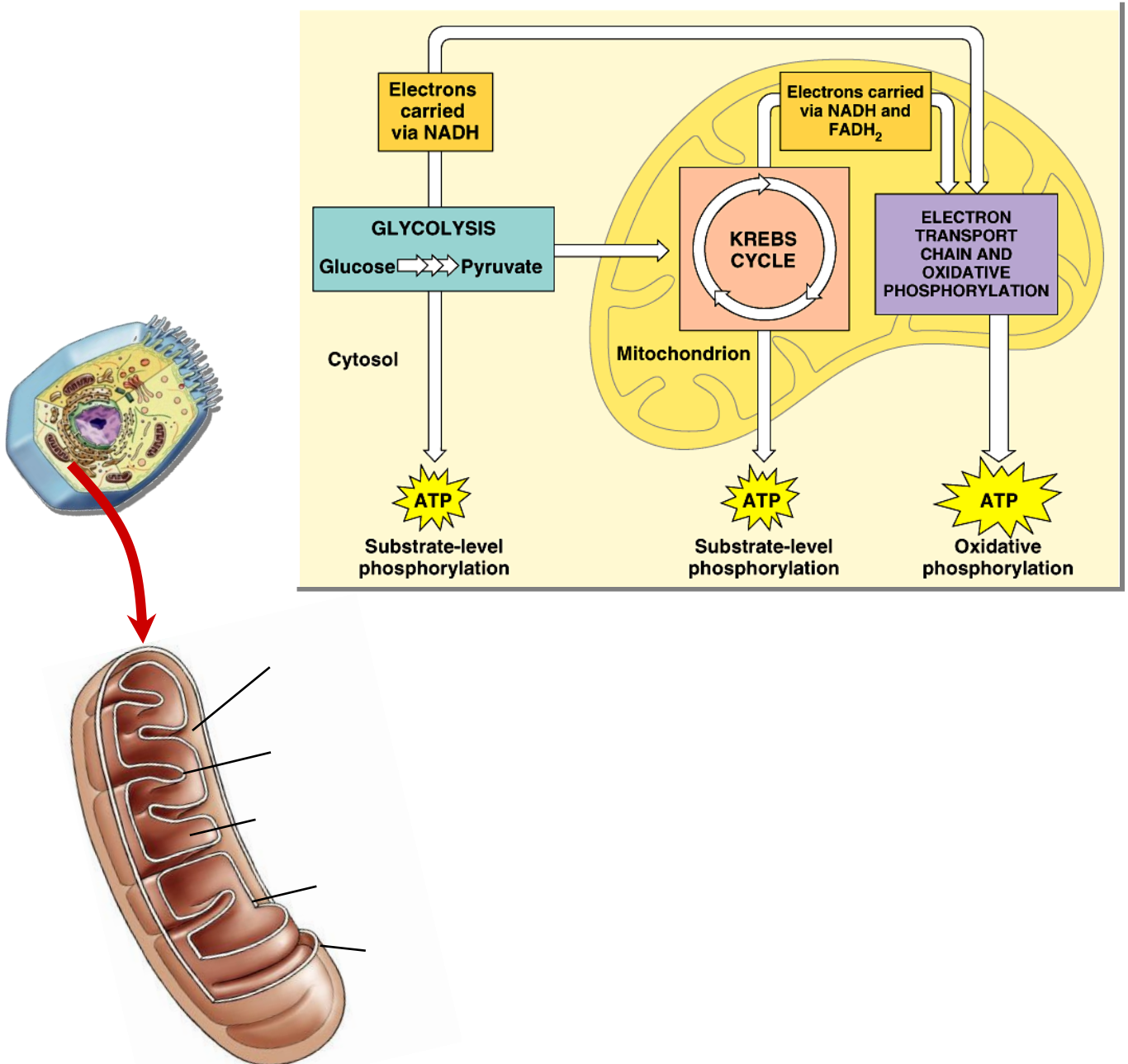


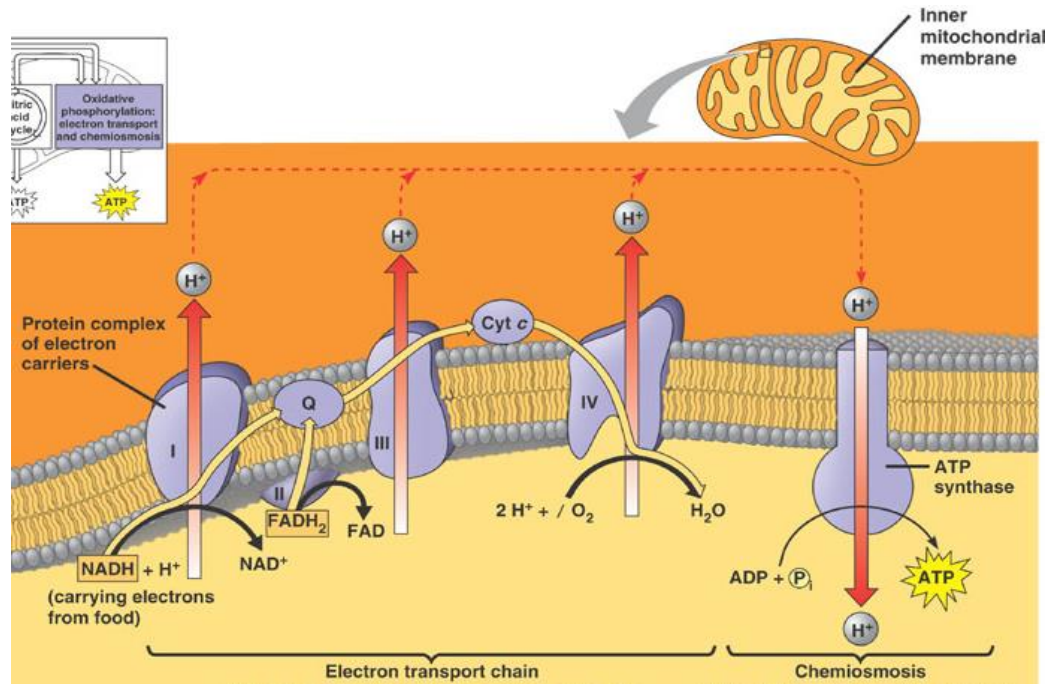
Krebs Cycle

Glycolysis is only the start

Glucose → pyruvate

Pyruvate → CO₂

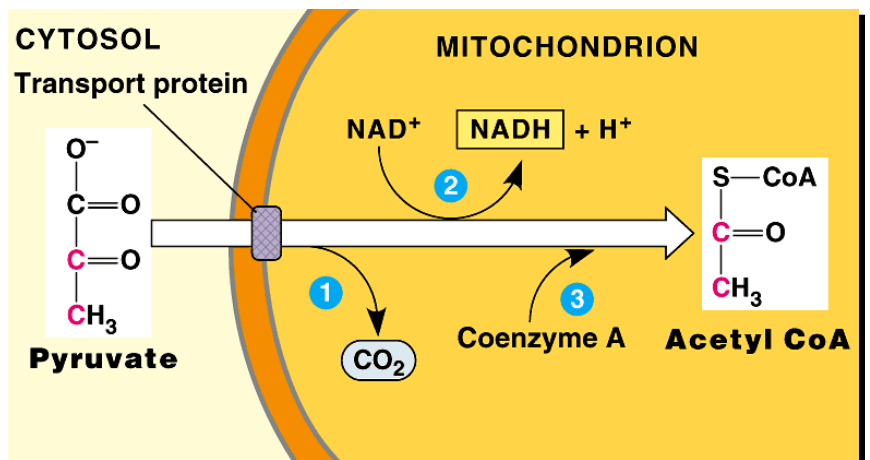




Oxidation of pyruvate

- 3 step _____ process
- releases _____ (count the carbons!)
- reduces _____ (moves e^-)
- produces _____

Acetyl CoA enters _____



Krebs Cycle aka

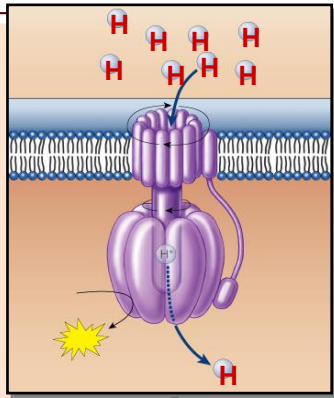
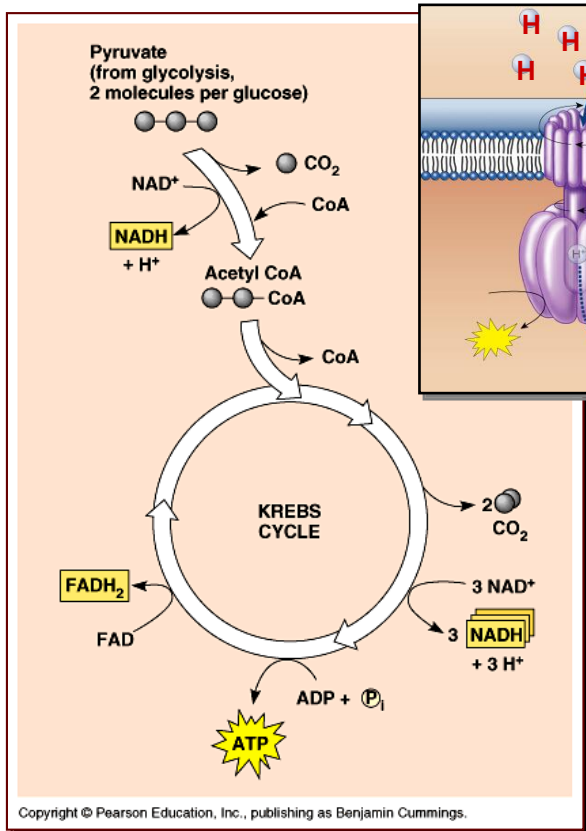
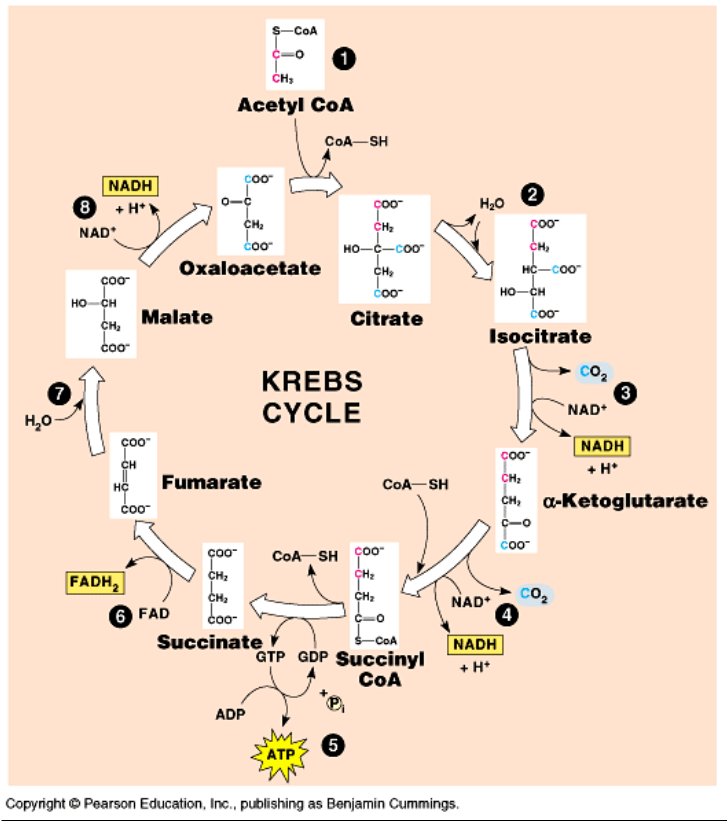
- in _____
- 8 step pathway
 - each catalyzed by specific enzyme
 - step-wise _____ of _____ molecule

Evolved later than glycolysis

- does that make evolutionary sense?
 - bacteria → 3.5 billion years ago (_____)
 - free O₂ → 2.7 billion years ago (_____)
 - eukaryotes → 1.5 billion years ago
(_____)

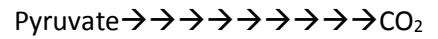
Count the carbons!

Count the Electron carriers



ATP Synthase

Energy Accounting of Krebs Cycle



Net Gain