

Year 10 (Science) Curriculum Map 2021-2022

	Autumn Term	Spring Term	Summer Term
Unit Length	<p>Biology: Infectious Disease Oak Resources https://teachers.thenational.academy/units/infection-and-response-4f71</p> <p>Chemistry Quantitative Oak Resources https://teachers.thenational.academy/units/quantitative-chemistry-4db7 Chemical Changes Oak resources https://teachers.thenational.academy/units/chemical-changes-a5ba Energy Changes Oak Resources https://teachers.thenational.academy/units/energy-changes-b607</p> <p>Physics: Atomic Structure Oak Resource https://teachers.thenational.academy/units/atomic-structure-d811 Magnets Oak resources https://teachers.thenational.academy/units/magnetism-bf8d</p>	<p>Biology: Homeostasis Oak Resources https://teachers.thenational.academy/units/homeostasis-and-response-ft-d80b</p> <p>Chemistry Rates and extent of reactions Oak Resources https://teachers.thenational.academy/units/the-rate-and-extent-of-chemical-change-0530</p> <p>Physics: Waves Oak Resource: https://teachers.thenational.academy/units/waves-4cef</p>	<p>Biology: Ecology Oak resources https://teachers.thenational.academy/units/ecology-a6da</p> <p>Chemistry Chemical Analysis Oak Resource: https://teachers.thenational.academy/units/chemical-analysis-cf8d</p> <p>Physics: Forces Oak Resources: https://teachers.thenational.academy/units/forces-6562</p>
Links to the National curriculum/Assessment Objectives	<p>In year 10, 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>AC1 will be previous exam questions using Exampro, where knowledge from year 9 and 10 will be tested.</p> <p>AC2 will be paper 1 from 2018-2019</p> <p>AC3 will be Paper 1 from 2019-2020</p> <p>Pupils will be challenged to apply knowledge of understanding to unfamiliar concepts.</p>		

Assessments will be made from previous exam questions using Exampro.

Description of the topic and key learning outcomes (key knowledge and understanding)

Biology

BIOLOGY

Infection and response

Lesson 1: Communicable (infectious) diseases

Oak Resources

<https://classroom.thenational.academy/lessons/infectious-disease-6wu3ce>

Lesson 2: Viral and Bacterial diseases

Oak Resources

<https://classroom.thenational.academy/lessons/viral-and-bacterial-disease-68v3at>

Lesson 3: Fungal and Protist diseases

Oak Resources

<https://classroom.thenational.academy/lessons/fungal-and-protist-disease-6xk3gt>

Lesson 4: Human defence systems

Oak Resources

<https://classroom.thenational.academy/lessons/immunity-cn3ad>

Lesson 5: Vaccination

Oak Resources

<https://classroom.thenational.academy/lessons/vaccines-70u6cc>

Lesson 6: Antibiotics and painkillers

Oak Resources

<https://classroom.thenational.academy/lessons/antibiotics-6qv62c>

Lesson 7: Maths Skills

Oak Resources

<https://classroom.thenational.academy/lessons/maths-skills-6nj6cc>

Lesson 8: Discovery and development of drugs

Oak Resources

<https://classroom.thenational.academy/lessons/testing-drugs-part-1-6wwker>

<https://classroom.thenational.academy/lessons/testing-drugs-part-2-60r32c>

Biology

Homeostasis

Lesson 1: The human nervous system structure and function

Oak Resource:

<https://classroom.thenational.academy/lessons/the-nervous-system-6rt64e>

Lesson 2: Reflex Arc

Oak Resource:

<https://classroom.thenational.academy/lessons/reflex-arcs-6hhp4r>

Lesson 3: The brain (bio only)

Oak Resource:

<https://classroom.thenational.academy/lessons/the-brain-64rk4c>

Lesson 4: The eye (bio only)

Oak Resource:

<https://classroom.thenational.academy/lessons/the-eye-61h64e>
<https://classroom.thenational.academy/lessons/correcting-vision-68w3at>

Lesson 5: Control of body temperature (bio only)

Oak Resource:

<https://classroom.thenational.academy/lessons/regulating-body-temperature-68v38e>

Lesson 6: Hormonal coordination in humans, human endocrine system

Oak Resource:

<https://classroom.thenational.academy/lessons/hormonal-responses-cqr3ed>

Lesson 7: Control of blood glucose concentration

Oak Resource:

<https://classroom.thenational.academy/lessons/controlling-blood-sugar-levels-higher-71k32c>

Biology

Ecology

Lesson 1: Communities

Oak Resources:

<https://classroom.thenational.academy/lessons/communities-64vkcc>

Lesson 2: Abiotic factors and Biotic factors

Oak Resources:

<https://classroom.thenational.academy/lessons/biotic-and-abiotic-factors-6cw3jc>

Lesson 3: Adaptations

Oak Resources:

<https://classroom.thenational.academy/lessons/adaptations-6gt64r>

Lesson 4: Sampling RP

Oak Resources:

<https://classroom.thenational.academy/lessons/sampling-required-practical-1-6rwkjc>

Lesson 5: Using transects RP

Oak Resources:

<https://classroom.thenational.academy/lessons/plant-diseases-and-deficiencies-part-2-71h32t>

Lesson 5: Biomass

Oak Resources:

<https://classroom.thenational.academy/lessons/biomass-64rpcc>

Lesson 6: Food production and security (bio only)

Oak Resources:

<https://classroom.thenational.academy/lessons/food-security-and-farming-6mw3gr>

Lesson 7: Biomass

Oak Resources

<https://classroom.thenational.academy/lessons/biomass-64rpcc>

Lesson 9: Producing monoclonal antibodies (bio only)

Oak Resources

<https://classroom.thenational.academy/lessons/monoclonal-antibodies-6djp2t>

Lesson 10: Uses of monoclonal antibodies (bio only)

Lesson 11: Plant diseases (bio only)

Oak Resources

Lesson 12: Detection and identification of plant diseases (bio only)

Oak Resources

<https://classroom.thenational.academy/lessons/plant-diseases-and-deficiencies-part-1-61jpcd>

Lesson 13: Plant defence responses (bio only)

Oak Resources

<https://classroom.thenational.academy/lessons/plant-diseases-and-deficiencies-part-2-cnjp6r>

Lesson 14 Review

Oak Resources

<https://classroom.thenational.academy/lessons/review-part-1-crt3ec>
<https://classroom.thenational.academy/lessons/review-part-2-6crp2e>

Lesson 15 Review BIOLOGY ONLY

Oak Resources

<https://classroom.thenational.academy/lessons/review-bio-only-6ngpae>

Lesson 16 Exam Techniques

Oak Resources

<https://classroom.thenational.academy/lessons/exam-skills-6wr62r>

Lesson 17 Research

Oak Resources

<https://classroom.thenational.academy/lessons/kelly-chibale-drug-production-71j34t>

Chemistry:

Quantitative

Lesson 8: Diabetes

Oak Resource

<https://classroom.thenational.academy/lessons/diabetes-chi6ad>

Lesson 9: Maintain water and nitrogen balance in the body (bio only)

Oak resources

<https://classroom.thenational.academy/lessons/water-balance-6cu3ec>

Lesson 10: Kidney failure:

Oak Resource

<https://classroom.thenational.academy/lessons/kidney-failure-69gpct>

Lesson 11: Hormones in human reproduction

Oak Resource:

<https://classroom.thenational.academy/lessons/hormones-in-reproduction-higher-cdhket>

Lesson 12: Contraception

Oak Resource:

Lesson 13: The use of hormones to treat infertility (HT only)

Oak Resource:

Lesson 14: Plant hormones (bio only)

Oak Resource:

<https://classroom.thenational.academy/lessons/required-practical-plant-hormones-part-1-cgrkjc>

<https://classroom.thenational.academy/lessons/required-practical-plant-hormones-part-1-cgrkjc>

Lesson 15: Use of plant hormones (HT only)

Oak Resource:

<https://classroom.thenational.academy/lessons/required-practical-plant-hormones-part-2-6mu3ct>

Chemistry

Rates of Reaction

Lesson 1: The rate and extent of chemical change

Oak Resource:

Lesson 2: Factors that affect the rate of chemical reactions

Lesson 8: Decomposition (bio only)

Oak Resources:

<https://classroom.thenational.academy/lessons/decay-6crkjd>

Lesson 9: Decomposition RP (bio only)

Oak Resources:

<https://classroom.thenational.academy/lessons/decay-required-practical-cdj30c>

Lesson 10: Biodiversity

Oak Resources

<https://classroom.thenational.academy/lessons/biodiversity-cmrk8r>

Lesson 11: Water Cycle

Oak Resource

<https://classroom.thenational.academy/lessons/cycles-c8rkat>

Lesson 12: Water Cycle

Oak Resource

<https://classroom.thenational.academy/lessons/cycles-c8rkat>

Lesson 12: Global warming

Oak Resources:

<https://classroom.thenational.academy/lessons/global-warming-6ww64c>

Lesson 13: Review

Oak Resources:

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

<https://classroom.thenational.academy/lessons/review-part-2-75k36d>

<https://classroom.thenational.academy/lessons/review-part-3-cnj36d>

Lesson 13: Maths Skills

Oak Resources:

<https://classroom.thenational.academy/lessons/maths-skills-cmt3gc>

Lesson 13: Further Reading

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-ft-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 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:

Oak Resource:

<https://classroom.thenational.academy/lessons/rate-of-reaction-68uk8t>

Lesson 3: Collision theory and activation energy

Oak Resource:

<https://classroom.thenational.academy/lessons/collision-theory-6hjk4c>

Lesson 4: Catalysts

Oak Resource:

<https://classroom.thenational.academy/lessons/catalysts-6rr3ad>

Lesson 5: Reversible reactions and dynamic equilibrium

Oak Resource:

<https://classroom.thenational.academy/lessons/reversible-reactions-70r3gd>

Lesson 6: Energy changes and reversible reactions

Oak Resource:

Lesson 7: Equilibrium

Oak Resource:

<https://classroom.thenational.academy/lessons/le-chateliers-principle-uses-in-industry-60w3gd>

Lesson 8: The effect of changing conditions on equilibrium (HT only)

Oak Resource:

Lesson 9: The effect of changing concentration (HT only)

Oak Resource:

<https://classroom.thenational.academy/lessons/le-chateliers-principle-effect-of-changing-concentration-and-temperature-6cv68t>

Lesson 10: The effect of temperature changes on equilibrium (HT only)

Oak Resource:

<https://classroom.thenational.academy/lessons/effect-of-changing-temperature-on-rate-of-reaction-6wu6cd>

Lesson 11: The effect of pressure changes on equilibrium (HT only)

Oak Resource:

Oak Resources:

<https://classroom.thenational.academy/lessons/case-study-dr-beth-penrose-cgw68c>

Chemistry

Chemical Analysis

Lesson 1: Pure and Impure substances

Oak resources

<https://classroom.thenational.academy/lessons/pure-and-impure-formulations-cgvp4t>

Lesson 2: Chromatography

Oak resources

<https://classroom.thenational.academy/lessons/chromatography-61gkcd>

Lesson 3: Interpreting Chromatograms

Oak resources

<https://classroom.thenational.academy/lessons/interpreting-chromatograms-6ct6ae>

Lesson 4: Testing gases

Oak resources

<https://classroom.thenational.academy/lessons/testing-gases-ccrp4r>

Lesson 5: Positive Ions

Oak resources

<https://classroom.thenational.academy/lessons/identifying-positive-ions-75j3ce>

Lesson 6: Testing for negative ions

Oak resources

<https://classroom.thenational.academy/lessons/testing-for-negative-ions-cdk64c>

Lesson 7: Identifying ions (physics Only)

Oak resources

<https://classroom.thenational.academy/lessons/ion-identification-problems-6hkh8d>

Lesson 8: Flame Tests (physics Only)

Oak resources

<https://classroom.thenational.academy/lessons/flame-emission-spectroscopy-60r30d>

Lesson 9: Review

<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/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/effect-of-changing-pressure-on-rate-of-reaction-6tjker>

Lesson 12: The effect of changing Surface area on rate of reaction

Oak Resource:

<https://classroom.thenational.academy/lessons/effect-of-changing-surface-area-on-rate-of-reaction-c9k32t>

Lesson 13: Oak Revision materials:

<https://classroom.thenational.academy/lessons/the-rate-and-extent-of-chemical-change-review-part-1-61gp6d>

<https://classroom.thenational.academy/lessons/the-rate-and-extent-of-chemical-change-review-part-2-6hhkgc>

Physics

Waves

Lesson 1: Wave properties and types

Oak Resources

<https://classroom.thenational.academy/lessons/wave-properties-60vk0d>

Lesson 2: Wave Speed

Oak Resources

<https://classroom.thenational.academy/lessons/calculations-with-waves-6xh66e>

Lesson 3: Waves in air solids and fluids

Oak Resources

Lesson 4: Reflection (Physics only)

Oak Resources

<https://classroom.thenational.academy/lessons/reflecton-60v3ad>

Lesson 5: Refraction (Physics only)

Oak Resources

<https://classroom.thenational.academy/lessons/refraction-cmr64c>

Lesson 6: Sound waves (Physics only)

Oak Resources

<https://classroom.thenational.academy/lessons/sound-64u3gt>

Lesson 7: Hearing (Physics only)

Oak resources

<https://classroom.thenational.academy/lessons/review-part-1-6cvk0c>

<https://classroom.thenational.academy/lessons/review-part-2-cnhp6t>

<https://classroom.thenational.academy/lessons/review-part-3-6cu36r>

Lesson10 Further Reading

Oak resources

<https://classroom.thenational.academy/lessons/scientist-profile-angela-lamb-c4v38c>

PHYSICS

FORCE

Lesson 1: What are Forces

Oak Resources

<https://classroom.thenational.academy/lessons/forces-an-introduction-cgwk0d>

Lesson 2: Gravity

Oak Resources

<https://classroom.thenational.academy/lessons/weight-mass-and-gravity-74t32d>

Lesson 3: Resultant Forces

Oak Resources

<https://classroom.thenational.academy/lessons/resolving-forces-ht-6hgp4r>

Lesson 4: Work Done

Oak Resources

<https://classroom.thenational.academy/lessons/forces-and-work-6ngkec>

Lesson 5: Hookes Law

Oak Resources

<https://classroom.thenational.academy/lessons/forces-and-elasticity-part-1-6tjp8c>

Lesson 6: Hookes Law 2

Oak Resources

<https://classroom.thenational.academy/lessons/forces-and-elasticity-part-2-70vk6t>

Lesson 7: Newtons Laws

<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

<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/titration-s-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

Oak Resources

Lesson 8:Ultrasound and Seismic waves (Physics only)

Oak Resources

<https://classroom.thenational.academy/lessons/ultrasound-and-seismic-waves-ccrkge>

Lesson 9:Waves for detection and exploitation (Physics only)

Oak Resources

Lesson 10:Electromagnetic Spectrum

Oak Resources

<https://classroom.thenational.academy/lessons/electromagnetic-spectrum-part-1-6dk62r>

Lesson 11:properties,uses and dangers

Oak Resources

<https://classroom.thenational.academy/lessons/electromagnetic-spectrum-part-2-c9h3cr>

Lesson 12:Infrared

Oak Resources

<https://classroom.thenational.academy/lessons/infrared-60u3cd>

Lesson 13:Lenses (Physics only)

Oak Resources

Lesson 14:Visible Light (Physics only)

Oak Resources

Lesson 15:Black body (Physics only)

Oak Resources

Oak Resources

<https://classroom.thenational.academy/lessons/newtons-laws-c9k3at>

Lesson 7: Speed

Oak Resources

<https://classroom.thenational.academy/lessons/speed-c5jp4t>

Lesson 8: Distance time graphs

Oak Resources

Lesson 9: Velocity time graphs

Oak Resources

<https://classroom.thenational.academy/lessons/velocity-time-graphs-6wr3gr>

Lesson 10: Terminal velocity

Oak Resources

<https://classroom.thenational.academy/lessons/terminal-velocity-75hkec>

Lesson 11: Acceleration

Oak Resources

Lesson 12: Acceleration RP

Oak Resources

<https://classroom.thenational.academy/lessons/acceleration-rpa-part-1-6xhp2c>

<https://classroom.thenational.academy/lessons/acceleration-rpa-part-2-c4v3gr>

Lesson 13: Stopping distances

Oak Resources

<https://classroom.thenational.academy/lessons/stopping-distance-6wvk4c>

Lesson 14: Momentum

Oak Resources

<https://classroom.thenational.academy/lessons/momentum-64r6ad>

Lesson 15: Car safety

Oak Resources

<https://classroom.thenational.academy/lessons/collisions-and-car-safety-crwkce>

<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

<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>

Chemistry

Energy changes

Lesson 1: Exothermic and endothermic reactions

Oak Resources:

<https://classroom.thenational.academy/lessons/exothermic-and-endothermic-reactions-cgw32t>

Lesson 2: Energy transferred during endothermic and exothermic reactions

Oak Resources:

<https://classroom.thenational.academy/lessons/required-practical-temperature-change-part-1-6tgp8c>

Lesson 16: Moments and levers (Physics Only)

Oak Resources

<https://classroom.thenational.academy/lessons/moments-and-levers-cmrk4r>

Lesson 17: Moments and gears (Physics Only)

Oak Resources

<https://classroom.thenational.academy/lessons/moments-and-gears-c8vp8t>

Lesson 18: Pressure (Physics Only)

Oak Resources

<https://classroom.thenational.academy/lessons/pressure-6xgkgc>

Lesson 19: Pressure in liquids (Physics Only)

Oak Resources

<https://classroom.thenational.academy/lessons/pressure-in-fluids-64t6ar>

Lesson 20: Atmospheric Pressure (Physics Only)

Oak Resource

<https://classroom.thenational.academy/lessons/atmospheric-pressure-74upct>

Lesson 21: Review (Combined Only)

Oak Resources

<https://classroom.thenational.academy/lessons/combined-science-review-6mw3gc>

Lesson 22: Review (Physics Only)

Oak Resources

<https://classroom.thenational.academy/lessons/physics-only-review-chj3cd>

Lesson 23: Further Reading

Oak Resources

<https://classroom.thenational.academy/lessons/case-study-sir-isaac-newton-e9jp6g>

<https://classroom.thenational.academy/lessons/required-practical-temperature-change-part-2-ccwkjt>

Lesson 3: Reaction Profile

Oak Resources:

<https://classroom.thenational.academy/lessons/energy-level-diagrams-cgv68e>

Lesson 4: Energy changes of a reaction (HT)

Oak Resources:

<https://classroom.thenational.academy/lessons/calculating-bond-energies-68tker>

Lesson 5: Cells and Batteries (Chemistry Only)

Oak Resources:

Lesson 6: Fuel Cells (Chemistry Only)

Oak Resources:

<https://classroom.thenational.academy/lessons/fuel-cells-cguk4d>

Lesson 7: Combined Review

Oak Resources:

<https://classroom.thenational.academy/lessons/review-combined-64u3ar>

Lesson 8: Chemistry Review

Oak Resources:

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

Atomic Structure

Lesson 1: Atoms and their structure

Oak Resources

<https://classroom.thenational.academy/lessons/exploring-inside-an-atom-c9h6ac>

Lesson 2: Isotopes

Oak Resources

<https://classroom.thenational.academy/lessons/isotopes-and-ionisation-crrk8c>

Lesson 3: The development of the model of the atom

Oak Resources

<https://classroom.thenational.academy/lessons/history-of-atomic-models-c8wk2t>

Lesson 4: Radioactive decay

Oak Resources

<https://classroom.thenational.academy/lessons/radioactivity-6tgkjc>

Lesson 5: Decay equation (Physics Only)

Oak Resources

<https://classroom.thenational.academy/lessons/decay-equations-crup6d>

Lesson 6: Half life

Oak Resources

<https://classroom.thenational.academy/lessons/activity-and-half-life-ht-c9jk6d>

Lesson 7: Radioactive contamination

Oak Resources

<https://classroom.thenational.academy/lessons/uses-and-hazards-of-radiation-combined-science-only-74uk6d>

Lesson 8: Background radiation (Physics Only)

Oak Resources

<https://classroom.thenational.academy/lessons/hazards-of-radiation-physics-only-c5j6ad>

Lesson 9: Uses of nuclear radiation

Oak Resources

<https://classroom.thenational.academy/lessons/uses-of-radiation-physics-only-cdh3gt>

Lesson 10: Nuclear Fission and Fusion (Physics Only)

Oak Resources

<https://classroom.thenational.academy/lessons/fission-and-fusion-70tk6c>

Lesson 11: Review

<https://classroom.thenational.academy/lessons/p4-atomic-structure-review-part-1-6rv38d>

Physics

Magnetism and Electromagnets

Lesson 1: Magnetism

Oak Resources:

<https://classroom.thenational.academy/lessons/magnetism-75jpad>

Lesson 2: Magnetic Fields

Oak Resources:

<https://classroom.thenational.academy/lessons/magnetic-fields-61jkcc>

Lesson 3: Electromagnetism

Oak Resources:

<https://classroom.thenational.academy/lessons/electromagnetism-cgv64r>

Lesson 4: The motor Effect and left hand rule (Physics Only)

Oak Resources:

<https://classroom.thenational.academy/lessons/the-motor-effect-and-left-hand-rule-cctp8c>

Lesson 5: $F = B \times I \times l$

Oak Resources:

<https://classroom.thenational.academy/lessons/f-b-i-l-74uk4d>

Lesson 6: Electric Motors (Physics Only)

Oak Resources:

<https://classroom.thenational.academy/lessons/dc-motors-74r32c>

Lesson 7: Induced potential (Physics Only)

Oak Resources:

<https://classroom.thenational.academy/lessons/electromagnetic-induction-and-generators-6dhkge>

Lesson 8: Use of the generator effect (Physics Only)

Oak Resources:

<https://classroom.thenational.academy/lessons/electromagnetic-devices-ctjk2d>

Lesson 9: Transformers (Physics Only)

Oak Resources:

<https://classroom.thenational.academy/lessons/transformers-cgvp8c>

Lesson 10: Transformer equation (Physics Only)

Oak Resources:

Lesson 11: Transformers (Physics Only)

Oak Resources:

<https://classroom.thenational.academy/lessons/transformer-equations-75jkae>

Lesson 12: Review

Oak Resources:

<https://classroom.thenational.academy/lessons/p7-magnetism-revision-part-1-6cv3gc>

<https://classroom.thenational.academy/lessons/p7-magnetism-revision-part-1-6cv3gc>

Lesson 12: Further Reading

Oak Resources:

<https://classroom.thenational.academy/lessons/case-study-nikola-tesla-68tp2c>

Related Concepts (that are revisited)

BIOLOGY:
Health organ systems (Year 8)

CHEMISTRY: Chemical Reactions (Year 7)
Elements, compounds and mixtures (Year 8)
Separation techniques (Year 7)
Endothermic and exothermic reactions (Year 7)

PHYSICS:
Atomic structure (Year 9))
Particle model (Year 7)
Atomic structure (Year 8)
Melting and boiling Point (Year 8)

BIOLOGY
Health (Year 8)

CHEMISTRY
Chemical Reactions (Year 7)
Elements, compounds and mixtures (Year 8)

PHYSICS: Sound and hearing (year 7)
Properties and characteristics of waves, reflection, refraction, wave speed (year 8)

PHYSICS
Forces (Year 7)

CHEMISTRY
Elements, compounds and mixtures (Year 8)
Separation techniques (Year 7)
Chromatography (Year 8)

BIOLOGY
Adaptations (Year 8)
Competition (Year 8)
Natural Selection (Year 8)
Extinction (Year 8)

Skills being taught

Mathematical Skills:
Interpretation of data
Drawing graphs and tables
Analysing data

Literacy Skills
Key terms taught using decode it
Written communication
Oral Communication

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Milestone assessments	Mini assessments to identify gaps in knowledge Quick quizzes Retrieval practice in DIN Lots of practice of exam questions in the lessons	Mini assessments to identify gaps in knowledge Quick quizzes Retrieval practice in DIN Lots of practice of exam questions in the lessons	Mini assessments to identify gaps in knowledge Quick quizzes Retrieval practice in DIN Lots of practice of exam questions in the lessons
Wider reading	GCSE Bitesize Exposure to reading for learning in the lesson So COOL	GCSE Bitesize Exposure to reading for learning in the lesson So COOL	GCSE Bitesize Exposure to reading for learning in the lesson So COOL
Literacy programme	Key terms taught Opportunities to read Science material in lessons Independent writing	Key terms taught Opportunities to read Science material in lessons Independent writing	Key terms taught Opportunities to read Science material in lessons Independent writing
Homework	Exam question Retrieval questions, Quick fire Key term definitions	Exam question Retrieval questions, Quick fire Key term definitions	Exam question Retrieval questions, Quick fire Key term definitions
Links to learning Program	<u>Biology</u> U:\Staff Drive\By Department\FACULTY\SCIENCE\YEAR 10\Autumn\Biology <u>Chemistry</u> U:\Staff Drive\By Department\FACULTY\SCIENCE\YEAR 10\Autumn\Chemistry <u>Physics</u> U:\Staff Drive\By Department\FACULTY\SCIENCE\YEAR 10\Autumn\Physics	<u>Biology</u> U:\Staff Drive\By Department\FACULTY\SCIENCE\YEAR 10\Spring\Biology <u>Chemistry</u> U:\Staff Drive\By Department\FACULTY\SCIENCE\YEAR 10\Spring\Chemistry <u>Physics</u> U:\Staff Drive\By Department\FACULTY\SCIENCE\YEAR 10\Spring\Physics	<u>Biology</u> U:\Staff Drive\By Department\FACULTY\SCIENCE\YEAR 10\Summer\Biology <u>Chemistry</u> U:\Staff Drive\By Department\FACULTY\SCIENCE\YEAR 10\Summer\Chemistry <u>Physics</u> U:\Staff Drive\By Department\FACULTY\SCIENCE\YEAR 10\Summer\Physics

