

Who Do Cells Get Energy?

Name: _____

Date: _____

Cell Respiration

- At _____, the light reaction of photosynthesis shuts down.
- However, the _____ of nutrients into cells, removal of wastes from cells, building of new cell parts, and other functions do not stop because it is dark.
- _____ is still needed to carry on these life processes.
- The chemical energy stored during photosynthesis is made accessible for use by the cell through _____.
- Cell respiration involves processes with and without _____.

Cell Respiration: Glycolysis

- _____ is a process that breaks down glucose molecules.
- It occurs in the _____.
- It _____ require oxygen.
- The process yields pyruvate and a small amount of _____ molecules.
 - _____ is a type of acid necessary to convert sugar to energy.

Cell Respiration: Aerobic Respiration

- Aerobic respiration occurs in the _____.
- _____ is required for this process.
- The _____ made during glycolysis enters the mitochondria.
- This process yields many _____ molecules.

Cell Respiration: Fermentation

- _____ is a type of anaerobic respiration, a process that does not require oxygen.
- Pyruvate is converted into _____, carbon dioxide, and either lactic acid or alcohol. A small amount of ATP molecules is produced.
- _____ is mainly produced in muscles and can be used as a source of energy. It is also used in food making.
- Fermentation by _____ is important in baking bread and making wine.

Photosynthesis and Cell Respiration are Related

- You can see _____ in the two processes that maintain life on Earth: photosynthesis and cell respiration.
- Photosynthesis _____ the molecule that provides the energy for life.
- Cell Respiration breaks this molecule _____ to meet the cell's current energy needs.
- Nearly every creature on Earth uses the _____, or chemical energy, produced through photosynthesis by plant cells.
- Both plant and animal cells use the _____ that plants give off during photosynthesis for cell respiration.
- Photosynthesis and cell respiration go _____.
- They involve the same basic chemical materials:
 - Carbon Dioxide
 - _____
 - _____
 - ATP
 - ADP
 - _____
- Each reaction yields the _____ result of the other.
- Photosynthesis and cell respiration are _____.
- One stores energy from the _____ in the form of sugars to be used later by cells.
- The other converts the _____ sugars into energy for immediate use by the cells.