

# SECONDE

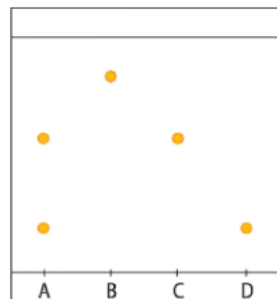
Le programme de Physique-Chimie de la classe de seconde vise à faire pratiquer les méthodes et démarches de physique et de chimie en mettant particulièrement en avant la pratique expérimentale et l'activité de modélisation.

L'objectif est de donner aux élèves une vision intéressante et authentique de la Physique-Chimie.

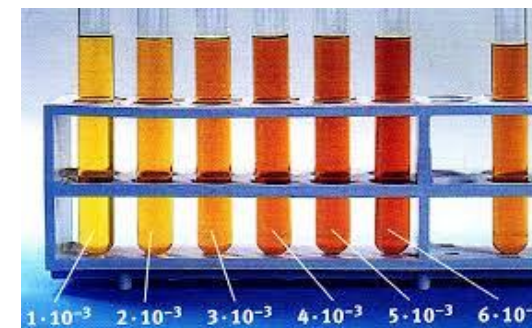
# CONSTITUTION ET TRANSFORMATIONS DE LA MATIERE

## 1. Constitution de la matière de l'échelle macroscopique à l'échelle microscopique

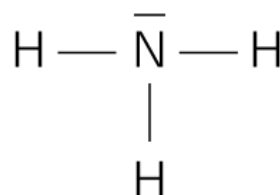
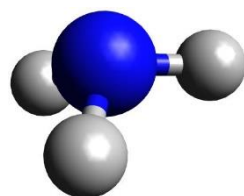
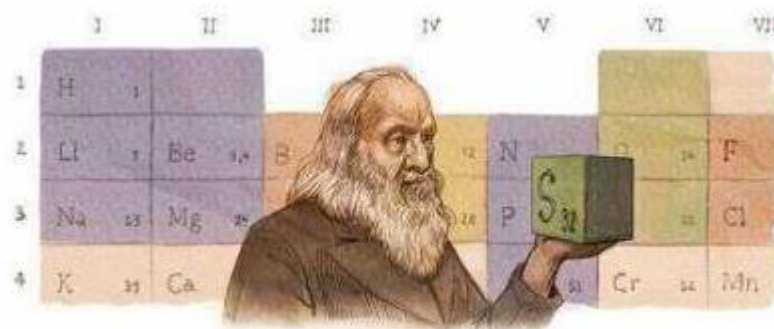
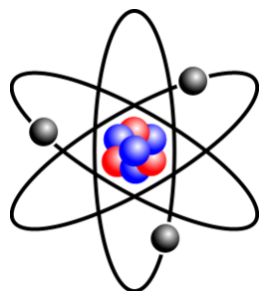
### DESCRIPTION ET CARACTERISATION DE LA MATIERE A L'ECHELLE MACROSCOPIQUE



**Dépôts**  
 A : médicament à analyse  
 B : aspirine  
 C : paracétamol  
 D : caféine



### MODELISATION DE LA MATIERE A L'ECHELLE MICROSCOPIQUE



## THE MOLE: $6.022 \times 10^{23}$



### What is a Mole?

One mole is the amount of a substance that contains  $6.022 \times 10^{23}$  atoms or molecules. It is specifically defined as the number of atoms contained in 12 grams of carbon-12. This is also known as 'Avogadro's Number' ( $N_A$ ); it is named after the Italian scientist Amedeo Avogadro (left), a suggestion put forward by French scientist Jean Perrin to recognise Avogadro's work.

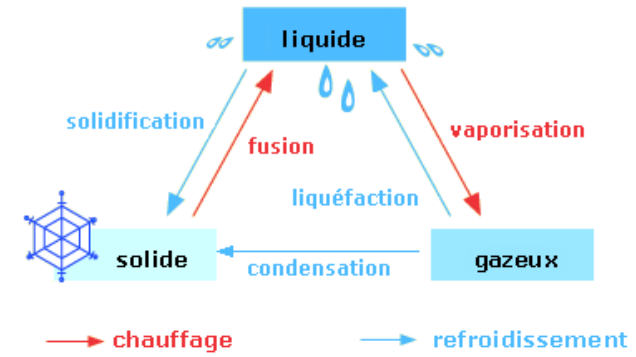
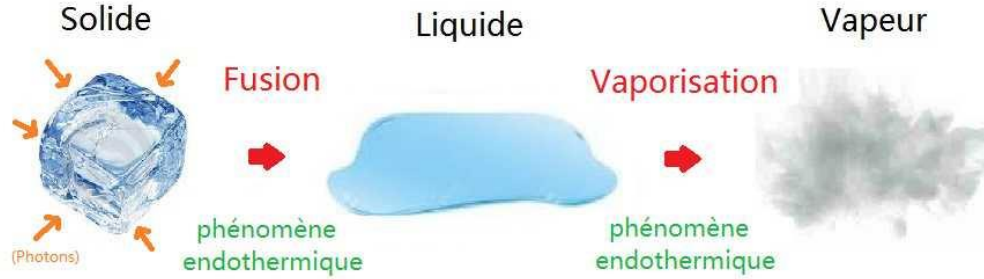


One mole is essentially  
 **$602,214,179,000,000,000,000,000$**   
 of something - in chemistry, atoms or molecules

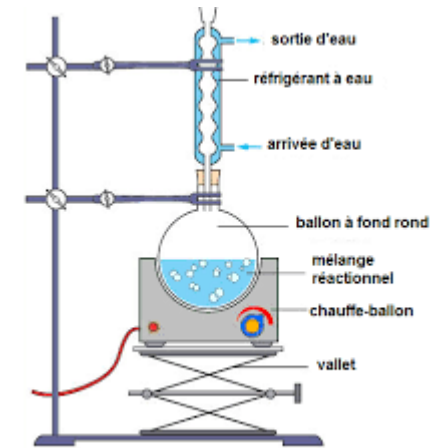


## 2. Modélisation des transformations de la matière et transfert d'énergie

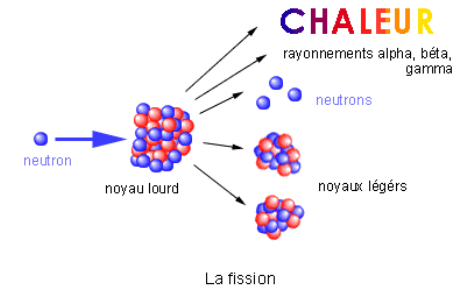
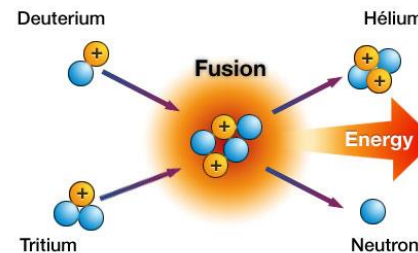
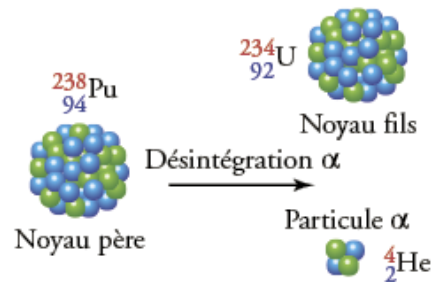
### TRANSFORMATION PHYSIQUE



### TRANSFORMATION CHIMIQUE

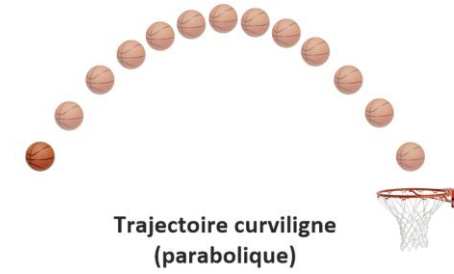


### TRANSFORMATION NUCLEAIRE



# MOUVEMENT ET INTERACTIONS

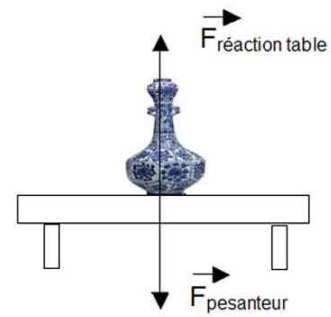
## 1. Décrire un mouvement



## 2. Modéliser une action sur un système

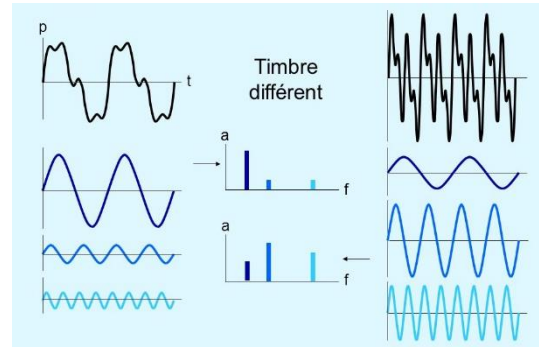
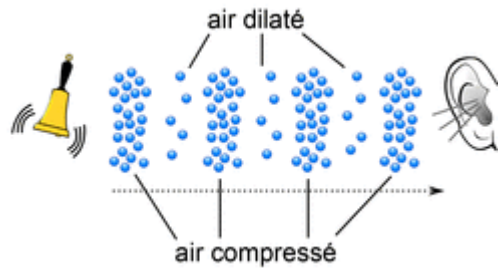


## 3. Principe d'inertie



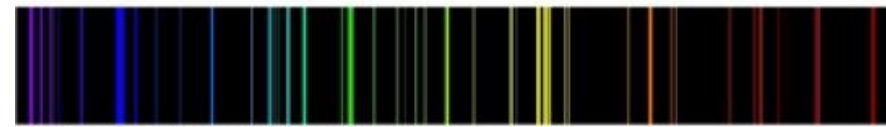
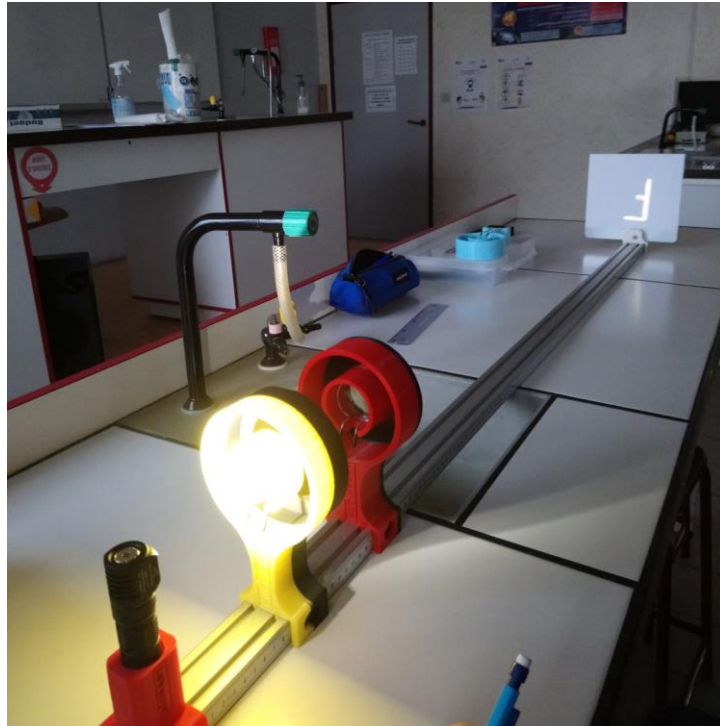
# ONDES ET SIGNAUX

## 1. Émission et perception d'un son

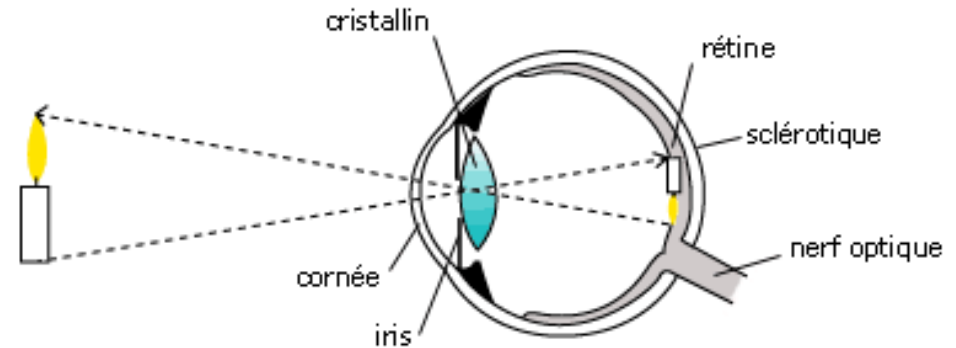


caractéristiques du son	
volume	
tonalité	
fréquence	
durée	

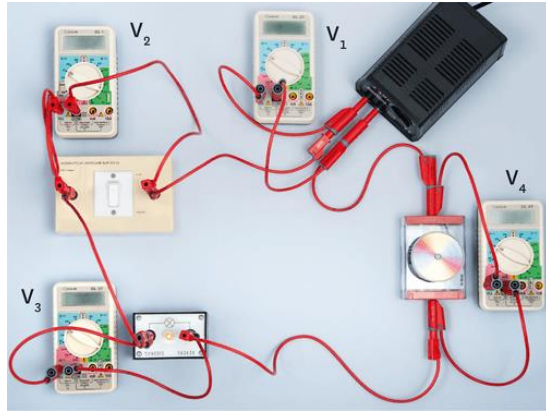
## 2. Vision et image



Spectre d'émission du mercure



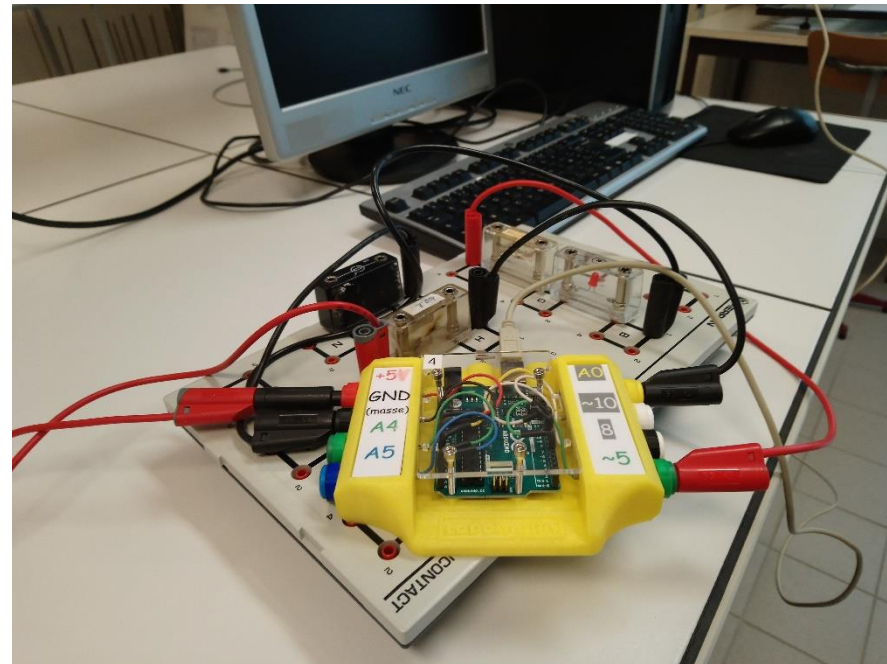
### 3. Signaux et capteurs



```
int val = A0;
int LDR = A0;
int led = 5;

void setup() {
  Serial.begin(9600);
  pinMode(led, OUTPUT);
}

void loop() {
  val = analogRead(LDR);
  Serial.println(val);
  if (val>500){digitalWrite (led, HIGH);
                delay (100);
                digitalWrite(led, LOW);
                delay (200);}
}
```





# EXPERIENCES DE PHYSIQUE AU LYCEE

