Year 7 Physics | Term 2

Exploration question: How do friction, speed interpretation from graphs, practical assessments, energy transfer, and scientific theories contribute to a holistic understanding of physics principles this term?

Topic Overview: During this term in physics, students focused on crucial exploration questions. They delved into the impact of friction on vehicles, examining the opposing force's types and practical implications. Distance-time graphs were a central focus, with students learning to interpret motion and calculate speed from graph slopes. Assessments, labelled "Try Now," provided opportunities for students to apply their knowledge and receive feedback. Energy transfer, encompassing various forms such as kinetic and potential energy, was explored, emphasising mechanisms and reasons for energy exchange. The nature of scientific theories became a key area of study, differentiating them from hypotheses and laws, and highlighting their role in providing evidence-based explanations. The term's integrated approach included hands-on experiments, discussions, and assessments, fostering a holistic understanding of fundamental physics principles through these exploration questions.

	Lesson Exploration	Knowledge and Skills	Key Words
Week 1: Lesson 1	Why does friction slow vehicles down?	SK6: Speed = Distance / Time	Speed Distance Time Journey Gradient
Week 2: Lesson 1	How do we calculate speed from a distance-time graph?	Sk7: Constructing distance time graphs.	
Week 3: Lesson 1	Assessment	Assessment Lesson	
Week 4: Lesson 1	Try Now	Try Now Lesson	
Week 5:	How and why is energy	KN5: Energy transfers from one store to another.	

Lesson 1	transferred?		
Week 6: Lesson 1	What is a scientific theory?	SK: Scientific Theories	

Literacy Links	Numeracy Links
Paul Parsons – Science in 100 Key Breakthroughs Paul Parsons – Science 1001: Absolutely Everything that Matters in Science Young Scientist Journal - www.butrousfoundation.com/ysjournal School Science - www.schoolscience.co.uk BBC Bitesize - www.bbc.co.uk/bitesize/ks3/science/	understand and use SI units and IUPAC (International Union of Pure and Applied Chemistry) chemical nomenclature. Comparison of magnitude of different values Unit conversions Interpreting the graphs