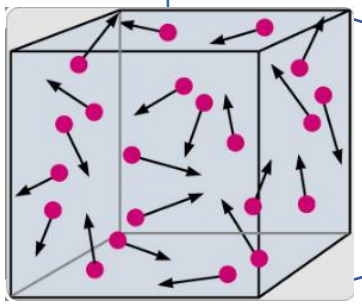
Science summary: Week 2: (lesson l period l)

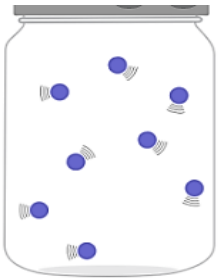
Ms. Fatima Alketbi

Particles in Motion

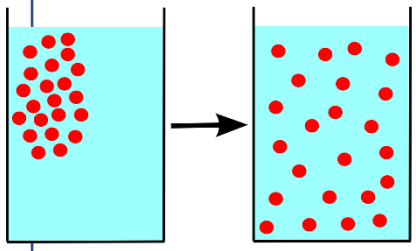
Randome Motion

movement in all directions and at different speeds





Diffusion: is the movement of particles from an area of higher concentration to an area of lower concentration .



particle motion

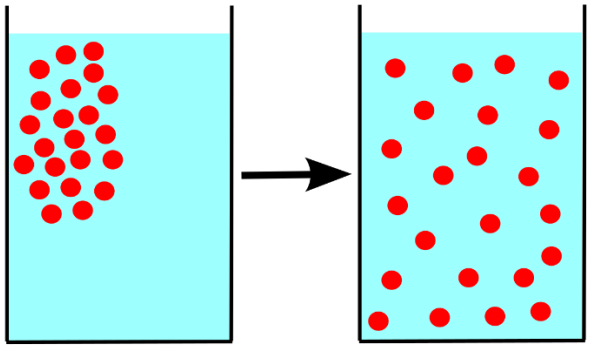
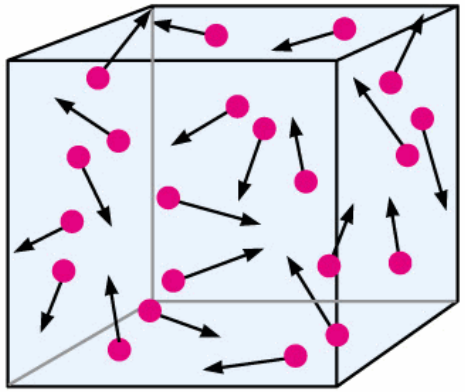
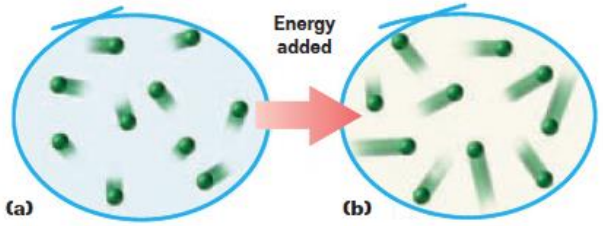
Hot Matter

- **The particles move <u>fast</u>**
- **The particles has <u>High</u> Kinetic Energy**

cold Matter

- **The particles move <u>slow</u>**
- **The particles has <u>low</u> Kinetic Energy**

Match the correct image and definition with it's Concept:

Random Motion				**The movement of particles from an area of higher concentration to an area of lower concentration .**
Diffusion				**The Motion energy of the particles**
Kinetic Energy				**movement in all directions and at different speeds**

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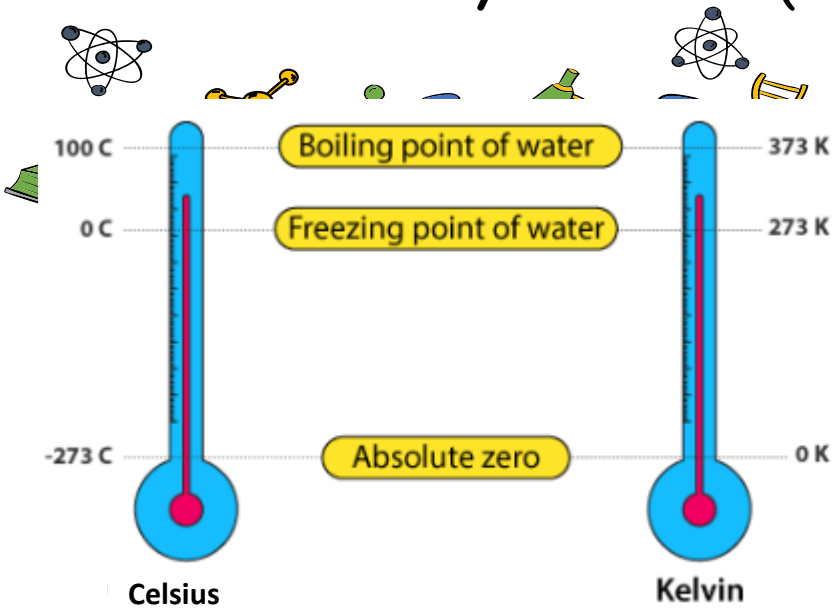
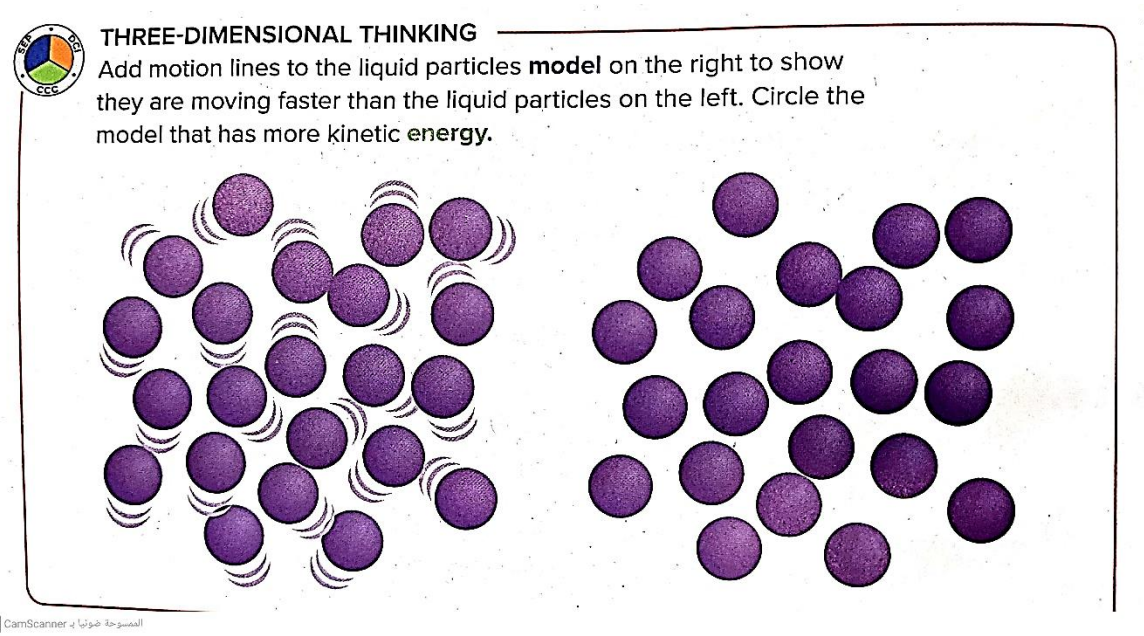


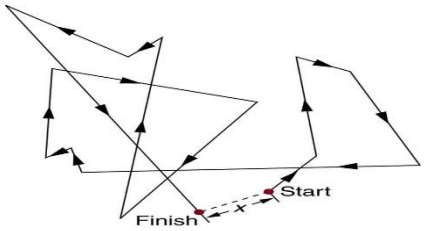
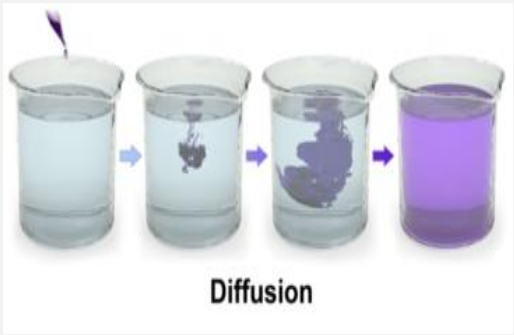
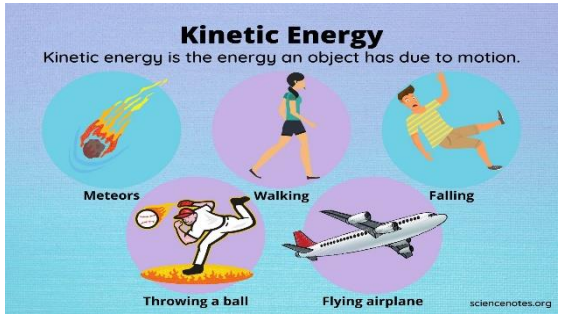


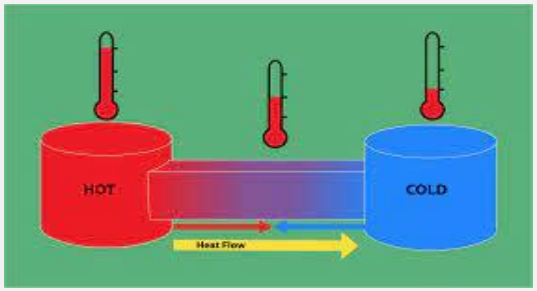
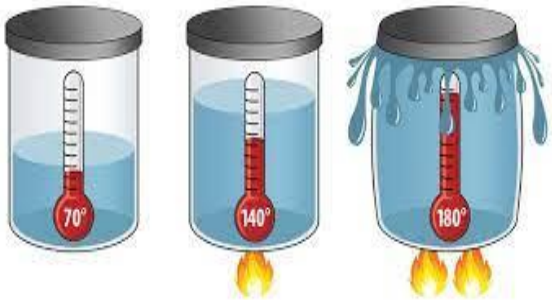
Thermal expansion

Thermal Contraction

Temperature

- Thermometer used to measure Temperature.
- There are two type of Thermometer: Celsius and Kelvin.
- Gases can expand more than liquids and solids because it moves freely.
- When the substance has more mass, that substance has more energy.

Energy and Matter Lesson 1 : Vocabulary			
	Term	Definition	Diagram
1.	random motion (حركة عشوائية)	movement in all directions and at different speeds. (الحركة في جميع الاتجاهات وبسرعات مختلفة.)	
2.	Diffusion (تعريف)	the movement of substances from an area of higher concentration to an area of lower concentration. (حركة المواد من منطقة تركيز أعلى إلى منطقة تركيز أقل.)	
3.	kinetic energy (الطاقة الحركية)	energy due to motion (الطاقة بسبب الحركة)	

4.	Thermodynamics (الديناميكا الحراري)	the study of heat (دراسة الحرارة)	
5.	thermal expansion (التمدد الحراري)	an increase in a material's volume when the temperature is increased. (زيادة حجم المادة عند زيادة درجة الحرارة)	
6.	thermal contraction (الانكماش الحراري)	a decrease in a material's volume when the temperature is decreased. (انخفاض في حجم المادة عندما تنخفض درجة الحرارة.)	

7.	Temperature (درجة حرارة)	the measure of the average kinetic energy of the particles in a material. (مقياس متوسط الطاقة الحركية للجسيمات في مادة ما.)	

Module Test: Energy and Matter

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1) The measure of the average kinetic energy of the particles of a substance is its _____.

- ○ **A)** temperature
- ○ **B)** heat
- ○ **C)** thermal energy
- ○ **D)** kinetic energy

Correct Answer

A) temperature

1) Temperature is the measure of the average kinetic energy of a substance.

- ○ True
- ○ False

Correct Answer

True

2) Which of the following statements about the particles in a material is true?

- ○ **A)** The average kinetic energy of the particles increases as the temperature increases.
- ○ **B)** The average kinetic energy of the particles decreases as the temperature increases.
- ○ **C)** The average kinetic energy of the particles in a substance never changes.
- ○ **D)** There is no relationship between kinetic energy and temperature.

Correct Answer

A) The average kinetic energy of the particles increases as the temperature increases.

5) When a substance is cooled it usually expands.

- ○ True
- ○ False

Correct Answer

False

2) Which best describes the particles in a solid?

- ○ **A)** close together and moving freely
- ○ **B)** far apart and moving freely
- ○ **C)** close together and vibrating in place
- ○ **D)** far apart and vibrating in place

Correct Answer

C) close together and vibrating in place