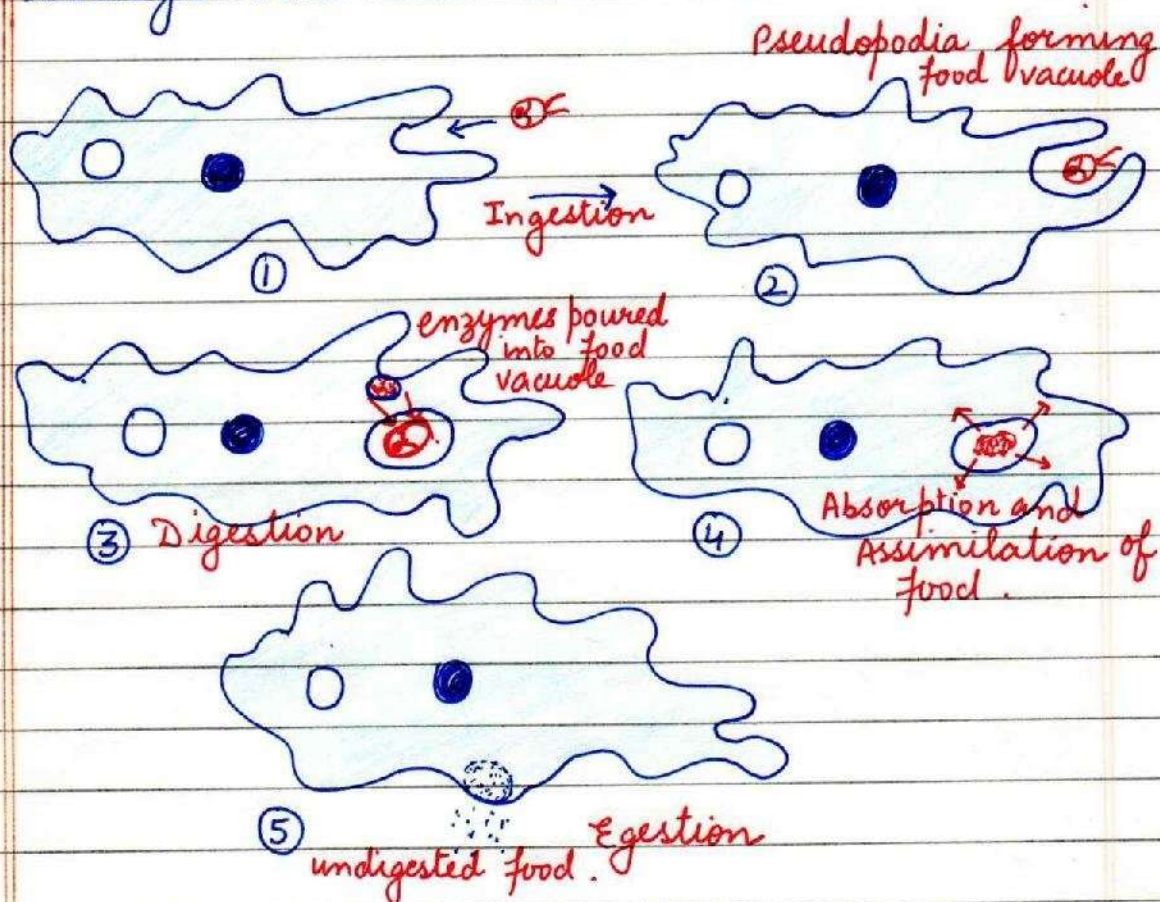
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within the food vacuole. This vacuole then moves to the rear end of the cell. The undigested food is expelled from the body through the cell membrane.



Respiration - Exchange of gases in Amoeba occurs by diffusion.

The dissolved oxygen present in the surrounding environment diffuses continuously inside the cytoplasm as its concentration outside the cell is always higher than in the cytoplasm.

This oxygen is used for respiration within the cell and the resultant carbon di-oxide diffuses out from the body into the surroundings.

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Dear Parents,

Please assist your child in reading the chapter alongwith the written notes so that he/she can understand the concept completely. Your effort is highly appreciated.

Home assignment

1. Differentiate between bacteria and amoeba.
2. Unicellular organisms with a proper nucleus as known as _____.
3. Amoeba belongs to _____.
4. What is a contractile vacuule? State its function in amoeba.
5. Give reason:
Amoeba does not have any regular shape.