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## THRESHOLD LIFE ON EARTH

4 BILLION YEARS AGO

1 BILLION YEARS AGO

Earth provided a perfect environment for life. Chemically rich, with liquid water and just the right distance from the sun made an ideal setting for life to emerge. These new organisms had the capacity to harness energy and materials from their environments to adapt to changing conditions and reproduce themselves. From them, a diverse array of life evolved.

### INGREDIENTS & GOLDBLOCKS CONDITIONS

Complex chemical  
compounds (including  
RNA & DNA)

Just the right  
amount of energy

Liquid water



### NEW COMPLEXITY

New organisms  
with the ability to

Maintain and fuel  
themselves (metabolism)

Adjust to changes around  
them (homeostasis)

Copy themselves  
(reproduction)

Gain new characteristics  
over time (adaptation)

### QUESTIONS

What is life?

How does extinction  
drive evolution?