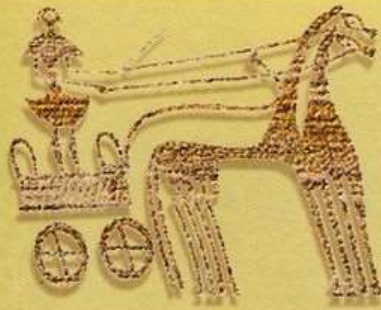


Continuous  
or  
Discontinuous



# ANCIENT GREECE



# Democritus



vs.



# Aristotle

# Is there a smallest particle?

Yes, there is.

No, there is not.



**IS !!!**



**ISN'T !!!**

# Democritus



- Matter is discontinuous.
- All matter is made up of atoms.
- Atoms are indivisible.
- Atoms have spaces (voids) between them.

“Nothing exists except atoms and empty space; everything else is opinion.”

# Aristotle

- Matter is continuous.
- There is no such thing as a smallest particle.
- All matter (*on Earth*) is made up of a combination of 4 elements: earth, water, air, and fire.
- He later added a fifth element: aether (*that makes up the stars*).

“The roots of education are bitter, but the fruit is sweet.”



# POP QUIZ

# Aristotle or Democritus ?

AIR



EARTH

WATER



FIRE



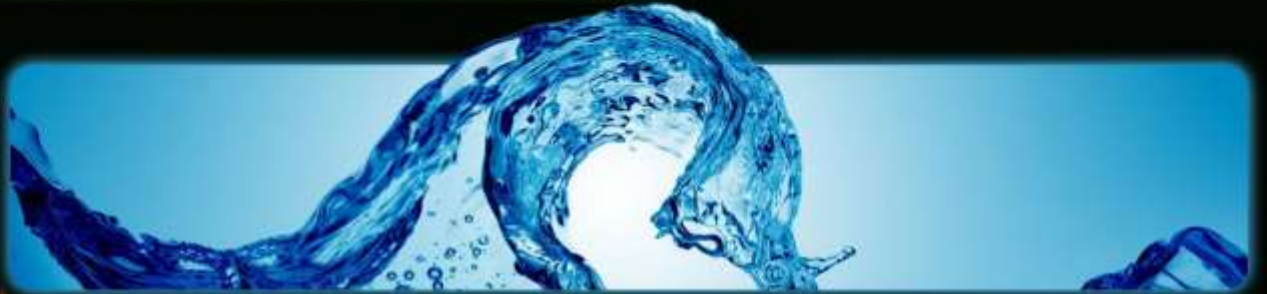
# Aristotle

AIR



EARTH

WATER



FIRE



Aristotle

or

Democritus



Aristotle

or

Democritus

SUN IS OUT  
COD IN

Aristotle or Democritus

It's an anagram

SUN IS OUT  
COD IN

Aristotle or Democritus

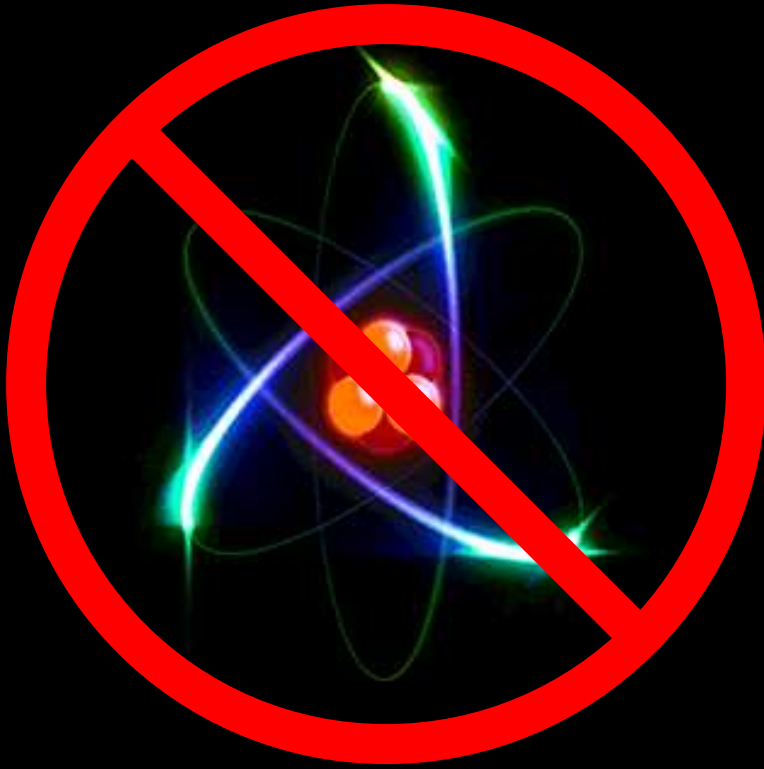
# Aristotle or Democritus



# Aristotle or Democritus



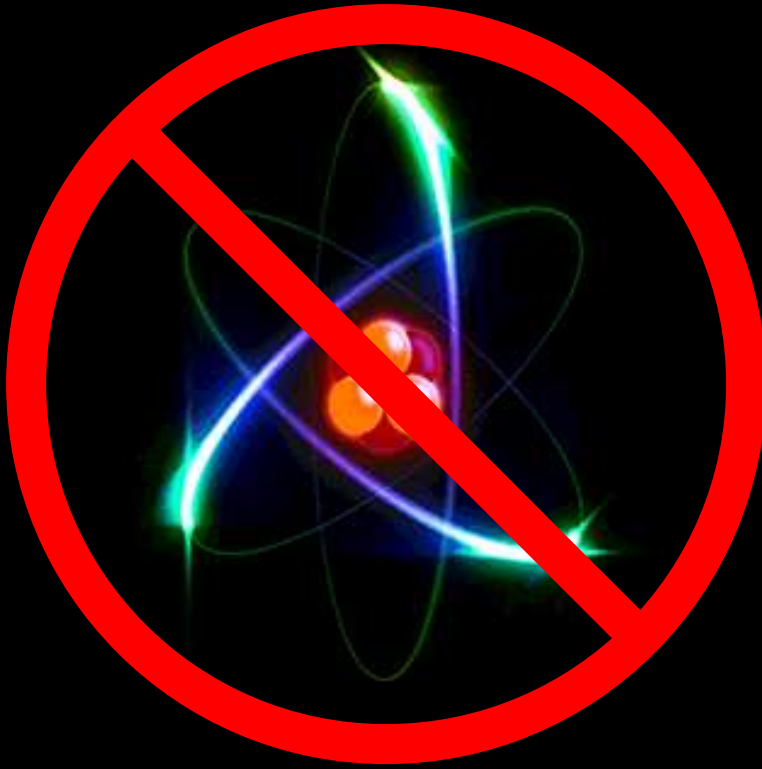
# Aristotle or Democritus ?



There is  
NO  
smallest  
particle!



# Aristotle or Democritus ?



There is  
NO  
smallest  
particle!

**Aristotle**

**IF WE ARE MADE  
OF ATOMS, THEN A  
SCIENTIST  
STUDYING ATOMS  
IS ACTUALLY A  
GROUP OF ATOMS  
STUDYING  
THEMSELVES**