

Subject	Year 9 Physics Content Spring Term	How to support students' learning
Molecules of Matter	Summary of the concepts covered: ➤ Density ➤ Density – Required Practical for GCSE ➤ States of Matter ➤ Changes of State ➤ Internal Energy ➤ Specific Latent Heat ➤ Gas Pressure and Temperature	You will have covered density in lesson, use the simulation to have play with density of materials: Density - Density Mass Volume - PhET Interactive Simulations (colorado.edu) You will need to know about the density required practical for GCSE science. Watch the video here to review the content covered in lesson: Density - GCSE Science Required Practical - YouTube Read this BBC bitesize website about solids, liquids and gases: Solids, liquids and gases - The three states of matter - AQA - GCSE Combined Science Revision - AQA Trilogy - BBC Bitesize You need to know how solids can turn into liquids etc, watch this video about changes of state: Changes of State Matter Physics FuseSchool - YouTube Read up about internal energy using the BBC Bitesize: Internal energy - Temperature changes and energy - AQA - GCSE Physics (Single Science) Revision - AQA - BBC Bitesize Specific latent heat is a difficult concept, read about it first: Specific latent heat - Temperature changes and energy - AQA - GCSE Physics (Single Science) Revision - AQA - BBC Bitesize then try this website for questions: Specific latent heat test questions - National 5 Physics Revision - BBC Bitesize Gas temperature affects its pressure when under a fixed volume, watch this video to recap your knowledge: GCSE Physics - Factors Affecting Gas Pressure #29 - YouTube

Wave Properties	Summary of Concepts Covered: ➤ Properties of waves. ➤ Features of transverse and longitudinal waves. ➤ Wave Practical's – Required for GCSE (Measuring the speed of waves in a ripple tank and solid) ➤ Reflection and refraction of waves	Students can review the work covered using their revision guide or using the BBC Website: Types of waves - Properties of waves - AQA - GCSE Combined Science Revision - AQA Trilogy - BBC Bitesize Completing practical tasks in science is important as these can be accessed during their examinations in year 11. Watch these videos to remind yourself of the practical task you have completed in lesson: Wavespeed - GCSE Science Required Practical - YouTube Apply your knowledge and calculate the wave speed of a water wave: Waves Intro (colorado.edu) You will need the measuring tape and stop clock. Reflection and refraction is a fundamental aspect of light. It happens all the time. Use the animation to play with the concepts: Bending Light - Snell's Law Refraction Reflection - PhET Interactive Simulations (colorado.edu)
Electromagnetic Waves	Summary of Concepts Covered: ➤ The electromagnetic spectrum ➤ Radio waves and electrical circuits. ➤ How electromagnetic waves are generated. ➤ The effects of gamma, X-rays and ultraviolet radiation on the body. ➤ Uses of electromagnetic waves. ➤ Infrared Radiation – Required Practical	Review your knowledge of electromagnetic waves using the video here: https://www.youtube.com/watch?v=7v2gs8rdQzU Make sure you know your uses, review the uses on the BBC bitesize website: Uses of electromagnetic radiation - The electromagnetic (EM) spectrum - GCSE Physics (Single Science) Revision - BBC Bitesize There is another required practical about waves, but this time its about heat (infrared radiation): Required practical - how different surfaces affect infrared intensity - Infrared radiation absorption and radiation by a surface - AQA - GCSE Combined Science Revision - AQA Trilogy - BBC Bitesize