Energy Transformations and Heat Energy

Heat Energy
Def : _____

_____

Heat has 2 variables:
1- # of particles (how much ex: mass). Less mass allows substance to get hot faster.

2- Degree of agitation (movement) of the particles.

- High agitation = substance has high temperature
- Low agitation = substance has low temperature

Temperature
Def : _____

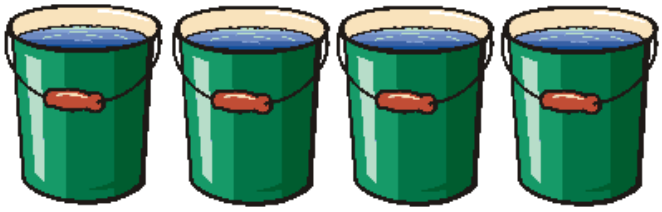
Mass is irrelevant for temperature, big or small 37℃is 37℃.

Heat transfer

- _____
- _____

ex: All buckets below have 7 L of water, but each bucket has a different temperature of water.

Bucket A Bucket B Bucket C Bucket D



80 °C 50 °C 25 °C 10 °C

You mix bucket A and C together and B and D together.

Explain what the temperature of the buckets will when you first mix them?
Why does this change in temperature occur?
Which buckets lost heat?

Which buckets gained heat?

Energy Types

Type of energy	Definition	Examples
Chemical		candle wax, energy stored in food
Electric		Power plants and generators
Sound		Sound and music
Kinetic		Kicking ball
Potential		A rock on a hill
Mechanic		Swing starting to move
Thermal		Sun, fire and heating element
Radiation		Sun, microwave and light bulb
Wind		Wind turbines
Elastic		Spring and stretched elastic
Hydraulic		Waterfall and river
Nuclear		Sun and nuclear power plant

Energy transfer and transformation

Energy transfer: _____

Energy transformation: _____