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| **fungi** | **plants** | 1. |
| also | Eukaryotic, meaning they belong to the Eukarya domain and that have nuclear membrane surrounding nucleus. |
| also | Non motile organisms (not move) | 2. |
| such as [yeasts](http://www.ask.com/wiki/Yeast?qsrc=3044) , [molds](http://www.ask.com/wiki/Mold?qsrc=3044), mushrooms | such as trees, flowers, and ferns, | 3. |
| [cell walls](http://www.ask.com/wiki/Cell_wall?qsrc=3044) that contain [**chitin**](http://www.ask.com/wiki/Chitin?qsrc=3044) | [cell walls](http://www.ask.com/wiki/Cell_wall?qsrc=3044) that contain [**cellulose**](http://www.ask.com/wiki/Cellulose?qsrc=3044) | 4. |
| no phototrophic organisms (that mean no plastids or photosynthetic pigment. | use photosynthesis to get energy. Remember that photosynthesis is a process that converts sunlight and carbon dioxide into oxygen and sugar. | 5. |
| **heterotrophic** : taking in food for energy **or** unable to make their own food from inorganic components **or** they must take in nutrients for energy | **autotrophic** : making their own energy | 6. |

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| **yeasts** | **Mushrooms** |  |
| unicellular organisms (single cells) | Multicellular organisms (multiple cells) | 1 |
| Reproduction by budding | Reproduction by spores | 2 |
| Consist of single cell which contains a nucleus and other organelles | consist of a stalk with a large cap on top. | 3 |

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| **yeasts** | **Mold**  |  |
| unicellular organisms (single cells) | Multicellular organisms (multiple cells) | 1 |
| Non Filamentous fungi | Filamentous fungi | 2 |
| Consist of single cell which contains a nucleus and other organelles | Consist of weblike network ofmicroscopic strands called **mycelium** (a hypha (plural hyphae) is a long,branching filamentous structure of a fungus ). | 3 |

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| **Myxomycota= protistae= slime molds** | **True fungi** |
| 1.The assimilative stage is **myxamoeba** that uninucleate, haploid cell which is not enclosed in a rigid cell wall | 1. the assimilative stages are **mycelium**and **yeast**, both of which are surrounded by a rigid cell wall |
| **2.**the nutrition is phagotrophic | **2.**the nutrition is Absorption |

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| **Stramenopila (Chromista)** | **True fungi** |
| **1.** have cell wall  | **1**.also |
| **2.** somatic phase consist from branched filaments hyphae | **2.**also |
| **3.** their nutrition is Absorption | **3**.also |
| **4**. forming zoospores with **2** flagella(whiplash+tinsel) | **4**.forming zoospores with **1** flagella(whiplash) |
| **5**. the cell wall consist of cellulose | **5**.the cell wall consist of chitin |

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| **Stramenopila (Chromista)**  | **Myxomycota= protistae= slime molds** |
| **1**.have cell wall  | **1**.cell wall less |
| **2.**somatic phase: consist from branched filaments hyphae | **2.**somatic phase: myxoamoeba uninucleate or plasmodium multinucleate |
| **3.**the nutrition is Absorption | **3.**the nutrition is phagotrophic |

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| **Oomycota =water molds** | **True fungi** |
| **1.** forming zoospores with 2 flagella(whiplash+tinsel) | **1**.forming zoospores with 1 flagella(whiplash) |
| **2.** The cell wall consist of cellulose and glycan,  | **2**.The cell wall consist of chitin |
| **3.**The nuclei within the filaments are diploid | **3**.The nuclei within the filaments are haploid |

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| **Somatic phase** | **Asexual reproduction** | **Sexual reproduction** | **Phylum name** |
| Uninucleate myxoamboae 1n or multinucleate plasmodium 2n | sporangiospore |  | **Myxomycota** |
|  | Zoospores with 2 flagella whiplash |  | **plasmodiophoromycota** |
| Coenocytic mycelium or branched mycelium | Zoospores with 2 flagella whiplash +tensel | Oospore by gametangial contact | **Oomycota** |
| Unicellular with rhizoids or Multicellular mycelium with aseptate hyphae | Zoospores with one flagella whiplash | Isogamous or Anisogamous or Oogamous | **Chytridiomycota** |
| Coenocytic mycelium | 1.sporangiospore2.chlamydospores  | Zygospore by gametangial copulation  | **Zygomycota**  |
| Unicellular yeast or sepatate mycelium | Conidia | Ascospore | **Ascomycota** |
| Unicellular yeast or sepatate mycelium | 1. Budding2. Conidia3. Arthrospores (Fragmentation of hyphae) | Basidiospore | **Basidiomycota** |
| sepatate mycelium or yeast | Conidia | absent | **Deuteromycota imperfect fungi** |