

Deyes High School Remote Learning

Engage, Enable and Empower



DEYES
HIGH
SCHOOL
LYDIATE
LEARNING TRUST

Year 10 Physics (Separates)

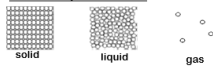
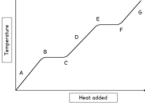
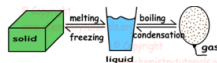
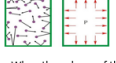
Work for individual students not attending school

Half Term 2: October to December

Pupils who are absent should select the lesson activity that they are up to

- Click the link and watch the video.
- Complete the tasks as you watch. Write your answers on paper.
- Complete the exit quiz by clicking the green circles at the bottom of the screen. ● ● ● ● ●
- Submit your work to your teacher when you return to school.

Date (week commencing)	Lesson	Focus/Topic/Theme	Hyper link to Activity
2/11/20	1	Changes of State	https://classroom.thenational.academy/lessons/particle-models-6tj34r?activity=video&step=1
	2	Density	https://classroom.thenational.academy/lessons/density-of-solids-60w3at?activity=video&step=1
9/11/20	3	Internal energy	https://classroom.thenational.academy/lessons/internal-energy-70t6ad?activity=video&step=1
	4	Heating and cooling	https://classroom.thenational.academy/lessons/heating-and-cooling-substances-c4wp4c?activity=video&step=1
16/11/20	5	Specific latent heat	https://classroom.thenational.academy/lessons/latent-heat-chjk2r?activity=video&step=1
	6	Specific heat capacity	https://classroom.thenational.academy/lessons/heating-and-cooling-substances-c4wp4c?activity=video&step=1
23/11/20	7	Particle motion in gases	https://www.bbc.co.uk/bitesize/guides/z2xcfw/revision/1
	8	Gas pressure and temperature	https://classroom.thenational.academy/lessons/gas-pressure-69hp6r?activity=video&step=1
30/11/20	9	Particle model of matter review	https://classroom.thenational.academy/lessons/review-part-1-6mupcr?activity=video&step=1
	10	End of topic test	Select and complete revision activities on the next slide to support your understanding of the topic.
7/12/20	11	Particle model of matter topic review	Use Seneca to complete questions on energy topic.
	12	Contact and non contact forces	https://classroom.thenational.academy/lessons/force-s-an-introduction-cgwk0d?activity=video&step=1
14/12/20	13	Weight, mass and gravity	https://classroom.thenational.academy/lessons/weight-mass-and-gravity-74t32d?activity=video&step=1
	14	Resolving forces	https://classroom.thenational.academy/lessons/resolving-forces-ht-6hgp4r?activity=video&step=1

Year 10		The Particle Model of Matter		Unit 4
Keyword	Definition	3.1. Density of Materials		3. Required Practical
Density	The mass of a unit volume of a material			Collecting measurements of mass and volume to calculate the density of, • A liquid • A regularly shaped solid object • An irregularly shaped solid object
Physical change	Reversible change which does not produce a new chemical e.g. dissolving.	Solids are the densest state of matter- they have the greatest mass (kg) in a unit of volume (m ³). Density = $\frac{\text{mass}}{\text{Volume}}$ $\rho = \frac{m}{V}$		
Chemical change	Permanent change where new substances are formed.	Units of density are kg/m ³		3.2.2 Specific Heat Capacity and Latent Heat
Conserved	Does not change- what goes in comes out.	3.1.2 Changes of state		
Internal energy	Total KE + PE of the particles of a substance			In regions A, D and G thermal energy absorbed is transferred to <i>Kinetic Energy</i> of particles allowing them to overcome the forces of attraction between them and <i>change state</i> . Change in thermal energy = mass x specific heat capacity x temperature change $\Delta E = m \times c \times \Delta\theta$
Pressure	Force per unit area	When a substance changes state a physical change takes place no new chemicals are formed and the change is easily reversible. The total mass of the substance does not change- mass is conserved . Temperature is also constant during a change of state.		In region BC and EF thermal energy absorbed is transferred to <i>Potential Energy</i> of particles allowing them to overcome the forces of attraction between them and <i>change state</i> . Thermal energy for a change in state = mass x specific latent heat $E = m \times L$
Unit	Scale of a measurement e.g. cm or m OR e.g. a unit area = 1m ²	3.2.1 Internal Energy		3.3.1 Pressure in Gases
Equations to remember		The energy stored as the energy of the particles of a system is called internal energy . Internal Energy = Total Kinetic + Potential Energy of the particles When a substance is heated its internal energy increases. This can increase the temperature of the substance or change its state.		 Particles in a gas are in <i>constant random motion</i> . Pressure is the force on a unit area from the collisions of the particles with the container walls When the volume of the gas is constant, its pressure is increased when the temperature of the gas increases. Pressure \propto Temperature measured on the Kelvin scale.
Density = $\frac{\text{mass}}{\text{Volume}}$ Change in = mass x specific heat x temperature Thermal capacity change energy Thermal energy for = mass x specific latent heat change of state		Further Reading CGP revision guide: Particle model of matter School Network shared area – Science – Physics - GCSE summary sheets https://www.bbc.com/bitesize/topics/z3ybb82 YouTube video link: https://www.youtube.com/playlist?list=PL87bj_uAamQlBp_c9NMWp43GNL1zx94K		

Physics Revision Activities

Unit 1: The Particle Model of Matter

Knowledge Organiser	Create revision flashcards using the knowledge organisers Include key definitions and equations in your flashcards.
Recall Questions	Use the knowledge organiser in the PowerPoint to answer the recall questions, following the link below. https://deyes.sharepoint.com/:p:/r/sites/shadowcurriculum/_layouts/15/Doc.aspx?sourcedoc=%7B11F29830-E68A-43A8-9181-58ED80CD6F70%7D&file=Recall%20questions%20Particles.pptx&action=edit&mobileredirect=true
GCSE Bitesize	Using the web link read the revision notes and watch the videos. https://www.bbc.co.uk/bitesize/topics/zxsh2nb
Cognito Videos	https://www.youtube.com/watch?v=OTksau0_Vol https://www.youtube.com/watch?v=pgGzVdau1Bw https://www.youtube.com/watch?v=4rT7-5yE4pQ https://www.youtube.com/watch?v=3itqmCtmJPC https://www.youtube.com/watch?v=0P3b8bWqAkC
SENECA	Use the web link to work through the revision notes and attempt questions at the end of the topic. https://app.senecalearning.com/classroom/course/f4627c20-1e1d-11e8-b99c-3168302284a4/section/933275d0-1e1e-11e8-b99c-3168302284a4/session