Physics

Year 11 at Walford
Her Way

The study of Physics uses qualitative and quantitative models, laws, and theories to better understand matter, forces, energy, and the interaction among them. Physics seeks to explain natural phenomena, from the subatomic world to the macrocosmos, and to make predictions about them. The models, laws, and theories in physics are based on evidence obtained from observations, measurements, and active experimentation over thousands of years. Studying this course will enable you to explain many everyday observations and help you better understand the world around you. You will study linear motion and forces, electric circuits, heat, energy and momentum, waves, nuclear models and radioactivity.

SACE Stage 1
two semesters

Engage
Skills

- Apply science inquiry skills to deconstruct a problem and design and conduct physics investigations, using appropriate procedures and safe, ethical working practices
- Obtain, record, represent, analyse, and interpret the results of physics investigations
- Evaluate procedures and results, and analyse evidence to formulate and justify conclusions
- Develop and apply knowledge and understanding of physics concepts in new and familiar contexts
- Explore and understand science as a human endeavour
- Communicate knowledge and understanding of physics concepts, using appropriate terms, conventions, and representations.

Extend
Knowledge

- Linear motion and forces
- Electric circuits
- Heat
- Energy and momentum
- Waves
- Nuclear models and radioactivity.

Enrich
Experiences

- Uni SA STEM opportunities - STEM Girls on Campus – others as they arise via STEM Girls Academy
- Science Olympiads (optional)
- Oliphant Awards (optional)
- National Youth Science Forum (optional)
- STEM Tour (optional – offered every two years)

Assessments/Outcomes

Each semester - one practical investigation, one investigation with a focus on science as a human endeavour, two or three skills and applications tasks.

Pathways

Career Pathways: Physicist, Engineering, Medicine, Dentistry, Physiotherapy, Geology, Architect, Meteorologist, Software Developer, Data Analyst, Astronomer, Climate Change Scientist, Medical Physicist, Biophysicist, AI and Robotics Scientist

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