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### **TEACHER WEBINAR**

## FIELDS AND THEIR CONSEQUENCES

#### New dates coming soon

#### **FOCUS**

Fields are a notoriously difficult field (!) in A-level Physics. The concept of a field dates back to Newton in the 17th Century and then was expanded to include electricity and magnetism in the 19th Century and eventually quantum physics in the twentieth. Students are challenged by the abstraction of the concept of a field – it is invisible but it is fills up the whole of space – and also challenged by the mathematical representation. In this webinar you gain ideas from Tony on how to tackle the challenges of this topic successfully through analysis of the key conceptual difficulties and review of recent examination questions for the topic.

#### **PROGRAMME**

#### 4.00pm: Introduction, welcome and sound check

#### 4.05pm: The mathematical and graphical representation of a field

- · The concept of a field algebraically and graphically
- The difference between scalar and vector fields
- · The graphical representation of a field
- · The calculus underpinning the mathematics of fields

#### 4.25pm: Activity

 Analyse student exemplar responses for field-based questions – mathematical and graphical analysis

#### 4.35pm: Verbally communicating the concept of a field

- · The essential scientific terminology
- The use of precise grammatical forms to express exact meaning
- · The conceptual understanding behind the terminology

#### 4.50pm: Activity

Analyse student exemplar responses for field-based questions – explaining concepts

# WEBINAR LEADER Tony Dunn

#### **BENEFITS**

- Identify the problems that students have with the topic of Fields
- Examine and discuss good and bad exemplars of examination responses
- Increase confidence in teaching the difficult concepts
- Develop strategies for improving learner understanding of the topic
- Assist learners with preparation for examination questions

#### WHY SHOULD YOU BOOK A WEBINAR?

- ✓ **Get focused feedback** on the most important areas for improvement for 2020
- ✓ Take away new approaches to tackling specific challenging topics that take a different angle
- ✓ Gain new techniques for enhancing the performance of specific groups of students
- ✓ Led by current examiners and academic experts, giving the best possible advice
- ✓ Interact and ask questions directly to the examiner expert leading the webinar

#### **HOW TO BOOK:**

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#### COST:

The cost for each webinar log in is £85+VAT