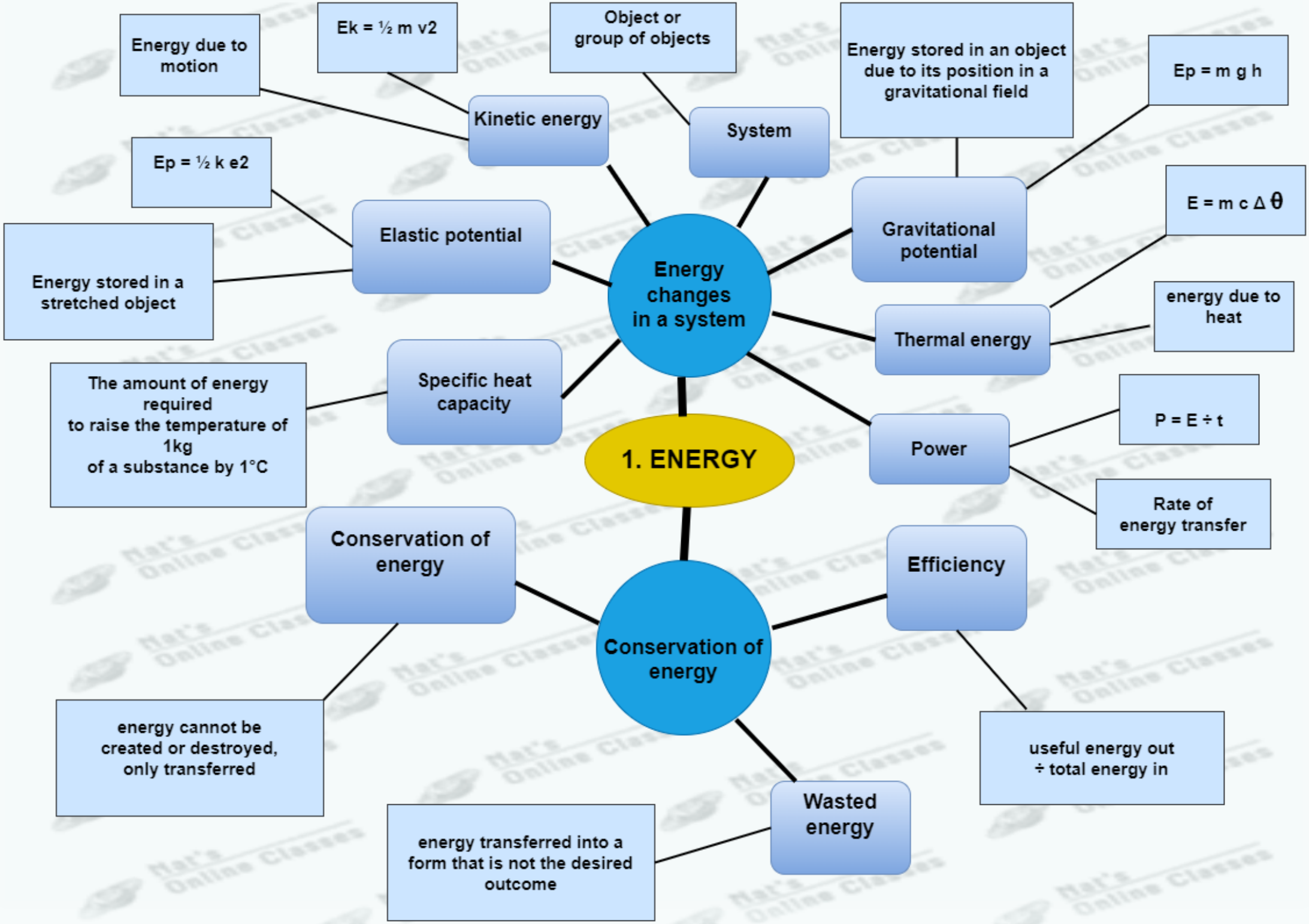
1. ENERGY
Energy changes in a system
Kinetic energy
Energy due to motion
Ek = ½ m v2
System
Object or group of objects
Gravitational potential
Energy stored in an object due to its position in a gravitational field
Ep = m g h
Elastic potential
Ep = ½ k e2
Energy stored in a stretched object
Thermal energy
E = m c Δ θ
energy due to heat
Specific heat capacity
The amount of energy required to raise the temperature of 1kg of a substance by 1°C
Power
P = E ÷ t
Rate of energy transfer
Conservation of energy
Conservation of energy
energy cannot be created or destroyed, only transferred
Efficiency
useful energy out ÷ total energy in
Wasted energy
energy transferred into a form that is not the desired outcome