

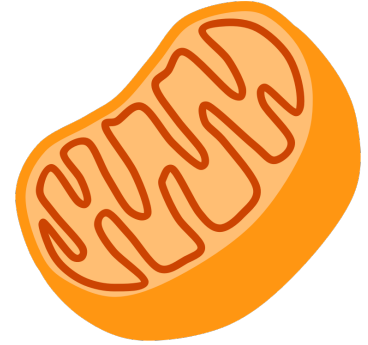
Aerobic Cellular Respiration

What is the purpose of cellular respiration?

How is cellular respiration different than burning fuel in a car? How is it the same?

Why is cellular respiration considered aerobic?

Label the mitochondrion with the following parts: **outer membrane, inner membrane (cristae), intermembrane space, matrix.**



What does the word glycolysis mean?

Complete the Table below while reading about each stage of Cell Respiration:

| Stage | Where It Occurs | What Goes In | What Comes Out |
|--------------------------------|-----------------|--------------|----------------|
| Glycolysis | | | |
| Krebs cycle | | | |
| Electron Transport Chain (ETC) | | | |

Can you add the missing pieces to this diagram after reading through the notes on the 3 stages of Cell Respiration?

- Where is oxygen used?
- Where is carbon dioxide released?

How many ATP are made during aerobic cellular respiration?

What role does ATP Synthase Play?

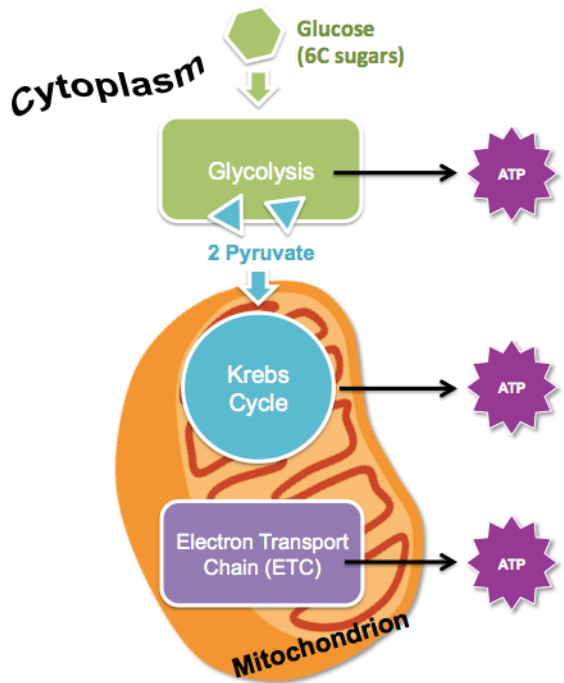
What is the purpose of oxygen in Cell Respiration?

Cellular respiration begins with a pathway called _____.

Is the following sentence True or False? Glycolysis releases a great amount of energy.

Name That Stage! Practice

Use this space to record the correct answers for this activity:



| Glycolysis | Krebs Cycle | ETC |
|------------|-------------|-----|
| | | |

The Powerhouse of the Cell Movie

Distinguish between fast and slow twitch fibers. When are they used? Which have more mitochondria?

What does exercise training do for our muscle cells?

What damages mitochondrial DNA?

As a person ages, **what changes occur** that contributes to aging and lack of stamina?

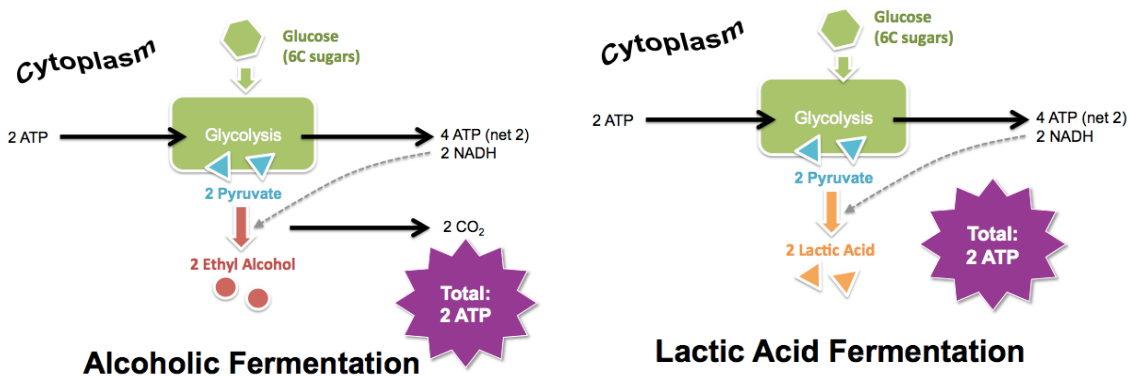
Anerobic Respiration: Fermentation

28. Because fermentation does not require oxygen, it is said to be _____.

29. List the two main types of fermentation, distinguish between each using the table below:

| Fermentation Type | Where It Occurs | What Goes In | What Comes Out |
|-------------------|-----------------|--------------|----------------|
| | | | |
| | | | |

How is each type of fermentation used commercially?



30 . During rapid exercise, how do your muscle cells produce ATP?

28. When a runner needs quick energy for a short race, what source can supply enough ATP for about 90 seconds?

29. Why does a sprinter have an oxygen debt to repay after the race is over?

Fermentation Separation Practice Activity

30. Make some notes about your learning from this activity:

| Alcoholic Fermentation | Both | Lactic Acid Fermentation |
|------------------------|------|--------------------------|
| | | |