

KCLMS Online Physics A-level Twilight CPD

Free, online CPD sessions from King's Maths School for teachers of Physics A level.

Register here: <https://www.cognitoforms.com/KingsMathsSchool1/KCLMSALevelPhysicsTeacherCPD>

Each week we will cover a different A-level topic and address the following outcomes:

- Asking the explorative questions: getting students to lead their own learning
- Increasing engagement in the subject & making links across the A-level
- Challenging high-attainers
- Regular and explorative practical work

The content is non-exam board specific. The series will run online every Thursday at 17.15 - 18.15, from

- Thurs 20 January - Thurs 3 February (3 sessions)
- Thurs 24 February - Thurs 24 March (5 sessions)

There will be 45 minutes of structured time, then 15 minutes of reflection/Q&A/breakout space.

Teachers are not required to attend every session: each topic will be stand alone, although we will inevitably build on some common themes.

The topics that we will cover are:

	Date	Topic	Overview
Session 1	20/01	Skills	<ul style="list-style-type: none">• Estimation• Dimensional analysis• Putting the maths back in
Session 2	27/01	Electricity	<ul style="list-style-type: none">• Axioms of circuit theory• Practicals• Capacitors, AC, Signaling
Session 3	03/02	Waves	<ul style="list-style-type: none">• Progressive vs standing waves• Interference• 'What is' & 'what if' approaches
Session 4	24/02	Mechanics	<ul style="list-style-type: none">• Forces, motion and G-fields• Space links• Mapping with maths
Session 5	03/03	Thermal	<ul style="list-style-type: none">• Temperature• Thermodynamics• Making the numbers real
Session 6	10/03	SHM	<ul style="list-style-type: none">• The bike analogy• Energy – link across the A-level• Exploring damping
Session 7	17/03	Nuclear	<ul style="list-style-type: none">• The story of the atom• Simulations• The energy debate
Session 8	24/03	Electromagnetism (EM)	<ul style="list-style-type: none">• The journey of $E \rightarrow B \rightarrow EM$• EM machines in practice• Key concepts: flux, back emf