

Year 7 Physics | Yearly Overview

Term 1	Term 2	Term 3	Term 4	Term 5	Term 6
<p>Past Explorations: Previously in physics students have explored the fundamental physics concepts like motion and energy, along with general science terminology.</p> <p>This will help the students in this by allowing them to engage with the upcoming physics content.</p>	<p>Past Explorations: Previously in Physics students have explored forces, starting with their definition as interactions causing changes in motion or shape.</p> <p>This will help the students in this by allowing them to engage with the upcoming physics content.</p>	<p>Past Explorations: Previously in Physics students delved into the impact of friction on vehicles, examining the opposing force's types and practical implications.</p> <p>This will help the students in this by allowing them to engage with the upcoming physics content.</p>	<p>Past Explorations: Previously in Physics students have explored fundamental questions about energy, focusing on the conservation of energy, the comparative power of household appliances, the physics behind the sound produced by a hairdryer, and the sources of energy for powering homes.</p> <p>This will help the students in this by allowing them to engage with the upcoming physics content.</p>	<p>Past Explorations: Previously in Physics students have explored the energy content of snacks, learned effective methods for displaying research results, delved into converting natural energy sources for device power, and understood the calculation of electricity bills.</p> <p>This will help the students in this by allowing them to engage with the upcoming physics content.</p>	<p>Past Explorations: Previously in Physics students have explored the fundamental questions in electricity, exploring electromagnetic principles by questioning if opposites attract and delving into static electricity to discover ways to adhere balloons to walls without adhesive.</p> <p>This will help the students in this by allowing them to engage with the upcoming physics content.</p>
<p>Termly Exploration Question: What is force?</p>	<p>Termly 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?</p>	<p>Termly Exploration Question: How does understanding energy conservation, appliance power dynamics, sound production physics, and diverse home energy sources contribute to our daily life understanding of energy?</p>	<p>Termly Exploration Question: Exploration question: Where do we get our energy from?</p>	<p>Termly Exploration Question: What is electricity?</p>	<p>Termly Exploration Question: How is series circuit different from the parallel circuit?</p>
<p>Termly Overview: This term, students will explore forces, starting with their definition as interactions causing changes in motion or shape. They'll learn to represent forces as vectors, understand the impact of multiple forces, and distinguish between weight, mass, and gravity. Practical activities, including experiments with springs using Hooke's Law, will reinforce theoretical concepts. Students will engage in hands-on assessments, discussions, and problem-solving scenarios, integrating technology for virtual simulations. By term-end, they will possess a strong</p>	<p>Termly Overview: During this term in physics, students 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</p>	<p>Termly Overview: In this term, students explored fundamental questions about energy, focusing on the conservation of energy, the comparative power of household appliances, the physics behind the sound produced by a hairdryer, and the sources of energy for powering homes. Practical experiments, discussions, and analyses enhanced their understanding of these concepts, fostering critical thinking and linking theoretical knowledge to real-world applications. The exploration questions served as guiding themes, connecting different aspects of energy exploration</p>	<p>Termly Overview: This term focused on exploring key energy-related questions. Students investigated the energy content of snacks, learned effective methods for displaying research results, delved into converting natural energy sources for device power, and understood the calculation of electricity bills. Practical experiments and discussions enriched their understanding of energy concepts, fostering critical thinking and practical application.</p>	<p>Termly Overview: This term, students focused on fundamental questions in electricity, exploring electromagnetic principles by questioning if opposites attract and delving into static electricity to discover ways to adhere balloons to walls without adhesive. They delved into the core of electrical concepts, understanding current measurement and the components of electrical circuits through practical demonstrations. The exploration extended to investigating resistance and its practical applications in controlling electrical current flow. Overall, the term emphasised a</p>	<p>Termly Overview: Throughout the term, students explored fundamental questions related to electricity. Beginning with an understanding of potential difference, they progressed to examining the intricate relationships between current, potential difference, and resistance, exploring the applications of Ohm's Law. The focus then shifted to circuit configurations, with investigations into the key features of series circuits, where components are arranged sequentially, and parallel circuits, characterised by multiple pathways. Practical experiments and discussions enriched</p>

foundation in force principles, practical measurement skills, and the ability to apply theoretical knowledge to real-world situations.	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.	and encouraging students to delve deeper into the physics of everyday phenomena.		comprehensive understanding of electricity, from basic principles to practical applications in daily life.	their comprehension of electrical concepts, fostering critical thinking and practical application skills.
<p>Future Explorations: Going forward in physics, students will explore 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.</p>	<p>Future Explorations: Going forward in Physics, students will explore fundamental questions about energy, focusing on the conservation of energy, the comparative power of household appliances, the physics behind the sound produced by a hairdryer, and the sources of energy for powering homes. Practical experiments, discussions, and analyses enhanced their understanding of these concepts, fostering critical thinking and linking theoretical knowledge to real-world applications. The exploration questions served as guiding themes, connecting different aspects of energy exploration and encouraging students to delve deeper into the physics of everyday phenomena.</p>	<p>Future Explorations: Going forward in Physics, students will explore the key energy-related questions. Students will investigate the energy content of snacks, learn effective methods for displaying research results, delve into converting natural energy sources for device power, and understand the calculation of electricity bills. Practical experiments and discussions will enrich their understanding of energy concepts, fostering critical thinking and practical application.</p>	<p>Future Explorations: Going forward in Physics, students will focus on fundamental questions in electricity, exploring electromagnetic principles by questioning if opposites attract and delving into static electricity to discover ways to adhere balloons to walls without adhesive. They will delve into the core of electrical concepts, understanding current measurement and the components of electrical circuits through practical demonstrations. The exploration will extend to investigating resistance and its practical applications in controlling electrical current flow. Overall, the term will emphasise a comprehensive understanding of electricity, from basic principles to practical applications in daily life.</p>	<p>Future Explorations: Going forward in Physics, students will explore fundamental questions related to electricity. They will commence with an understanding of potential difference, progressing to examine the intricate relationships between current, potential difference, and resistance, exploring the applications of Ohm's Law. The focus will then shift to circuit configurations, with investigations into the key features of series circuits, where components are arranged sequentially, and parallel circuits, characterised by multiple pathways. Practical experiments and discussions will enrich their comprehension of electrical concepts, fostering critical thinking and practical application skills.</p>	<p>Future Explorations: Going forward in Physics, students will delve into fundamental physics questions, exploring the relationship between mass and volume and understanding why a 1kg sponge will have a larger volume than a 1kg brick due to differences in density. Practical experiments will hone their skills in determining the density of both regular and irregular objects, providing a hands-on approach to mastering mathematical formulas and measurement techniques. The microscopic world will be unveiled as students study particle movement in solids, liquids, and gases, enhancing their comprehension of states of matter and kinetic theory. Safety considerations will be emphasised through an exploration of the physics behind boiling water, illustrating why touching a boiling kettle with bare hands is hazardous due to heat transfer mechanisms. Throughout the term, a combination of experiments, theoretical studies, and safety awareness will contribute to a comprehensive understanding of fundamental physics principles, fostering critical thinking and a deeper appreciation for the physical properties of matter.</p>