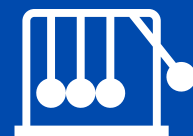


Subject on a Page: Physics



In a nutshell:

Physics is the study of matter, energy, space, and time — and how they interact. It seeks to explain everything from the smallest particles to the largest galaxies, using logic, mathematics, and experimentation to uncover the rules of the universe.

In Physics we:

Demonstrate knowledge and understanding of scientific ideas, processes, techniques and procedures (AO1), apply knowledge and understanding of scientific ideas, process, techniques and procedures in a theoretical and practical context, as well as when handling both quantitative and qualitative data (AO2) and analyse, interpret and evaluate scientific information, ideas and evidence relating to making judgements and conclusions or refining and developing practical procedures (AO3).

Think like a physicist :

- Be curious – question everything relative to what you can see or understand
- Be logical – what are the physical reasonings to mathematical or scientific explanations
- Analyse data in a critical manner, quote errors on everything
- Problem solve – work through mistakes, challenge yourself, think of logical, sensible answers to problems

Write and talk like a physicist :

- | | |
|---------------|------------------|
| • Accuracy | • Leptons |
| • Anomaly | • Hadrons |
| • Calibration | • Baryons |
| • Data | • Mesons |
| • Errors | • Superposition |
| • Evidence | • Interferometry |
| • Hypothesis | • Resistivity |
| • Precision | • Potentiometer |
| • Resolution | • Interference |
| • Uncertainty | • Projectiles |

Read like a physicist :

- AQA Physics A-Level, Breithaupt et al
- Surely, You're Joking Mr Feynman, Richard Feynman
- Moondust: In search of the men who fell to Earth, Andrew Smith
- Quantum Theory Cannot Hurt You, Marcus Chown
- A Short History of Nearly Everything, Bill Bryson

Revise like a physicist :

- Practice exam papers
- Physics and maths tutor question bundles
- Key quizzes on platforms like Isaac Physics
- Self or peer testing

The only way to improve your physics is by **DOING** physics

Experience it like a physicist :

- Keep abreast of scientific development by looking at the science section of the BBC or the guardian
- Visit the nuclear powerplant in Hartlepool (educational trip)

Progress to a career in physics:

- | | |
|--------------------|-------------------------------------|
| • Research | • Sustainability / renewable energy |
| • Engineer | • Telecommunications |
| • Data analyst | • Semi-conductor manufacturing |
| • Programmer | • Defence |
| • Patent attorney | • Education |
| • IT consultant | • Meteorology and climate science |
| • Business analyst | |
| • Aerospace | |
| • Finance | |
| • Health care | |