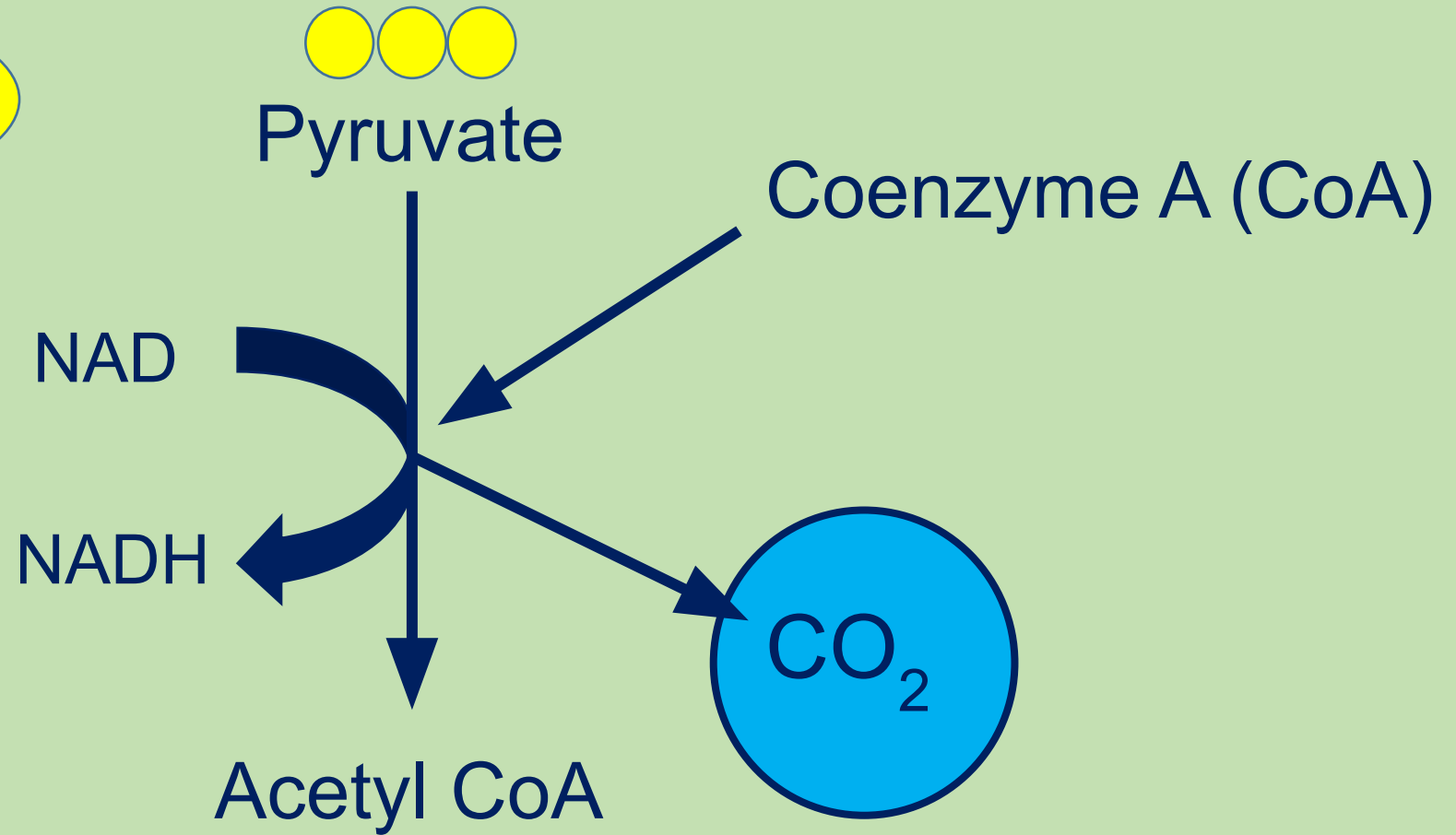


# Aerobic respiration and the Krebs cycle

## Learning objectives

- Be able to follow the flow of carbon and energy through the Krebs cycle
- Be able to reproduce the kerb 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

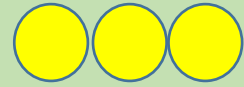
2 Acetyl CoA

2 CO<sub>2</sub>

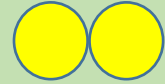
2 NADH

# LINK REACTION

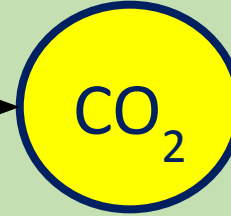
● = 1 CARBON  
ATOM



PYRUVATE



ACETYL CoA



Yield from

KREB  
CYCLE

Input

2 Acetyl Co A

6 NAD

2

FAD

2

ADP

Output

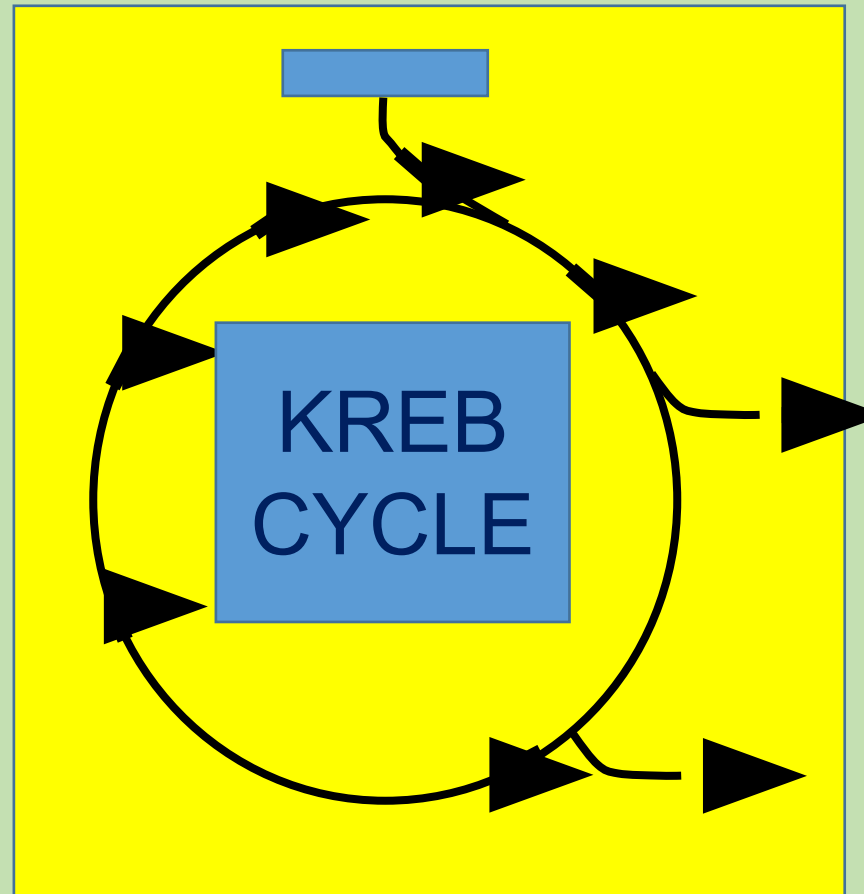
4 CO<sub>2</sub>

6 NADH

2 FADH<sub>2</sub>

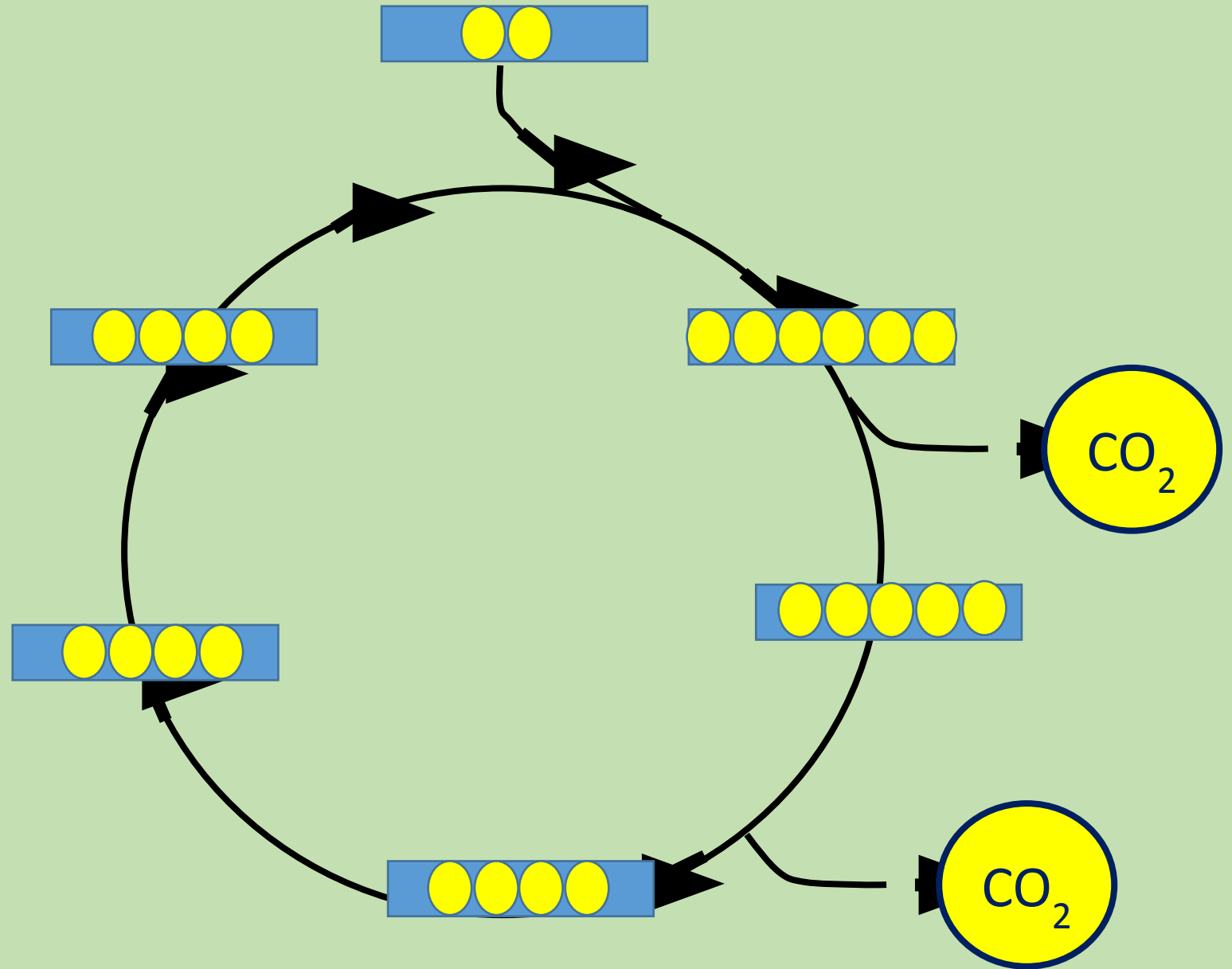
2

ATP



First we are going to follow the number of carbon atoms

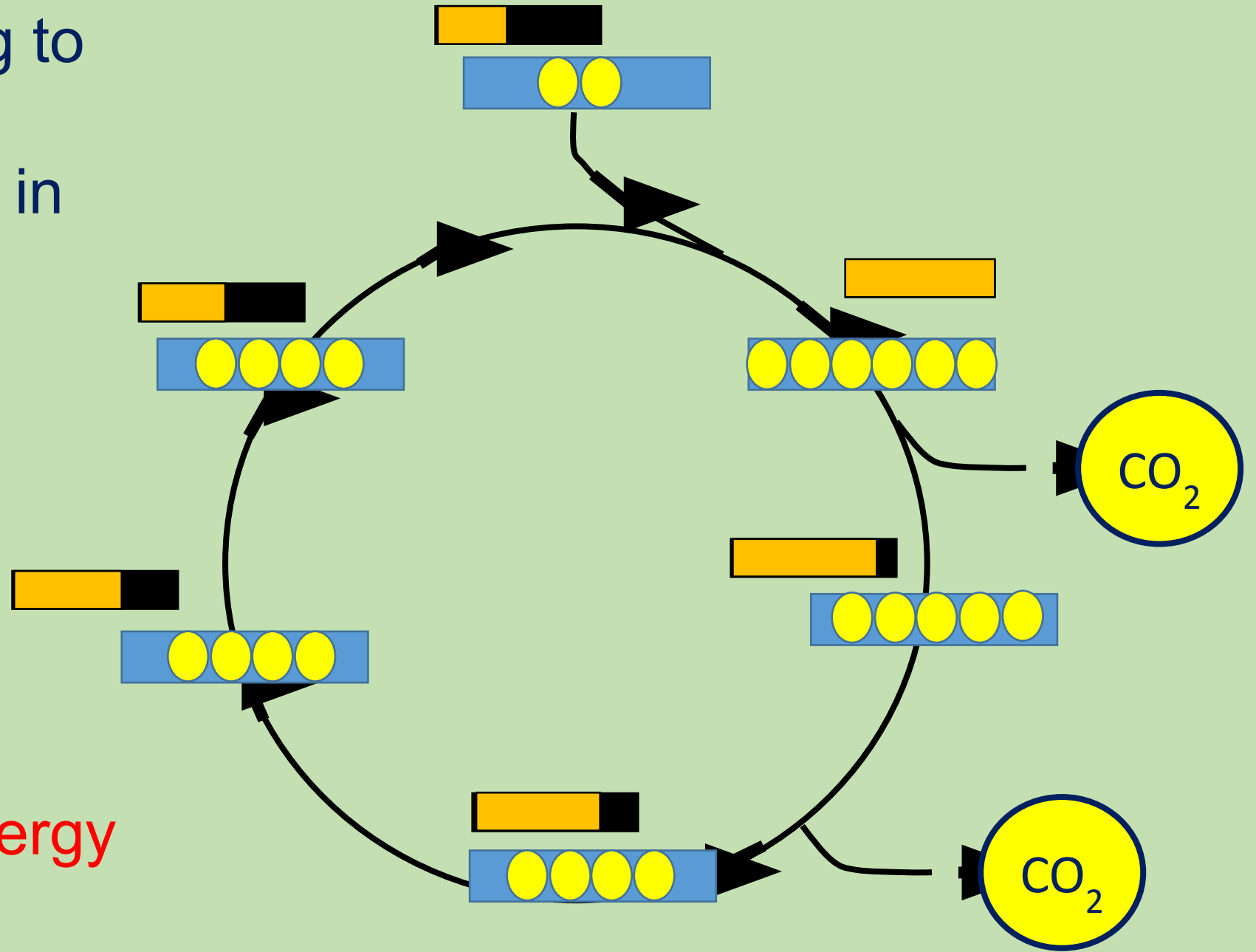
?



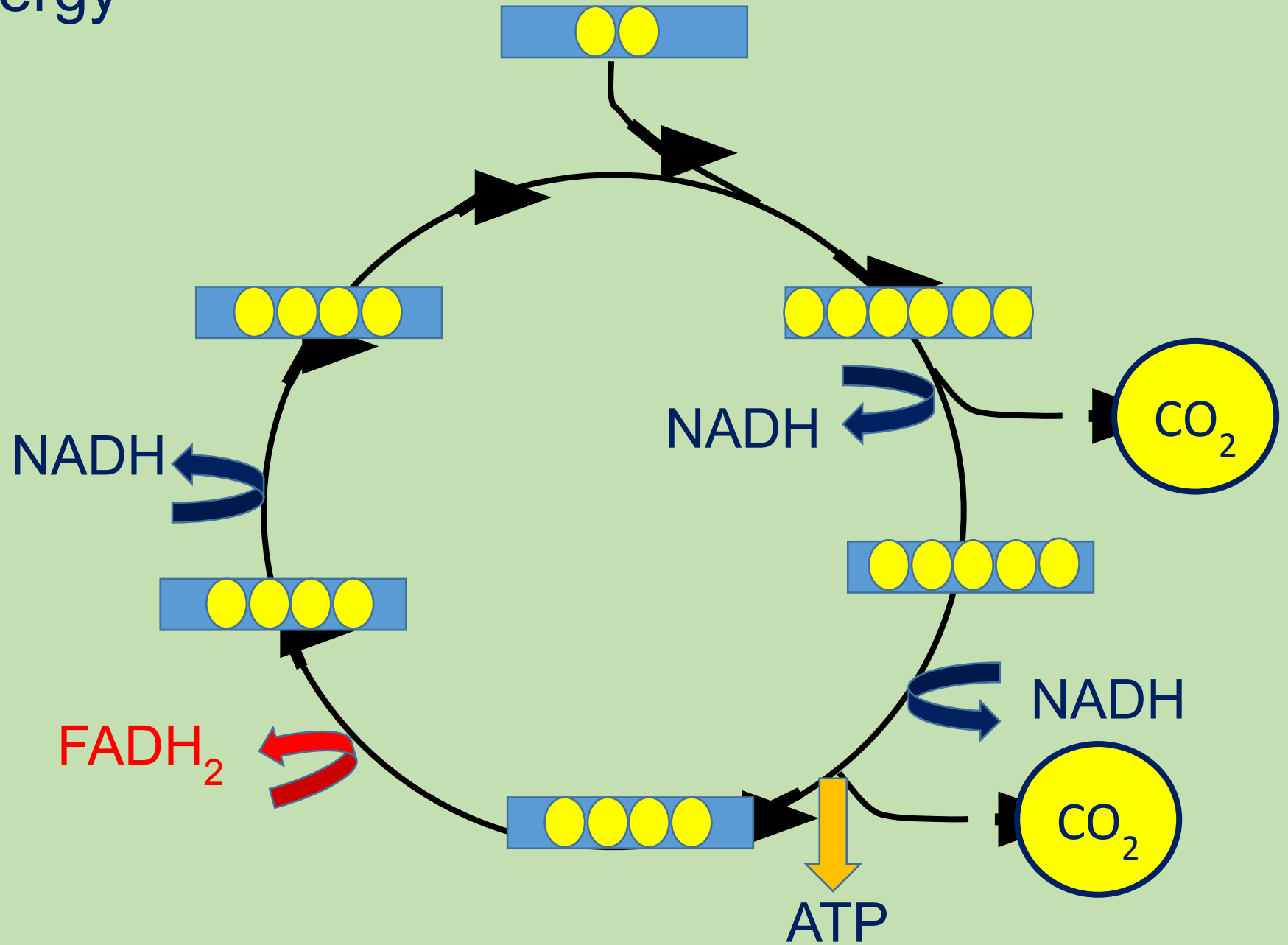
Next we are going to follow the relative amount of energy in the molecules.

?

Where is this energy transferred?

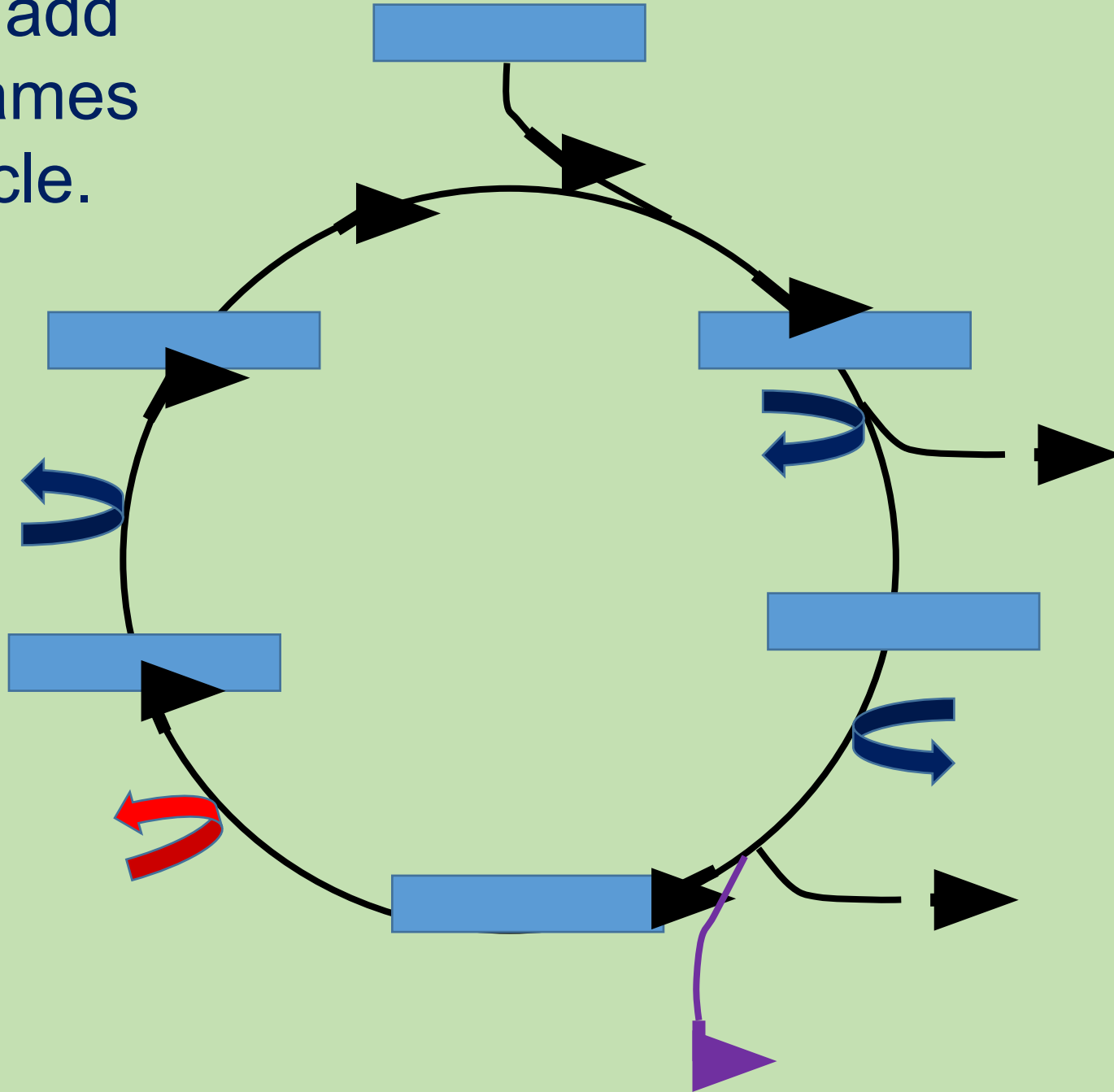


Where is this energy transferred?





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

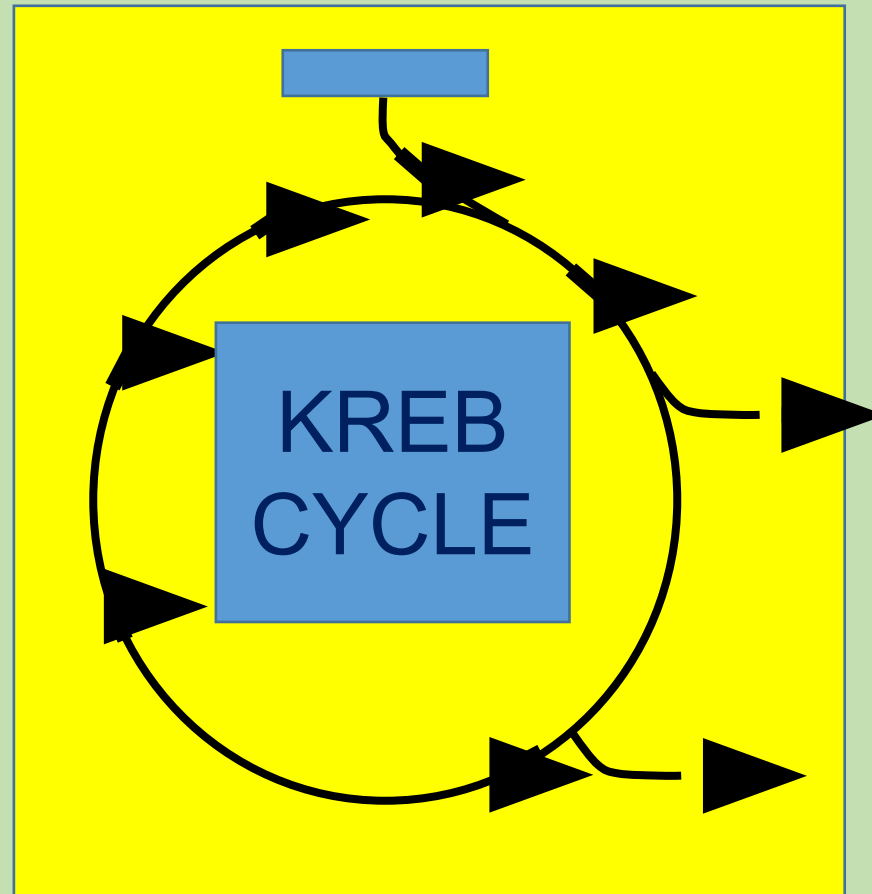
4 CO<sub>2</sub>

6 NADH

2 FADH<sub>2</sub>

2

ATP



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