**Walton High School Hub Curriculum** 

**Year 7 – Science Half term 4 (February 2025 – April 2025)**

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 |
| 24/02/25 | Monday | **Biology -** Respiration | [Breathing, respiration and gas exchange |](https://www.thenational.academy/pupils/programmes/science-secondary-year-8/units/breathing-and-respiration/lessons/breathing-respiration-and-gas-exchange/overview) | [The human gas exchange system and breathing |](https://www.thenational.academy/pupils/programmes/science-secondary-year-8/units/breathing-and-respiration/lessons/the-human-gas-exchange-system-and-breathing/overview) |
| Tuesday | [Estimating lung volume |](https://www.thenational.academy/pupils/programmes/science-secondary-year-8/units/breathing-and-respiration/lessons/estimating-lung-volume/overview) | [Adaptations of the human lungs for gas exchange |](https://www.thenational.academy/pupils/programmes/science-secondary-year-8/units/breathing-and-respiration/lessons/adaptations-of-the-human-lungs-for-gas-exchange/overview) |
| Wednesday | [Cellular respiration |](https://www.thenational.academy/pupils/programmes/science-secondary-year-8/units/breathing-and-respiration/lessons/cellular-respiration/overview) | [Aerobic cellular respiration |](https://www.thenational.academy/pupils/programmes/science-secondary-year-8/units/breathing-and-respiration/lessons/aerobic-cellular-respiration/overview) |
| Thursday | [Anaerobic cellular respiration in humans |](https://www.thenational.academy/pupils/programmes/science-secondary-year-8/units/breathing-and-respiration/lessons/anaerobic-cellular-respiration-in-humans/overview) | [Anaerobic cellular respiration and fermentation in microorganisms |](https://www.thenational.academy/pupils/programmes/science-secondary-year-8/units/breathing-and-respiration/lessons/anaerobic-cellular-respiration-and-fermentation-in-microorganisms/overview) |
| Friday | [Diffusion and surface area to volume ratio |](https://www.thenational.academy/pupils/programmes/biology-secondary-year-10-higher-aqa/units/transport-and-exchange-surfaces-in-humans/lessons/diffusion-and-surface-area-to-volume-ratio/overview) | [The importance of exchange surfaces and transport systems in humans |](https://www.thenational.academy/pupils/programmes/biology-secondary-year-10-higher-aqa/units/transport-and-exchange-surfaces-in-humans/lessons/the-importance-of-exchange-surfaces-and-transport-systems-in-humans/overview) |
| 03/03/25 | Monday | **Chemistry –** Separating Mixtures | [Separating an insoluble solid from a liquid |](https://www.thenational.academy/pupils/programmes/science-secondary-year-7/units/separation-techniques/lessons/separating-an-insoluble-solid-from-a-liquid/overview) | [Separating a soluble solid from a liquid |](https://www.thenational.academy/pupils/programmes/science-secondary-year-7/units/separation-techniques/lessons/separating-a-soluble-solid-from-a-liquid/overview) |
| Tuesday | [Separating pure salt from dirty rock salt](https://www.thenational.academy/pupils/programmes/science-secondary-year-7/units/separation-techniques/lessons/separating-pure-salt-from-dirty-rock-salt/overview) | [Simple distillation |](https://www.thenational.academy/pupils/programmes/science-secondary-year-7/units/separation-techniques/lessons/simple-distillation/overview) |
| Wednesday | [Distillation: practical |](https://www.thenational.academy/pupils/programmes/science-secondary-year-7/units/separation-techniques/lessons/distillation-practical/overview) | [Chromatography |](https://www.thenational.academy/pupils/programmes/science-secondary-year-7/units/separation-techniques/lessons/chromatography/overview) |
| Thursday | [Separating liquids |](https://www.thenational.academy/pupils/programmes/science-secondary-year-7/units/separation-techniques/lessons/separating-liquids/overview) | [Separating mixtures (including formulations) |](https://www.thenational.academy/pupils/programmes/chemistry-secondary-year-10-higher-aqa/units/separating-substances/lessons/separating-mixtures-including-formulations/overview) |
| Friday | [Solutions |](https://www.thenational.academy/pupils/programmes/chemistry-secondary-year-10-higher-aqa/units/separating-substances/lessons/solutions/overview) | [Filtration |](https://www.thenational.academy/pupils/programmes/chemistry-secondary-year-10-higher-aqa/units/separating-substances/lessons/filtration/overview) |
| 10/03/25 | Monday | **Physics** – Atomic Structure and Ions | [Atomic structure (very small electron mass) |](https://www.thenational.academy/pupils/programmes/chemistry-secondary-year-10-higher-aqa/units/atomic-structure-and-the-periodic-table/lessons/atomic-structure-very-small-electron-mass/overview) | [Developing a model for atoms |](https://www.thenational.academy/pupils/programmes/chemistry-secondary-year-10-higher-aqa/units/atomic-structure-and-the-periodic-table/lessons/developing-a-model-for-atoms/overview) |
| Tuesday | [Modern periodic table and electron configuration |](https://www.thenational.academy/pupils/programmes/chemistry-secondary-year-10-higher-aqa/units/atomic-structure-and-the-periodic-table/lessons/modern-periodic-table-and-electron-configuration/overview) | [Atomic number and mass number |](https://www.thenational.academy/pupils/programmes/chemistry-secondary-year-10-higher-aqa/units/atomic-structure-and-the-periodic-table/lessons/atomic-number-and-mass-number/overview) |
| Wednesday | [Isotopes and relative atomic mass |](https://www.thenational.academy/pupils/programmes/chemistry-secondary-year-10-higher-aqa/units/atomic-structure-and-the-periodic-table/lessons/isotopes-and-relative-atomic-mass/overview) | [Why elements react |](https://www.thenational.academy/pupils/programmes/chemistry-secondary-year-10-l/units/atomic-structure-and-the-periodic-table-u68nqqc/lessons/why-elements-react-t8wpkh/overview) |
| Thursday | [Metals & Non-Metals Lesson |](https://cognitoedu.org/coursesubtopic/c2-gcse-aqa-h-t_1.12) | [Formation of Ions Lesson |](https://cognitoedu.org/coursesubtopic/c2-gcse-aqa-h-t_2.01) |
| Friday | [Greenshaw Learning Trust - Remote Learning](https://www.greenshawlearningtrust.co.uk/virtual-curriculum?group=250&lesson=4510) | [Greenshaw Learning Trust - Remote Learning](https://www.greenshawlearningtrust.co.uk/virtual-curriculum?group=250&lesson=4511) |
| 17/03/25 | Monday | **Biology** – Gas exchange in humans | [Lungs & Gas Exchange Lesson |](https://cognitoedu.org/coursesubtopic/b2-gcse-aqa-h-t_4.05) | [Specialised Exchange Surfaces Lesson |](https://cognitoedu.org/coursesubtopic/b2-gcse-aqa-h-t_1.17) |
| Tuesday | [Surface Area to Volume Ratio Lesson |](https://cognitoedu.org/coursesubtopic/b2-gcse-aqa-h-t_1.16) | [Diffusion Lesson |](https://cognitoedu.org/coursesubtopic/b2-gcse-aqa-h-t_1.07) |
| Wednesday | [Aerobic & Anaerobic Respiration Lesson |](https://cognitoedu.org/coursesubtopic/b2-gcse-aqa-h-t_3.04) | [Exercise Lesson |](https://cognitoedu.org/coursesubtopic/b2-gcse-aqa-h-t_3.06) |
| Thursday | [Greenshaw Learning Trust - Remote Learning](https://www.greenshawlearningtrust.co.uk/virtual-curriculum?group=251&lesson=3658) | [Greenshaw Learning Trust - Remote Learning](https://www.greenshawlearningtrust.co.uk/virtual-curriculum?group=251&lesson=3258) |
| Friday | [Greenshaw Learning Trust - Remote Learning](https://www.greenshawlearningtrust.co.uk/virtual-curriculum?group=251&lesson=1089) | [Greenshaw Learning Trust - Remote Learning](https://www.greenshawlearningtrust.co.uk/virtual-curriculum?group=251&lesson=1088) |
| 24/03/25 | Monday | **Chemistry –** Carbon Chemistry | [Crystallisation |](https://www.thenational.academy/pupils/programmes/chemistry-secondary-year-10-higher-aqa/units/separating-substances/lessons/crystallisation/overview) | [Distillation: simple distillation |](https://www.thenational.academy/pupils/programmes/chemistry-secondary-year-10-higher-aqa/units/separating-substances/lessons/distillation-simple-distillation/overview) |
| Tuesday | [Distillation: fractional distillation |](https://www.thenational.academy/pupils/programmes/chemistry-secondary-year-10-higher-aqa/units/separating-substances/lessons/distillation-fractional-distillation/overview) | [Hydrocarbons |](https://www.thenational.academy/pupils/programmes/chemistry-secondary-year-10-higher-aqa/units/chemistry-of-carbon/lessons/hydrocarbons/overview) |
| Wednesday | [Fractional distillation of crude oil |](https://www.thenational.academy/pupils/programmes/chemistry-secondary-year-11-higher-aqa/units/using-earths-resources/lessons/fractional-distillation-of-crude-oil/overview) | [Cracking fractions of crude oil |](https://www.thenational.academy/pupils/programmes/chemistry-secondary-year-11-higher-aqa/units/using-earths-resources/lessons/cracking-fractions-of-crude-oil/overview) |
| Thursday | [Earth's resources and sustainable development |](https://www.thenational.academy/pupils/programmes/chemistry-secondary-year-11-higher-aqa/units/using-earths-resources/lessons/earths-resources-and-sustainable-development/overview) | [Polymer structures |](https://www.thenational.academy/pupils/programmes/chemistry-secondary-year-11-higher-aqa/units/using-earths-resources/lessons/polymer-structures/overview) |
| Friday | [Alkenes |](https://www.thenational.academy/pupils/programmes/chemistry-secondary-year-11-higher-aqa/units/organic-chemistry/lessons/alkenes/overview) | [Addition polymerisation |](https://www.thenational.academy/pupils/programmes/chemistry-secondary-year-11-higher-aqa/units/organic-chemistry/lessons/addition-polymerisation/overview) |
| 31/03/25 | Monday | **Physics** – Transverse and Longitudinal Waves | [Distance from sounds: do and review |](https://www.thenational.academy/pupils/programmes/science-primary-year-4/units/introduction-to-sound/lessons/distance-from-sounds-do-and-review/overview) | [Higher and lower sounds |](https://www.thenational.academy/pupils/programmes/science-primary-year-4/units/introduction-to-sound/lessons/higher-and-lower-sounds/overview) |
| Tuesday | [Changing the pitch of sounds |](https://www.thenational.academy/pupils/programmes/science-primary-year-4/units/introduction-to-sound/lessons/changing-the-pitch-of-sounds/overview) | [Musical instruments and pitch |](https://www.thenational.academy/pupils/programmes/science-primary-year-4/units/introduction-to-sound/lessons/musical-instruments-and-pitch/overview) |
| Wednesday | [Transverse waves |](https://www.thenational.academy/pupils/programmes/physics-secondary-year-10-foundation-aqa/units/measuring-waves/lessons/transverse-waves/overview) | [Representing transverse waves |](https://www.thenational.academy/pupils/programmes/physics-secondary-year-10-foundation-aqa/units/measuring-waves/lessons/representing-transverse-waves/overview) |
| Thursday | [Representing longitudinal waves |](https://www.thenational.academy/pupils/programmes/physics-secondary-year-10-foundation-aqa/units/measuring-waves/lessons/representing-longitudinal-waves/overview) | [Oscilloscope |](https://www.thenational.academy/pupils/programmes/physics-secondary-year-10-foundation-aqa/units/measuring-waves/lessons/oscilloscope/overview) |
| Friday | [The wave equation |](https://www.thenational.academy/pupils/programmes/physics-secondary-year-10-foundation-aqa/units/measuring-waves/lessons/the-wave-equation/overview) | [Measuring the speed of sound in air and solids |](https://www.thenational.academy/pupils/programmes/physics-secondary-year-10-foundation-aqa/units/measuring-waves/lessons/measuring-the-speed-of-sound-in-air-and-solids/overview) |
| 07/04/25 | Monday | **Retrieval Practice** | [Hydrocarbons |](https://www.thenational.academy/pupils/programmes/chemistry-secondary-year-10-higher-aqa/units/chemistry-of-carbon/lessons/hydrocarbons/overview) | [Fractional distillation of crude oil |](https://www.thenational.academy/pupils/programmes/chemistry-secondary-year-11-higher-aqa/units/using-earths-resources/lessons/fractional-distillation-of-crude-oil/overview) |
| Tuesday | [Atomic structure (very small electron mass) |](https://www.thenational.academy/pupils/programmes/chemistry-secondary-year-10-higher-aqa/units/atomic-structure-and-the-periodic-table/lessons/atomic-structure-very-small-electron-mass/overview) | [Developing a model for atoms |](https://www.thenational.academy/pupils/programmes/chemistry-secondary-year-10-higher-aqa/units/atomic-structure-and-the-periodic-table/lessons/developing-a-model-for-atoms/overview) |
| Wednesday | [Aerobic cellular respiration |](https://www.thenational.academy/pupils/programmes/science-secondary-year-8/units/breathing-and-respiration/lessons/aerobic-cellular-respiration/overview) | [Anaerobic cellular respiration in humans |](https://www.thenational.academy/pupils/programmes/science-secondary-year-8/units/breathing-and-respiration/lessons/anaerobic-cellular-respiration-in-humans/overview) |
| Thursday | [Microscopes |](https://www.thenational.academy/pupils/programmes/science-secondary-year-9-l/units/cells-u2b1h4c/lessons/microscopes-lcj273/overview) | [Cell structures |](https://www.thenational.academy/pupils/programmes/science-secondary-year-9-l/units/cells-u2b1h4c/lessons/cell-structures-fxjz0y/overview) |
| Friday | [Energy stores and transfers |](https://www.thenational.academy/pupils/programmes/science-secondary-year-9-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-9-l/units/energy-2ga1p6y/lessons/conservation-of-energy-and-efficiency-7d68ho/overview) |