

Laws of Thermodynamics

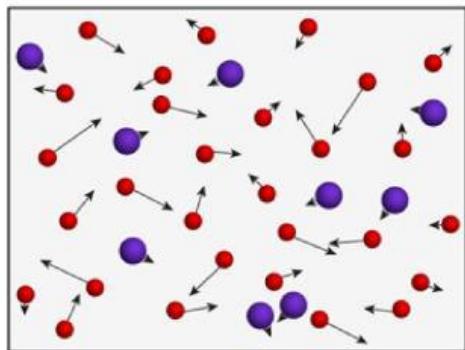
Total questions: 17

Worksheet time: 29mins

Name Class Date

1. Temperature is a measure of the...

- a) total energy in a substance
- b) total kinetic energy in a substance
- c) average potential energy in a substance
- d) average kinetic energy of molecules in a substance



2.

A slower particle has a lower energy than an identical, faster particle.

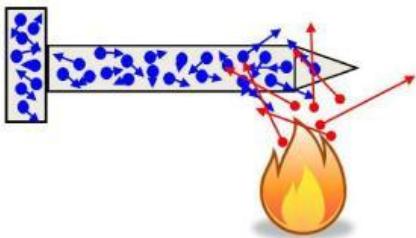
- a) True
- b) False

3. The transfer of thermal energy between objects of different temperatures is called...

- a) temperature
- b) heat
- c) internal energy
- d) none of these

4. It is possible to reach absolute zero

- a) true
- b) false



5.

When thermal energy is added to a substance, the substance's particles move:

- a) More rapidly at an increased distance from each other.
- b) More rapidly with less distance between each other.
- c) More slowly with a greater distance between each other.
- d) More slowly with a reduced distance between each other.

6. Heat travels from the sun to the earth by the process of...

- a) conduction
- b) convection
- c) radiation
- d) insulation



7.

The temperature of a glass of cold water will eventually...

- a) Match the temperature of the surrounding environment.
- b) Always be colder than the surrounding environment.
- c) Become warmer than the surrounding environment.
- d) Never change temperature.

8. The first law of thermodynamics states that energy is

- a) created
- b) destroyed
- c) conserved
- d) created and destroyed

9. Which way does heat flow?

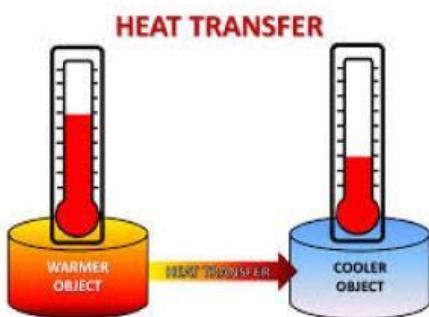
- a) hot to cold
- b) cold to hot
- c) it doesn't

10. Which of the following is an example of convection?

- a) A hair dryer is drying up your hair.
- b) When the AC or heater changes the temperature.
- c) When a car engine turns hot after being turned on.
- d) When you are making soup and the water is rising and lowering.

11. What heat transfer happens when you burn your hand by touching a fire?

- a) Radiation
- b) Conduction
- c) Convection
- d) Connection

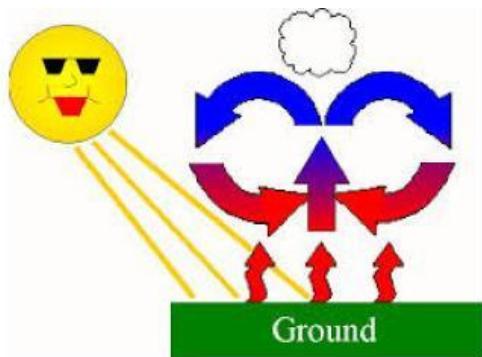


12. Heat transfers from an area of ____ temperature to an area of ____ temperature.

- a) high to low
- b) low to high
- c) high to high
- d) All

13. The first law of thermodynamics states that the change in the internal energy of a system is equal to the difference in energy transferred to or from the system as heat and

- a) mass
- b) work done
- c) force
- d) pressure



14.

Warm air rises and the cool air sinks demonstrates this type of heat transfer.

- a) conduction
- b) convection
- c) radiation
- d) Insolation

15. Dragging an object across a rough surface makes it warm, or even hot. The temperature increase occurs because of

- a) Work
- b) Heat
- c) Thermal
- d) Both work and heat

16. The total amount of energy in a system is ALWAYS _____.

- a) increasing
- b) decreasing
- c) conserved
- d) changing

17. The energy stored in gasoline is

- a) chemical energy.
- b) electromagnetic energy.
- c) mechanical energy.
- d) nuclear energy.