**Photosynthesis, Cellular Respiration and Protists STUDY GUIDE KEY**

A **chemical reaction** occurs when bonds between atoms are broken

Photosynthesis occurs in the **chloroplast** (what organelle?)

Cellular respiration occurs in the **mitochondria** (what organelle?)

The source of energy for ALL organisms is **the Sun**

The major energy source for most cells is stored in a sugar molecule called **glucose**

What must a cell be able to release to stay alive? **energy**

Energy released during cellular respiration is in the form of **ATP**

The process that requires energy is called **photosynthesis**

The process that makes energy is called **cellular respiration**

The starting materials for photosynthesis are:

**Sun’s energy**

**Water (H20)**

**Carbon dioxide (CO2)**

The products of photosynthesis are:

**Oxygen (O2)**

**Glucose (C6H12O6)**

The starting materials for cellular respiration are:

**Oxygen (O2)**

**Glucose (C6H12O6)**

The products of cellular respiration are:

**ATP energy**

**Water (H20)**

**Carbon dioxide (CO2)**

The two ways cells release energy are **cellular respiration (with oxygen)** and **fermentation (without oxygen)**

Cells have a **selectively permeable** cell membrane

How do cells store energy? **In their chemical bonds**

Your cells are made mostly of **water**

List how the following Protists move, eat and reproduce:

**Movement Food Reproduce**

Euglena **Flagellum Photosynthesis (Autotroph) Asexual**

Amoeba  **Pseudopods Engulfs Prey (heterotroph) Asexual**

Paramecium **Cilia Oral Groove (heterotroph) Asexual**

Volvox **Flagellum Photosynthesis (Autotroph) Asexual/Sexual**