

Year 8 Physics

Curriculum



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Introduction

Building on the knowledge gained in Year 7, Year 8 Physics will delve deeper into the study of electricity, magnetism, and waves. Students will investigate electrical circuits, magnetic fields, and the properties of sound and light.

By the end of the year, students will be able to:

- Design and analyse simple electrical circuits.
- Explain the relationship between electricity and magnetism.
- Understand the properties of sound and light waves.
- Investigate the electromagnetic spectrum.

Curriculum Content:

1. Electricity

Electrical Circuits:

- Understand the basic components of an electrical circuit (cell, battery, wire, resistor, switch, bulb)
- Investigate series and parallel circuits
- Measure current (A) and potential difference (V)
- Apply Ohm's Law
- Learn about plug structure

Static Electricity:

- Understand subatomic particles
- Investigate static electricity
- Understand the concept of electric charge



2. Magnetism and Electromagnetism

Magnetism:

- Investigate the properties of magnets (poles, magnetic fields)
- Understand the Earth's magnetic field
- Find the direction of magnetic field

Electromagnetism:

- Investigate the relationship between electricity and magnetism
- Understand the concept of electromagnetic induction
- Explore the use of electromagnets

3. Waves

Sound Waves:

- Investigate the nature of sound waves
- Learn about the types of wave (Longitudinal and transverse waves)
- Understand the properties of sound (pitch, loudness, timbre)
- Explore the human ear

Electromagnetic Waves:

- Investigate the electromagnetic spectrum
- Understand the properties of electromagnetic waves (wavelength, frequency, speed)
- Explore the uses of electromagnetic waves (radio waves, microwaves, infrared radiation, visible light, ultraviolet radiation, X-rays, gamma rays)

Practical Activities and Investigations:

Students will conduct practical experiments and investigations.

Assessment:

At the end of each unit, students will be assessed through a variety of methods, including quizzes, practical experiments, and problem-solving activities, to evaluate their understanding and progress



Resources

- A range of resources will be used to support students' learning, including:
- Textbooks
- Equipment for experiments, such as circuit components
- Digital resources

Evaluation and Review

The curriculum will be reviewed annually to ensure its effectiveness. Feedback from students, teachers, and parents will be considered in the review process.

Updated August 2024

Next review: August 2025