**Walton High School Hub Curriculum** 

**Year 10 – Science Half term 3 (January 2025 – February 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 |
| 06/01/25 | Monday | **Biology** – The Immune Response, Vaccinations, Drug Testing | [Differences between infectious and non-infectious disease |](https://www.thenational.academy/pupils/programmes/science-secondary-year-9/units/disease-and-drugs/lessons/differences-between-infectious-and-non-infectious-disease/overview)  | [Recreational drug use: depressants |](https://www.thenational.academy/pupils/programmes/science-secondary-year-9/units/disease-and-drugs/lessons/recreational-drug-use-depressants/overview)  |
| Tuesday | [Recreational drug use: stimulants |](https://www.thenational.academy/pupils/programmes/science-secondary-year-9/units/disease-and-drugs/lessons/recreational-drug-use-stimulants/overview)  | [Solvent abuse |](https://www.thenational.academy/pupils/programmes/science-secondary-year-9/units/disease-and-drugs/lessons/solvent-abuse/overview)  |
| Wednesday | [Plant diseases: TMV and rose black spot |](https://www.thenational.academy/pupils/programmes/biology-secondary-year-10-higher-aqa/units/health-and-disease/lessons/plant-diseases-tmv-and-rose-black-spot/overview)  | [Bacterial and viral diseases in humans: Salmonella and measles |](https://www.thenational.academy/pupils/programmes/biology-secondary-year-10-higher-aqa/units/health-and-disease/lessons/bacterial-and-viral-diseases-in-humans-salmonella-and-measles/overview)  |
| Thursday  | [Fungal and protist diseases in humans |](https://www.thenational.academy/pupils/programmes/biology-secondary-year-10-higher-aqa/units/health-and-disease/lessons/fungal-and-protist-diseases-in-humans/overview)  | [Sexually transmitted infections |](https://www.thenational.academy/pupils/programmes/biology-secondary-year-10-higher-aqa/units/health-and-disease/lessons/sexually-transmitted-infections/overview)  |
| Friday | [Immune System & Defences Lesson |](https://cognitoedu.org/coursesubtopic/b2-gcse-aqa-h-t_5.07)  | [Monoclonal Antibodies Lesson |](https://cognitoedu.org/coursesubtopic/b2-gcse-aqa-h-t_5.09)  |
| 13/01/25 | Monday  | **Chemistry** – Group 1, Group 7 and Group 0  | [Elements |](https://www.thenational.academy/pupils/programmes/science-secondary-year-9-l/units/atoms-and-the-periodic-table-9q9t0p6/lessons/elements-4rclyu/overview)  | [Compounds |](https://www.thenational.academy/pupils/programmes/science-secondary-year-9-l/units/atoms-and-the-periodic-table-9q9t0p6/lessons/compounds-gb87ga/overview)  |
| Tuesday  | [Development of the Periodic Table |](https://www.thenational.academy/pupils/programmes/science-secondary-year-9-l/units/atoms-and-the-periodic-table-9q9t0p6/lessons/development-of-the-periodic-table-r21gyc/overview)  | [Metals and non-metals |](https://www.thenational.academy/pupils/programmes/science-secondary-year-9-l/units/atoms-and-the-periodic-table-9q9t0p6/lessons/metals-and-non-metals-2t0ylw/overview)  |
| Wednesday  | [Groups of elements in the periodic table |](https://www.thenational.academy/pupils/programmes/science-secondary-year-9/units/patterns-in-the-periodic-table/lessons/groups-of-elements-in-the-periodic-table/overview)  | [Group 1 and 2 metals |](https://www.thenational.academy/pupils/programmes/science-secondary-year-9/units/patterns-in-the-periodic-table/lessons/group-1-and-2-metals/overview)  |
| Thursday  | [Group 7 (halogens) |](https://www.thenational.academy/pupils/programmes/science-secondary-year-9/units/patterns-in-the-periodic-table/lessons/group-7-halogens/overview)  | [Group 0 (Noble Gases) |](https://www.thenational.academy/pupils/programmes/science-secondary-year-9/units/patterns-in-the-periodic-table/lessons/group-0-noble-gases/overview)  |
| Friday | [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)  | [Group 1 (Alkali Metals) Lesson |](https://cognitoedu.org/coursesubtopic/c2-gcse-aqa-h-t_1.14)  |
| 20/01/25 | Monday | **Physics** – Refraction, The EM Spectrum | [Transverse waves |](https://www.thenational.academy/pupils/programmes/physics-secondary-year-10-higher-aqa/units/measuring-waves/lessons/transverse-waves/overview)  | [Representing transverse waves |](https://www.thenational.academy/pupils/programmes/physics-secondary-year-10-higher-aqa/units/measuring-waves/lessons/representing-transverse-waves/overview) |
| Tuesday | [Representing longitudinal waves |](https://www.thenational.academy/pupils/programmes/physics-secondary-year-10-higher-aqa/units/measuring-waves/lessons/representing-longitudinal-waves/overview)  | [Oscilloscope |](https://www.thenational.academy/pupils/programmes/physics-secondary-year-10-higher-aqa/units/measuring-waves/lessons/oscilloscope/overview)  |
| Wednesday | [Measuring the speed of water waves from distance and time |](https://www.thenational.academy/pupils/programmes/physics-secondary-year-10-higher-aqa/units/measuring-waves/lessons/measuring-the-speed-of-water-waves-from-distance-and-time/overview)  | [The wave equation |](https://www.thenational.academy/pupils/programmes/physics-secondary-year-10-higher-aqa/units/measuring-waves/lessons/the-wave-equation/overview)  |
| Thursday | [Measuring waves in a ripple tank |](https://www.thenational.academy/pupils/programmes/physics-secondary-year-10-higher-aqa/units/measuring-waves/lessons/measuring-waves-in-a-ripple-tank/overview) | [Reflection of light (including specular and diffuse) |](https://www.thenational.academy/pupils/programmes/physics-secondary-year-11-higher-aqa/units/electromagnetic-waves/lessons/reflection-of-light-including-specular-and-diffuse/overview)  |
| Friday | [Refraction through a rectangular block (including wave front diagrams) |](https://www.thenational.academy/pupils/programmes/physics-secondary-year-11-higher-aqa/units/electromagnetic-waves/lessons/refraction-through-a-rectangular-block-including-wave-front-diagrams/overview)  | [Refraction through a semicircular block |](https://www.thenational.academy/pupils/programmes/physics-secondary-year-11-higher-aqa/units/electromagnetic-waves/lessons/refraction-through-a-semicircular-block/overview)  |
| 27/01/25 | Monday | **Biology** – Transpiration and Translocation, Plant Disease | [Plant nutrition |](https://www.thenational.academy/pupils/programmes/science-secondary-year-9/units/plant-nutrition-and-photosynthesis/lessons/plant-nutrition/overview)  | [Photosynthesis |](https://www.thenational.academy/pupils/programmes/science-secondary-year-9/units/plant-nutrition-and-photosynthesis/lessons/photosynthesis/overview)  |
| Tuesday | [Adaptations of plants for photosynthesis: gas exchange and stomata |](https://www.thenational.academy/pupils/programmes/science-secondary-year-9/units/plant-nutrition-and-photosynthesis/lessons/adaptations-of-plants-for-photosynthesis-gas-exchange-and-stomata/overview)  | [Plant Cell Organisation Lesson |](https://cognitoedu.org/coursesubtopic/b2-gcse-aqa-h-t_6.04)  |
| Wednesday | [Transpiration & Translocation Lesson |](https://cognitoedu.org/coursesubtopic/b2-gcse-aqa-h-t_6.05)  | [Active Transport Lesson |](https://cognitoedu.org/coursesubtopic/b2-gcse-aqa-h-t_1.09)  |
| Thursday | [Greenshaw Learning Trust - Remote Learning](https://www.greenshawlearningtrust.co.uk/virtual-curriculum?group=251&lesson=3276) | [Greenshaw Learning Trust - Remote Learning](https://www.greenshawlearningtrust.co.uk/virtual-curriculum?group=251&lesson=3277) |
| Friday | [Greenshaw Learning Trust - Remote Learning](https://www.greenshawlearningtrust.co.uk/virtual-curriculum?group=251&lesson=1098) | [Greenshaw Learning Trust - Remote Learning](https://www.greenshawlearningtrust.co.uk/virtual-curriculum?group=251&lesson=1097) |
| 03/02/25 | Monday  | **Chemistry** – Giant Lattices (Ionic and Covalent), Allotropes of Carbon | [Bonding to carbon atoms |](https://www.thenational.academy/pupils/programmes/chemistry-secondary-year-10-higher-aqa/units/chemistry-of-carbon/lessons/bonding-to-carbon-atoms/overview)  | [Diamond and graphite |](https://www.thenational.academy/pupils/programmes/chemistry-secondary-year-10-higher-aqa/units/chemistry-of-carbon/lessons/diamond-and-graphite/overview)  |
| Tuesday | [Graphene and fullerenes |](https://www.thenational.academy/pupils/programmes/chemistry-secondary-year-10-higher-aqa/units/chemistry-of-carbon/lessons/graphene-and-fullerenes/overview)  | [Discovery and uses of carbon nanostructures |](https://www.thenational.academy/pupils/programmes/chemistry-secondary-year-10-higher-aqa/units/chemistry-of-carbon/lessons/discovery-and-uses-of-carbon-nanostructures/overview)  |
| Wednesday | [Bonding, structure and properties |](https://www.thenational.academy/pupils/programmes/chemistry-secondary-year-10-higher-aqa/units/chemistry-of-carbon/lessons/bonding-structure-and-properties/overview)  | [Types of Covalent Structures Lesson |](https://cognitoedu.org/coursesubtopic/c2-gcse-aqa-h-t_2.07)  |
| Thursday | [Ionic Compounds Lesson |](https://cognitoedu.org/coursesubtopic/c2-gcse-aqa-h-t_2.03)  | [Diamond & Graphite Lesson |](https://cognitoedu.org/coursesubtopic/c2-gcse-aqa-h-t_2.08)  |
| Friday | [Graphene & Fullerenes Lesson |](https://cognitoedu.org/coursesubtopic/c2-gcse-aqa-h-t_2.09)  | [Nanoparticles Lesson |](https://cognitoedu.org/coursesubtopic/c2-gcse-aqa-h-t_2.15)  |
| 10/02/25 | Monday | **Physics** – Heat Transfers by Radiation | [Light and colour |](https://www.thenational.academy/pupils/programmes/physics-secondary-year-11-higher-aqa/units/electromagnetic-waves/lessons/light-and-colour/overview)  | [Convex lenses (including magnification) |](https://www.thenational.academy/pupils/programmes/physics-secondary-year-11-higher-aqa/units/electromagnetic-waves/lessons/convex-lenses-including-magnification/overview)  |
| Tuesday | [Scale diagrams for convex lenses (including magnification) |](https://www.thenational.academy/pupils/programmes/physics-secondary-year-11-higher-aqa/units/electromagnetic-waves/lessons/scale-diagrams-for-convex-lenses-including-magnification/overview)  | [Virtual images from convex and concave lenses (including magnification) |](https://www.thenational.academy/pupils/programmes/physics-secondary-year-11-higher-aqa/units/electromagnetic-waves/lessons/virtual-images-from-convex-and-concave-lenses-including-magnification/overview)  |
| Wednesday | [The spectrum of electromagnetic radiation |](https://www.thenational.academy/pupils/programmes/physics-secondary-year-11-higher-aqa/units/electromagnetic-waves/lessons/the-spectrum-of-electromagnetic-radiation/overview)  | [Absorbing infrared radiation practical |](https://www.thenational.academy/pupils/programmes/physics-secondary-year-11-higher-aqa/units/electromagnetic-waves/lessons/absorbing-infrared-radiation-practical/overview)  |
| Thursday | [Emitters of infrared & black body radiation |](https://www.thenational.academy/pupils/programmes/physics-secondary-year-11-higher-aqa/units/electromagnetic-waves/lessons/emitters-of-infrared-and-black-body-radiation/overview)  | [Ionising electromagnetic radiation |](https://www.thenational.academy/pupils/programmes/physics-secondary-year-11-higher-aqa/units/electromagnetic-waves/lessons/ionising-electromagnetic-radiation/overview)  |
| Friday | [Non-ionising electromagnetic radiations |](https://www.thenational.academy/pupils/programmes/physics-secondary-year-11-higher-aqa/units/electromagnetic-waves/lessons/non-ionising-electromagnetic-radiations/overview)  | [Conduction, Convection & Radiation Lesson |](https://cognitoedu.org/coursesubtopic/p2-gcse-aqa-h-t_1.09)  |