PHYSICS LEARNING JOURNEY: Develop an understanding of natural mpact phenomena and how the world works through scientific enquiry and analysis. **Nuclear Physics and Energy Kinetic Theory:** A-LEVEL Nuclear **Forces and Energy: Topic: Medical Physics Topic: Thermal Physics EXAMS Physics** Topic: Simple Harmonic Motion Energy, Forces, and Nuclear Physics Electromagnetism Electromagnetism **Topic: Astrophysics and Cosmology Topic: Electric Fields Forces** Topic: Materials EnergyTransfers Quantum Electromagnetism Topic: Newton's Laws and Momentum Energy: Topics: Waves **Physics** Topic: Capacitors Topic: Work Energy, and Power Electromagnetism: Electromagnetism: Forces in Topic: Gravitational Fields **Topic: Circular Motion** Topic: Potential Dividers Topic: Current and **Topic: Resistance and** Topic: Motion YEAR Action Potential Difference **EXAMS** Forces and their applica-Magnetism and Electromagnetism: **Energy and Forces** Energy: **Topic: Space** Topic: Waves Scalars, Vectors, Speed, Magnetic fields, electromag-Acceleration, adding forces, Newton's Laws, Up-Lenses, visible nets, Motors, generating electricity, Transformers, Loudspeakers, Microphones Stars, circular motion, radiation, red-shift light, and colour thrust, Moments, Mo-mentum, Levers, Elasticity Energy Energy Electromagnetism: **Nuclear Physics: Topic: Waves Topic: Electricity** Topic: Atomic Structure and Radi-YEAR Wave types, wave speed equation, refraction, electro-Current, Potential differ-ence, Resistance, Mains electricity and the Nation-al Grid, Static electricity 10 Atom Development, Ionising Radi-ation, Half life, Contamination, Irradiation, Fission and Fusion Radioactive Atom magnetic spectrum. Particle Kinetic Theory: The Scientific Method: **Topic: Particle Model** Topic: Space Describing and calcu-**YEAR** Understanding heating and cooling and changes of state in terms of particles, density, specific latent heat, specific heat capacity lating energy stores and transfers, efficiency, The solar system, stars, redshift and the Big Bang power, and energy resources. WAVES / PRESSURE & DENSITY **ELECTRICITY & MAGNETISM** How does energy travel? How are they related? Electrical circuits and magnets YEAR Introduction to be-SPACE & the FORCES - What are the **SPEED & ENERGY** - Stores & coming a good scientist Universe effects of forces? **MOTION Transfers** YEAR Energy Hookes Solar system & beyond Speed of What do you already changes Law objects know? Safety. Apparatus. WHAT DO WE RETURN TO ON OUR LEARNING JOURNEY? **Concepts/Ideas Skills** Speed Check - Data will be taken to see if Energy (conservation and transfer), forces and their application, Enquiry skills (Investigation planning), Apparatus and techniques, Data analysis, you need a diversion to your journey or extra support on the road. nuclear physics, quantum physics, fields, electromagnetism, Analyse evidence, How scientists develop theories

kinetic theory.