

# Evolução Química

## Trabalho de biologia

3 - C

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# Tópicos

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Introdução

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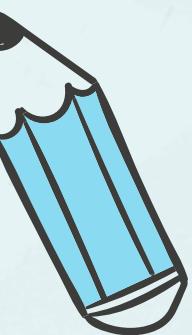
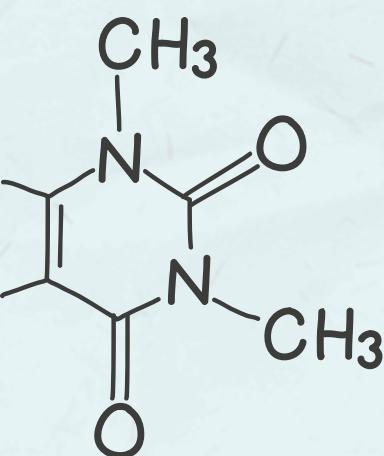
O que é

03

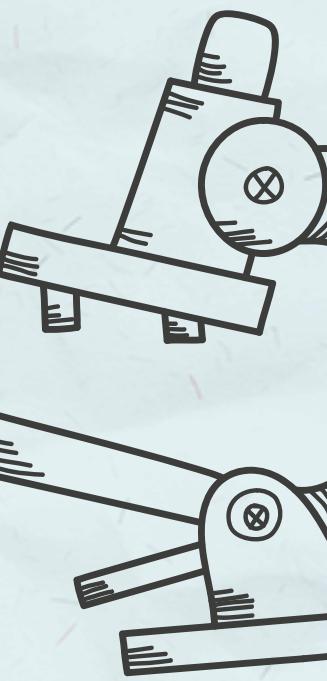
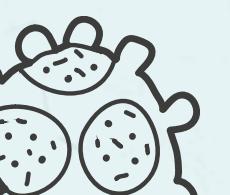
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Hipóteses sobre a  
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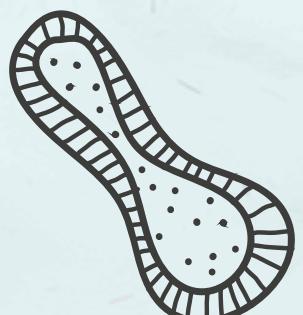
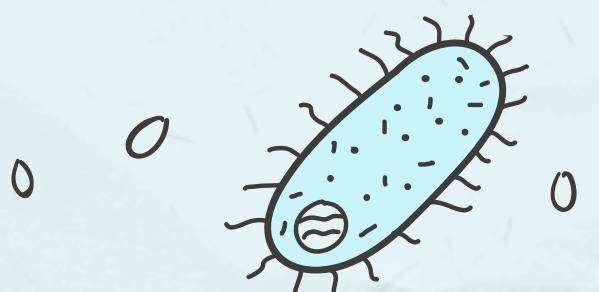
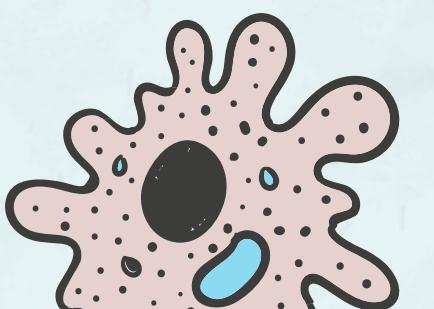
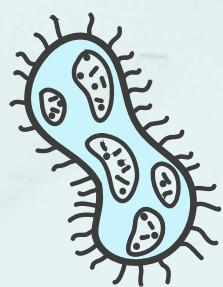
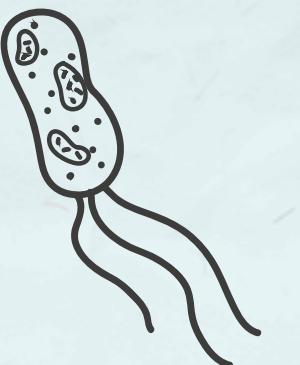
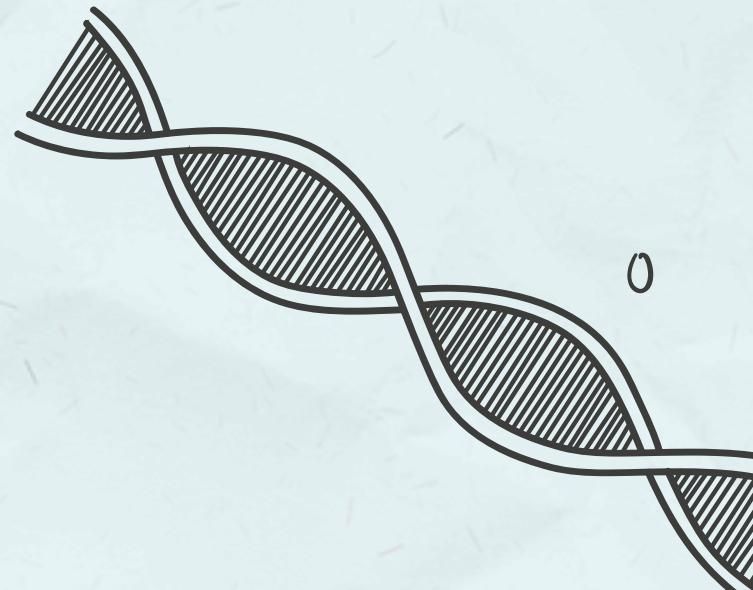
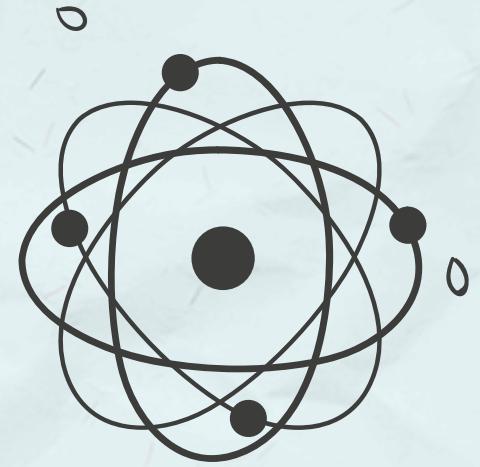
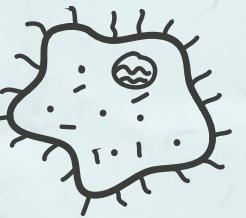
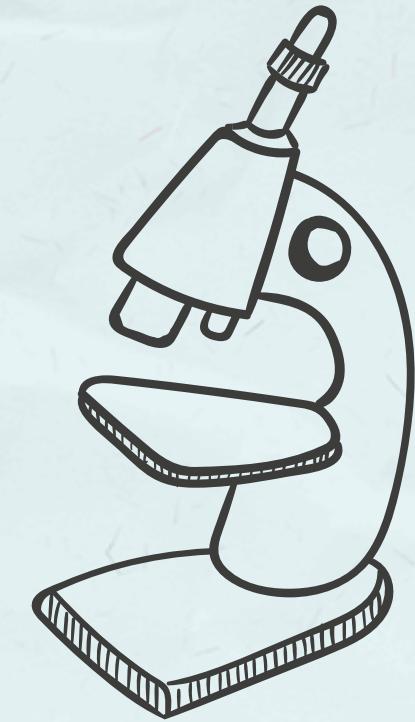
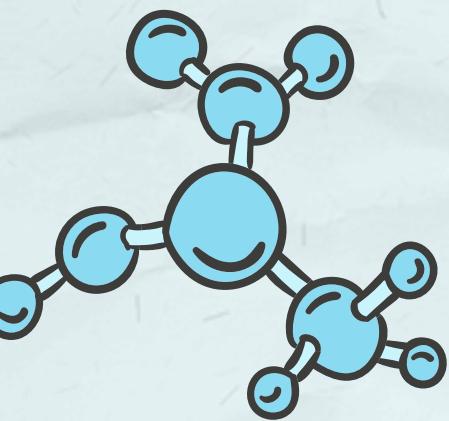


Teoria da Evolução  
Molecular

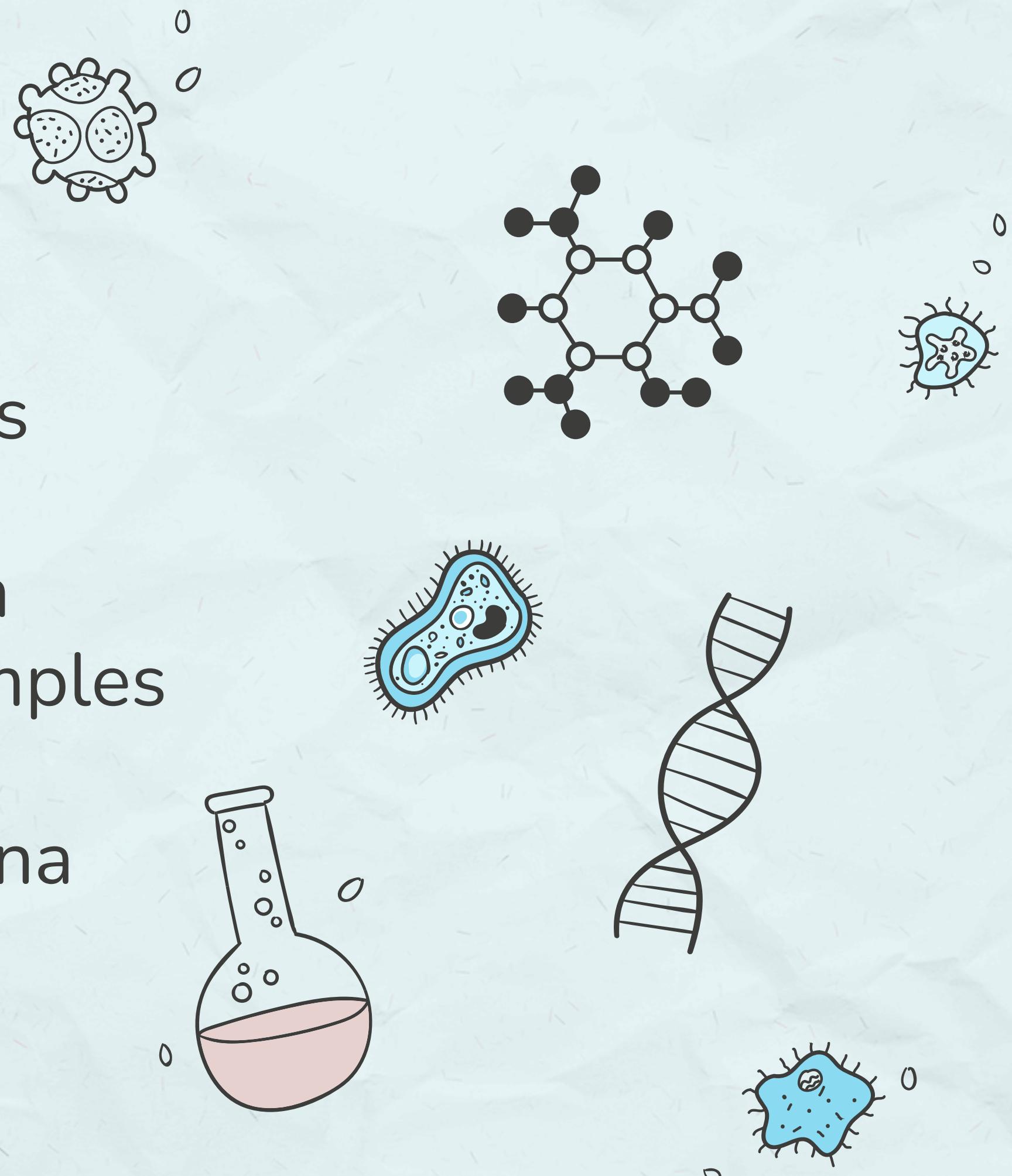


# 01

# Introdução



A evolução química é um dos temas mais intrigantes da ciência, pois busca explicar a transição entre a química simples e os processos biológicos complexos que culminaram na origem da vida.



# 1 pergunta

Qual é o principal objetivo do seminário sobre evolução química?

- a) Explicar como a física influenciou a origem da vida.
- b) Fornecer uma compreensão mais ampla de como a química primitiva pode ter dado origem aos processos biológicos.
- c) Discutir apenas as figuras importantes da biologia moderna.
- d) Focar exclusivamente na evolução dos animais.

# Resposta

b) Fornecer uma compreensão mais ampla de como a química primitiva pode ter dado origem aos processos biológicos.

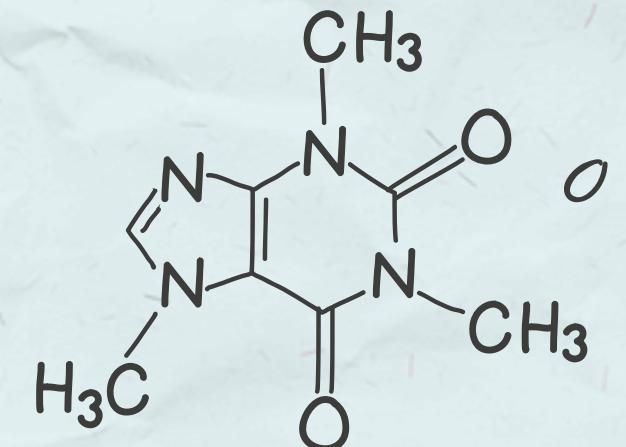
# O que é a teoria da evolução química

1.00794 1312.0 2.20 H Hidrogênio 1s <sup>1</sup>	12.0107 1086.5 2.55 C Carbono 1s <sup>2</sup> 2s <sup>2</sup> 2p <sup>2</sup>	14.0067 1402.3 3.04 N Nitrogênio 1s <sup>2</sup> 2s <sup>2</sup> 2p <sup>3</sup>	15.9994 1313.9 3.44 O Oxigênio 1s <sup>2</sup> 2s <sup>2</sup> 2p <sup>4</sup>	30.97696 1011.8 2.19 P Fósforo [Ne] 3s <sup>2</sup> 3p <sup>3</sup>	32.065 999.6 2.58 S Enxofre [Ne] 3s <sup>2</sup> 3p <sup>4</sup>
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evolução  
química →



Eles sugeriram que, na Terra primitiva, a atmosfera era composta principalmente por metano, amônia, vapor d'água e hidrogênio. Essa composição química teria sido muito diferente da atmosfera atual, sem oxigênio livre, o que favoreceria a formação de compostos orgânicos complexos, como aminoácidos, açúcares e ácidos nucleicos.



# 2 pergunta

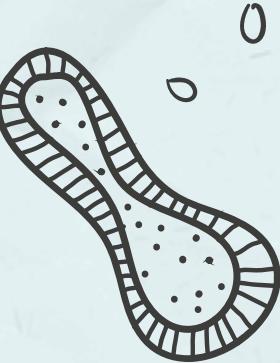
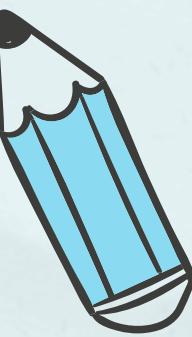
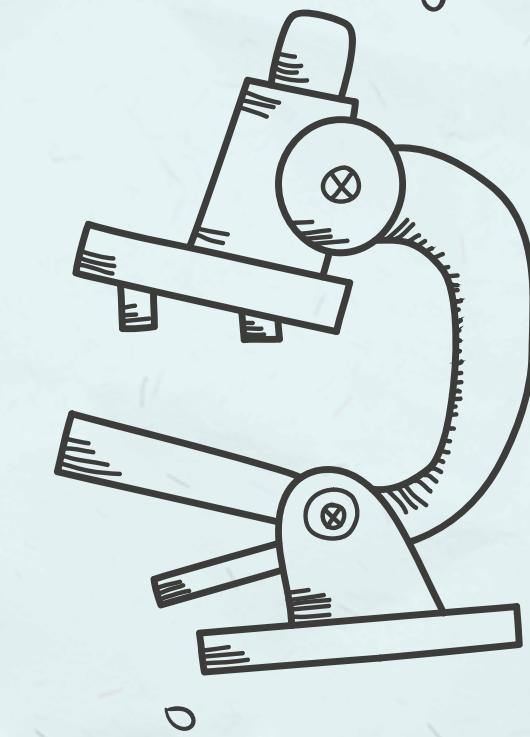
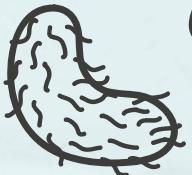
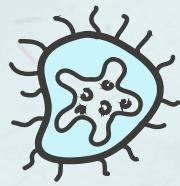
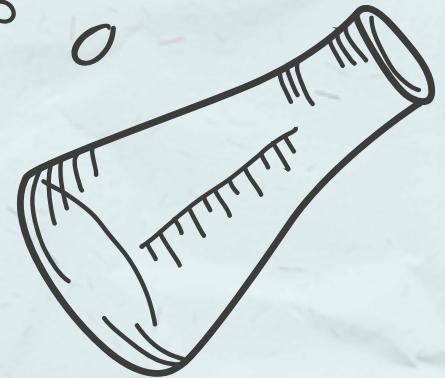
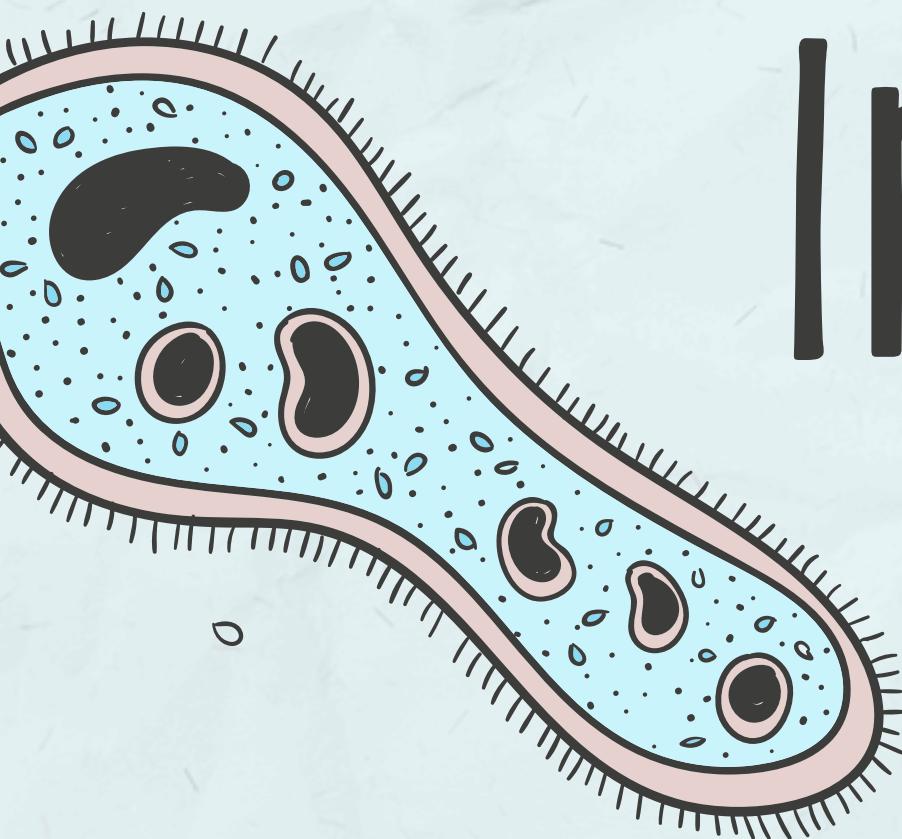
Qual das alternativas abaixo descreve corretamente uma das hipóteses sobre a origem da vida apresentadas no texto?

- a) A vida surgiu a partir de compostos orgânicos formados em lagos primitivos, como proposto pela Hipótese dos Ventos Hidrotermais.
- b) O RNA foi a primeira molécula genética a surgir, conforme sugerido pela Hipótese do Mundo de RNA.
- c) A atmosfera primitiva era rica em oxigênio, o que permitiu a formação de moléculas complexas, de acordo com a Hipótese da Sopa Primordial.
- d) As fontes hidrotermais são consideradas o local mais provável para a formação do DNA, segundo a Hipótese do Mundo de RNA.

# Resposta

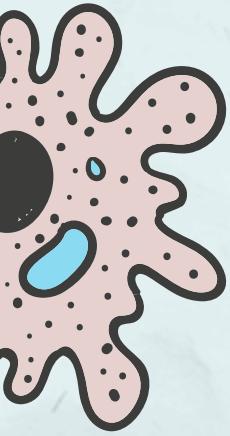
b) O RNA foi a primeira molécula genética a surgir, conforme sugerido pela Hipótese do Mundo de RNA.

# Figuras Importantes

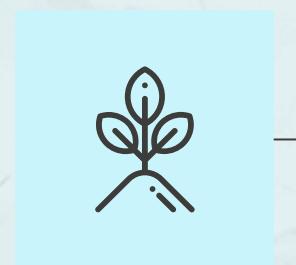




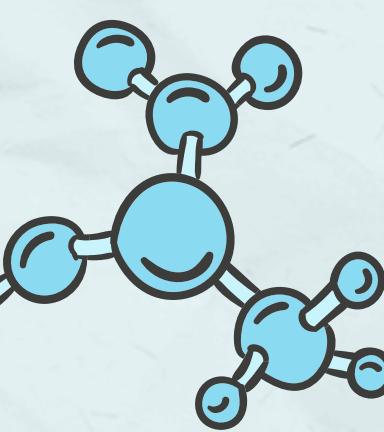
**Stanley Miller e  
Harold Urey**



**Thomas Cech e  
Sidney Altman**



**J.B.S. Haldane**



**Alexander Oparin**

# 3 pergunta

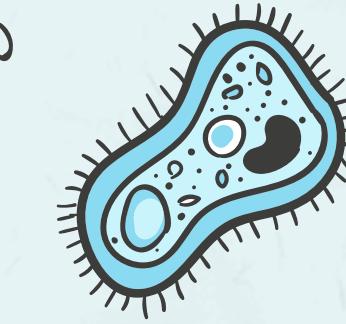
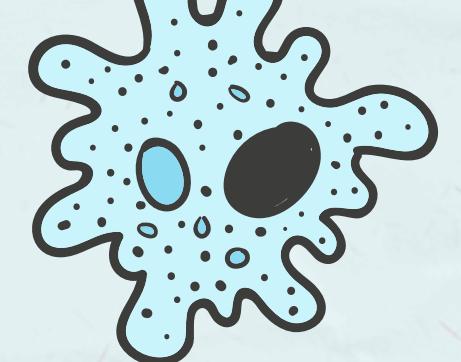
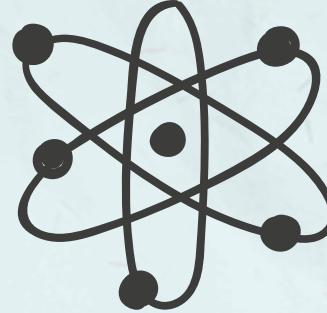
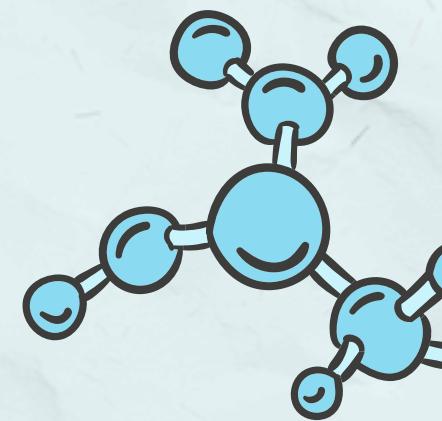
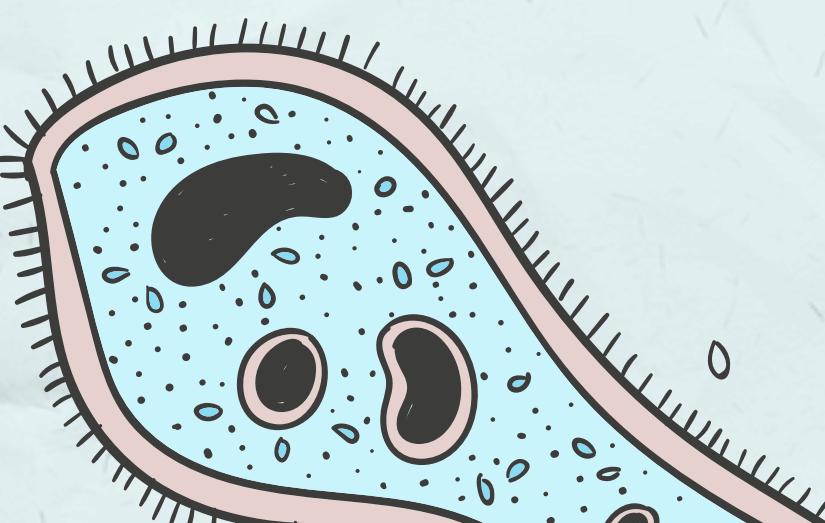
Qual cientista realizou o famoso experimento que simulou as condições da Terra primitiva e demonstrou a formação de moléculas orgânicas a partir de substâncias inorgânicas?

- a) Alexander Oparin
- b) Sidney Fox
- c) Stanley Miller e Harold Urey
- d) Thomas Cech e Sidney Altman

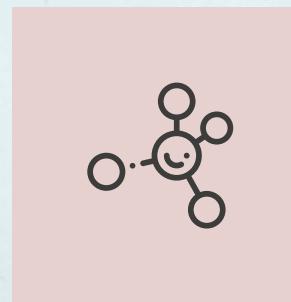
# Resposta

c) Stanley Miller e Harold Urey.

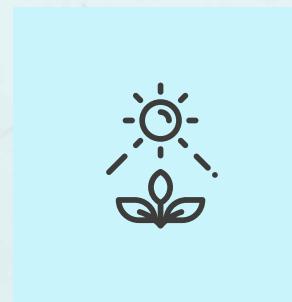
# Hipóteses sobre a evolução química da vida



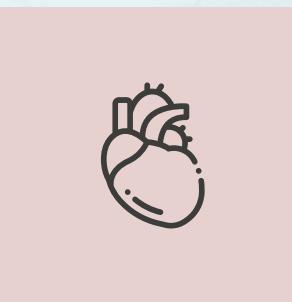
# HIPÓTESIS



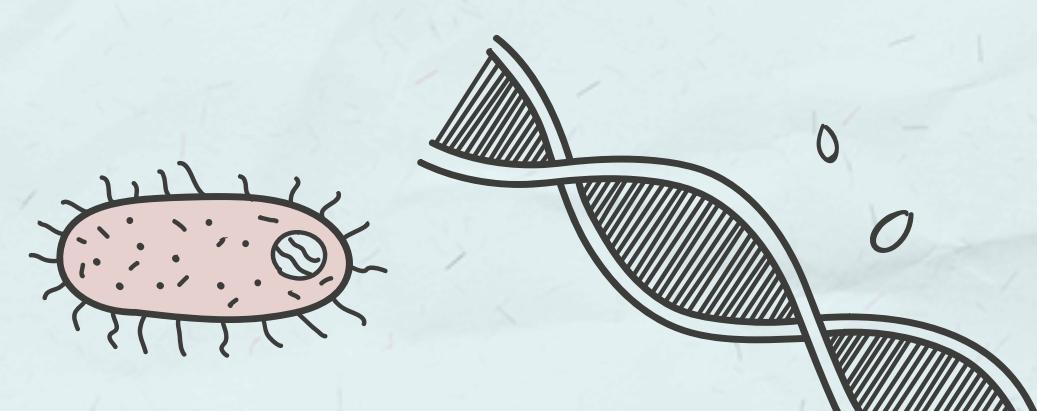
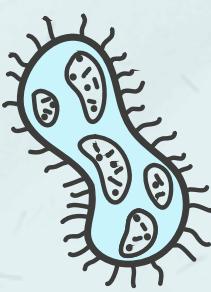
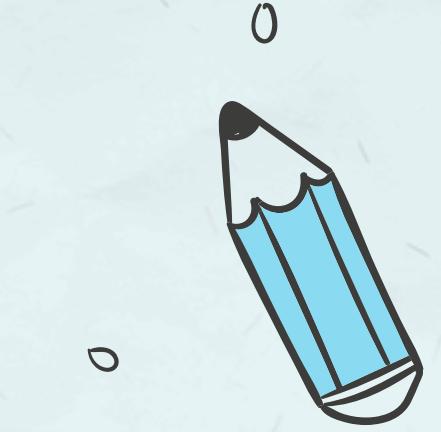
**HIPÓTESIS #1**  
Júpiter es el planeta más  
grande del sistema solar



**HIPÓTESIS #2**  
Saturno es un gigante  
gaseoso y tiene anillos



**HIPÓTESIS #3**  
Neptuno es el planeta más  
lejano del Sol



# OBJETIVOS DEL ESTUDIO



## DEMÁS

Mercurio es el planeta más cercano al Sol y el más pequeño



## INVESTIGAR MÉTODOS

La Tierra es el tercer planeta más cercano al Sol



## ENTENDIMIENTO

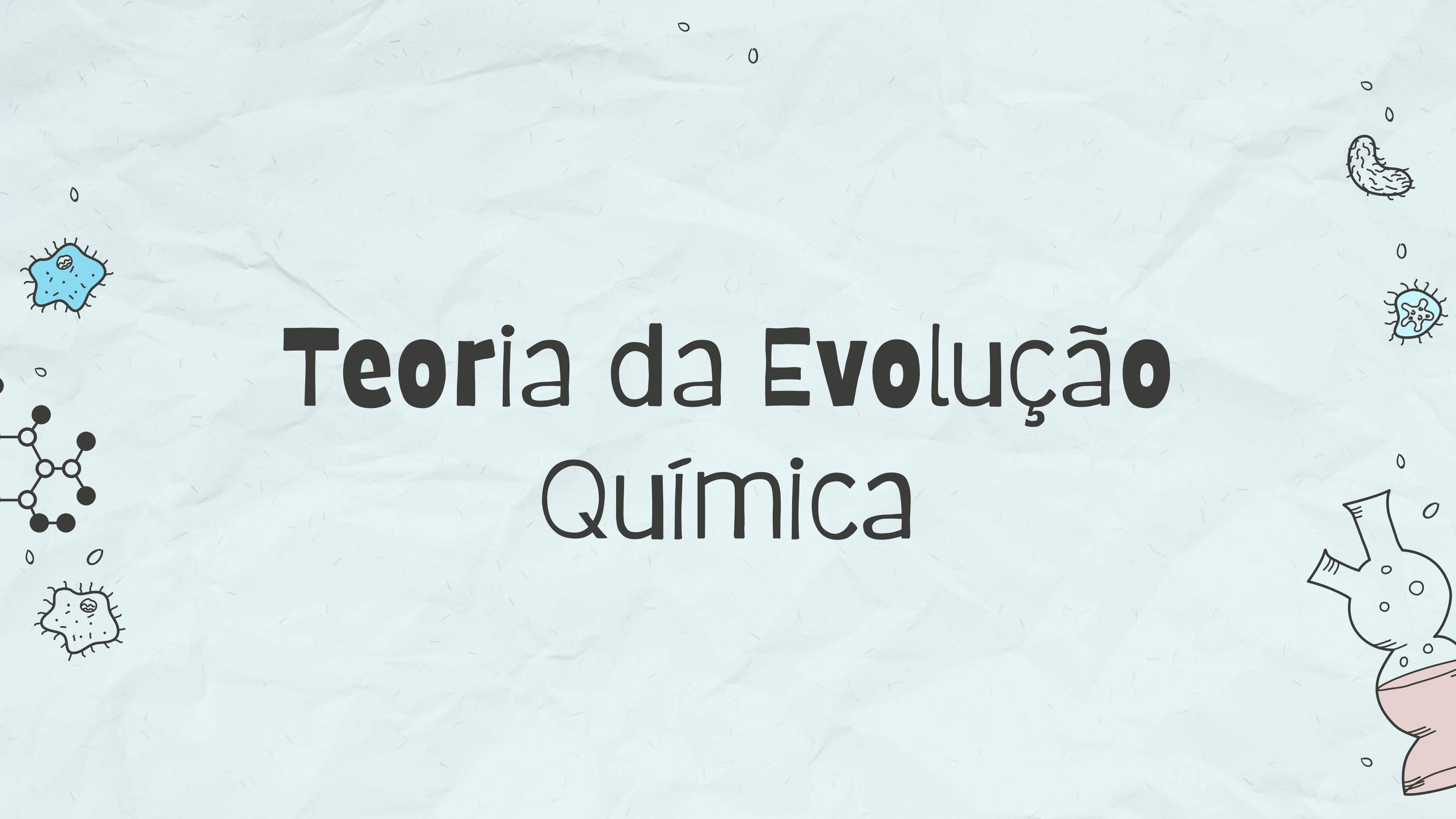
Venus es el segundo planeta más cercano al Sol

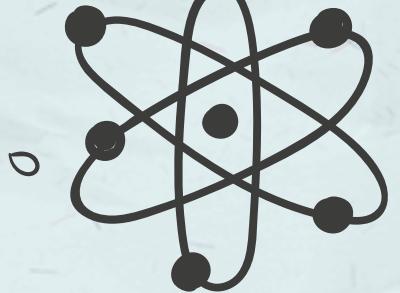


## NUEVO SISTEMA

A pesar de ser rojo, Marte es en realidad un lugar frío

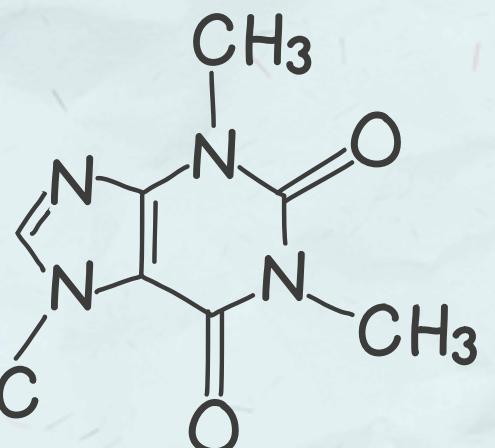
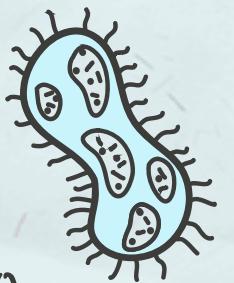
# Teoria da Evolução Química





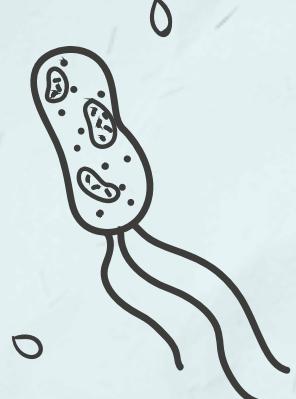
74%

El **Sol** es la estrella en el centro del sistema solar



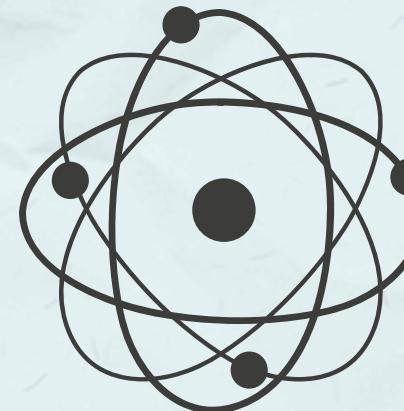
23 587

Ceres se encuentra en el cinturón de asteroides principal



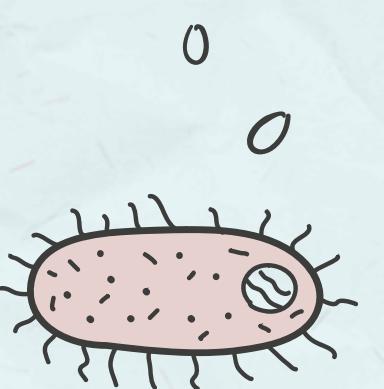
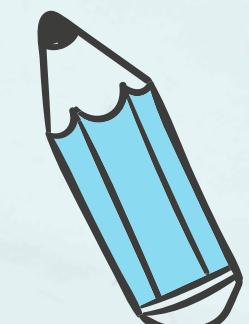
45 129

Plutón ahora se considera un planeta enano



+24%

Saturno es un gigante gaseoso y tiene varios anillos



# ANÁLISIS Y DESARROLLO II



## SOBRE LAS CÉLULAS

Saturno es un gigante gaseoso y tiene varios anillos



## MERCURIO

Mercúrio es un planeta pequeño



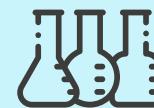
## VENUS

Venus tiene un nombre precioso



## SOBRE SU COMPORTAMIENTO

Neptuno es el cuarto planeta más grande del sistema solar



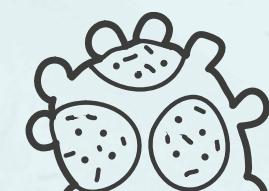
## TIERRA

La Tierra es un planeta con vida



## MARTE

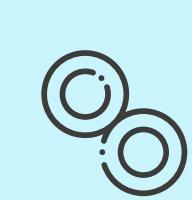
Marte es un lugar demasiado frío



# DISCUSIÓN

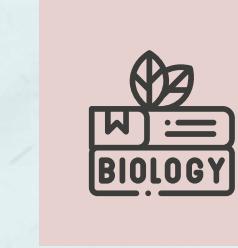
# SAM WOO

“Mercurio es el planeta más cercano al Sol”



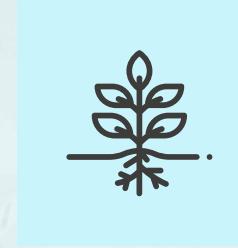
# BILL CLIFF

## “Venus tiene unas temperaturas altas”



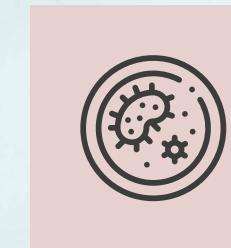
# **ANA ALVARADO**

“La Tierra es un planeta que alberga vida”



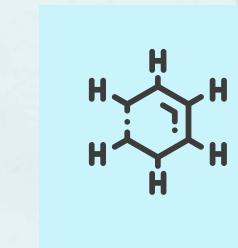
# **ROBIN LEE**

“A pesar de ser rojo, Marte  
es un lugar frío”



# PAOLA MALIK

“Júpiter es el planeta más grande del sistema solar”



# **TIM MORAN**

## **“Saturno es un gigante gaseoso y tiene anillos”**



**obrigado!!!**