



Costings per delegate: Free

However, attendance at all sessions is an expectation along with a commitment from your Headteacher.

Physics Teacher Subject Specialism Training

Programme Objectives

As part of a DfE initiative, Avon TSA is offering non-specialist teachers the opportunity to train to teach Physics up to GCSE level. This is an ideal opportunity for Science departments to improve their Physics provision. **ALL TRAINING IS FREE** to schools and participants. This is an IOP enabled, community approved course.

The course draws on up-to-date research to improve subject knowledge, pedagogy and practical skills. Outcomes for participants:

- raise the overall quality of teaching and learning in lessons and contribute to schemes of learning
- extend subject knowledge and learn and develop skills with others from schools across the region
- wider teaching opportunities after the TSST programme is complete

Who is this course for?

For teachers meeting the criteria, this course is FREE through funding provided by the DfE. This includes:

- non-specialist teachers who could potentially teach Physics in addition to their main subject
- non-specialist teachers who are currently teaching Physics either full-time or in addition to their specialist subject
- teachers looking to return to the profession

Outcomes for Schools:

- opens up greater opportunities for the science department, e.g. to run separate sciences at KS4
- more freedom in timetabling science staff at GCSE
- students will have a better grounding in KS3 physics leading to better outcomes at KS4

How to Apply

For more information and to register your interest for a place on the Physics TSST course, please complete the booking form on the website or email avontsa@malmesbury.wilts.sch.uk. The location of the course will be chosen to suit the participants that register, but it is likely to be in Malmesbury.



avontsa@malmesbury.wilts.sch.uk



www.avontsa.com



@AvonTSA



01666 829768

Session	Session Title	Date	Time
1	<p>Day one: Intro to KS3 physics</p> <p>We will carry out a needs analysis to tailor the course to participants. Abstraction, modelling, perceptions of physics and physicists, maths, scale and scope. Energy, common misconceptions in energy, energy transfer, introducing simple circuits at KS3, modelling simple circuits.</p>	Wednesday 4 th Nov 2020	09.00 –16.00
2	<p>Day 2: KS3 physics</p> <p>Forces and motion, Scalar and vector quantities, Measuring speed and introducing quantitative reasoning. Newton's first law and free body diagrams. Measuring forces. Waves - light and sound.</p>	Thursday 19 th Nov 2020	09.00 –16.00
3	<p>Day 3: Forces at KS4</p> <p>Linear and non-linear motion, understanding rates of change, understanding errors, forces on moving objects, Newton's laws of motion, momentum and impulse.</p>	Tuesday 15 th Dec 2020	09.00 –16.00
4	<p>Day 4: Electricity and electromagnetism</p> <p>Static electricity and electric fields, circuits at KS4, series and parallel, Ohm's law, the potential divider, semiconductor devices, resistivity, magnetism, the motor effect, simple electromagnetic devices.</p>	Tuesday 12 th Jan 2021	09.00 –16.00
5	<p>Day 5: Energy transfers, thermal physics and gas laws</p> <p>Sankey diagrams, the joule, work done, potential energy, gravitational potential and kinetic energy, conduction, convection, radiation and mass transfer - SHC and latent heat, thermodynamics.</p>	Wednesday 10 th Feb 2021	09.00 –16.00
6	<p>Day 6: Waves and radiation</p> <p>Radiation, half-life, uses of isotopes, nuclear power, fission and fusion, electromagnetic radiation Basic optics - optics diagrams, communications technology</p>	Thursday 11 th Mar 2021	09.00 –16.00
7	<p>Day 7: Additional physics</p> <p>Other topics in physics: Special requests! Astrophysics - earth in space at KS2 to stellar evolution and the age of the universe, introduction to basic electronics, bridging the gap to A level, modern physics.</p>	Tuesday 30 th Mar 2021	09.00 –16.00

