

## classical physics

① classical mechanics

$$\vec{F} = \frac{d\vec{p}}{dt}$$

② Electromagnetic dynamics  
Maxwell eq's

(electricity  
magnetism  
light)

unified theory  
( $\frac{v}{c} \ll 1$ )

③ thermodynamics  
Heat

macroscopic picture

microscopic picture



statistical mechanics

(Temperature)  
(atom, molecules)

## Modern physics

Special Relativity

⇒ (Theory of 'Fast')

( $v < c$ ) ↑  
speed of light

To understand  
Black-body radiation

⇒ Quantum physics  
planck's constant  
( $h$ )

photon  
(carrying discrete energy)

(Quanta)

Theory of "small".