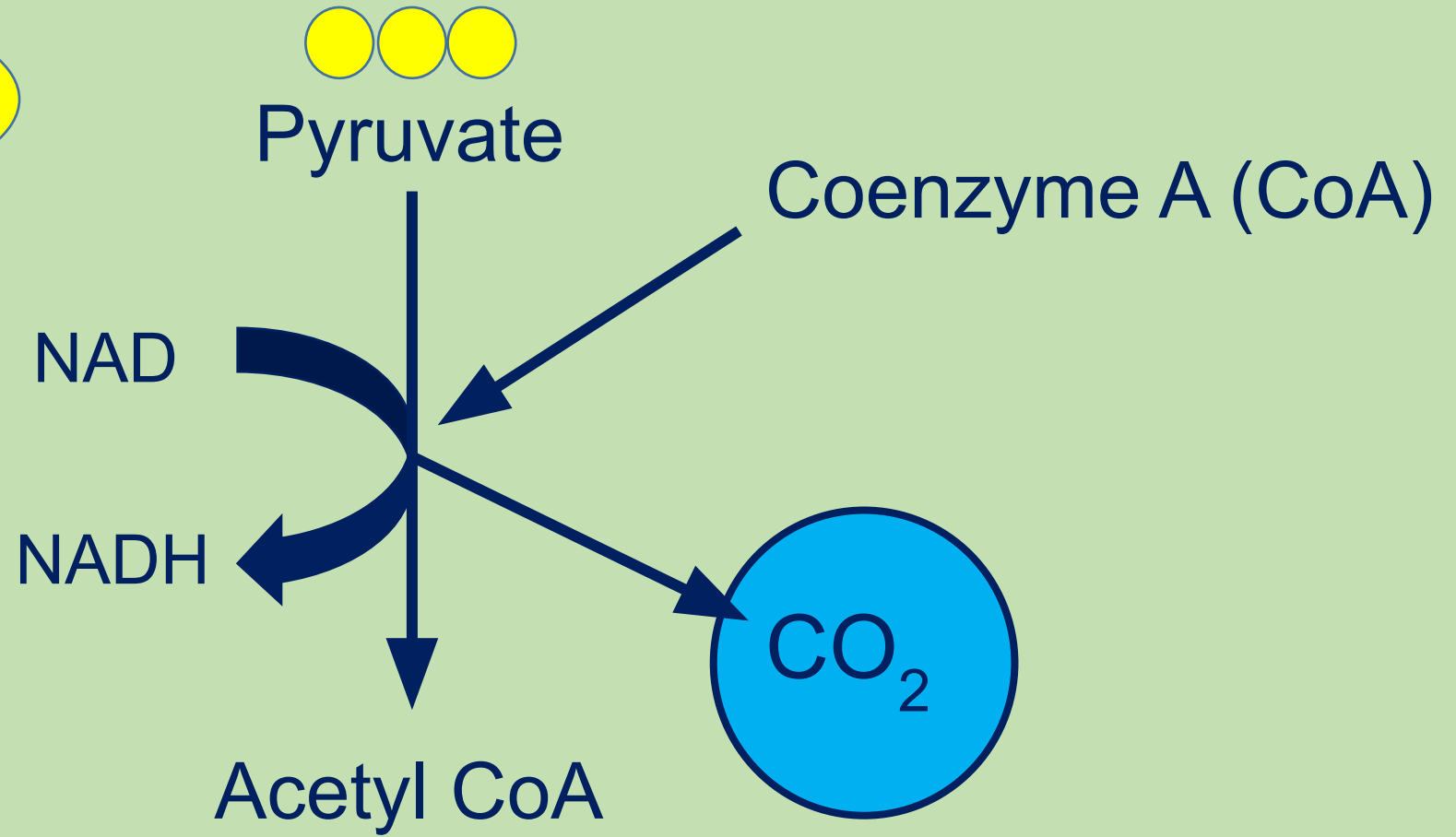


Aerobic respiration and the Krebs cycle

Learning objectives

- Be able to follow the flow of carbon and energy through the Krebs cycle
- Be able to reproduce the Krebs cycle.
- Be able to describe the Krebs cycle as an oxidative process.

LINK REACTION



- Remember glycolysis produces 2 molecules of pyruvate per molecule of glucose.

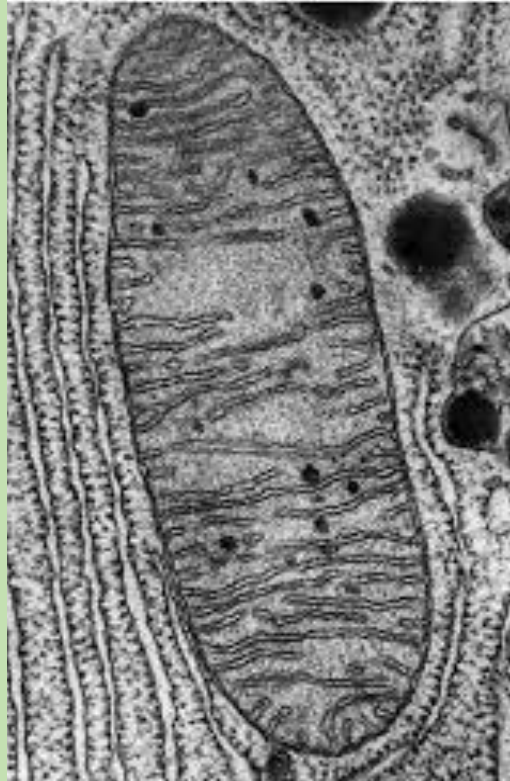
Yield from

LINK
REACTION

Input

2 pyruvate

2 NAD



Output

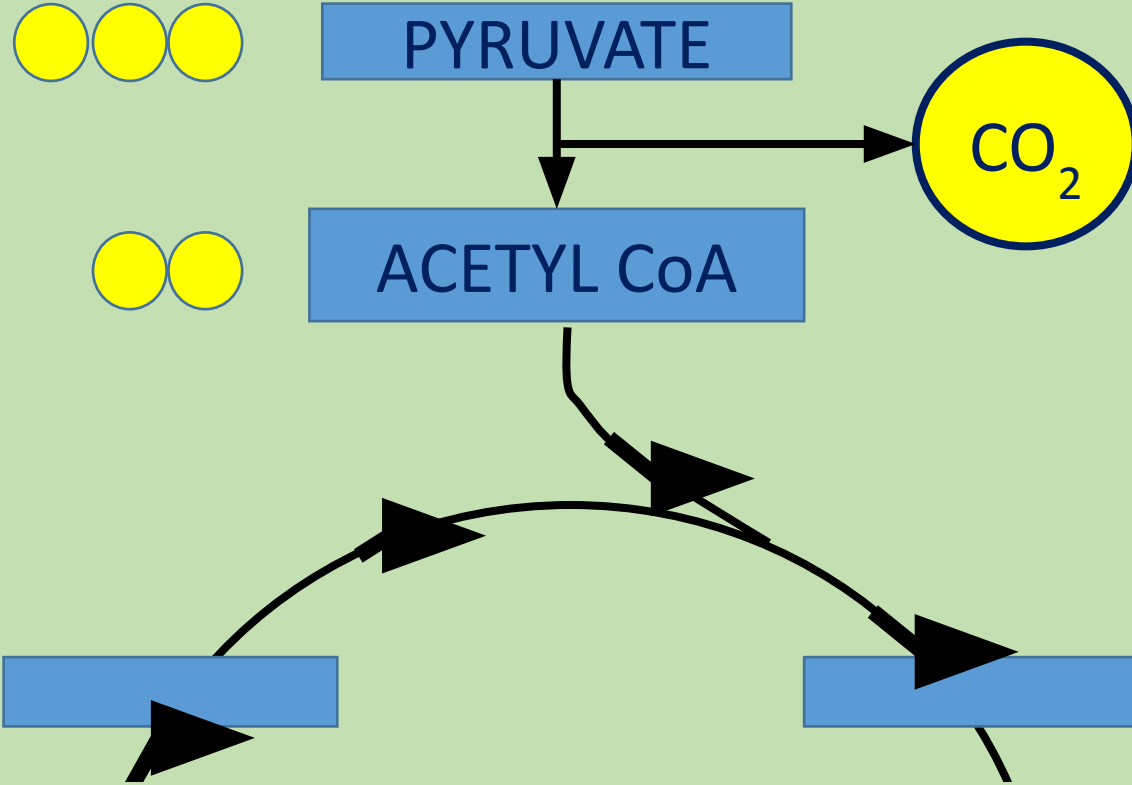
2 Acetyl CoA

2 CO₂

2 NADH

LINK REACTION

● = 1 CARBON ATOM



Yield from

KREB
CYCLE

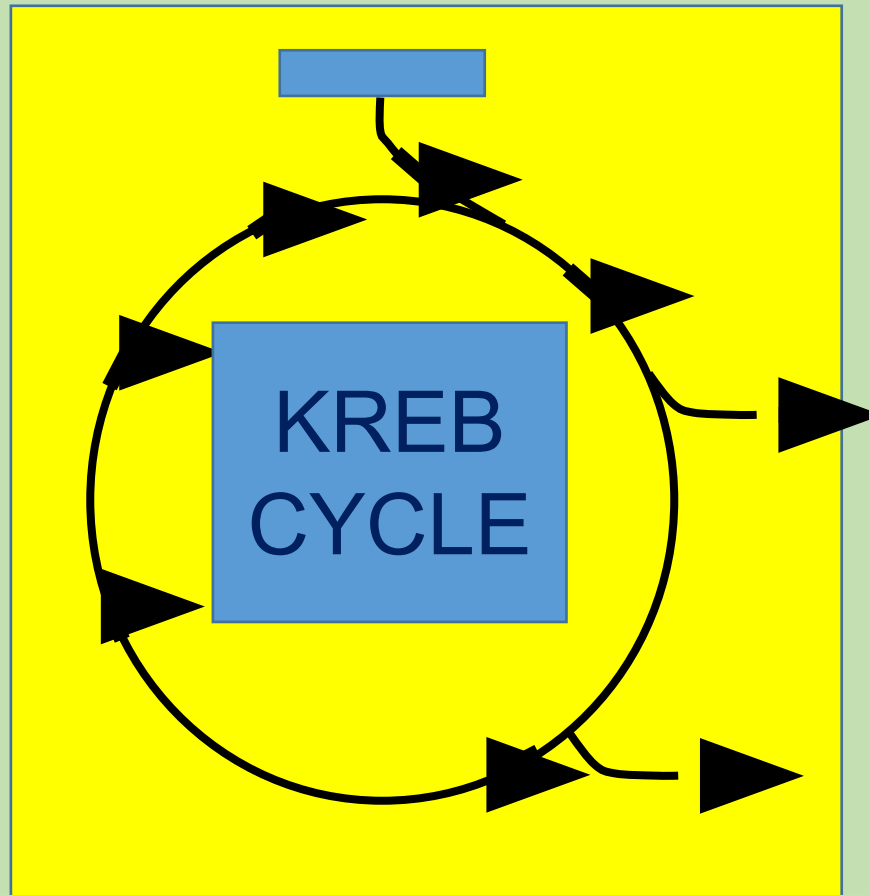
Input

2 Acetyl Co A

6 NAD

2
FAD

2
ADP



Output

4 CO₂

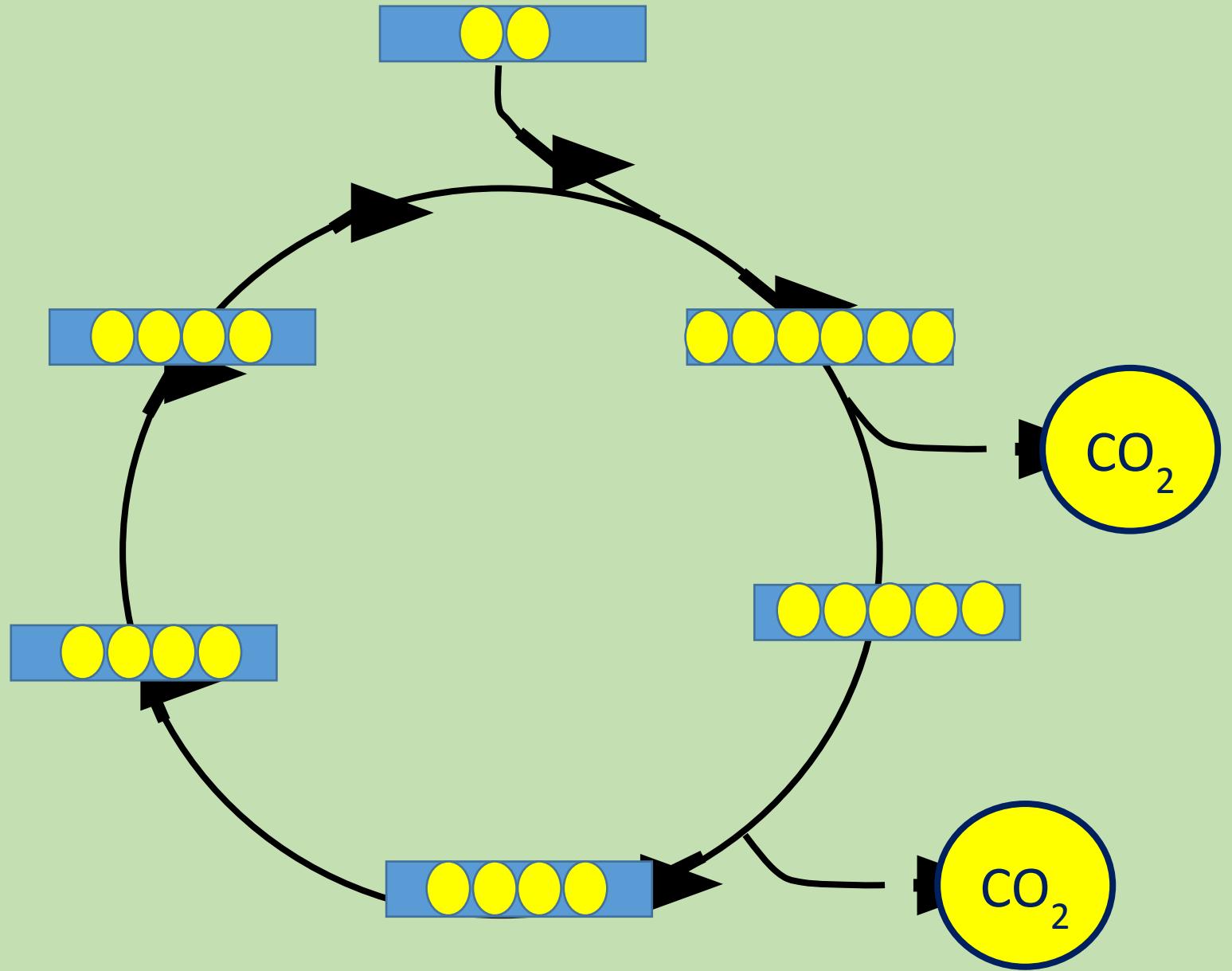
6 NADH

2 FADH₂

2

ATP

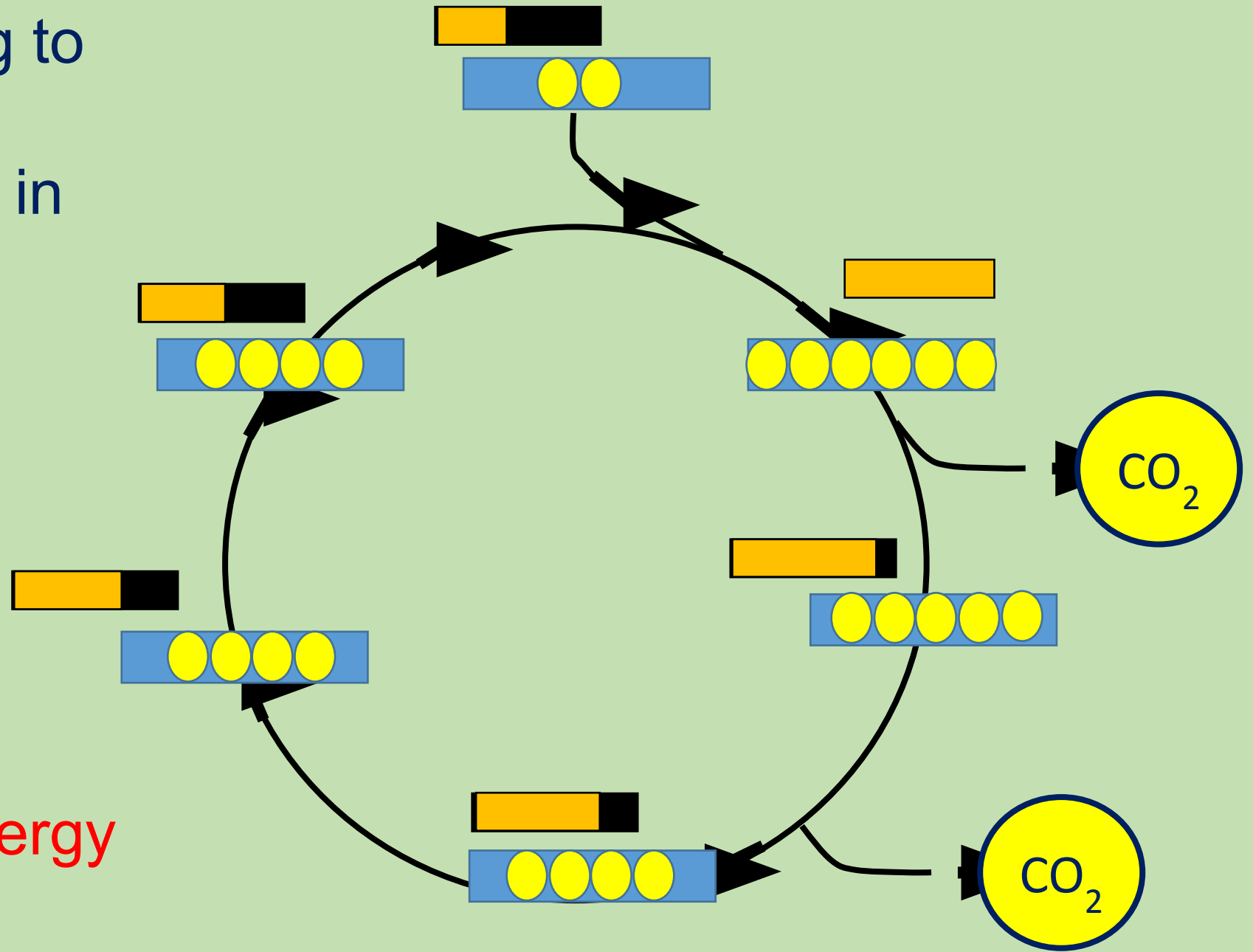
First we are going to follow the number of carbon atoms



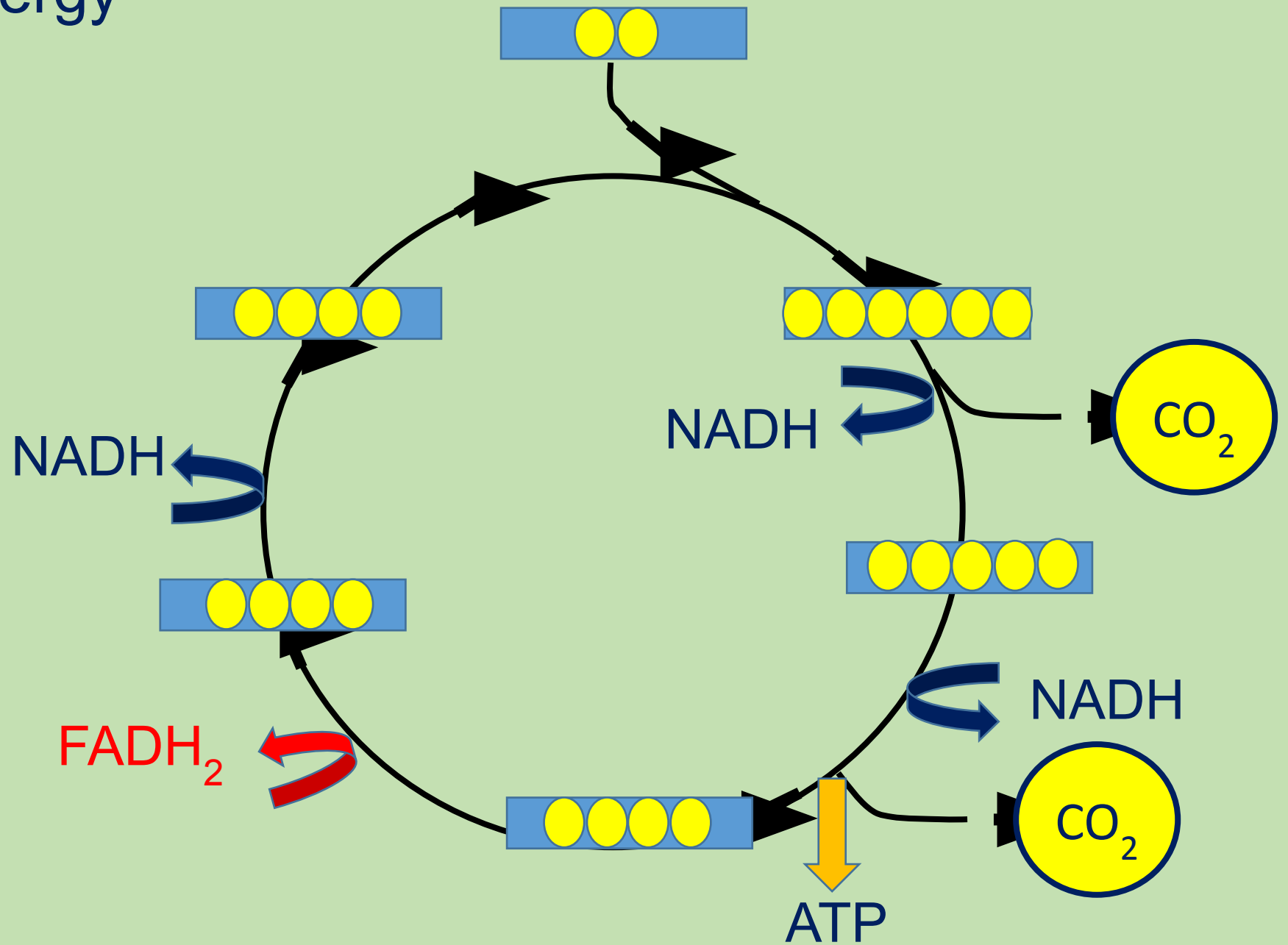
Next we are going to follow the relative amount of energy in the molecules.



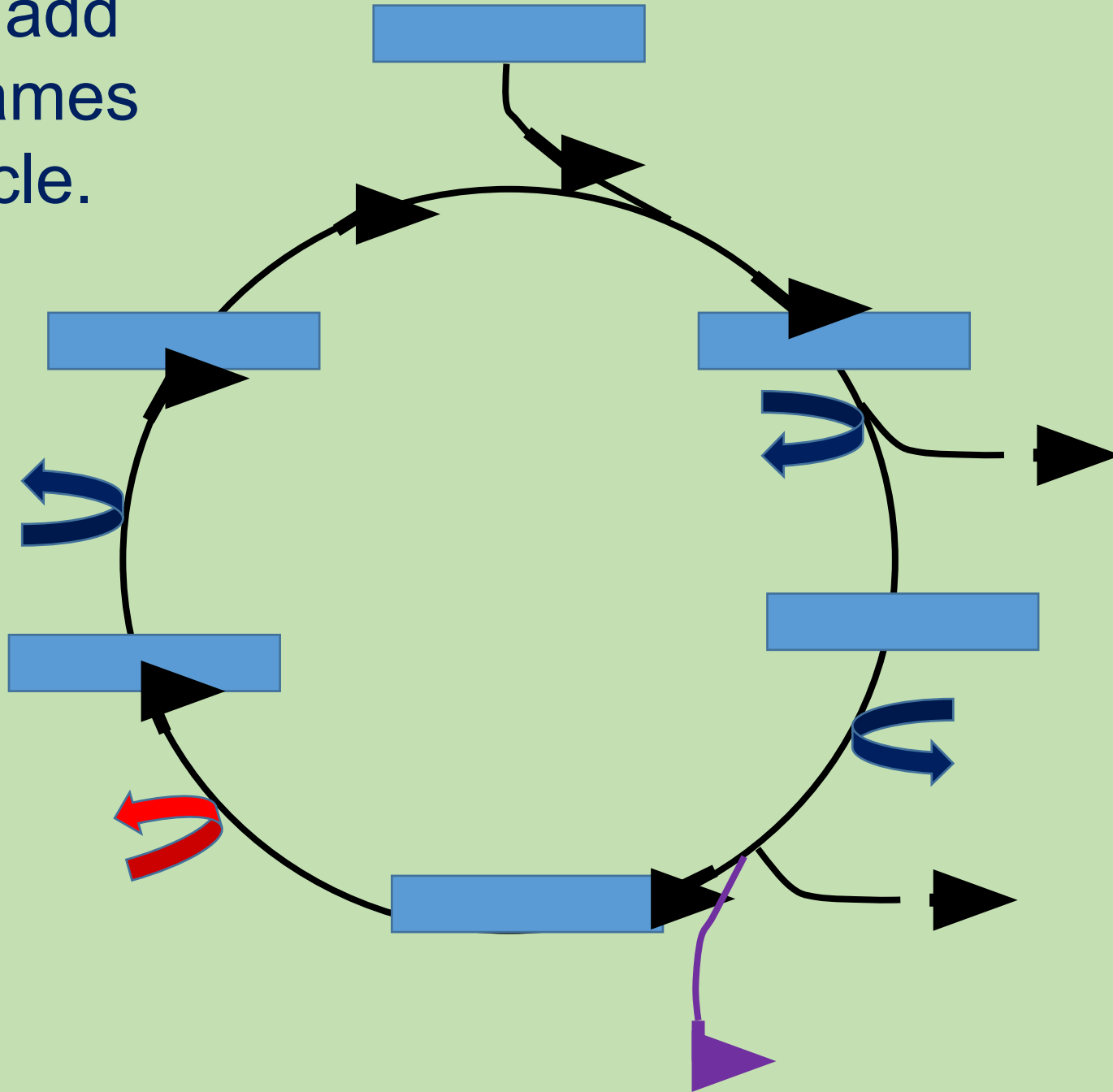
Where is this energy transferred?



Where is this energy transferred?



Finally can you add the chemical names of the Krebs cycle.



Yield from

KREB
CYCLE

Input

2 Acetyl Co A

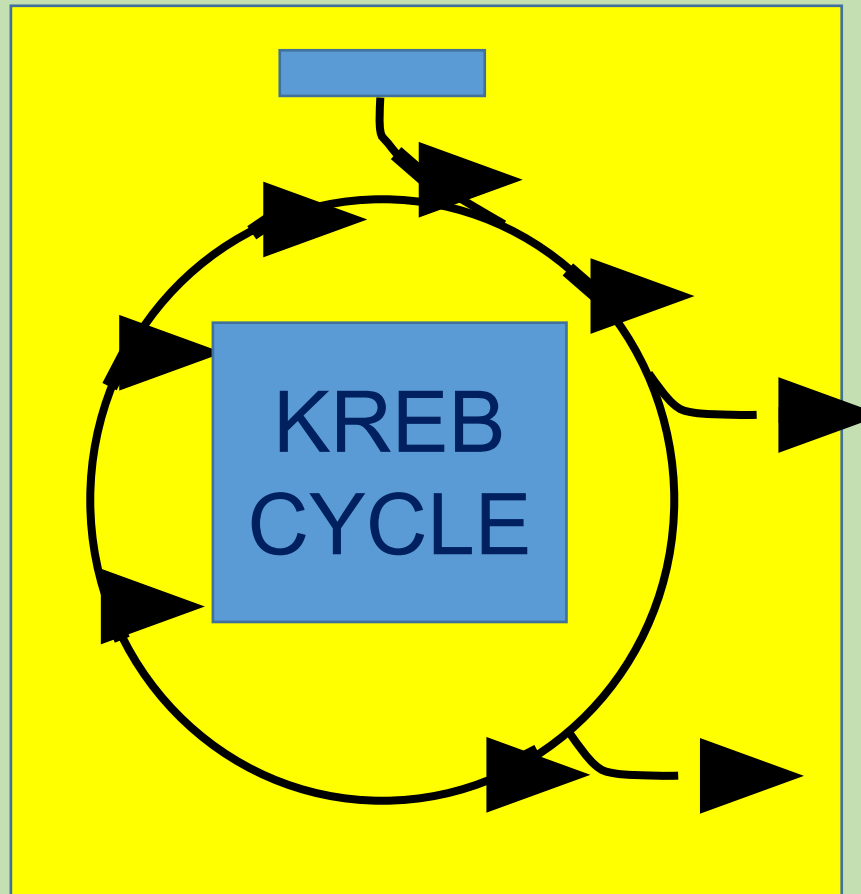
6 NAD

2

FAD

2

ADP



Output

4 CO₂

6 NADH

2 FADH₂

2

ATP

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