Lyrics:

Cell Respiration

It's a long complicated process

That I need to know for a Bio test,

But it turns my brain into a huge big mess

Cell Respiration

It breaks down food to release energy

Food molecules are glucose specifically

You need oxygen to oxidize thoroughly

Cell Respiration (Woo Hoo)

It gives off some carbon dioxide

Also water's made off to the side,

But the ATP is why we got on this ride

Cell Respiration (Woo Hoo)

It's made up of 3 main stages,

But it takes up so many pages,

And to know it all seems to take many ages

Glycolysis (lysis means split)

Is what's first up (in the cytoplasm)

Takes one glucose (6 carbons)

And splits it up

To do this right (it)

Phosphorylates (from)

2 ATP (so)

2 ADP are....made!

Now that the glucose has phosphate

It breaks into 2 molecules that seem like mates

2 NAD+ come and oxidize them,

Which mean they take electrons and hydrogen (gen gen gen)

Add free phosphates

Now we're set

2 ADP (it's really 4)

and 3 carbon...met

Phosphates break off

ATP made...

Left with pyruvate (there's 2 of them)

And they go to the Krebs Cycle

Krebs Cycle, which happens in the mitochondria,

Oh no wait, not really, there's transition step

Let's count the ATP

4 were made, but 2 were spent

That means 2 ATP

were profited in

Glycolysis (woo hoo)

It didn't need any oxygen

2 NADH now have hydrogen

and 2 pyruvate molecules were made in the end

Transition Step (woo hoo)

NAD+ oxidizes pyruvate

1 carbon is lost along the way

And both molecules turn into Acetyl-CoA

Now 2 carbons (carried by Coenzyme A)

Krebs Cycle's next (in the matrix)

4 carbon molecule (already there)

The two connect (now 6 carbons)

Gets oxidized (by NAD+)

1 carbon left (CO2 gone)

Will do this twice (numbers doubled)

4 carbons ...are left

1 ATP (made)

oxidize (by the)

NAD+ (and...)

FADH

Molecule change (no carbon lost)

Atoms rearrange (still 4 carbons)

Looks like the start (wooooooO~~~)

And then we'll do it again

Krebs Cycle repeats twice, because 2-pyruvate

were made in (gly)colysis; let's count it up

We now have (4) ATP (6) CO2 and then these guys

10 NA(DH) 2 FA(DH2) bring electrons to ETC:

Electron Transport Chain

Inner membrane-brane-brane-brane-brane

Of the mitochondria

Proteins in lane-lane-lane-lane-lane

Electrons from NADH

Pass through 3 proteins-teins-teins-teins

Electrons from FADH2

Pass through 2 proteins-teins-teins-teins

As the electrons pass through the proteins pump out

Hydrogen ions called protons to the

Inter-Intermembrane space

A concentrated place (place)

Protons will return through the (A)ATP Synthase

ATP Synthase (ma~~~akes)

32 ATP from returning protons

6 oxygen molecules get the electrons

And they combine to make 6 water with hydrogen ions

Cell Respiration (woo hoo)

Now I know the entire process

If I study I'll do well on the Bio test

And afterwards I'll get a good, good rest

Woo hoo!