

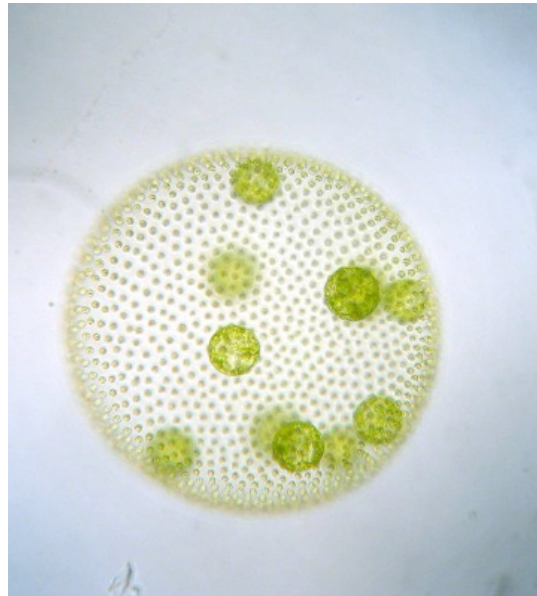
# The Volvox

## A Colony of Green Algae

### What are volvox?

Volvox are a colony of individual cells and that live together. The volvox colony can have anywhere between 500-50,000 cells. Although, a 1996 survey<sup>1</sup> estimates that there is an average of 6,000 cells in a volvox. Due to the high number of cells, certain cells in the volvox can be specialized. This means they take on a specific job, or function, to assist the cell.

The cells are held together by a cytoplasmic substance, also known as a gelatinous matrix. This allows the cells to work and move together. To move, each cell has two flagella. Together, the colony beats the flagella in a synchronous motion. This directs the colony to wherever it needs to go.



### How do volvox obtain energy?

Volvox are classified as algae. Therefore, we can deduce that they are able to obtain their energy through photosynthesis. Volvox contain chloroplasts, which allow them to carry out photosynthesis. Within the chloroplasts are found chlorophyll, a pigment which gives the organism its green color.

### How do volvox reproduce?

Volvox can reproduce through asexual or sexual reproduction. Earlier, you read that some cells are specialized. There are a limited number of cells in the volvox that are dedicated to reproduction. Some of these cells can be male and other can be female. These cells produce the daughter colonies, the dark green spheres found within the larger volvox colony. Once the daughter colony matures, the parent colony breaks apart and releases the daughter colony.

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<sup>1</sup> Koufopanou, V. 1994. The evolution of soma in the Volvocales. *Am. Nat.* 143:907-31.