

Year 9 Curriculum mat 2021-2022

	Autumn Term	Spring Term	Summer Term
Unit Length	<p><u>BIOLOGY</u></p> <p>Cell Biology Oak Resource: https://teachers.thenational.academy/units/cell-biology-b859</p> <p><u>CHEMISTRY</u></p> <p>Atoms and the periodic table Oak Resource: https://teachers.thenational.academy/units/atomic-structure-and-periodic-table-c831</p> <p>Physics</p> <p>Particles Oak Resource: https://teachers.thenational.academy/units/particle-model-of-matter-a6d5</p>	<p><u>BIOLOGY</u></p> <p>Bioenergetics Oak Resource: https://teachers.thenational.academy/units/bioenergetics-244e</p> <p><u>CHEMISTRY</u></p> <p>Bonding and structures Oak Resource: https://teachers.thenational.academy/units/bonding-structure-and-the-properties-of-matter-e93f</p> <p><u>PHYSICS</u></p> <p>Energy Oak resource: https://teachers.thenational.academy/units/energy-c750</p>	<p><u>BIOLOGY</u></p> <p>Cell Organisation Oak Resource: https://teachers.thenational.academy/units/organisation-2345</p> <p><u>CHEMISTRY</u></p> <p>Quantitative Oak Resources https://teachers.thenational.academy/units/quantitative-chemistry-4db7</p> <p><u>Chemistry</u></p> <p>Chemical Changes Oak resources https://teachers.thenational.academy/units/chemical-changes-a5ba</p> <p><u>PHYSICS</u></p> <p>Electricity Oak Resource https://teachers.thenational.academy/units/electricity-f083</p>

<p>Links to the National curriculum/Assessment Objectives</p>	<p>In year 9, Pupils will be constantly assessed through the use of exam questions, and long answer questions to develop the skills required for the external exam.</p> <p>Pupils will have three assessment throughout the year. This will be made up of topics taught throughout the years and test the practical skills.</p> <p>Pupils will be challenged to apply knowledge of understanding to unfamiliar concepts.</p> <p>Assessments will be made from previous exam questions using exampro.</p>		
<p>Description of the topic and key learning outcomes (key knowledge and understanding)</p>	<p><u>BIOLOGY</u> <u>Cell Biology</u> <u>Lesson 1: Animal and plant cells</u> <u>Oak lesson</u> https://classroom.thenational.academy/lessons/comparing-of-cells-6dj62r <u>Lesson 2: Microscopy</u> <u>Oak lesson</u> https://classroom.thenational.academy/lessons/microscopes-magnification-and-resolution-6mr38d https://classroom.thenational.academy/lessons/using-the-microscope-and-magnification-equation-c5k66r <u>Lesson 3: Order of magnitude calculations</u> <u>Oak lesson</u> https://classroom.thenational.academy/lessons/order-of-magnitude-calculations-75k34d <u>Lesson 4: Culturing microorganisms (Biology only)</u> <u>Oak lesson</u> https://classroom.thenational.academy/lessons/aseptic-techniques-c9ijkid https://classroom.thenational.academy/lessons/effectiveness-of-disinfectants-c4r34c <u>Lesson 5: Cell specialisation</u> <u>Oak lesson</u> https://classroom.thenational.academy/lessons/specialised-cells-74r66c <u>Lesson 6: Cell division</u> <u>Oak lesson</u> <u>Lesson 7: Cell Differentiation</u></p>	<p><u>Biology</u> <u>Bioenergetics</u> <u>Lesson 1: Photosynthesis RP:</u> <u>Oak Resources:</u> https://classroom.thenational.academy/lessons/photosynthesis-required-practical-cmrk4t <u>Lesson 2: Structure of a leaf and adaptations</u> <u>Oak Resources:</u> <u>Lesson 3: Limiting Factors</u> <u>Oak Resources:</u> https://classroom.thenational.academy/lessons/limiting-factors-of-photosynthesis-crw68d <u>Lesson 4: Advantages and disadvantages of limiting factors for photosynthesis</u> https://classroom.thenational.academy/lessons/manipulating-factors-of-photosynthesis-ht-ccwkjt7 <u>Lesson 5: Limiting Factors RP</u> <u>Oak Resources:</u> https://classroom.thenational.academy/lessons/photosynthesis-required-practical-cmrk4t https://classroom.thenational.academy/lessons/photosynthesis-required-practical-results-c4tp4t <u>Lesson 6: Photosynthesis Review</u> <u>Oak Resources:</u> https://classroom.thenational.academy/lessons/review-photosynthesis-6wvpat <u>Lesson 7: Respiration</u> <u>Oak Resources:</u></p>	<p><u>BIOLOGY</u> <u>Cell Organisation</u> <u>Lesson 1: Principles of organisation</u> <u>Oak Resources</u> <u>Lesson 2: The human digestive system</u> <u>Oak Resources</u> https://classroom.thenational.academy/lessons/digestion-cnkg66c <u>Lesson 3: Food tests</u> <u>Oak Resources</u> https://classroom.thenational.academy/lessons/food-tests-61h3cd <u>Lesson 4: Digestive enzymes</u> <u>Oak Resources</u> https://classroom.thenational.academy/lessons/digestive-enzymes-6dkgkr <u>Lesson 5: Absorption</u> <u>Oak Resources</u> https://classroom.thenational.academy/lessons/absorption-74v38e <u>Lesson 6: Enzyme Investigation</u> <u>Oak Resources</u> https://classroom.thenational.academy/lessons/investigating-enzymes-60w64t <u>Lesson 7: pH and Enzymes</u> <u>Oak Resources</u> https://classroom.thenational.academy/lessons/ph-and-enzymes-part-1-cru3jt https://classroom.thenational.academy/lessons/ph-and-enzymes-part-2-75h3gr <u>Lesson 8: Respiratory system</u> <u>Oak Resources</u></p>

Oak lesson

Lesson 8: Stem cells

Oak lesson

<https://classroom.thenational.academy/lessons/stem-cells-and-the-use-of-stem-cells-69gkac>

Lesson 9: Mitosis and the cell cycle

Oak lesson

<https://classroom.thenational.academy/lessons/cell-cycle-and-mitosis-60r30t>

Lesson 10: Eukaryotes and prokaryotes

Oak lesson

<https://classroom.thenational.academy/lessons/prokaryotic-and-eukaryotic-cells-6cr6ae>

Lesson 11: Diffusion

Oak lesson

<https://classroom.thenational.academy/lessons/diffusion-61jker>

Lesson 12: Osmosis

Oak lesson

<https://classroom.thenational.academy/lessons/osmosis-6wu3jd>

Lesson 13: Osmosis RP

Oak lesson

<https://classroom.thenational.academy/lessons/osmosis-required-practical-part-1-70r6cr>

Lesson 14: Active Transport

Oak lesson

<https://classroom.thenational.academy/lessons/active-transport-6mtk2r>

Lesson 16 Maths Skills

Oak Resources

<https://classroom.thenational.academy/lessons/useful-maths-skills-64vk6t>

Lesson 15 Cells Review

Oak Resources

<https://classroom.thenational.academy/lessons/cell-biology-review-part-1-60ukgt>

<https://classroom.thenational.academy/lessons/cell-biology-review-part-2-61h62t>

<https://classroom.thenational.academy/lessons/respiration-71jpce>

Lesson 8: Anaerobic respiration

Oak Resources:

<https://classroom.thenational.academy/lessons/anaerobic-respiration-cdtk6d>

Lesson 9: Oxygen Debt

Oak Resources:

<https://classroom.thenational.academy/lessons/consequences-of-anaerobic-respiration-6rr30c>

Lesson 10: Metabolism

Oak Resources:

<https://classroom.thenational.academy/lessons/metabolism-6rw3gc>

Lesson 11: Linking together

Oak Resources:

<https://classroom.thenational.academy/lessons/synoptic-links-6wtkje>

Lesson 12: Review

Oak Resources:

<https://classroom.thenational.academy/lessons/end-of-topic-review-65j62d>

Lesson 13: Exam Techniques

Oak Resources

<https://classroom.thenational.academy/lessons/exam-skills-6tj3ac>

Lesson 13: Maths skills

Oak Resources

<https://classroom.thenational.academy/lessons/maths-skills-6cr68c>

Lesson 14: Extra Reading

Oak Resources

<https://classroom.thenational.academy/lessons/scientist-case-study-ynes-mexia-c4u32t>

CHEMISTRY

Bonding and structures

Lesson 1: Chemical bonds

<https://classroom.thenational.academy/lessons/the-lungs-ccu3ge>

Lesson 9: The Blood and blood vessels

Oak Resources

<https://classroom.thenational.academy/lessons/blood-and-blood-vessels-c8t62c>

Lesson 10: The heart

Oak Resources

<https://classroom.thenational.academy/lessons/the-heart-6ct3jd>

Lesson 11: The heart rate

Oak Resources

<https://classroom.thenational.academy/lessons/heart-rate-6cr32r>

Lesson 12: Coronary heart disease: a non-communicable disease

Oak Resources

<https://classroom.thenational.academy/lessons/heart-disease-61k68d>

Lesson 13: The effect of lifestyle on some non-communicable diseases

Oak Resources

<https://classroom.thenational.academy/lessons/non-communicable-disease-75jk6r>

Lesson 14: Cancer

Oak Resources

<https://classroom.thenational.academy/lessons/cancer-c8rp8d>

Lesson 15: Plant tissues

Oak Resources

<https://classroom.thenational.academy/lessons/plant-tissue-cnh32t>

Lesson 16: Plant organ system

Oak Resources

<https://classroom.thenational.academy/lessons/plant-roots-61k3jr>

Lesson 17: Plant transport systems

Oak Resources

<https://classroom.thenational.academy/lessons/transport-in-plants-6rr38c>

Lesson 17 Exam Skills

Oak Resources

<https://classroom.thenational.academy/lessons/ca-se-study-and-exam-skills-c8uk2t>

CHEMISTRY

Atoms and the periodic Table

Lesson 1: Atoms, elements and compounds

Oak Resources

<https://classroom.thenational.academy/lessons/atoms-elements-and-compounds-6cv3ge>

Lesson 2: Chemical Formula and conservation of mass

Oak Resources

<https://classroom.thenational.academy/lessons/chemical-formulae-and-conservation-of-mass-6ngk4c>

Lesson 3: Mixtures

Oak Resources

<https://classroom.thenational.academy/lessons/mixtures-filtration-and-crystallisation-60u38e>

Lesson 4: Distillation

Oak Resources

<https://classroom.thenational.academy/lessons/separation-by-distillation-75jk2r>

Lesson 5: Chromatography

Oak Resources

<https://classroom.thenational.academy/lessons/separation-by-chromatography-69j3jr>

Lesson 6: Atomic structure

Oak Resources

<https://classroom.thenational.academy/lessons/atomic-structure-6crk8d>

Lesson 7: The development of the model of the atom

Oak Resources

<https://classroom.thenational.academy/lessons/development-of-the-atomic-model-6crp2t>

Oak Resources

Lesson 2: Ionic bonding

Oak Resources

<https://classroom.thenational.academy/lessons/ionic-bonding-introduction-70wk4c>

Lesson 3: Ionic compounds

Oak Resources

<https://classroom.thenational.academy/lessons/further-ionic-bonding-6cu32c>

Lesson 4: Further Ionic compounds

Oak Resources

<https://classroom.thenational.academy/lessons/further-ionic-bonding-6cu32c>

Lesson 5: Properties of Ionic compounds

Oak Resources

<https://classroom.thenational.academy/lessons/properties-of-ionic-compounds-6hj66c>

Lesson 6: Covalent bonding

Oak Resources

<https://classroom.thenational.academy/lessons/covalent-bonding-65hpcc>

Lesson 7: Properties of simple ionic molecules

Oak Resources

<https://classroom.thenational.academy/lessons/simple-covalent-molecules-70v66e>

Lesson 8: Giant covalent structures

Oak Resources

<https://classroom.thenational.academy/lessons/the-giant-covalent-structures-c5h3cc>

Lesson 9: Graphite and fullerenes

Oak Resources

<https://classroom.thenational.academy/lessons/giant-covalent-structures-graphene-68rp6e>

Lesson 10: Metallic bonding

Oak Resources

Lesson 18: Transpiration

Oak Resources

<https://classroom.thenational.academy/lessons/investigating-transpiration-6tjk0r>

Lesson 19 Review

Oak Resources

<https://classroom.thenational.academy/lessons/review-part-1-6ct66e>

<https://classroom.thenational.academy/lessons/review-part-2-cmu62r>

Lesson 20 Exam Techniques

Oak Resources

<https://classroom.thenational.academy/lessons/exam-technique-cdk3qt>

Lesson 21 Maths Skills

Oak Resources

<https://classroom.thenational.academy/lessons/maths-skills-6mw32d>

Chemistry:

Quantitative

Lesson 1: Conservation of mass

Oak Resources:

Lesson 2: Balancing equations

Oak Resources:

<https://classroom.thenational.academy/lessons/reacting-masses-ht-only-69jk4d>

Lesson 3: RAM

Oak Resources:

<https://classroom.thenational.academy/lessons/relative-formula-mass-ht-only-64r3cc>

<https://classroom.thenational.academy/lessons/relative-formula-mass-ht-only-6gtp8d>

Lesson 4: Conservation of mass

Oak Resources:

Lesson 5: Calculating Moles (Chemistry Only)

Oak Resources:

<https://classroom.thenational.academy/lessons/moles-and-avogadros-constant-ht-only-chj3jt>

Lesson 8: Development of the periodic table

Oak Resources

<https://classroom.thenational.academy/lessons/periodic-table-development-6cwp8t>

Lesson 9: Electronic Configuration and the periodic table

Oak Resources

<https://classroom.thenational.academy/lessons/electron-configuration-and-the-periodic-table-61jp4c>

Lesson 10: Isotopes

Oak Resources

<https://classroom.thenational.academy/lessons/isotopes-ccwp4c>

<https://classroom.thenational.academy/lessons/isotopes-case-study-lesson-cguk0t>

Lesson 11: Metals and non-metals and reactions and Group 0

Oak Resources

<https://classroom.thenational.academy/lessons/why-elements-react-6cuk4d>

Lesson 12: Group 1

Oak Resources

<https://classroom.thenational.academy/lessons/group-1-cdk68r>

Lesson 13: Group 7

Oak Resources

<https://classroom.thenational.academy/lessons/group-7-c5h36c>

Lesson 14: Displacement

Oak Resources

<https://classroom.thenational.academy/lessons/group-7-displacement-69jp4c>

Lesson 15: Displacement reactions and Ionic equations (Chemistry Only)

Oak Resources

Lesson 11: The three states of matter

Oak Resources

<https://classroom.thenational.academy/lessons/solids-liquids-and-gases-cmr36d>

Lesson 12: State symbols

Oak Resources

Lesson 13: Properties of ionic compounds

Oak Resources

Lesson 14: Polymers

Oak Resources

<https://classroom.thenational.academy/lessons/polymers-6rvkgr>

Lesson 15: Properties of metals and alloys

Oak Resources

Lesson 16: Metals as conductors

Oak Resources

Lesson 17: Diamond

Oak Resources

Lesson 18: Graphite

Oak Resources

Lesson 19: Nanoparticles (Chemistry Only)

Oak Resources

<https://classroom.thenational.academy/lessons/nanoparticles-gcse-chemistry-only-crr64r>

Lesson 20: Uses of nanoparticles

Oak Resources

Lesson 21: Review

Oak Resources

<https://classroom.thenational.academy/lessons/review-part-2-c8tp2d>

Lesson 6: Amount of substance in an equation (Chemistry Only)

Oak Resources:

Lesson 7: Using moles to balance equations (Chemistry Only)

Oak Resources:

<https://classroom.thenational.academy/lessons/balancing-equations-using-moles-ht-only-6gwkar>

Lesson 8: Limiting Reactants (Chemistry Only)

Oak Resources:

<https://classroom.thenational.academy/lessons/limiting-reactants-6mup4c>

Lesson 9: Concentration of solution (Chemistry Only)

Oak Resources:

<https://classroom.thenational.academy/lessons/concentration-6rr6cc>

Lesson 10: Percentage Yield (Chemistry Only)

Oak Resources:

<https://classroom.thenational.academy/lessons/reacting-masses-and-yield-gcse-chemistry-c4wkge>

Lesson 11: Atom economy (Chemistry Only)

Oak Resources:

<https://classroom.thenational.academy/lessons/atom-economy-6mt3ac>

Lesson 12: Using concentration of solutions in Mol/dm³ (Chemistry Only)

Oak Resources:

<https://classroom.thenational.academy/lessons/titration-calculations-chj6cd>

Lesson 13: Use of the amount of substance in relation to volumes of gases (Chemistry Only)

Oak Resources:

<https://classroom.thenational.academy/lessons/gas-volumes-cgwk6c>

Lesson 14: Review Learning Combined H/T

Oak Resources

<https://classroom.thenational.academy/lessons/displacement-reactions-ionic-equations-c5hp6d>

Lesson 16: Comparison with Group 1 elements (Chemistry only)

<https://classroom.thenational.academy/lessons/comparing-the-reactivities-of-group-1-and-7-elements-6tjpac>

Lesson 17: Transitional elements

Oak Resources

<https://classroom.thenational.academy/lessons/transition-elements-c4u3cr>

Lesson 18: Review

Oak Resources

<https://classroom.thenational.academy/lessons/review-part-1-chh62t>

<https://classroom.thenational.academy/lessons/review-part-1-chh62t>

Physics

Particles

Lesson 1: Particle model

Oak Resources

<https://classroom.thenational.academy/lessons/particle-models-6tj34r>

Lesson 2: Density

Oak Resources

<https://classroom.thenational.academy/lessons/density-of-solids-60w3at>

<https://classroom.thenational.academy/lessons/density-of-liquids-64tp8c>

Lesson 3: Density RP

Oak Resources

<https://classroom.thenational.academy/lessons/density-required-practical-6hhk2r>

Lesson 4: Internal energy

PHYSICS

Energy

Lesson 1: Energy Stores and systems

Oak Resources

Lesson 2: Changes in energy

Oak Resources

<https://classroom.thenational.academy/lessons/energy-transfers-64upac>

Lesson 3: Conservation of energy

Oak Resources

<https://classroom.thenational.academy/lessons/conservation-of-energy-71gk6c>

Lesson 4: Energy changes in systems

Oak Resources

Lesson 5: Efficiency and reducing unwanted energy

Oak Resources

<https://classroom.thenational.academy/lessons/efficiency-and-reducing-unwanted-energy-transfers-61jker>

Lesson 6: Insulating materials RP

Oak Resources

<https://classroom.thenational.academy/lessons/insulating-material-required-practical-part-1-ccukgr>

<https://classroom.thenational.academy/lessons/insulating-material-required-practical-part-2-71h3gc>

Lesson 7: Kinetic energy

Oak Resources

<https://classroom.thenational.academy/lessons/the-kinetic-energy-store-6thpad>

Lesson 8: Gravitational potential energy

Oak Resources

<https://classroom.thenational.academy/lessons/review-ht-only-c9gkgr>

Lesson 15: Chemistry Only

Oak Resources

<https://classroom.thenational.academy/lessons/review-gcse-chemistry-6gup2c>

Chemistry

Chemical change

Lesson 1: Redox Reactions

Oak resources

<https://classroom.thenational.academy/lessons/redox-6hj3gt>

<https://classroom.thenational.academy/lessons/redox-higher-tier-75h68c>

Lesson 2: Reactivity of metals

Oak resources

<https://classroom.thenational.academy/lessons/investigating-the-reactivity-of-metals-cmu32e>

Lesson 3: The reactivity Series

Oak resources

<https://classroom.thenational.academy/lessons/displacement-reactions-of-metals-c5hk6r>

Lesson 4: Neutralisation of acids and salt production

Oak resources

<https://classroom.thenational.academy/lessons/acid-base-reactions-cgt66t>

<https://classroom.thenational.academy/lessons/acid-base-reactions-cgt66t>

<https://classroom.thenational.academy/lessons/observations-from-acid-base-reactions-68w36d>

Lesson 5: Acid base ionic Equations

Oak Resources

<https://classroom.thenational.academy/lessons/acid-base-ionic-equations-74r62c>

Lesson 6: Soluble Salts

Oak resources

Oak Resources

<https://classroom.thenational.academy/lessons/internal-energy-70t6ad>

Lesson 5: Heating and Cooling**Oak Resources**

<https://classroom.thenational.academy/lessons/heating-and-cooling-substances-c4wp4c>

Lesson 6: Latent heat**Oak Resources**

<https://classroom.thenational.academy/lessons/latent-heat-chjk2r>

Lesson 7: Specific Heat Capacity RP**Oak Resources**

<https://classroom.thenational.academy/lessons/specific-heat-capacity-required-practical-69j66r>

Lesson 8: Particle motion in gases (Physics Only)**Oak Resources**

<https://classroom.thenational.academy/lessons/gas-pressure-69hp6r>

Lesson 9: Pressure in gases (Physics only)**Oak Resources**

<https://classroom.thenational.academy/lessons/pressure-and-volume-part-2-6xhkjr>

Lesson 10: Calculations**Oak Resources**

<https://classroom.thenational.academy/lessons/multi-step-energy-calculations-crv36r>

Lesson 11: Review**Oak Resources**

<https://classroom.thenational.academy/lessons/review-part-1-6mupcr>

Lesson 12: Further Reading**Oak Resources**

<https://classroom.thenational.academy/lessons/case-study-joseph-black-6ct6cc>

<https://classroom.thenational.academy/lessons/the-gravitational-potential-store-crr6ar>

Lesson 9: Elastic potential energy**Oak Resources**

<https://classroom.thenational.academy/lessons/the-elastic-potential-store-70u62t>

Lesson 10: Specific heat capacity**Oak Resources**

<https://classroom.thenational.academy/lessons/specific-heat-capacity-chhp6r>

Lesson 11: Power**Oak Resources**

<https://classroom.thenational.academy/lessons/power-crvk4c>

Lesson 12: Non renewable energy resources**Oak Resources**

<https://classroom.thenational.academy/lessons/non-renewable-energy-resources-6rupcd>

Lesson 13: Renewable energy resources**Oak Resources**

<https://classroom.thenational.academy/lessons/renewable-energy-resources-ccu6cr>

Lesson 14: National Grid**Oak Resources****Lesson 15: National and Global energy resources****Oak Resources****Lesson 16: Calculations****Oak Resources**

<https://classroom.thenational.academy/lessons/multi-step-calculations-for-the-energy-topic-ctgp4e>

Lesson 17: Review**Oak Resources**

<https://classroom.thenational.academy/lessons/energy-review-6rtkgt>

<https://classroom.thenational.academy/lessons/making-salts-crw68c>

Lesson 7: The pH scale and neutralisation**Oak resources**

<https://classroom.thenational.academy/lessons/acids-alkalis-and-the-ph-scale-chj38c>

Lesson 8: Titrations (Chemistry Only)**Oak resources**

<https://classroom.thenational.academy/lessons/titrations-6gv3et>

<https://classroom.thenational.academy/lessons/processing-titration-results-6crp6e>

Lesson 9: Strong and weak acids (HT)**Oak resources**

<https://classroom.thenational.academy/lessons/strong-and-weak-acids-ctk34d>

Lesson 10: Electrolysis**Oak resources**

<https://classroom.thenational.academy/lessons/electrolysis-of-solutions-cmv3ge>

Lesson 11: Electrolysis of molten ionic compounds**Oak resources**

<https://classroom.thenational.academy/lessons/electrolysis-of-molten-compounds-cgw66t>

Lesson 12: Using electrolysis to extract metals**Oak resources**

<https://classroom.thenational.academy/lessons/extraction-of-aluminium-68w38r>

<https://classroom.thenational.academy/lessons/extraction-of-aluminium-68w38r>

Lesson 13: Electrolysis of Aqueous materials**Oak resources**

Lesson 18: Further Reading

Oak Resources

<https://classroom.thenational.academy/lessons/case-study-esther-takeuchi-69hp8e>

<https://classroom.thenational.academy/lessons/electrolysis-of-solutions-cmv3ge>

Lesson 14: Representation of reactions at electrode as a half equation (HT)

Oak resources

<https://classroom.thenational.academy/lessons/developing-an-electrolysis-hypothesis-6rw3gd>

<https://classroom.thenational.academy/lessons/electrolysis-half-equations-c8r6ar>

Lesson 15: Review learning

Oak Resources:

<https://classroom.thenational.academy/lessons/reactivity-and-acid-base-reactions-review-60r32d>

<https://classroom.thenational.academy/lessons/chemical-change-higher-tier-review-cct6cd>

Lesson 16: Working Scientifically: Writing a method

Oak Resources:

<https://classroom.thenational.academy/lessons/writing-a-method-crv32c>

Physics

Electricity

Lesson 1: Electrical Circuits

Oak Resources:

<https://classroom.thenational.academy/lessons/drawing-electrical-circuits-c9hpcc>

Lesson 2: Charge and Current

Oak Resources:

<https://classroom.thenational.academy/lessons/charge-and-current-64r36t>

Lesson 3: Potential Difference

Oak Resources:

<https://classroom.thenational.academy/lessons/potential-difference-74tk4c>

Lesson 4: Electrical Resistance

Oak Resources:

<https://classroom.thenational.academy/lessons/electrical-resistance-6wvk4t>

Lesson 5: Series Circuits

Oak Resources:

<https://classroom.thenational.academy/lessons/series-circuits-6wrpad>

Lesson 6: Parallel Circuits

Oak Resources:

<https://classroom.thenational.academy/lessons/parallel-circuits-68w3ct>

Lesson 7: Series and Parallel Circuits

Oak Resources:

<https://classroom.thenational.academy/lessons/series-and-parallel-circuits-69jk8c>

Lesson 8: Resistors

Oak Resources:

<https://classroom.thenational.academy/lessons/properties-of-resistors-6nhp2c>

Lesson 9: Filaments

Oak Resources:

<https://classroom.thenational.academy/lessons/filament-lamps-71j34r>

Lesson 10: Diodes

Oak Resources:

<https://classroom.thenational.academy/lessons/diodes-6gtpcr>

Lesson 11: LDR

Oak Resources:

<https://classroom.thenational.academy/lessons/light-dependent-resistors-chhk8c>

Lesson 12: Thermistors

Oak Resources:

<https://classroom.thenational.academy/lessons/thermistors-cgr68d>

Lesson 13: Domestic electricity

Oak Resources:

<https://classroom.thenational.academy/lessons/domestic-electricity-c4rp8t>

Lesson 14: Power

Oak Resources:

<https://classroom.thenational.academy/lessons/electrical-power-part-1-6hjk6r>

<https://classroom.thenational.academy/lessons/electrical-power-part-2-cgvkjc>

Lesson 15: Calculations

Oak Resources:

<https://classroom.thenational.academy/lessons/multi-step-calculations-6cwkgd>

Lesson 16: Energy transfer in everyday appliances

Oak Resources:

Lesson 17: National Grid

Oak Resources:

<https://classroom.thenational.academy/lessons/the-national-grid-c4rp6t>

Lesson 18: Static electricity (Physics only)

Oak Resources:

<https://classroom.thenational.academy/lessons/static-electricity-74t32t>

Lesson 19: Electric Fields (Physics Only)

Oak Resources:

<https://classroom.thenational.academy/lessons/electric-fields-65hk8c>

Lesson 20: Review Learning

Oak Resources

			https://classroom.thenational.academy/lessons/review-of-electrical-circuits-6qv3gc
Related Concepts (that are revisited)	<p>PHYSICS: Particle model and change of state (Year 8) Pressure in gases (year 7)</p> <p>BIOLOGY: Cell structure, specialised cells, microscopy, diffusion (year 7)</p> <p>CHEMISTRY: Atoms, compounds, elements, mixtures (year 7)</p>	<p>PHYSICS: Energy stores and energy transfers, National Grid, Renewable and non-renewable energy resources (year 8) BIOLOGY: Photosynthesis and respiration when discussing cell structures (year 7), photosynthesis and respiration (year 8) Health (Year 8)</p> <p>CHEMISTRY: state symbols (year 8), three states of matter (year 7)</p>	<p>PHYSICS: Electricity (Year 8) BIOLOGY: Principles of organisation (year 7) Organ systems Health (year 8), Digestive system.</p> <p>CHEMISTRY Chemical Reactions (Year 7) Elements, compounds and mixtures (Year 8) Endothermic and exothermic reactions (Year 7) Separation techniques (Year 7) Chromatography (Year 8)</p>
Skills being taught	<p><u>Mathematical Skills:</u> Interpretation of data Drawing graphs and tables Analysing data <u>Literacy Skills</u> Key terms taught using decode it Written communication Oral Communication</p>	<p><u>Mathematical Skills:</u> Interpretation of data Drawing graphs and tables Analysing data <u>Literacy Skills</u> Key terms taught using decode it Written communication Oral Communication</p>	<p><u>Mathematical Skills:</u> Interpretation of data Drawing graphs and tables Analysing data <u>Literacy Skills</u> Key terms taught using decode it Written communication Oral Communication</p>

Milestone assessments	<p>Mini assessments to identify gaps in knowledge</p> <p>Quick quizzes</p> <p>Retrieval practice in DIN</p> <p>Lots of practice of exam questions in the lessons</p>	<p>Mini assessments to identify gaps in knowledge</p> <p>Quick quizzes</p> <p>Retrieval practice in DIN</p> <p>Lots of practice of exam questions in the lessons</p>	<p>Mini assessments to identify gaps in knowledge</p> <p>Quick quizzes</p> <p>Retrieval practice in DIN</p> <p>Lots of practice of exam questions in the lessons</p>
Wider reading	<p>GCSE Bitesize</p> <p>Exposure to reading for learning in the lesson</p> <p>So COOL</p>	<p>GCSE Bitesize</p> <p>Exposure to reading for learning in the lesson</p> <p>So COOL</p>	<p>GCSE Bitesize</p> <p>Exposure to reading for learning in the lesson</p> <p>So COOL</p>
Literacy programme	<p>Key terms taught</p> <p>Opportunities to read Science material in lessons</p> <p>Independent writing</p>	<p>Key terms taught</p> <p>Opportunities to read Science material in lessons</p> <p>Independent writing</p>	<p>Key terms taught</p> <p>Opportunities to read Science material in lessons</p> <p>Independent writing</p>
JWS Science Resources	<p><u>Autumn</u></p> <p><u>Biology</u></p> <p>U:\Staff Drive\By Department\FACULTY\SCIENCE\YEAR 9\Autumn\Biology</p> <p><u>Chemistry</u></p> <p>U:\Staff Drive\By Department\FACULTY\SCIENCE\YEAR 9\Autumn\Chemistry</p> <p><u>Physics</u></p> <p>U:\Staff Drive\By Department\FACULTY\SCIENCE\YEAR 9\Autumn\Physics\Particles Paper 1</p>	<p><u>Spring</u></p> <p>U:\Staff Drive\By Department\FACULTY\SCIENCE\YEAR 9\Spring</p>	<p><u>Summer</u></p> <p><u>Biology</u></p> <p>U:\Staff Drive\By Department\FACULTY\SCIENCE\YEAR 9\Summer\Biology</p> <p><u>Chemistry</u></p> <p>U:\Staff Drive\By Department\FACULTY\SCIENCE\YEAR 9\Summer\Chemistry</p> <p><u>Physics</u></p> <p>U:\Staff Drive\By Department\FACULTY\SCIENCE\YEAR 9\Summer\Physics</p>