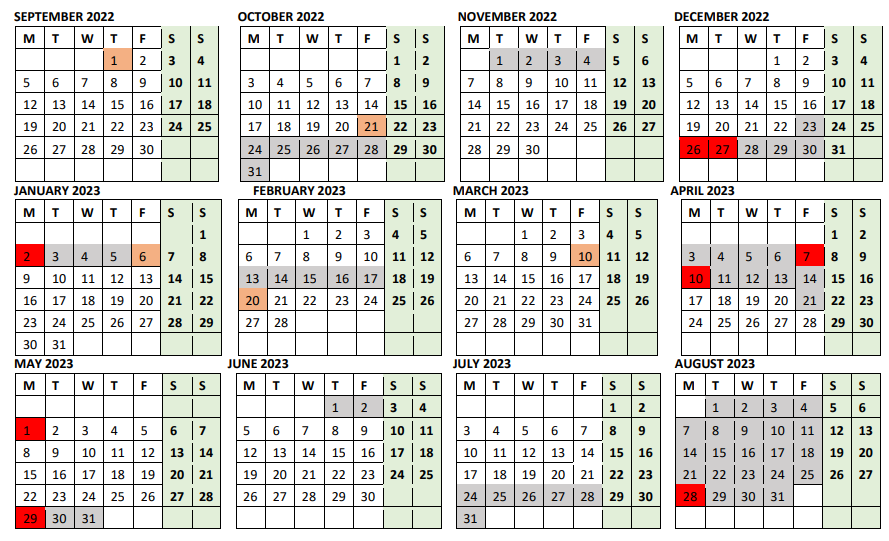
Physics **SOW** & **Required Practical** (2022-2023)**: Y13** (A2)

**AQA A-level Physics: 7408**

**Year 13:** *(green covered)*

1. ***Particles and radiation***
2. ***EM radiation and Q phenomena***
3. ***Waves***
4. ***Mechanics***
5. ***Materials***
6. ***Electricity***

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***7. Further mechanics***

**13. Astrophysics (option)**

**8. Gravitational and electric field**

**9. Electromagnetism**

**10. Capacitors**

**11. Nuclear physics…**

**12. Thermal physics**

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| **Week** | **Date** | **Topic** | **Cross-curricular** | **Additional notes/spec code** |
| W1 | 04-09-23 | * N/A * Recap of Further Mechanics * FD and gap analysis |  | **Monday (4th ) INSET day**  ***7. Further mechanics***  Spec\_ref: 3.6.1.1 to 3.6.1.4 |
| W2 | 11-09-23 | * 13.1 Optics and optical telescope Recap * 13.2 Comparing telescopes * 13.3 Parallax and parsecs |  | ***13. Astrophysics***  ***Spec\_ref: 3.9.1.1 to 3.9.3.4*** |
| W3 | 18-09-23 | * 13.4 Magnitude * 13.5 Stars as black bodies * 13.6 Stellar classification |  |  |
| W4 | 25-09-23 | * A-level Paper 1 test * FD and gap analysis * 7.5 The mass Spring System as SHO |  |  |
| W5 | 02-10-23 | * 13.7 Evolution of stars * 13.8 Doppler shift and redshift * 13.9 The Big bang theory |  |  |
| W6 | 09-10-23 | * 13.10 Detection of binary stars, quasars and exoplanets * Summary & review * EOU test |  | Blended learning: Friday 13th |
| W7 | 16-10-23 | * FD and gap analysis * [RP7: Investigation of Mass Spring System](file:///F:\A\Plan_SOW\links\RP7.docx) & Simple Pendulum System * Buffer |  | **✓**  ***CPAC assessed***  *CPAC 1a, CPAC 1b, CPAC 3a, CPAC 4a, CPAC 4b and CPAC 5b.* |
| W8 | HT  (23-10-23) |  |  |  |
| W9 | HT  (30-10-23) |  |  |  |
| W10 | 06-11-23 | * 8.1 Gravitational field * 8.2 Gravitational field Strength * 8.3 Gravitational Potential |  | ***8. Gravitational and***  ***electric field*** |
| W11 | 13-11-23 | * 8.4 Orbits * 8.5 Electric Fields * 8.6 Electric Potential |  |  |
| W12 | 20-11-23 | * 8.7 Comparing Electric and Gravitational Fields * Review & EOU Test * FD and gap analysis |  |  |
| W13 | 27-11-23 | * 9.1 Magnetic flux density * 9.2 Forces on charge particles * 9.3 Electromagnetic induction |  | ***9. Electromagnetism*** **Spec\_ref: 3.7.5.1 to 3.7.5.6** |
| W14 | 04-12-23 | * 9.4 Faraday’s and Len’s law * RP10 Investigating Force on a Current-carrying Wire * RP11 Investigating Flux Linkage with a Search Coil |  | Blended learning: Friday 15th    *Will take place on W16*  **✓ and ✓** |
| W15 | 11-12-23 | * 9.5 AC * 9.6 Transformers * Review & EOU |  |  |
| W16 | 18-12-23 | * FD and gap analysis * 10.1 Capacitors * 10.2 Energy stored by capacitors * 10.3 Charging and Discharging | ***Maths***  ***Edexcel 9MA0***  **Section 1.6: Exponentials and logarithms** | ***10. Capacitors***  Spec\_ref: 3.7.4.1 to 3.7.4.4  ***School breaks on Thursday 21st*** |
| W17 | HT  (25-12-23) |  |  | **Winter break:**  BANK holiday Monday 25th and Tuesday 26th |
| W18 | HT  (01-01-24) |  |  | BANK holiday Monday 1st |
|  |  |  |  | **Schools opens Tuesday 4th of Jan** |
| W19 | 08-01-24 | * 10.4 Time constant, time half and dielectric * Buffer * N/A |  | ***Finished Capacitors.***  *We are about 2 weeks behind due to changes in the time table of INSET days and extra-curricular activities* |
| W20 | 15-01-24 | * RP9 Investigating Capacitors Discharging * Summary & review * **EOU test** |  | To be carried out on W23  **✓** |
| W21 | 22-01-24 | * **11.1 The Atomic Nucleus** * 11.2 Nuclear Radius and Density * 11.3 Properties of Nuclear Radiation |  | ***11. Nuclear physics***  Spec\_ref: 3.8.1.1 to 3.8.1.8 |
| W22 | 29-01-24 | * 11.4 Background radiation and intensity * 11.5 Exponential Law of Decay * 11.6 Half-life and its Applications |  |  |
| W23 | 05-02-24 | * 11.7Nuclear Decay * 11.8 Mass defect and the binding energy * 11.9 Nuclear Fission and fusion |  | **INSET day Thursday 8th and Friday 9th** |
| W24 | 12-02-24 | * 11. 10 Nuclear Fission Reactor * Buffer |  |  |
| W25 | HT  (19-02-24) |  |  |  |
| W26 | 26-02-24 | * Buffer * 11.11 Nuclear Physics Summary * EOU test * RP12 Investigating the inverse square law |  |  |
| W27 | 04-03-24 | * 12.1 Thermal energy transfer * 12.2 The three gas laws * 12.3 The ideal gas equation | Chemistry  The ideal gas equation: 3.1.2.3 | ***12. Thermal physics***  Spec\_ref: 3.6.2.1 to 3.6.2.3  **INSET day Friday 8th** |
| W28 | 11-03-24 | * 12.4 Kinetic theory and the pressure of an ideal gas * 12.5 Kinetic energy of gas molecule * Summary and review | Chemistry  Relative atomic mass and relative molecular mass:  3.1.2.1  The mole and the Avogadro constant: 3.1.2.2 |  |
| W29 | 18-03-24 | * RP8: Experimental Investigation of Boyle’s Law, and Investigation of Charles Law * EOU test * FD and gap analysis |  |  |
| W30 | 25-03-24 | * Buffer * Buffer * Buffer |  | BANK holiday Friday 29th |
| W31 | HT  (01-04-24) |  |  | **Easter break:**  BANK holiday Monday 1st |
| W32 | HT  (08-04-24) | * Revision and catch-up: 3 days |  |  |
| W33 | 15-04-24 | * Paper 2 test * FD and gap analysis * Buffer |  |  |
| W34 | 22-04-24 | * Revision * Revision * Revision |  |  |
| W35 | 29-04-24 | * Revision * Revision * Revision |  |  |
| W36 | 06-05-24 | * Revision * Revision * Revision |  | BANK holiday Monday 6th |
| W37 | 13-05-24 | C:\Users\b.ahmed\AppData\Local\Microsoft\Windows\INetCache\Content.Word\1.png | | |
| W38 | 20-05-24 | * Revision * Revision * Revision |  |  |
| W39 | HT  (27-05-23) |  |  | BANK holiday Monday 27th |
| W40 | 03-06-23 |  | | |
| W41 | 10-06-23 | **Paper 1** | | |
| W42 | 17-06-23 |  | | |
| W43 | 24-06-23 |  | | |
| W44 | 01-07-23 | **Paper 2** | | |
| W45 | 08-07-23 |  | | |
| W46 | 15-07-23 | **Paper 3** | | |
| W47-W52 | **END of the academic Year** | **Summer break: *School breaks Friday 19th*** | | |