

Kingdom Plantae – Algae

Name _____

Date _____

Block _____

What are Algae?

- _____
- Live in _____, etc. (i.e. in or near a source of water)
- Can be _____ or _____
- Range in size from unicellular, microscopic organisms to multicellular organisms that can grow up to _____ (i.e. kelp forests)

Why must algae live in or near a source of water?

- They lack an _____ to move water and materials from one part of the plant to another
- Need to be able to absorb these materials at all surfaces (_____)

Adaptations algae have to live under water

- Do not need _____ (i.e. no waterproof covering)
- Do not have _____ (as water supports them)
- Sexual reproduction (_____)
- Do not need structures to _____ (water does this)

Photosynthesis

- Chlorophyll captures _____
 - All algae contain chlorophyll _____, which MAY also be in combination with chlorophyll _____
 - Varying _____ of light penetrate the various depths of _____
 - Different chlorophyll pigments absorb _____
-

- Algae have adapted to contain _____ that absorb the wavelengths of light that penetrate the depths of water in which the algae live
- Algae also contain necessary pigments which aid in the absorption of varying wavelengths of light

Classification

- The classification of algae is based on:
 - _____ (based on chlorophyll and accessory pigments)
 - Form in which _____

Phyla

- Algae are divided into three phyla:
 - Phylum _____
 - Phylum _____
 - Phylum _____

Phylum Chlorophyta: Green Algae

- Colour provided by chlorophyll _____
- Food stored in the form of _____
- Cell walls contain _____
- Found in _____
- May live as single cells (unicellular), in a colony (group of cells, such as _____), or as a multicellular organism
- Unicellular Example – Chlamydomonas
- Colony (Filamentous) Example: Oedogonium
- Multicellular Example: Ulva (Sea lettuce)

Phylum Phaeophyta: Brown Algae

- Colour provided by chlorophyll _____, and accessory pigment _____
 - Food stored in the form of _____
 - Cell walls contain a water retaining material to prevent them from drying out when the tide is out
 - Found in _____ of temperate or arctic regions
 - May live as single cells (unicellular), or as a multicellular organism
- Multicellular Example: fucus

Phylum Rhodophyta: Red Algae

- Colour provided by chlorophyll __ (some have chlorophyll d), and accessory pigment _____
 - Food stored in the form of _____
 - Found in _____ from far north to the tropics
 - Most live as _____
 - Can grow on ocean's surface to depths of _____
- Example: Chondrus crispus