

# **Additional Science Revision Timetable February – June 2017**

### Additional Science Revision Countdown!

| w/c     | Monday  | Tuesday  | Wednesday   | Thursday  | Friday   | Weekend   |
|---------|---|--|---|---|--|---|
| 20/2/17 | Describe and explain aerobic respiration                      | Describe and draw examples of covalent bonding         | Explain the difference between atomic mass & number   | Describe speed time graphs                                | Explain what glycogen is and the role in the body              | Explain the equations to how salts are formed                           |
|         | Describe and explain what half life is                        | State the structure + function of animal & plant cells | Describe a reversible reaction and knows its symbol   | Knows how to work out relative atomic mass ( $A_r$ )      | Create a set a flash cards for P2                              | Describe, explain & draw the stages of mitosis & meiosis                |
| 27/2/17 | Describe how elements form compounds                          | Can calculate power equations                          | Explain the factors that speed up digestion           | Compare the use of a fuse and RCCB                        | Describe rate of reaction is & how it's worked out             | Compare current – pd graphs for resistor, bulb and diodes               |
|         | Describe and draw examples of metallic bonding                | Explain the difference between LDR and thermistors     | Knows how to work out relative formula mass ( $M_r$ ) | Construct a genetic diagram to show how sex is determined | Describe and explain the structure of the atom                 | Construct punnett square to show how conditions are inherited in humans |
| 6/3/17  | Describe & explain the properties & charge of alpha radiation | Describe how enzymes are used in industry and at home  | What are nanoparticles?                               | Describe the differences between bacteria & yeast         | Describe the difference between protostar & main sequence star | What are the benefits and risks of nanoscience?                         |
|         | Describe acids and alkalis in terms of ions                   | Write nuclear equations for alpha decay                | Describe why Gregor Mendel is so important            | Explain how elements are formed inside stars              | List examples of endo and exothermic reactions                 | Practice working out the % of an element in a compound                  |
| 13/3/17 | Explain how plants use glucose                                | Can describe and explain nuclear fission               | Define an isotope                                     | Link the idea of car safety to momentum                   | Can give modern day uses of alpha, beta & gamma radiation      | Argue the social, economical & ethical issues of stem cell use          |
|         | Explain velocity & the equation for acceleration              | (HT) can practice balancing equations                  | Describe and explain terminal velocity                | Describe and explain anaerobic respiration                | Describe hookes law and $F = kx$                               | Describe the lifecycle of large and small stars                         |
| 20/3/17 | Explain what DNA is   | Explain & describe the big bang                        | Describe photosynthesis and its limiting factors      | Describe distance time graphs                             | Can describe and explain nuclear fusion                        | Explain the differences between thermosetting                           |

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|                | Can calculate $W = Fd$  | Describe the process of electrolysis                              | Describe what intermolecular forces are                           | Describe & explain the properties & charge of beta radiation    | Create a set a flash cards for B2                              | (HT) work out the empirical formula from its % composition                                |
| <b>27/3/17</b> | Explain how fossils are formed & how organisms have changed over time | Explain how the moderator, control rods work in a nuclear reactor | Explain the difference between mass and velocity using $W=mg$     | Describe and draw examples of ionic bonding                     | Explain and describe charges on static electricity             | Explain the differences between thermosetting & thermosoftening                           |
|                | Can draw all the circuit symbols                                      | List & explain factors that affect organism distribution          | Explain background radiation & give examples                      | Can calculate kinetic energy and gravitational potential energy | State how you write the formulae of ionic compounds            | Compare the nuclear model to the plum pudding model                                       |
| <b>3/4/17</b>  | Explain how you a wire a plug safety                                  | Describe how enzymes are used in digestion                        | Can calculate current, charge and potential difference.           | Understand what a mole is                                       | Can compare and contrast nuclear fission and fusion            | Explain how surface area, temperature, concentration & catalysts effect rate of reactions |
| <b>10/4/17</b> | Describes the pros and cons of instrumental methods of analysis       | Knows the difference between ionisation and penetrating           | Explain why elements of G1 bond with G7                           | Compare and describe AC and DC                                  | Can describe and calculate resistance                          | List and explain reasons for extinction   |
| <b>17/4/17</b> | State the structure & function of specialised cells                   | Explain what happens at the cathode and anode                     | Describe & explain the properties & charge of gamma radiation     | Describe and give examples of tissues and organs                | Create a set a flash cards for C2                              | Use balanced equations to calculate the reacting masses                                   |
| <b>24/4/17</b> | Describe the properties of giant ionic structures                     | Describe what Ernest Rutherford investigated                      | Explain how we use paper chromatography to analyse food additives | Write nuclear equations for beta decay                          | Explain in detail how enzymes are effected by pH & temperature | Describe series and parallel circuits   |
| <b>1/5/17</b>  | Calculate $F = ma$ calculations                                       | List animal and plant organs                                      | Explain and describe ohms law                                     | Describe how we use gas chromatography                          | Describe stem cells and explain their importance               | Compare and contrast ionic, covalent and metallic bonding                                 |
| <b>8/5/17</b>  | Describe the importance of the Earth wire & fuse                      | Calculate the % yield of a reaction                               | Explain what mass spectrometry is                                 | Describe how you measure the distribution of organisms          | Describe resultant forces and why it could be zero             | Explain the advantages & disadvantages of nuclear power                                   |

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| 15/5/17 | Describe what an enzyme is                           | Describe in detail what collision theory is                      | Describe the properties of simple molecules                 | Describe the difference between neutrons, protons & electrons | Describe the factors that affect stopping distances  | Describe the properties of polymers             |
| 22/5/17 | Describe the properties of giant metallic structures | Describe & calculate the area under a velocity-time graph        | List reasons why chemical reactions yield is less than 100% | Explain the electrolysis of brine and electroplating          | Can calculate half life from graphs                  | Practice all the calculations equations from C2 |
| 29/5/17 | Describe how aluminium is extracted                  | Can explain & describe current, charge and potential difference. | What is the difference between endo and exothermic          | Explain the difference between a red giant & super red giant  | Describe the properties of giant covalent structures | Practice all the calculations equations from P2 |
| 5/6/17  | Explain and calculate momentum                       | Describe diffusion & what effects the its rates                  | Mindmap the whole of B2                                     | Complete B2 6 mark questions                                  | <b>B2 Exam 0900 Sports Hall</b>                      | Mindmap the whole of P2                         |
| 12/6/17 | Mindmap the whole of C2                              | Complete C2 6 mark questions                                     | <b>C2 Exam 0900 Sports Hall</b>                             | Complete P2 6 mark questions                                  | <b>P2 Exam 0900 Sports Hall</b>                      |   |

**Physics** - <http://www.aqa.org.uk/subjects/science/gcse/physics-4403/past-papers-and-mark-schemes>

**Biology** – <http://www.aqa.org.uk/subjects/science/gcse/biology-4401/past-papers-and-mark-schemes>

**Chemistry** - <http://www.aqa.org.uk/subjects/science/gcse/chemistry-4402/past-papers-and-mark-schemes>

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