**Walton High School Hub Curriculum** 

**Year 9 - Science Half term 2 (November 2024 – December 2024)**

How it works:

1. In the table, find the correct week by looking at the date in the first column.
2. Find today’s work – there are three links per double lesson so you won’t run out of work!
3. Choose a lesson – hold ctrl and click on the chosen link.

**If the link does not work, you do not recognise the work or the work is too difficult, try another lesson.**

1. Some lessons have links to PowerPoints and other resources beneath the video and/or Starter Quiz.
2. Complete any starter quizzes.
	1. Write your answer down
	2. Mark your answers and write down any corrections, using the videos.
3. Watch the videos and take notes.
4. Pause if/when instructed to do so to answer questions or respond.
5. When the lesson is complete, go onto the next one.

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| Week commencing | Day | Subject/Topic | Lesson 1 | Lesson 2 |
| 04/11/24 | Monday | **Physics** - Forces | [Contact and Non-Contact Forces Lesson |](https://cognitoedu.org/coursesubtopic/p2-gcse-aqa-h-t_2.01)  | [Scalar and Vector Quantities Lesson |](https://cognitoedu.org/coursesubtopic/p2-gcse-aqa-h-t_2.02)  |
| Tuesday | [Free Body Diagrams & Resultant Forces Lesson |](https://cognitoedu.org/coursesubtopic/p2-gcse-aqa-h-t_2.05)  | [Resolving Vectors & Scale Drawings Lesson |](https://cognitoedu.org/coursesubtopic/p2-gcse-aqa-h-t_2.07)  |
| Wednesday | [Elasticity, Spring Constant, & Hookes Law Lesson |](https://cognitoedu.org/coursesubtopic/p2-gcse-aqa-h-t_2.08)  | [Elastic Potential Energy Lesson |](https://cognitoedu.org/coursesubtopic/p2-gcse-aqa-h-t_1.06)  |
| Thursday  | [Moments Part 1 Lesson |](https://cognitoedu.org/coursesubtopic/p2-gcse-aqa-h-t_2.1)  | [Moments Part 2 Lesson |](https://cognitoedu.org/coursesubtopic/p2-gcse-aqa-h-t_2.11)  |
| Friday | [Pressure Lesson | GCSE](https://cognitoedu.org/coursesubtopic/p2-gcse-aqa-h-t_2.12)  | [Liquid Pressure & Upthrust Lesson **|**](https://cognitoedu.org/coursesubtopic/p2-gcse-aqa-h-t_2.13)  |
| 11/11/24 | Monday  | **Biology** - Ecosystems | [Food chains |](https://www.thenational.academy/pupils/programmes/science-secondary-year-7/units/ecosystems/lessons/food-chains/overview)  | [Predator-prey relationships |](https://www.thenational.academy/pupils/programmes/science-secondary-year-7/units/ecosystems/lessons/predator-prey-relationships/overview)  |
| Tuesday  | [Adaptations of predators and prey |](https://www.thenational.academy/pupils/programmes/science-secondary-year-7/units/ecosystems/lessons/adaptations-of-predators-and-prey/overview)  | [Food webs |](https://www.thenational.academy/pupils/programmes/science-secondary-year-7/units/ecosystems/lessons/food-webs/overview)  |
| Wednesday  | [Ecosystems and habitats |](https://www.thenational.academy/pupils/programmes/science-secondary-year-7/units/ecosystems/lessons/ecosystems-and-habitats/overview)  | [Pollination and human food security |](https://www.thenational.academy/pupils/programmes/science-secondary-year-7/units/ecosystems/lessons/pollination-and-human-food-security/overview)  |
| Thursday  | [Using chemicals in farming |](https://www.thenational.academy/pupils/programmes/science-secondary-year-7/units/ecosystems/lessons/using-chemicals-in-farming/overview)  | [Bioaccumulation |](https://www.thenational.academy/pupils/programmes/science-secondary-year-7/units/ecosystems/lessons/bioaccumulation/overview)  |
| Friday | [The importance of biodiversity |](https://www.thenational.academy/pupils/programmes/science-secondary-year-7/units/ecosystems/lessons/the-importance-of-biodiversity/overview) | [Competition & Interdependence Lesson |](https://cognitoedu.org/coursesubtopic/b2-gcse-aqa-h-t_10.02)  |
| 18/11/24 | Monday | **Chemistry** – Atomic Structure | [Atoms Lesson |](https://cognitoedu.org/coursesubtopic/c2-gcse-aqa-h-t_1.01)  | [Elements, Isotopes & Relative Atomic Mass Lesson |](https://cognitoedu.org/coursesubtopic/c2-gcse-aqa-h-t_1.02)  |
| Tuesday | [Compounds, Molecules & Mixtures Lesson |](https://cognitoedu.org/coursesubtopic/c2-gcse-aqa-h-t_1.03)  | [Balancing Chemical Equations Lesson |](https://cognitoedu.org/coursesubtopic/c2-gcse-aqa-h-t_1.04)  |
| Wednesday | [The History of The Atom Lesson |](https://cognitoedu.org/coursesubtopic/c2-gcse-aqa-h-t_1.08) | [Electronic Structure Lesson |](https://cognitoedu.org/coursesubtopic/c2-gcse-aqa-h-t_1.09)  |
| Thursday | [Development of the Periodic Table Lesson |](https://cognitoedu.org/coursesubtopic/c2-gcse-aqa-h-t_1.1)  | [Metals & Non-Metals Lesson |](https://cognitoedu.org/coursesubtopic/c2-gcse-aqa-h-t_1.12)  |
| Friday | [Group 1 (Alkali Metals) Lesson |](https://cognitoedu.org/coursesubtopic/c2-gcse-aqa-h-t_1.14)  | [Group 7 & Group 0 (Halogens & Noble Gases) Lesson |](https://cognitoedu.org/coursesubtopic/c2-gcse-aqa-h-t_1.15)  |
| 25/11/24 | Monday | **Physics -** Energy | [Energy |](https://www.thenational.academy/pupils/programmes/science-secondary-year-7/units/forces/lessons/energy/overview)  | [Transferring energy |](https://www.thenational.academy/pupils/programmes/science-secondary-year-7/units/forces/lessons/transferring-energy/overview)  |
| Tuesday | [Energy stores and transfers |](https://www.thenational.academy/pupils/programmes/science-secondary-year-7-l/units/energy-2ga1p6y/lessons/energy-stores-and-transfers-q4rg3i/overview)  | [Conservation of Energy and Efficiency |](https://www.thenational.academy/pupils/programmes/science-secondary-year-7-l/units/energy-2ga1p6y/lessons/conservation-of-energy-and-efficiency-7d68ho/overview)  |
| Wednesday | [Power and energy |](https://www.thenational.academy/pupils/programmes/science-secondary-year-7-l/units/energy-2ga1p6y/lessons/power-and-energy-o9ueal/overview)  | [Energy in the home |](https://www.thenational.academy/pupils/programmes/science-secondary-year-7-l/units/energy-2ga1p6y/lessons/energy-in-the-home-dabp49/overview)  |
| Thursday | [Conduction |](https://www.thenational.academy/pupils/programmes/science-secondary-year-7-l/units/energy-2ga1p6y/lessons/conduction-0yz3wp/overview)  | [Convection |](https://www.thenational.academy/pupils/programmes/science-secondary-year-7-l/units/energy-2ga1p6y/lessons/convection-6acbiv/overview)  |
| Friday | [Radiation |](https://www.thenational.academy/pupils/programmes/science-secondary-year-7-l/units/energy-2ga1p6y/lessons/radiation-d7lcc2/overview)  | [Insulation |](https://www.thenational.academy/pupils/programmes/science-secondary-year-7-l/units/energy-2ga1p6y/lessons/insulation-n8r8ye/overview)  |
| 02/12/24 | Monday  | **Biology** - Adaptations | [Abiotic and Biotic Factors Lesson |](https://cognitoedu.org/coursesubtopic/b2-gcse-aqa-h-t_10.03)  | [Food chains & Predator Prey Cycles Lesson |](https://cognitoedu.org/coursesubtopic/b2-gcse-aqa-h-t_10.04)  |
| Tuesday | [Investigating Abundance & Distribution Lesson |](https://cognitoedu.org/coursesubtopic/b2-gcse-aqa-h-t_10.07)  | [Adaptations Lesson |](https://cognitoedu.org/coursesubtopic/b2-gcse-aqa-h-t_8.21)  |
| Wednesday | [Adaptations |](https://www.thenational.academy/pupils/programmes/science-secondary-year-9/units/adaptations-competition-natural-selection-and-evolution/lessons/adaptations/overview)  | [Competition |](https://www.thenational.academy/pupils/programmes/science-secondary-year-9/units/adaptations-competition-natural-selection-and-evolution/lessons/competition/overview)  |
| Thursday | [Heritable variation |](https://www.thenational.academy/pupils/programmes/science-secondary-year-9/units/adaptations-competition-natural-selection-and-evolution/lessons/heritable-variation/overview)  | [Natural selection |](https://www.thenational.academy/pupils/programmes/science-secondary-year-9/units/adaptations-competition-natural-selection-and-evolution/lessons/natural-selection/overview)  |
| Friday | [A model of natural selection |](https://www.thenational.academy/pupils/programmes/science-secondary-year-9/units/adaptations-competition-natural-selection-and-evolution/lessons/a-model-of-natural-selection/overview)  | [Evolution |](https://www.thenational.academy/pupils/programmes/science-secondary-year-9/units/adaptations-competition-natural-selection-and-evolution/lessons/evolution/overview)  |
| 09/12/24 | Monday | **Chemistry** – Ar, Mr and Isotopes | [Relative Formula Mass Lesson |](https://cognitoedu.org/coursesubtopic/c2-gcse-aqa-h-t_3.01)  | [Development of the atomic model |](https://www.thenational.academy/pupils/programmes/chemistry-secondary-year-10-l/units/atomic-structure-and-the-periodic-table-u68nqqc/lessons/development-of-the-atomic-model-fon1nm/overview)  |
| Tuesday | [Atomic structure |](https://www.thenational.academy/pupils/programmes/chemistry-secondary-year-10-l/units/atomic-structure-and-the-periodic-table-u68nqqc/lessons/atomic-structure-b4j7jk/overview)  | [Isotopes |](https://www.thenational.academy/pupils/programmes/chemistry-secondary-year-10-l/units/atomic-structure-and-the-periodic-table-u68nqqc/lessons/isotopes-vhm4rn/overview)  |
| Wednesday | [Electronic structure and the periodic table |](https://www.thenational.academy/pupils/programmes/chemistry-secondary-year-10-l/units/atomic-structure-and-the-periodic-table-u68nqqc/lessons/electronic-structure-and-the-periodic-table-in1zfj/overview)  | [Chemical formulae and conservation of mass |](https://www.thenational.academy/pupils/programmes/chemistry-secondary-year-10-l/units/atomic-structure-and-the-periodic-table-u68nqqc/lessons/chemical-formulae-and-conservation-of-mass-jeab35/overview)  |
| Thursday | [Conservation of mass |](https://www.thenational.academy/pupils/programmes/chemistry-secondary-year-10-foundation-aqa/units/calculations-involving-masses/lessons/conservation-of-mass/overview)  | [Balancing equations |](https://www.thenational.academy/pupils/programmes/chemistry-secondary-year-10-foundation-aqa/units/calculations-involving-masses/lessons/balancing-equations/overview)  |
| Friday | [Uncertainties in measurements: chemistry |](https://www.thenational.academy/pupils/programmes/chemistry-secondary-year-10-foundation-aqa/units/calculations-involving-masses/lessons/uncertainties-in-measurements-chemistry/overview)  | [Mass in a chemical reaction |](https://www.thenational.academy/pupils/programmes/chemistry-secondary-year-10-foundation-aqa/units/calculations-involving-masses/lessons/mass-in-a-chemical-reaction/overview)  |
| 16/12/24 | Monday | **Physics** – Energy Resources | [Comparing fuels |](https://www.thenational.academy/pupils/programmes/science-secondary-year-8/units/fuels-and-energetics/lessons/comparing-fuels/overview)  | [Power stations |](https://www.thenational.academy/pupils/programmes/science-secondary-year-8/units/fuels-and-energetics/lessons/power-stations/overview)  |
| Tuesday | [Using renewable energy resources |](https://www.thenational.academy/pupils/programmes/science-secondary-year-8/units/fuels-and-energetics/lessons/using-renewable-energy-resources/overview)  | [Calculating efficiency (in terms of energy and power) |](https://www.thenational.academy/pupils/programmes/physics-secondary-year-10-higher-aqa/units/energy-of-moving-objects/lessons/calculating-efficiency-in-terms-of-energy-and-power/overview)  |
| Wednesday | [Energy Stores & Systems Lesson |](https://cognitoedu.org/coursesubtopic/p2-gcse-aqa-h-t_1.01)  | [Energy Transfer Examples Lesson |](https://cognitoedu.org/coursesubtopic/p2-gcse-aqa-h-t_1.02) |
| Thursday | [Kinetic Energy Lesson |](https://cognitoedu.org/coursesubtopic/p2-gcse-aqa-h-t_1.03)  | [Gravitational Potential Energy & Gravity Lesson |](https://cognitoedu.org/coursesubtopic/p2-gcse-aqa-h-t_1.04)  |
| Friday | [Transfer Between KE & GPE Lesson |](https://cognitoedu.org/coursesubtopic/p2-gcse-aqa-h-t_1.05)  | [Conservation of Energy Lesson |](https://cognitoedu.org/coursesubtopic/p2-gcse-aqa-h-t_1.08)  |