SUMMER & AUTUMN 2019

PHYSICS TEACHER COURSES

Call 01625 532974 or book online at keynote.org.uk
@KeynoteCourses
There is renewed interest in, and indeed widespread support among school leaders for the inspectorate’s plans to focus more on the quality of the curriculum and less on performance data in its inspections. Join us at this vital conference where you will explore powerful curriculum thinking, examine the new challenges for leaders in developing curriculum expertise within schools and analyse how to ensure curriculum progress in every subject.

**KEYNOTE SPEAKERS INCLUDE:**
- Summer Turner
  Head of Curriculum Development, The Inspiration Trust
- Matthew Purves
  Deputy Director for Schools, Ofsted
- Shaun Allison
  Research Lead at Durrington High School
CONFERENCE
NEW HEADS OF DEPARTMENTS
Challenges, Opportunities, Approaches to Excellence

Friday 5 July 2019 | Central London

New Heads of Departments have to quickly develop their skills in setting a departmental vision, leading high quality teaching and learning and performance-managing colleagues. With an ever-increasing focus on student outcomes, the pressures on Heads of Department to produce impressive results are high.

Focusing on the key attributes of leadership, including assessing and developing your curriculum, making your mark with the SLT, coaching your team and producing an effective Quality of Education for all students, this conference will provide methods and solutions for the differing issues new Heads of Department encounter when they progress beyond the role of subject teacher.
<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>7622</td>
<td>GCSE Physics Aiming for grades 8-9</td>
<td>5</td>
</tr>
<tr>
<td>7619</td>
<td>Teaching the Practical Skills for A level Physics</td>
<td>6</td>
</tr>
<tr>
<td>7105</td>
<td>Challenging able Physics students to achieve A/A*</td>
<td>7</td>
</tr>
<tr>
<td>7104</td>
<td>Raising the achievement of lower attaining students in A level Physics</td>
<td>8</td>
</tr>
<tr>
<td>7102</td>
<td>Teaching A Level Physics for the first time</td>
<td>9</td>
</tr>
<tr>
<td>7627</td>
<td>A level Physics: Key Concepts, Effective Methods of Teaching including the Practicals</td>
<td>10</td>
</tr>
<tr>
<td>7618</td>
<td>Improving results / achievement in AQA A level Physics Paper 3</td>
<td>11</td>
</tr>
<tr>
<td>7106</td>
<td>Outstanding Achievement in AQA A level Physics</td>
<td>12</td>
</tr>
<tr>
<td>7103</td>
<td>A Level Physics for Biology and Chemistry and Maths Specialists</td>
<td>13</td>
</tr>
<tr>
<td>7620</td>
<td>Teaching A-level Physics for non-specialist teachers</td>
<td>14</td>
</tr>
<tr>
<td>7527</td>
<td>How to Build a Rich Science Curriculum</td>
<td>15</td>
</tr>
</tbody>
</table>

**Biographies**

16
GCSE PHYSICS
AIMING FOR GRADES 8-9

CODE 7622

ABOUT THIS COURSE
This course is for all teachers of GCSE Physics and GCSE Combined Science Physics. We will identify the high-level aspects of the GCSE Physics specification and look at a variety of useful techniques and strategies to improve student performance in the level 8–9 questions in examinations. We will look at how students should tackle high level calculation and data analysis questions. We will look at how students can best perform on questions involving the required practicals and long answer questions. Ideas for teaching and extension tasks will be discussed and we will identify where and how to incorporate “working scientifically” into your teaching.

PROGRAMME

High level performance in calculations and data analysis
10.00 – 11.15am
- Learning the formulae - strategies and exercises to help students embed the formulae
- Selecting the correct formula – exercises for students to be able to identify quantities they are given and select the correct formula
- Tackling calculation questions - what stages of working are necessary to obtain the marks?
- High mark calculation questions: using the more difficult formulae and two formulae at once
- Prefixes, converting units and standard form
- High level analysis of tables of data and graphs – what the examiners require
- Helping students’ understanding of mathematical relationships between variables; linear, non-linear; direct proportion, inverse proportion, exponential decay - how to identify these relationships from graphs and tables and explain their meaning
- Mathematical skills being tested in the Physics exams: proportion, percentages, percentage change, using graphs

Discussion: coffee break
11.15 – 11.30am

High level performance in questions on the required practicals and long answer questions
11.30 – 12.30pm
- Teaching approaches that produce excellent understanding of the AQA required practicals
- Teaching the “scientific method”: resolution, recording results to the correct number of significant figures, finding the mean and discarding anomalies, lines of best fit, uncertainties in results, the difference between random and systematic errors and methods to improve accuracy
- Examples of student templates and for writing practical methods to gain full marks
- Explore topics likely to come up in the long answer question and some model answers
- Explanation questions – bullet point the key phrases to target the marks in topics such as terminal velocity, Rutherford scattering etc.
- How to answer “compare” and “explain” questions in the long answer questions to target all the marks

Lunch and informal discussion
12.30 – 1.30pm

High level attainment in Paper 1
1.30 – 2.30pm
- Lessons from the 2018 paper 1 higher tier (trilogy and separate)
- High mark questions on electric circuits - example answers and tips demonstrating how students should approach these questions
- Sensing circuits and potential dividers
- Describing and explaining I-V characteristic curves
- Correct terminology to explain energy changes and efficiency
- Approaches to areas of challenge in the particle model (energy changes in heating and change of state), and atomic structure (half-life)
- Online simulations for modelling abstract concepts such as electric current, particle models of gases at different temperatures and pressures.
- Ideas for teaching paper 1 topics and extension tasks

Discussion: afternoon tea
2.30 – 2.45pm

High level attainment in Paper 2
2.45 – 3.45pm
- Lessons from 2018 paper 2 higher tier (trilogy and separate)
- High level skills in Forces and Motion and how to ensure your students are prepared for these – tangents to curves, area under curves, \( v^2-u^2=2as \)
- Practising finding the resultant and resolving forces.
- High level concepts in waves: refraction, lens ray diagrams, seismic waves giving evidence for structure of the Earth
- Simulations and models to help students’ understanding of difficult concepts in Electromagnetism: Motors, Alternators and Dynamos – key points students should learn.
- Ensuring the correct phraseology is used to target the marks in electromagnetism.
- Reducing mistakes made when using the transformer equations
- Ideas for teaching paper 2 topics and extension tasks

LOCATION/DATE
London
Friday 21 June 2019
Monday 02 December 2019

COURSE LEADER
Sarah Battams has been teaching Physics at KS3, GCSE and A level for the last 20 years. She is an outstanding practitioner with consistently excellent examination results and value added at GCSE and A level. She delivers Physics lessons that are fun, varied and equip students with the skills necessary to confidently tackle examinations.

WHO SHOULD ATTEND?
- Heads of Science
- Heads of Physics
- All teachers of GCSE Physics

BENEFITS OF ATTENDING
- Focussed on the skills required to achieve grades 8 and 9
- Mark schemes for high level questions will be analysed
- Improve student performance in high level calculation and data analysis questions
- Improve student performance in questions on required practicals
- Improve student performance on long answer explanation questions
- Develop your teaching methods for the level 8-9 parts of the specification with innovative and student friendly activities
- Resources to take away for your GCSE teaching that improve student examination performance

COST: £269+VAT

This course, tailored to suit, can be delivered in your school.
Discuss this further with our CPD team on 01625 532974 or online@keynote.org.uk

IN SCHOOL INFO
TEACHING THE PRACTICAL SKILLS FOR A LEVEL PHYSICS

CODE 7619

ABOUT THIS COURSE
This course is aimed at teachers looking for more guidance and new ideas for teaching the key practical skills required for A level Physics and those in charge of monitoring student progress in the practical element. It will demonstrate techniques for delivering the required practicals, approaches for teaching practical skills so that students really understand what they are learning, how to monitor student progress in the practical element and what students need to learn for the unfamiliar practical contexts they will face in paper 3. Led by a highly experienced examiner and classroom teacher, you will gain new ideas and approaches that encourage student success in the examinations.

PROGRAMME

The practical skills
- What the CPAC competencies are and how to assess them
- Key challenges in teaching the practical skills
- What are the AT skills and which practicals contain them

Successful teaching methods for the A level required practicals
- Analyse student task sheets for all the required practicals that ensure full understanding and success
- Best practice techniques for utilised the methods and equipment requirements, so that students can utilise their knowledge in the examinations
- Teaching with the end in mind

Monitoring and recording student competencies
- In-class monitoring techniques and strategies; a proforma is provided and its use discussed
- A spreadsheet to record student CPAC competencies is given and how to use it as a simple, quick and effective tool to record student progress
- Analysing student performance and developing your teaching to ensure all are making progress

Applying practical knowledge to the examinations
In this session past papers will be used
- Key practical methods to learn (reading micrometers, finding vertical heights, using measuring cylinders, timing oscillations)
- Key methods for accuracy (large measurements for small percentage uncertainty, repeats and means to reduce random error, method to eliminate systematic errors)
- How to write an experimental method to gain all the marks
- Plotting an analysing of graphs of the type y = mx+c (choosing appropriate scales, plotting points, adding line of best fit, calculating gradient and calculating intercepts)
- Use of appropriate numbers of significant figures

Applying practical knowledge to Paper 3
- Analysis of results: use of log - linear graphs (for decay constants in exponential decay) and log-log graphs (to find unknown powers in equations)

LOCATION/DATE
London
Friday 5 July 2019
Friday 08 November 2019

COURSE LEADER
Sarah Battams has been teaching Physics at KS3, GCSE and A level for the last 20 years. She is an outstanding practitioner with consistently excellent examination results and value added at GCSE and A level. She delivers Physics lessons that are fun, varied and equip students with the skills necessary to confidently tackle examinations.

WHO SHOULD ATTEND?
- All teachers of A level Physics
- Heads of Department for Physics
- Heads of Science

BENEFITS OF ATTENDING
- Focus on how to ensure all students understand and can apply the key practical skills
- Develop teaching techniques and methodologies for the A level Physics practical skills
- Take away successful ideas and strategies that ensure students succeed in the examinations in questions on the practical skills
- Support for the most able students to achieve the highest grades and nurture for those who struggle

IN SCHOOL INFO
This course, tailored to suit, can be delivered in your school. Discuss this further with our CPD team on 01625 532974 or online@keynote.org.uk

COST: £269+VAT
### CHALLENGING ABLE PHYSICS STUDENTS TO ACHIEVE A/A*

**CODE 7105**

**ABOUT THIS COURSE**
This updated course is for all teachers of A level Physics looking to develop new strategies for extending their very able students hoping to achieve A/A* and possibly go on to read Physics or related disciplines at degree level.

The course will provide guidance on getting the best out of A/A* candidates and on preparing them for the examinations. Delegates will takeaway a range of ideas, approaches and tried and tested strategies for teaching top end students, the principles of which would also work across other A level sciences.

**PROGRAMME**

<table>
<thead>
<tr>
<th>TIME</th>
<th>TIME</th>
<th>TIME</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Identifying and challenging able students in physics</strong> 10.00 – 10.45am</td>
<td><strong>Identifying and challenging able students in physics</strong> 10.00 – 10.45am</td>
<td><strong>Identifying and challenging able students in physics</strong> 10.00 – 10.45am</td>
</tr>
<tr>
<td>Identifying the genuinely gifted physicists at A level</td>
<td>Identifying the genuinely gifted physicists at A level</td>
<td>Identifying the genuinely gifted physicists at A level</td>
</tr>
<tr>
<td>Characteristics of high attainers in physics</td>
<td>Characteristics of high attainers in physics</td>
<td>Characteristics of high attainers in physics</td>
</tr>
<tr>
<td>How to teach and challenge gifted students in mixed ability groups</td>
<td>How to teach and challenge gifted students in mixed ability groups</td>
<td>How to teach and challenge gifted students in mixed ability groups</td>
</tr>
<tr>
<td>Developing skills for independent learning</td>
<td>Developing skills for independent learning</td>
<td>Developing skills for independent learning</td>
</tr>
<tr>
<td>Discussion: coffee break 10.45 – 11.00am</td>
<td>Discussion: coffee break 10.45 – 11.00am</td>
<td>Discussion: coffee break 10.45 – 11.00am</td>
</tr>
<tr>
<td><strong>Bridging the gap to an A</strong> 11.00 – 11.30am</td>
<td><strong>Bridging the gap to an A</strong> 11.00 – 11.30am</td>
<td><strong>Bridging the gap to an A</strong> 11.00 – 11.30am</td>
</tr>
<tr>
<td>What is the A* for? What is the national standard at A and A*?</td>
<td>What is the A* for? What is the national standard at A and A*?</td>
<td>What is the A* for? What is the national standard at A and A*?</td>
</tr>
<tr>
<td>Why are able students not achieving the A*?</td>
<td>Why are able students not achieving the A*?</td>
<td>Why are able students not achieving the A*?</td>
</tr>
<tr>
<td>What skills are needed to access the higher grades?</td>
<td>What skills are needed to access the higher grades?</td>
<td>What skills are needed to access the higher grades?</td>
</tr>
<tr>
<td>Ways to prepare your able students for all types of questions including those testing practical skills</td>
<td>Ways to prepare your able students for all types of questions including those testing practical skills</td>
<td>Ways to prepare your able students for all types of questions including those testing practical skills</td>
</tr>
<tr>
<td><strong>Improving able students’ understanding of difficult physics concepts</strong> 11.30 – 12.45pm</td>
<td><strong>Improving able students’ understanding of difficult physics concepts</strong> 11.30 – 12.45pm</td>
<td><strong>Improving able students’ understanding of difficult physics concepts</strong> 11.30 – 12.45pm</td>
</tr>
<tr>
<td>Effective approaches to teaching the physics topics that able students miss marks on in exams</td>
<td>Effective approaches to teaching the physics topics that able students miss marks on in exams</td>
<td>Effective approaches to teaching the physics topics that able students miss marks on in exams</td>
</tr>
<tr>
<td>Using computer simulations to challenge and extend students’ understanding</td>
<td>Using computer simulations to challenge and extend students’ understanding</td>
<td>Using computer simulations to challenge and extend students’ understanding</td>
</tr>
<tr>
<td>Examples of experiments to stimulate thought and challenge ideas</td>
<td>Examples of experiments to stimulate thought and challenge ideas</td>
<td>Examples of experiments to stimulate thought and challenge ideas</td>
</tr>
<tr>
<td>Taking forward lessons from the 2018 examination</td>
<td>Taking forward lessons from the 2018 examination</td>
<td>Taking forward lessons from the 2018 examination</td>
</tr>
<tr>
<td>Lunch and informal discussion 12.45 – 1.45pm</td>
<td>Lunch and informal discussion 12.45 – 1.45pm</td>
<td>Lunch and informal discussion 12.45 – 1.45pm</td>
</tr>
<tr>
<td><strong>Higher Order Questioning</strong> 1.45 – 2.30pm</td>
<td><strong>Higher Order Questioning</strong> 1.45 – 2.30pm</td>
<td><strong>Higher Order Questioning</strong> 1.45 – 2.30pm</td>
</tr>
<tr>
<td>Problem solving contexts</td>
<td>Problem solving contexts</td>
<td>Problem solving contexts</td>
</tr>
<tr>
<td>Approaches to improve lateral thinking</td>
<td>Approaches to improve lateral thinking</td>
<td>Approaches to improve lateral thinking</td>
</tr>
<tr>
<td>Modelling in Physics</td>
<td>Modelling in Physics</td>
<td>Modelling in Physics</td>
</tr>
<tr>
<td>Thought provoking examples to challenge learners’ understanding</td>
<td>Thought provoking examples to challenge learners’ understanding</td>
<td>Thought provoking examples to challenge learners’ understanding</td>
</tr>
<tr>
<td><em><em>Extending the A/A</em> Students</em>* 2.30 – 3.00pm</td>
<td><em><em>Extending the A/A</em> Students</em>* 2.30 – 3.00pm</td>
<td><em><em>Extending the A/A</em> Students</em>* 2.30 – 3.00pm</td>
</tr>
<tr>
<td>Classroom and laboratory activities that encourage higher order thinking</td>
<td>Classroom and laboratory activities that encourage higher order thinking</td>
<td>Classroom and laboratory activities that encourage higher order thinking</td>
</tr>
<tr>
<td>Olympiad and other physics competitions</td>
<td>Olympiad and other physics competitions</td>
<td>Olympiad and other physics competitions</td>
</tr>
<tr>
<td>How to support your students with Russell Group interviews</td>
<td>How to support your students with Russell Group interviews</td>
<td>How to support your students with Russell Group interviews</td>
</tr>
<tr>
<td><strong>Maximising marks in the examinations</strong> 3.00 – 3.45pm</td>
<td><strong>Maximising marks in the examinations</strong> 3.00 – 3.45pm</td>
<td><strong>Maximising marks in the examinations</strong> 3.00 – 3.45pm</td>
</tr>
<tr>
<td>Examples of mistakes often made by able students in physics examinations</td>
<td>Examples of mistakes often made by able students in physics examinations</td>
<td>Examples of mistakes often made by able students in physics examinations</td>
</tr>
<tr>
<td>Preparing for the exam papers in a logical and systematic way to maximise marks</td>
<td>Preparing for the exam papers in a logical and systematic way to maximise marks</td>
<td>Preparing for the exam papers in a logical and systematic way to maximise marks</td>
</tr>
<tr>
<td>A carefully planned revision campaign that leaves nothing to chance</td>
<td>A carefully planned revision campaign that leaves nothing to chance</td>
<td>A carefully planned revision campaign that leaves nothing to chance</td>
</tr>
</tbody>
</table>

*Afternoon tea will be available during the afternoon sessions*
ABOUT THIS COURSE
This course provides teachers working with lower attaining A-level Physics students with an effective toolkit to help learners excel in the new linear exams.
Looking at a range of strategies to boost results we will cover effective teaching and assessment techniques, monitoring and early intervention strategies, exam technique and ways to improve confidence, motivation and attainment.

PROGRAMME

Effective Techniques to use with lower attaining students
- Effective techniques to develop knowledge, understanding and practical skills in lower attaining students
- The aspects of physics that low attaining students find most difficult
- The fundamental concepts that must be understood: effective ways to guarantee secure understanding
- Developing practical skills – getting the most from the compulsory practicals

Discussion: coffee break

Reliable Assessment Methods to Identify Underperformance & Early Intervention strategies
- Reliable techniques to quickly identify underperformance
- Intervention strategies that work best with low attaining students
- Monitoring methods to track progress over the new linear courses

Lunch and informal discussion

Raising students’ aspirations and motivation by providing regular opportunities for success
- Strategies for motivating low attainers
- How to sustain their motivation
- Raising aspirations by showing students how physics can lead to many Higher Education and employment options
- Building differentiation into classroom revision activities to ensure that the more able learners are stretched while the rest of the class are supported

Discussion: afternoon tea

Exam techniques: enhancing exam performance and developing independent learning strategies
- Understanding how exam papers are written and marked: what to do and not to do in exams
- How to help learners interpret questions and provide concise but complete answers that match the questions
- How to help low attainers to maximise their exam time achieve the best outcome
- Embed the teaching of exam techniques to enhance performance levels
- Utilising additional resources to encourage independent learning and offer remote support

LOCATION/DATE
London
Thursday 27 June 2019
Monday 2 December 2019

COURSE LEADER
Howard Dodd has worked as an A-level Physics Principal Examiner (writing exam papers and supervising marking) for over twenty years being employed by OCR, AQA and Edexcel.
He has a national reputation for providing high quality and helpful in-service training courses for secondary and post-16 teachers.

WHO SHOULD ATTEND?
- All AS/A-level Physics teachers including NQTs and heads of department

BENEFITS OF ATTENDING
- Utilise techniques to quickly identify underperforming students and implement strategies to effectively support them
- Embed the teaching of exam techniques to enhance the performance of lower attaining students for linear exams
- Embed revision strategies to encourage independent learning that improve exam performance
- Take away ways to prepare lower attaining learners for questions relating to the Compulsory Practicals
- Develop effective techniques to help lower attaining learners to retain knowledge, understand concepts and develop skills

IN SCHOOL INFO
This course, tailored to suit, can be delivered in your school.
Discuss this further with our CPD team on 01625 532974 or online@keynote.org.uk

COST: £269+VAT
TEACHING A LEVEL PHYSICS FOR THE FIRST TIME

CODE 7102

ABOUT THIS COURSE
This is a course designed for all those teaching Physics at A Level for the first time or in their first years of teaching. Teachers attending the course will gain a clear understanding of the demands and standard of A-level Physics and the concepts and skills that are key for students to understand to be successful on the course.

You will take away a range of effective teaching approaches, strategies and key Physics techniques for use in the key areas of A-level Physics as well as a full range of highly effective and engaging resources to use straight away in lessons.

There will also be an emphasis on the A-level Physics examinations and the types and range of questions that are posed to illustrate the demands and requirements for students to access the top grades and how their progress can be monitored internally.

PROGRAMME

**The A-level Physics Course**  
10.00 – 10.30am  
- The key demands of A Level Physics  
- Improving your understanding of the A-Level course and the standard expected of students  
- Structuring a well-planned Physics course to ensure student success  
- Starting on a solid foundation – ways to move students from GCSE to A-level

**Practical Approaches to Teaching Year 1 A-level Physics**  
10.30 – 12.00pm  
- Looking in particular at topics which students find challenging in Year 1 including Mechanics, Electricity and Particle Physics  
- Developing key skills in Year 1

**Practical work in A-level Physics**  
12.00 – 12.40pm  
- The Compulsory Practical Assessment Criteria  
- Approaches to preparing students for the new practical skills examination questions  
- Monitoring skills for the practical endorsement  
- Examination of skills related to practicals

Lunch and informal discussion  
12.40 – 1.40pm

**Practical Approaches to Teaching Year 2 A-level Physics**  
1.40 – 2.50pm  
- Looking in particular at topics which students find challenging including Electromagnetism and Fields  
- Physics concepts that run through the whole course

**The Examinations and Assessing Progress**  
2.50 – 3.30pm  
- Exploring the new style exams  
- How to help learners interpret questions and provide concise but complete answers that match the questions  
- Understanding different types of questions and how to teach these for exam success  
- Effectively monitoring students’ progress  
- Effective assessment and feedback techniques

Keeping students motivated  
3.30 – 3.45pm  
- Differentiating strategies to accommodate all learners  
- Enriching the specification  
- Preparing for next steps

Questions/Discussion  
3.45 – 4.00pm

LOCATION/DATE
London  
Monday 1 July 2019  
Friday 8 November 2019

COURSE LEADER
Martin Gallacher is a current Head of Physics which he carries out as part of his wider role as Assistant Head of Sixth Form at a large FE College. He has 14 years’ experience teaching A-level Physics in Secondary Schools and Colleges to students of all abilities from a wide range of backgrounds.

WHO SHOULD ATTEND?
- NQTs and those teaching A-level Physics for the first time

BENEFITS OF ATTENDING
- Improve your understanding of the A-level course and best practice in terms of teacher delivery  
- Increase your awareness of how to teach key concepts that are crucial to student achievement on the A-level Physics course  
- Learn successful methods for monitoring and maintaining students’ progress in A-level Physics  
- Increased understanding of assessment in A-level Physics and how this affects your teaching  
- Take away resources to help your teaching, including student exam answers

IN SCHOOL INFO
This course, tailored to suit, can be delivered in your school.  
Discuss this further with our CPD team on 01625 532974 or online@keynote.org.uk

COST: £269+VAT
A LEVEL PHYSICS: KEY CONCEPTS, EFFECTIVE METHODS OF TEACHING INCLUDING THE PRACTICALS

CODE 7627

ABOUT THIS COURSE
This new course will demonstrate successful classroom strategies that will enable non-specialists to confidently teach A-level Physics. Led by our highly experienced A Level Physics teacher and senior examiner Sarah Battams, the course will explore the key challenging topics and areas in A-level Physics and demonstrate how to teach these well. Fundamental principles, patterns, concepts and models that students need to understand to succeed at A-level Physics will be analysed and explored, along with key strategies for successful teaching of the Compulsory Physics Practicals and expert guidance on preparing students for A-level examinations.

PROGRAMME

Key topics 1
We will look at the key concepts and methods of teaching, including useful practicals in the following topics:

Particle Physics
- Photons
- Photoelectric effect
- Pair production and annihilation
- Energy levels in atoms
- Wave-particle duality

Waves
- Wave properties
- Polarisation
- Stationary waves
- Diffraction: double slit, diffraction gratings, single slit

Discussion: coffee break

Key topics 2
We will look at the key concepts and methods of teaching, including useful practicals in the following topics:

Materials
- Springs
- Young’s modulus

Mechanics
- Uniform acceleration
- Forces and moments in equilibrium

Lunch and informal discussion

Key topics 3
We will look at the key concepts and methods of teaching, including useful practicals in the following topics:

Electricity
- Circuits – rules and formulae
- Potential dividers
- EMF and internal resistance

Discussion: afternoon tea

Teaching the required practicals
- Straight forward methods for the required practicals
- Monitoring student progress:
- In class assessment – how to assess students using provided checklists
- Recording CPAC competencies – a spreadsheet will be provided and a simple but effective way of recording student progress will be given

LOCATION/DATE
London
Thursday 17 October 2019
Thursday 12 December 2019

COURSE LEADER
Sarah Battams has been teaching Physics at KS3, GCSE and A level for the last 20 years. She is an outstanding practitioner with consistently excellent examination results and value added at GCSE and A level. She delivers Physics lessons that are fun, varied and equip students with the skills necessary to confidently tackle examinations.

WHO SHOULD ATTEND?
- All teachers of A level Physics
- Heads of Department for Physics
- Heads of Science

BENEFITS OF ATTENDING
- Building the ‘big picture’ of A-level Physics
- Take away successful approaches to the most challenging A level Physics topics
- The Required Physics Practicals – getting the most from them
- Where students succeed and struggle in A level Physics exams

COST: £269+VAT

IN SCHOOL INFO
This course, tailored to suit, can be delivered in your school. 
Discuss this further with our CPD team on 01625 532974 or online@keynote.org.uk
ABOUT THIS COURSE
This new course is intended for teachers of A-level physics who want to improve the achievement of their students on the AQA A-level Physics course. The focus is on the practical skills paper and Options (Paper 3) but there will also be general guidance of raising achievement at the A/A* level.

The course will focus on the main causes of learners’ poor attainment in in this area of the examination and the techniques which can be developed to improve their understanding and exam technique. The course focuses on AQA A-level Physics but the skills developed would also be useful for teachers teaching other specifications.

PROGRAMME

Key Challenges for Students in Paper 3
Identifying areas of weakness from analysis of examiner reports including use of technical vocabulary, dealing with original experiments and planning accurate procedures
Identifying the causes of these weaknesses in student performance
Identifying methods to address these weaknesses in classroom practice

Teaching Paper 3 Section A Q1 and 2
You will tackle these issues by:
Improving the skills of graph-plotting and analysis of graphs through explaining the guidelines for best practice
Developing communication skills in relation to describing methods and use of equipment by embedding written communication activities within practical sessions
Focussing on basic numeracy skills needed to achieve full marks by training students to use systematic approaches to mathematical problem-solving
Enabling learners to tackle novel experiments beyond the 12 core practicals

Teaching Paper 3 Section A Q3
To address this, we will
Work through two typical Q3 style question; one a standard Gas Laws practical and the other a non-standard practical on oscillations.
Adapt it for a different Core Practical to make the delivery of core practical sessions more exam-oriented.
Discuss the most effective method of delivering the practical curriculum to develop the skills needed to tackle Section A on Paper 3.
Consider how to deepen students’ understanding of the importance of uncertainty in planning and evaluating experiments

Teaching Paper 3: Section B
We tackle these issues by
Analysing comments by examiners on student responses in section B
Applying methods to improve communication skills in terms of level of detail and clarity of explanation
Using online resources to enable reluctant readers to engage with complex topics
Developing reasoning and evaluative skills through two questions, the evidence for the Big Bang theory and in comparison of CT scanning with MRI.

Accessing top grades in Paper 3
Tactics for achieving the A*
Identifying the ‘danger’ questions where marks are lost
Enabling learners to ‘read the mind’ of the examiner by independently researching feedback from awarding bodies
Stretch and challenge resources for high-achievers through extra-curricular activities such as the Olympiad, HE link projects and ISAAC Physics activities

WHO SHOULD ATTEND?
A level Physics teachers teaching the AQA specification
Heads of Department
Heads of Faculty

BENEFITS OF ATTENDING
Develop teaching strategies that lead to deep learning and ensure successful outcomes for your students in some of the challenging topics of Year 2
Explore how different approaches to problem solving lead to effective ways of tackling unfamiliar questions in Paper 3
Enhance laboratory learning through innovative activities in the classroom
Build advanced skills in data analysis through targeted exercises
Gain insights into approaches that work in answering ‘levels of response’ questions and other questions
Embed synoptic learning using active learning methods
Apply some of the latest research to build learning power in your students
Support for the most able students to achieve the highest grades and nurture those who struggle

COURSE LEADER
Tony Dunn has taught for over 30 years in secondary schools and sixth form colleges, mainly in inner city areas, specialising in A-level Physics. He has maintained 100% pass rate in A-level Physics at his college since the new specification started.

LOCATION/DATE
London
Wednesday 26 June 2019
Monday 18 November 2019

COURSE LEADER
Tony Dunn has taught for over 30 years in secondary schools and sixth form colleges, mainly in inner city areas, specialising in A-level Physics. He has maintained 100% pass rate in A-level Physics at his college since the new specification started.

WHO SHOULD ATTEND?
A level Physics teachers teaching the AQA specification
Heads of Department
Heads of Faculty

BENEFITS OF ATTENDING
Develop teaching strategies that lead to deep learning and ensure successful outcomes for your students in some of the challenging topics of Year 2
Explore how different approaches to problem solving lead to effective ways of tackling unfamiliar questions in Paper 3
Enhance laboratory learning through innovative activities in the classroom
Build advanced skills in data analysis through targeted exercises
Gain insights into approaches that work in answering ‘levels of response’ questions and other questions
Embed synoptic learning using active learning methods
Apply some of the latest research to build learning power in your students
Support for the most able students to achieve the highest grades and nurture those who struggle

COURSE LEADER
Tony Dunn has taught for over 30 years in secondary schools and sixth form colleges, mainly in inner city areas, specialising in A-level Physics. He has maintained 100% pass rate in A-level Physics at his college since the new specification started.

WHO SHOULD ATTEND?
A level Physics teachers teaching the AQA specification
Heads of Department
Heads of Faculty

BENEFITS OF ATTENDING
Develop teaching strategies that lead to deep learning and ensure successful outcomes for your students in some of the challenging topics of Year 2
Explore how different approaches to problem solving lead to effective ways of tackling unfamiliar questions in Paper 3
Enhance laboratory learning through innovative activities in the classroom
Build advanced skills in data analysis through targeted exercises
Gain insights into approaches that work in answering ‘levels of response’ questions and other questions
Embed synoptic learning using active learning methods
Apply some of the latest research to build learning power in your students
Support for the most able students to achieve the highest grades and nurture those who struggle

COURSE LEADER
Tony Dunn has taught for over 30 years in secondary schools and sixth form colleges, mainly in inner city areas, specialising in A-level Physics. He has maintained 100% pass rate in A-level Physics at his college since the new specification started.

WHO SHOULD ATTEND?
A level Physics teachers teaching the AQA specification
Heads of Department
Heads of Faculty

BENEFITS OF ATTENDING
Develop teaching strategies that lead to deep learning and ensure successful outcomes for your students in some of the challenging topics of Year 2
Explore how different approaches to problem solving lead to effective ways of tackling unfamiliar questions in Paper 3
Enhance laboratory learning through innovative activities in the classroom
Build advanced skills in data analysis through targeted exercises
Gain insights into approaches that work in answering ‘levels of response’ questions and other questions
Embed synoptic learning using active learning methods
Apply some of the latest research to build learning power in your students
Support for the most able students to achieve the highest grades and nurture those who struggle

COURSE LEADER
Tony Dunn has taught for over 30 years in secondary schools and sixth form colleges, mainly in inner city areas, specialising in A-level Physics. He has maintained 100% pass rate in A-level Physics at his college since the new specification started.

WHO SHOULD ATTEND?
A level Physics teachers teaching the AQA specification
Heads of Department
Heads of Faculty

BENEFITS OF ATTENDING
Develop teaching strategies that lead to deep learning and ensure successful outcomes for your students in some of the challenging topics of Year 2
Explore how different approaches to problem solving lead to effective ways of tackling unfamiliar questions in Paper 3
Enhance laboratory learning through innovative activities in the classroom
Build advanced skills in data analysis through targeted exercises
Gain insights into approaches that work in answering ‘levels of response’ questions and other questions
Embed synoptic learning using active learning methods
Apply some of the latest research to build learning power in your students
Support for the most able students to achieve the highest grades and nurture those who struggle

COURSE LEADER
Tony Dunn has taught for over 30 years in secondary schools and sixth form colleges, mainly in inner city areas, specialising in A-level Physics. He has maintained 100% pass rate in A-level Physics at his college since the new specification started.

WHO SHOULD ATTEND?
A level Physics teachers teaching the AQA specification
Heads of Department
Heads of Faculty

BENEFITS OF ATTENDING
Develop teaching strategies that lead to deep learning and ensure successful outcomes for your students in some of the challenging topics of Year 2
Explore how different approaches to problem solving lead to effective ways of tackling unfamiliar questions in Paper 3
Enhance laboratory learning through innovative activities in the classroom
Build advanced skills in data analysis through targeted exercises
Gain insights into approaches that work in answering ‘levels of response’ questions and other questions
Embed synoptic learning using active learning methods
Apply some of the latest research to build learning power in your students
Support for the most able students to achieve the highest grades and nurture those who struggle

COURSE LEADER
Tony Dunn has taught for over 30 years in secondary schools and sixth form colleges, mainly in inner city areas, specialising in A-level Physics. He has maintained 100% pass rate in A-level Physics at his college since the new specification started.

WHO SHOULD ATTEND?
A level Physics teachers teaching the AQA specification
Heads of Department
Heads of Faculty

BENEFITS OF ATTENDING
Develop teaching strategies that lead to deep learning and ensure successful outcomes for your students in some of the challenging topics of Year 2
Explore how different approaches to problem solving lead to effective ways of tackling unfamiliar questions in Paper 3
Enhance laboratory learning through innovative activities in the classroom
Build advanced skills in data analysis through targeted exercises
Gain insights into approaches that work in answering ‘levels of response’ questions and other questions
Embed synoptic learning using active learning methods
Apply some of the latest research to build learning power in your students
Support for the most able students to achieve the highest grades and nurture those who struggle

COURSE LEADER
Tony Dunn has taught for over 30 years in secondary schools and sixth form colleges, mainly in inner city areas, specialising in A-level Physics. He has maintained 100% pass rate in A-level Physics at his college since the new specification started.

WHO SHOULD ATTEND?
A level Physics teachers teaching the AQA specification
Heads of Department
Heads of Faculty

BENEFITS OF ATTENDING
Develop teaching strategies that lead to deep learning and ensure successful outcomes for your students in some of the challenging topics of Year 2
Explore how different approaches to problem solving lead to effective ways of tackling unfamiliar questions in Paper 3
Enhance laboratory learning through innovative activities in the classroom
Build advanced skills in data analysis through targeted exercises
Gain insights into approaches that work in answering ‘levels of response’ questions and other questions
Embed synoptic learning using active learning methods
Apply some of the latest research to build learning power in your students
Support for the most able students to achieve the highest grades and nurture those who struggle
OUTSTANDING ACHIEVEMENT IN AQA A LEVEL PHYSICS

CODE 7106

ABOUT THIS COURSE
This new course is intended for all teachers who wish to ensure the high achievement of students in AQA A level Physics. By providing tried and tested teaching techniques and approaches the courses aims to help teachers raise attainment in students of all abilities and experience by improving confidence, knowledge and a stronger understanding of what examiners are looking for.

PROGRAMME

**Feedback from the latest AQA A-level examinations**
- The overall stats - comparison between the different awarding boards
- The grade boundaries for each paper (indicating the level of difficulty of each)
- The topics and question types that caused the most difficulty for students

**Securing the Best Start - Bridging the gap between GCSE and A level**
- The key differences between A-level and GCSE
- Reliably identifying what the students already know
- Making students more self-sufficient and developing them as independent learners

Discussion: coffee break

**Building mathematical fluency**
- The key mathematical skills required at A-level
- Boosting students’ confidence in maths
- Using Mymaths, and MathsWatch to provide additional tuition and practice

**Developing students’ practical skills**
- The must-do practicals, when and how to do them
- Typical exam questions in paper 3 and how to prepare your students to answer them

Lunch and informal discussion

**Focus on Paper 1**
- The most common misconceptions and how they can be overcome for the paper 1 topics:
  - Measurements and errors
  - Particles and radiation
  - Waves
  - Mechanics and materials
  - Electricity
  - Preparing your students to answer the questions that cause the greatest difficulty

**Focus on Paper 2**
- The most common misconceptions and how they can be overcome for the paper 2 topics:
  - Measurements and errors
  - Thermal Physics
  - Fields and their consequences
  - Nuclear Physics
  - Preparing your students to answer the questions that cause the greatest difficulty

LOCATION/DATE
London
Monday 8 July 2019
Monday 9 December 2019

COURSE LEADER
Howard Dodd has worked as an A-level Physics Principal Examiner (writing exam papers and supervising marking) for over twenty years being employed by OCR, AQA and Edexcel. He has a national reputation for providing high quality and helpful in-service training courses for secondary and post-16 teachers.

WHO SHOULD ATTEND?
- Heads of Physics
- Teachers of AQA A level physics

BENEFITS OF ATTENDING
- Explore and discuss feedback from the latest examinations
- Take away approaches to building mathematical fluency in students
- Gain ways to develop students’ practical skills for Paper 3 questions
- Focus on Papers 1 and 2 misconceptions and how they can be used to enhance understanding

IN SCHOOL INFO
This course, tailored to suit, can be delivered in your school. Discuss this further with our CPD team on 01625 532974 or online@keynote.org.uk

COST: £269+VAT
ABOUT THIS COURSE

This course is intended for all teachers of A-level physics and particularly biology, chemistry or maths specialists who are now required to teach A-level physics in their schools. The course will explain successful approaches to confidently teach the A-level physics content. We explore the fundamental principles, concepts and models that underpin the topics to be taught. Time will also be spent looking at the Compulsory Practicals and preparing students for A-level examinations.

The day will be interactive with all participants encouraged to ask questions about any aspect of teaching A-level physics.

PROGRAMME

**A level Physics – Key Messages & Overview**

- Feedback from the 2017 A-level exams
- The Principles of physics and the skills and strategies needed to teach the subject effectively
- How to avoid common problems
- The Compulsory Practicals – how to effectively incorporate into lessons and avoid common difficulties

**Ways to teach the topics that students find most difficult**

- Practical strategies, ideas and approaches to teach the following topics
- How to correct common misunderstandings
- Useful resources to enhance students’ understanding
- **Mechanics:**
  - Triangle of vectors, projectiles, moments calculations, circular motion and simple harmonic motion
- **Waves:**
  - Principle of superposition, interference, diffraction and standing waves
- **Electricity and electromagnetism:**
  - Potential divider circuits, force on a conductor principle deflection of electrons in electric and magnetic fields, electromagnetic induction
- **Quantum physics:**
  - The photoelectric effect, spectra and lasers
- **Nuclear physics:**
  - Radioactivity, mass defect & binding energy per nucleon, E=mc²
- **Particle physics:**
  - The fundamental particles and how they interact

**The Compulsory Physics Practicals – getting the most from them**

- The Compulsory Practical Assessment Criteria
- The most common causes of inaccuracies/errors
- Approaches to preparing students for the new practical skills examination questions
- Solving common difficulties: e.g. lack of equipment, alternatives practicals, keeping records

**Improving students’ performance in the examinations**

- A proven strategy for dealing with the new style exams
- How to help learners interpret questions and provide concise answers to match the questions
- Maximising attainment: how to help all learners push forwards
TEACHING A-LEVEL PHYSICS FOR NON-SPECIALIST TEACHERS

CODE 7620

ABOUT THIS COURSE
This new course is intended for non-specialist teachers of A-level physics who are new to the subject and want to develop the knowledge and skills to teach the more challenging aspects of the subject.

The course will focus on the main causes of learners’ poor attainment in exams as indicated by examiner reports and help participants to develop strategies for effective teaching of these topics and skills.

The course focuses on OCR A-level Physics Spec A but will be useful for teachers teaching similar specifications.

PROGRAMME

Key fundamentals of the subject
- 10.00 – 10.30am
- The key fundamentals.
- Areas of challenge – evaluative questions, use of scientific terms, MCQs
- Identifying the topic areas which are most difficult:
  - Vectors and projectile motion
  - Fields – electromagnetic and gravitational
  - Vibrations and Waves

From GCSE to A level
- 10.30 – 11.00am
- How to build in the transition from GCSE into A level
- Comparing GCSE standard answers to A level standard answers.
- Looking at A level physics mark schemes in depth and examiner comments.
- Examples of the five challenging areas from questions in recent years

Discussion: coffee break
- 11.00 – 11.20am

The key topics that need to be learnt and understood
- 11.20 – 12.40pm
- Exploring the principal conceptual difficulties in vectors, projectile motion, fields (electromagnetic and gravitational), vibrations and waves.
- We review on-line resources to engage learners and develop their understanding of these complex topics including Youtube videos and simulations software

Lunch and informal discussion
- 12.40 – 1.40pm

The key skills that need to be developed
- 1.40 – 2.40pm
    - Using precise and logical technical language by learning key phrases and then deconstructing them
    - Techniques for answering MCQs effectively
    - Preparing to answer out-of-box questions in exams
    - Using exam questions, mark schemes and examiner reports which can be effective with students

Teaching the required practicals
- 2.40 – 3.30pm
    - Developing skills from carrying out experiments and skills to answer practical-related questions in exams.
    - Effective use of practical work in class
    - Developing the planning, analysis and evaluation skills for written examination
    - Developing graph plotting skills and analysis of uncertainty
    - Use the PAG resources and exam mark schemes to focus on the key requirements.
    - Use paper-based resources to develop the key analysis and evaluation skills to save time used up by running full practicals

Discussion and Plenary
- 3.30 – 3.45pm

LOCATION/DATE
London
Monday 1 July 2019
Monday 25 November 2019

COURSE LEADER
Tony Dunn has taught for over 30 years in secondary schools and sixth form colleges, mainly in inner city areas, specialising in A-level Physics. He has maintained 100% pass rate in A-level Physics at his college since the new specification started.

WHO SHOULD ATTEND?
- A level Physics teachers who are new to the subject
- GCSE Physics teachers who are starting to teach A level physics
- NQTs
- A level physics teachers who want to refresh their teaching

BENEFITS OF ATTENDING
- Develop strategies for helping students improve exam technique
- Deepen understanding of more challenging topics
- Familiarise with useful resources for improving student learning
- Find effective ways of diagnosing student weaknesses
- Share ideas with other practising Physics teachers

IN SCHOOL INFO
This course, tailored to suit, can be delivered in your school.
Discuss this further with our CPD team on 01625 532974 or online@keynote.org.uk

COST: £269 + VAT
HOW TO BUILD A RICH SCIENCE CURRICULUM

LOCATION/DATE
London
Tuesday 25 June 2019
Monday 18 November 2019

CODE 7527

NEW COURSE

ABOUT THIS COURSE
Curriculum is the key issue of the day, and this course will apply cutting edge thinking to the construction of a rich and meaningful science curriculum. By studying developments in educational policy and evidence from the cognitive sciences, this course will give attendees the intellectual tools to think more deeply about their curriculum and make purposeful changes. The course will weave together theoretical discussions of curriculum with practicalities like how a curriculum is best implemented in the classroom.

PROGRAMME

What is the purpose of a science curriculum? 10.00 – 11.30am
- What do we mean by curriculum?
- Intent, implementation and impact: different prisms of analysis
- What is the point of a science curriculum: powerful knowledge, cultural capital and science capital
- Knowledge and skills: which comes first?
- Knowing and understanding: what does it mean to get better at science?
- Content knowledge and pedagogical content knowledge: how is what we know different to what we want our students to know?
Discussion: coffee break

What are the different types of knowledge in secondary science? 11.45 – 12.30pm
- Understanding and incorporating methods to think about knowledge in a sophisticated way
- Mapping knowledge according to its properties:
  - Procedural/declarative
  - Abstraction/concrete
  - Objectivity/subjectivity
  - Realism/nominalism
  - Debatable/established
  - Semantic density
  - Substantive/disciplinary
- How is knowledge structured in our students’ minds?
- Which knowledge is vertical and which knowledge is horizontal?
- Understanding and evaluating the “Big Ideas” of science

Specifying knowledge: thinking about building a curriculum 11.45 – 12.30pm
- The power of the Core Question in planning for learning
- Core and Hinterland: what do I actually want my students to remember?
- The role of canonical examples in supporting deep thought
- Becoming a content-led teacher: how to let the science speak first

Lunch and informal discussion 1.00 – 2.00pm

Planning for knowledge 2.00 – 3.10pm
- Building knowledge into your long term planning: retrieval, interleaving and spiralling
- Sequencing: the most important curricular concept?
- Building knowledge into your medium term: which units should go first?
- Implementing your curriculum in the classroom and upskilling your staff

Impact: assessing your curriculum 3.10 – 3.30pm
- The principle of “backwards design” and the role of assessment
- Assessing curricula and assessing pupils: what can one tell you that the other can’t?

Inspiring the scientists of the future 3.30 – 3.50pm
- How can I build my curriculum to produce brilliant, creative scientists who are passionate about improving the world?
- Round-up and conclusion

IN SCHOOL INFO
This course, tailored to suit, can be delivered in your school. Discuss this further with our CPD team on 01625 532974 or online@keynote.org.uk

COURSE LEADER
Adam Boxer is an experienced chemistry teacher working at a school in North London. He is an established speaker and as well as providing CPD in schools has presented at a number of national conferences including Wellington Festival of Education, Teach First Summer Institute, ASE National Conference and EdFest Rosey, Switzerland.

WHO SHOULD ATTEND?
- Heads of science
- Directors of science
- Science lead practitioners
- Heads of key stage
- Teachers of science

BENEFITS OF ATTENDING
- Understand key terms to use when discussing curriculum
- Develop awareness of recent thinking on curriculum
- Improve ability to map and structure an effective science curriculum
- Take away practical and easily implemented tools for improving a science curriculum

COST: £269+VAT

LOCATION/DATE
London
Tuesday 25 June 2019
Monday 18 November 2019

COURSE LEADER
Adam Boxer is an experienced chemistry teacher working at a school in North London. He is an established speaker and as well as providing CPD in schools has presented at a number of national conferences including Wellington Festival of Education, Teach First Summer Institute, ASE National Conference and EdFest Rosey, Switzerland.

WHO SHOULD ATTEND?
- Heads of science
- Directors of science
- Science lead practitioners
- Heads of key stage
- Teachers of science

BENEFITS OF ATTENDING
- Understand key terms to use when discussing curriculum
- Develop awareness of recent thinking on curriculum
- Improve ability to map and structure an effective science curriculum
- Take away practical and easily implemented tools for improving a science curriculum

COST: £269+VAT

LOCATION/DATE
London
Tuesday 25 June 2019
Monday 18 November 2019

COURSE LEADER
Adam Boxer is an experienced chemistry teacher working at a school in North London. He is an established speaker and as well as providing CPD in schools has presented at a number of national conferences including Wellington Festival of Education, Teach First Summer Institute, ASE National Conference and EdFest Rosey, Switzerland.

WHO SHOULD ATTEND?
- Heads of science
- Directors of science
- Science lead practitioners
- Heads of key stage
- Teachers of science

BENEFITS OF ATTENDING
- Understand key terms to use when discussing curriculum
- Develop awareness of recent thinking on curriculum
- Improve ability to map and structure an effective science curriculum
- Take away practical and easily implemented tools for improving a science curriculum

COST: £269+VAT

LOCATION/DATE
London
Tuesday 25 June 2019
Monday 18 November 2019

COURSE LEADER
Adam Boxer is an experienced chemistry teacher working at a school in North London. He is an established speaker and as well as providing CPD in schools has presented at a number of national conferences including Wellington Festival of Education, Teach First Summer Institute, ASE National Conference and EdFest Rosey, Switzerland.

WHO SHOULD ATTEND?
- Heads of science
- Directors of science
- Science lead practitioners
- Heads of key stage
- Teachers of science

BENEFITS OF ATTENDING
- Understand key terms to use when discussing curriculum
- Develop awareness of recent thinking on curriculum
- Improve ability to map and structure an effective science curriculum
- Take away practical and easily implemented tools for improving a science curriculum

COST: £269+VAT

LOCATION/DATE
London
Tuesday 25 June 2019
Monday 18 November 2019

COURSE LEADER
Adam Boxer is an experienced chemistry teacher working at a school in North London. He is an established speaker and as well as providing CPD in schools has presented at a number of national conferences including Wellington Festival of Education, Teach First Summer Institute, ASE National Conference and EdFest Rosey, Switzerland.

WHO SHOULD ATTEND?
- Heads of science
- Directors of science
- Science lead practitioners
- Heads of key stage
- Teachers of science

BENEFITS OF ATTENDING
- Understand key terms to use when discussing curriculum
- Develop awareness of recent thinking on curriculum
- Improve ability to map and structure an effective science curriculum
- Take away practical and easily implemented tools for improving a science curriculum

COST: £269+VAT

LOCATION/DATE
London
Tuesday 25 June 2019
Monday 18 November 2019

COURSE LEADER
Adam Boxer is an experienced chemistry teacher working at a school in North London. He is an established speaker and as well as providing CPD in schools has presented at a number of national conferences including Wellington Festival of Education, Teach First Summer Institute, ASE National Conference and EdFest Rosey, Switzerland.

WHO SHOULD ATTEND?
- Heads of science
- Directors of science
- Science lead practitioners
- Heads of key stage
- Teachers of science

BENEFITS OF ATTENDING
- Understand key terms to use when discussing curriculum
- Develop awareness of recent thinking on curriculum
- Improve ability to map and structure an effective science curriculum
- Take away practical and easily implemented tools for improving a science curriculum

COST: £269+VAT

LOCATION/DATE
London
Tuesday 25 June 2019
Monday 18 November 2019

COURSE LEADER
Adam Boxer is an experienced chemistry teacher working at a school in North London. He is an established speaker and as well as providing CPD in schools has presented at a number of national conferences including Wellington Festival of Education, Teach First Summer Institute, ASE National Conference and EdFest Rosey, Switzerland.

WHO SHOULD ATTEND?
- Heads of science
- Directors of science
- Science lead practitioners
- Heads of key stage
- Teachers of science

BENEFITS OF ATTENDING
- Understand key terms to use when discussing curriculum
- Develop awareness of recent thinking on curriculum
- Improve ability to map and structure an effective science curriculum
- Take away practical and easily implemented tools for improving a science curriculum

COST: £269+VAT

LOCATION/DATE
London
Tuesday 25 June 2019
Monday 18 November 2019

COURSE LEADER
Adam Boxer is an experienced chemistry teacher working at a school in North London. He is an established speaker and as well as providing CPD in schools has presented at a number of national conferences including Wellington Festival of Education, Teach First Summer Institute, ASE National Conference and EdFest Rosey, Switzerland.

WHO SHOULD ATTEND?
- Heads of science
- Directors of science
- Science lead practitioners
- Heads of key stage
- Teachers of science

BENEFITS OF ATTENDING
- Understand key terms to use when discussing curriculum
- Develop awareness of recent thinking on curriculum
- Improve ability to map and structure an effective science curriculum
- Take away practical and easily implemented tools for improving a science curriculum

COST: £269+VAT

LOCATION/DATE
London
Tuesday 25 June 2019
Monday 18 November 2019

COURSE LEADER
Adam Boxer is an experienced chemistry teacher working at a school in North London. He is an established speaker and as well as providing CPD in schools has presented at a number of national conferences including Wellington Festival of Education, Teach First Summer Institute, ASE National Conference and EdFest Rosey, Switzerland.

WHO SHOULD ATTEND?
- Heads of science
- Directors of science
- Science lead practitioners
- Heads of key stage
- Teachers of science

BENEFITS OF ATTENDING
- Understand key terms to use when discussing curriculum
- Develop awareness of recent thinking on curriculum
- Improve ability to map and structure an effective science curriculum
- Take away practical and easily implemented tools for improving a science curriculum

COST: £269+VAT

LOCATION/DATE
London
Tuesday 25 June 2019
Monday 18 November 2019

COURSE LEADER
Adam Boxer is an experienced chemistry teacher working at a school in North London. He is an established speaker and as well as providing CPD in schools has presented at a number of national conferences including Wellington Festival of Education, Teach First Summer Institute, ASE National Conference and EdFest Rosey, Switzerland.

WHO SHOULD ATTEND?
- Heads of science
- Directors of science
- Science lead practitioners
- Heads of key stage
- Teachers of science

BENEFITS OF ATTENDING
- Understand key terms to use when discussing curriculum
- Develop awareness of recent thinking on curriculum
- Improve ability to map and structure an effective science curriculum
- Take away practical and easily implemented tools for improving a science curriculum

COST: £269+VAT
Adam Boxer
Adam is an experienced chemistry teacher working at a school in North London. He is an established speaker and as well as providing CPD in schools has presented at a number of national conferences including Wellington Festival of Education, Teach First Summer Institute, ASE National Conference and EdFest Rosey, Switzerland. Adam’s resources are used by thousands of teachers across the UK and his blog receives tens of thousands of hits each month. He has published articles about education in peer-reviewed journals and is one of the leading voices promoting innovative and evidence-based practices in science education.

Howard Dodd
Howard has worked as an A-level Physics Principal Examiner (writing exam papers and supervising marking) for over twenty years being employed by OCR, AQA and Edexcel.
He has taught A-level physics in a number of secondary schools, maintained and independent, and has extensive experience of leading very successful physics and science departments. Before becoming an educational consultant he lectured in Science and Physics Education for fifteen years at the University of Exeter. He is a qualified Ofsted inspector and continues to train and assess ITT trainees on the School Direct QTS training programmes. He has a national reputation for providing high quality and helpful in-service training courses for secondary and post-16 teachers.

Alessio Bernadelli
Alessio holds an MSc in Teacher Education from Oxford University. He has 15 years of teaching experience and has worked as Head of KS3 Science and Head of Physics for five years. He also worked as Field Development Officer for NGfL Cymru, as Science Subject Lead at TSL Education (TES) and as National Support Programme Partner in Wales with CfBT. He won a number of national and international education awards for the innovative and creative way he integrates emerging technologies in education. He authored a range of highly effective resources for partners like Microsoft, BBC, TES, Oxford University Press, Nelson Thornes, Cambridge University Press, Open University, and he is the author of Scholastic’s New GCSE Physics Revision Guide and Workbook. Alessio is currently working part-time with The Institute of Physics. He has also developed and led programmes of CPD for the British Council at National level in Mexico, Malaysia, Vietnam and Colombia.

Tony Dunn
Tony has taught for over 30 years in secondary schools and sixth form colleges, mainly in inner city areas, specialising in A-level Physics. He was Head of Science for 12 years and spent several years training Physics teachers in SE Asia. He has been an examiner for a major awarding body for A-level Physics for the past 4 years.

Sarah Battams
Sarah has been teaching Physics at KS3, GCSE and A level for the last 20 years. She is an outstanding practitioner with consistently excellent examination results and value added at GCSE and A level. She delivers Physics lessons that are fun, varied and equip students with the skills necessary to confidently tackle examinations. This year she received outstanding feedback from the A-level Practical monitoring visit. Sarah is a Physics Examiner and Team Leader at A level and GCSE. She writes and edits for the online resource GCSE Pod and is an author of high-quality Physics resources on TES.

Martin Gallacher
Martin is a current Head of Physics which he carries out as part of his wider role as Assistant Head of Sixth Form at a large FE College. He has 14 years’ experience teaching A-level Physics in Secondary Schools and Colleges to students of all abilities from a wide range of backgrounds. Martin has been an OCR A-level Physics Examiner for the past 7 years and a Team Leader for the past 3 years.

Andrea Mapplebeck
Andrea is a highly experienced Physics presenter, who has a wealth of experience designing and facilitating a broad range of flexible CPD experiences across the UK and abroad, originating innovative and creative curricula based on a sound evidence base, including data and research. Her PhD is in the field of Assessment for Learning and she has published numerous resources.
CONFERENCE

NEW HEADS OF DEPARTMENTS:
Challenges, Opportunities, Approaches to Excellence

Friday 5 July 2019 | Central London

New Heads of Departments have to quickly develop their skills in setting a departmental vision, leading high quality teaching and learning and performance-managing colleagues. With an ever-increasing focus on student outcomes, the pressures on Heads of Department to produce impressive results are high.

Focusing on the key attributes of leadership, including assessing and developing your curriculum, making your mark with the SLT, coaching your team and producing an effective Quality of Education for all students, this conference will provide methods and solutions for the differing issues new Heads of Department encounter when they progress beyond the role of subject teacher.

BOOKINGS

Telephone us on: 01625 532974
Book online at keynote.org.uk Email online at online@keynote.org.uk

WHAT HAPPENS NEXT?

You will receive confirmation of your booking within 48 hours.
Joining instructions will be sent to you two weeks in advance of the event.
If you haven’t received them by then please get in touch with us.

IN SCHOOL CPD

All courses and student conferences in this brochure can be booked to run in your school or they can be adapted and customised to suit.
For more information please contact the CPD Team on 01625 532974.