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DEPARTMENT: Nursing science

COURSE: Biology 102 Assignment

2. **IMPORTANCE OF ALGAE TO MAN**

* It can serve as a thickening agent in both shampoo and ice cream,
* They produce Oxygen and take in Carbon dioxide
* They are used for medicines and antibiotics e.g chlorellin
* Due to the presence of phosphorus it can be used as fertilizer
* Contains high iodine content which prevents goiter

3**. UNICELLULAR FORM OF ALGAE**

The unicellular form of green Algae is chlamydomonas

It has a cell bound cell wall made of cellulose

It’s found in stagnant water and on damp soil

It uses flagella for movement

4**. REPRODUCTION IN CHLAMYDOMONAS**

It undergoes both sexual and asexual reproduction - Asexual reproduction

Is by zoospores zoospore is a [motile](https://en.wikipedia.org/wiki/Motility) asexual [spore](https://en.wikipedia.org/wiki/Spore) that uses a [flagellum](https://en.wikipedia.org/wiki/Flagellum) for [locomotion](https://en.wikipedia.org/wiki/Motion_%28physics%29). Also called a swarm spore, these spores are created by some [protists](https://en.wikipedia.org/wiki/Protist), [bacteria](https://en.wikipedia.org/wiki/Bacteria) and [fungi](https://en.wikipedia.org/wiki/Fungi) to propagate themselves. the production of progeny without the union of cells or nuclear material..

Sexual reproduction is by formation of [gametes](https://www.britannica.com/science/gamete). The development of motility, [sexual differentiation](https://www.britannica.com/science/sexual-differentiation), and gamete fusion seems dependent on the production of substances (termones, gamones) that have a regulatory action similar to [hormones](https://www.britannica.com/science/hormone).

5. **The two colonial forms of Algae are:**

* Pandorina
* Volvox

|  |  |
| --- | --- |
| Pandorina | Volvox |
| Genus of the green algae | Complex form of pandorina  |
| Sexual reproduction is anisogamus | Sexual reproduction is oogamus |
| Unicellular motile thalus | Multicellular motile thalus |

6**. DISCRIBE A NAMED COMPLEX FORM OF ALGAE**

**CHRYSOPHYTA**: THE GOLDEN ALGAE

Freshwater environments. The chrysophytes are generally single-celled flagellates—organisms that have a whip like appendage called a flagellum. Their golden color comes from the presence of the secondary pigment fucoxanthin.

Not all members of the Chrysophyta are completely autotrophic (make their own food). Many members of this group are facultative heterotrophs. This means that under certain conditions—such as the absence of light or the presence of abundant readily available nutrients in the water—they behave as heterotrophs (organisms that consume other organisms for food). Such a life strategy is an [adaptation](https://kids.britannica.com/students/article/adaptation/272714) that allows the organisms the members of the division Chrysophyta are fairly diverse. Although some chrysophytes are found in marine habitats, the majority of the roughly 1,000 species in this group are found in cold to survive under a wide variety of circumstances.

Sexual reproduction among the chrysophytes is rare. Most species reproduce asexually by the formation of spores or by simple fission.

1  **PLANTS ACCORDING TO EICHLERS GROUPING OF 1883**

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| --- | --- |
| DIVISION | CLASS |
| Thallopyta  | Phycotinae (Algae)Mycotinae(Fungi) |
| Bryophyta | Hepaticae (Liverworts)Musci(Mosses) |
| Pteridophyta | Psilotinate (Psilotum)Lycopodinae(Lycopodium Selaginella)Equisetinea(Horsetails)Filicinae(Ferns) |
| Spermatophyta | Gymnospermae(gymnosperms)Angiospermae(angiosperms) |