

YEAR 11 REVISION PACK

2018-19 Half-term 2



Contents

- Art
- Biology
- Chemistry
- Classics
- Computer Science
- Economics
- English
- French
- Geography
- German
- History
- Maths
- Photography
- Physics

ART

Refer to your notes handed out in class, but your revision should include the following:

Coursework portfolio expectations

Mind Map – initial exploration of your chosen starting points.

Mood board of 20+ own photographs which relate to your chosen theme.

Collect and add other relevant research sources - exhibition leaflets, images, artefacts, poems, evidence of experiences, cultural sources, symbols, illustrations, fabrics, film, video or web based material, places, events, craft works, textures, etc.

Drawings

One A3 or two A4 or 4 A5 tonal pencil drawings from own photographs (biro, pencil, black in, fine liner).

Two A4 or four A5 colour drawings from your own photographs (ink, colour pencil, oil pastel etc).

One A3 or two A4 or 4 A5 drawings from your own photographs (collage/ text/Photoshop).

Artist Research: Use one to three pages of your sketchpad

Biographical information about the artist, their work and the art movement they belong to.
Detailed paragraph explaining your thoughts, feelings and opinion of the artist's work. Why do you have this opinion? How can their work inspire yours? What elements, key styles could you develop in your own work? How has the artist used the formal elements in their work?

An in-depth artist analysis of one piece of their work to show your understanding.

Artist interpretation(s) – A3 drawing or A3 page of drawings from own photographs/sources based on the style of your chosen artist, using appropriate medias which link to their style.

Artist Research 2: Use three pages of your sketchpad

Biographical information about the artist, their work and the art movement they belong to.
Detailed paragraph explaining your thoughts, feelings and opinion of the artist's work. Why do you have this opinion? How can their work inspire yours? What elements, key styles could you develop in your own work? How has the artist used the formal elements in their work?

An in-depth artist analysis of one piece of their work to show your understanding.

A4 artist copy of their work in a relevant medium.

Artist interpretation(s) – A3 drawing/ or A3 page of drawings from own photographs/sources based on the style of your chosen artist, using appropriate medias which link to their style.

TURN THE PAGE

Starting experimentation

Three A4 pages of experiments from own photographs/ sources (various sizes).

Chose parts of the photos and produce copied in experimental ways.

Using collage, graphite pencil, pen and ink, chalk, oil pastel, ink/ bleach, printing, acrylic, photo transfer, watercolour, mod rock, wire, clay.

Explore pattern, colour and texture.

Refine

Choose one image from experimentation to develop into an A3 mixed media piece. Choose a background paper- brown, graph, newspaper, mixed, to enlarge composition drawing onto. Use appropriate medias – watercolour, pens, acrylic or collage.

Develop

Choose one image from your own photographs/ sources/ sketchpad work to develop into a Printmaking outcome – 2/3 colour lino print/stencil print/extensive mono print/screen print.

Choose one image from your own photographs/ sources/ sketchpad work to develop into a 3D or Textile outcome. (outside of you book).

Design ideas

A4 refined composition ideas page. You must come up with two ideas.

Again, these must link to at least one artist you have researched and be from your own photographs and sources. They must be of good quality and be completed in relevant medias which link to techniques you have used in your portfolio.

A4 Final piece design- detailed annotation to explain intentions.

Exam final piece completed in 10 hour exam

TURN THE PAGE

BIOLOGY

Style of questions for your Mock paper

Fact recall questions: Label the organelles of a cell diagram, label the chambers of the heart; the formula for photosynthesis, the definition of an enzyme.

Analytical questions: Why do muscle cells have many mitochondria? What happens to the rate of photosynthesis if we increase the temperature?

Practical based questions: What is the food test for starch? At what temperature does lipase work best? How would you measure lipase activity?

Analysing practicals; How can you make this experiment more accurate? What are the errors in this experiment? Why should you use a digital stopwatch?

Graph and maths questions: Calculate the magnification of an object, explain the trend of the graph -why does amylase stop working? Why does the antibody concentration increase after the second injection of a vaccine?

Argumentative questions: What type of stem cell should you use to treat a disease? Should you use mechanical or biological valves in a heart surgery? You will be given information on the topics, which you will need to use in your arguments

Cells

Compare and contrast **prokaryotic** and **eukaryotic** cells, their structure and function.

Compare and contrast the organelles **of plant cells and animal cells** mitochondria, ribosomes, nucleus, cytoplasm, cell membrane, *only in plant cells:* vacuole, cell wall, chloroplasts. Link the organelles to their function (e.g. photosynthesis and respiration)

Give examples of **specialised cells** and their functions (e.g. red blood cells, nerve cells)

Explain how **magnification** works; magnification=size of image/ actual size of object

Describe how bacteria are grown and how to work aseptically (practical)

Cell division

Describe how DNA is organised into **chromosomes**

Describe the stages of **Mitosis**. Detailed knowledge is A-level.

Explain the term **stem cell**. Give example of their uses, and argue to pros and cons of using them.

TURN THE PAGE

Transport in cells

Describe the terms, **diffusion**, **osmosis** and **active transport** with examples (carbon dioxide, water, ions).

Explain the term **concentration gradient**, and why energy is needed to go against the gradient

Explain the **term water potential/ water gradient** in osmosis

Compare the effect of water movement in animal and plant cells (practical)

Link diffusion, osmosis and active transport to transport in plants and absorption of nutrients in the digestive system

The digestive system

Anatomy of the digestive system- mouth, oesophagus, stomach, liver, gall bladder, small and large intestine

Compare forms of digestion- mechanical and chemical (HCl)

Describe how the intestines are adapted to absorb nutrients

Describe the role of **enzymes** in digestion

Describe **food tests** (starch- iodine, proteins- biurets, glucose- benedict's solution)

The Circulatory system

Know the difference between **arteries** (away from heart) and **veins** (to the heart),

Label the **chambers of the heart** (2 atria, 2 ventricles, aorta, Vena cava, pulmonary artery, pulmonary vein). Show how the blood flows through the heart.

Describe how the cardiac cycle works. How does the heart pump blood?

Explain how a red blood cell is adapted (shape and haemoglobin) to its function

Knowledge of cardiovascular diseases, the impact of lifestyle and their treatments

Cancer

Describe cancer as uncontrolled cell division

Explain the terms benign, malignant and metastasis

Plant tissues

Describe the **transport system** of a plant; Xylem, phloem. Direction and what is transported

Describe the anatomy of a leaf and how it **is linked to photosynthesis**: stomata, guard cells, epidermis, palisade mesophyll, spongy mesophyll.

Communicable diseases

Give examples of viral (HIV), bacterial (salmonella), fungal (athletes' foot) and protozoal (malaria) diseases

TURN THE PAGE

Describe the first line of defence against pathogens (skin, stomach acid)

Describe the role of B cells in the immune response, and explain what an antibody is

Explain how vaccines are made, and how they make you immune to pathogens

Describe the action of antibiotics (on bacterial cell wall)

Describe how new medicines are made- pre clinical and clinical trials, and the use of placebo

Monoclonal antibodies

Describe how monoclonal antibodies are made, using mouse B cells and a cancer cell forming a hybridoma.

Describe uses of monoclonal antibodies

Plant disease and defences

Give examples of plant diseases and pathogens (bacteria, virus, fungus, protists and nutrients deficiencies)

Describe the plant's defence mechanisms to counter pathogens and herbivores

Photosynthesis

carbon dioxide+ water → glucose + oxygen

Describe factors affecting photosynthesis (heat, drought, sunlight, carbon dioxide)

Describe uses of glucose (starch and cellulose)

Respiration

Glucose+ oxygen→ water + carbon dioxide+ energy (aerobic)

Glucose → lactic acid + energy (anaerobic)

TURN THE PAGE



CHEMISTRY

Topic 1: Atomic structure and the Periodic Table

Success Criteria

Know all substances are made of atoms and an atom is the smallest part of an element that can exist.

Define mixture, compound, element and molecule.

Understand mixtures can be separated by physical processes e.g. filtration, crystallisation, distillation and chromatography.

Understand these physical processes do not involve chemical reactions and no new substances are made.

Know that the discovery of the electron led to the plum-pudding model of the atom. The plum-pudding model suggested that the atom was a ball of positive charge with negative electrons embedded in it.

Then the results from the Rutherford and Marsden's alpha scattering experiments led to the plum-pudding model being replaced by the nuclear model.

Bohr adapted the nuclear model by suggesting that electrons orbit the nucleus at specific distances. Later experiments led to the idea that the positive charge of any nucleus could be subdivided into a whole number of smaller particles, each particle having the same amount of positive charge. The name proton was given to these particles.

In 1932, the experimental work of James Chadwick provided the evidence to show the existence of neutrons within the nucleus. This was about 20 years after the nucleus became an accepted scientific idea.

Know the relative charges and masses for the three subatomic particles.

Atoms are very small, having a radius of about 0.1 nm (1×10^{-10} m). The radius of a nucleus is less than 1/10 000 of that of the atom (about 1×10^{-14} m). Almost all of the mass of an atom is in the nucleus.

The number of protons in an atom of an element is its atomic number. The sum of the protons and neutrons in an atom is its mass number (or nucleon number).

Atoms of the same element can have different numbers of neutrons; these atoms are called isotopes of that element.

Know how to draw electronic structure and write electronic configuration.

Know how elements on the periodic table are arranged.

Define 'valance electrons', and relate this key term to an element's group and chemical properties.

TURN THE PAGE



Be able to calculate the numbers of subatomic particles in an atom or ion, given its atomic number and mass number.

Know what Mendeleev did to help understanding of the modern periodic table.

Understand that elements that react to form positive ions are metals. Elements that do not form positive ions are non-metals.

Explain how the atomic structure of metals and non-metals relates to their position in the periodic table.

Know why group 0 elements – the noble gases – are unreactive and explain how properties of the elements in Group 0 depend on the outer shell of electrons of the atoms.-

Know how group 1 elements – the alkali metals – react with water and how they form hydroxides.

Know some key properties of group 1 metals e.g. they have a low density and they react with non-metals to form ionic compounds so that metal ion carries a charge of +1.

Know these ionic compounds formed by group 1 metals are white solids that can dissolve in water and form colourless solutions.

Explain why the further down the group the ALKALI METAL is the MORE reactive it is.

Group 7 elements – halogens – are non-metals, react with metals to form ionic compounds in which the halide ion carries a charge of -1.

The further down a HALOGEN is the LESS reactive it is.

The further down the group a HALOGEN is the higher its relative molecular mass, melting point and boiling point.

Understand that a more reactive halogen can displace a less reactive halogen from an aqueous solution of its salt.

Know some similarities and differences (compare and contrast) between group 1 elements and transition elements.

Know many transition elements have ions with different charges, form coloured compounds and are useful as catalysts.

The relative atomic mass of an element is an average value that takes account of the abundance of the isotopes of the element.

And also calculate the relative atomic mass of an element given the percentage abundance of its isotopes.

TURN THE PAGE

Topic 2: Bonding, structure and properties of matter

Success criteria

Know three types of strong chemical bonds (metallic, ionic and covalent).

Know what kind of atoms are involved in the 3 types of bonding.

Can explain chemical bonding in terms of electrostatic forces and the transfer or sharing of electrons

Explain the electronic structure of ions of Group 1, 2, and 7 elements

Can give basic description of an ionic bond and state why atoms react.

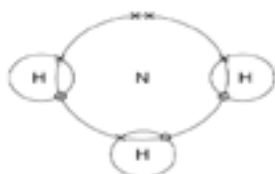
Explain the formation of ion.

Explain and work out the charge on an ion.

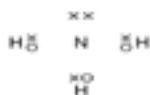
Know covalently bonded substances can have very large molecules, e.g. polymers

Also know covalently bonded substances can have giant covalent structures, e.g. diamond and silicon dioxide.

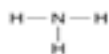
For ammonia (NH_3)



and/or



and/or



and/or



Can represent covalent bonds in four different ways

Can represent polymers in repeating units

Understand metals consist of giant structures of atoms arranged in regular pattern

Know electrons in the outer shell of metal atoms are delocalised so can move freely through whole structure

The sharing of delocalised electrons = strong metallic bonds

Know the three states of matter are solid, liquid and gas.

Melting and freezing take place at the melting point

Boiling and condensing take place at the boiling point

Know the amount of energy needed to change depends on strength of the forces between particles of the substance

Relate strong forces to substances' melting and boiling points

TURN THE PAGE

Know the four state symbols for chemical equations

Know about giant ionic lattices' MPs and BPs, and explain why it's that high value

Explain why ionic compounds conduct electricity when molten

Know the relation of compounds with their MPs & BPs in terms of intermolecular forces (ie as we size of molecule, the forces... so the MP...)

Know why simple molecular compounds don't conduct electricity

Explain, in terms of intermolecular forces, why polymers are solid at room temp

Know why giant covalent structures have high MPs

Understand strong metallic bonding = high MP

Know the arrangement of atoms in pure metals & alloys

Explain why alloys are harder than pure metals

Know why metals good conductors of electricity

Nanoscience refers to structures that are 1–100 nm in size, of the order of a few hundred atoms

Fine particles (PM2.5) have diameters between: 100 and 2500 nm, 1×10^{-7} m and 2.5×10^{-6} m

Coarse particles (PM10) have diameters between: 1×10^{-5} m and 2.5×10^{-6} m.

Know coarse particles are often referred to as dust

Understand nanoparticles have different properties than larger particles, making them useful – give examples

There are disadvantages and risks of these nanoparticles

As the side of cube decreases by a factor of 10, the surface area to volume ratio increases by a factor of 10.

Structure and bonding of carbon

In diamond, each carbon atom forms four covalent bonds with other carbon atoms in a giant covalent structure, so diamond is very hard, has a very high melting point and does not conduct electricity.

Explain the properties of diamond in terms of its structure and bonding.

In graphite, each carbon atom forms three covalent bonds with three other carbon atoms, forming layers of hexagonal rings which have no covalent bonds between the layers. In graphite, one electron from each carbon atom is delocalised.

Explain the properties of graphite in terms of its structure and bonding.

Know that graphite is similar to metals in that it has delocalised electrons.

TURN THE PAGE

Graphene is a single layer of graphite and has properties that make it useful in electronics and composites.

Explain the properties of graphene in terms of its structure and bonding.

Fullerenes are molecules of carbon atoms with hollow shapes. The structure of fullerenes is based on hexagonal rings of carbon atoms but they may also contain rings with five or seven carbon atoms. The first fullerene to be discovered was Buckminsterfullerene (C₆₀) which has a spherical shape.

Carbon nanotubes are cylindrical fullerenes with very high length to diameter ratios. Their properties make them useful for nanotechnology, electronics and materials.

Recognise graphene and fullerenes from diagrams and descriptions of their bonding and structure.

Give examples of the uses of fullerenes, including carbon nanotubes.

Topic 5: Energy changes

Success criteria

Energy is conserved in chemical reactions. I.e. amount of energy in the universe at the end of a chemical reaction is the same as before the reaction takes place

In Exothermic reactions they transfer energy to the surroundings so the temperature of the surroundings increases

Examples of Exothermic reactions include combustion, oxidation reaction and neutralisation.
Uses of Exothermic reactions include self-heating cans and hand warmers

In endothermic reactions, it takes in energy from the surroundings, thus the temperature of the surroundings decreases

Examples of Endothermic reactions include thermal decompositions and the reaction of citric acid and sodium hydrogencarbonate. Sports injury packs based on endothermic reactions

Chemical reactions can occur only when reacting particles collide with each other and with sufficient energy – called the activation energy.

Be able to draw reaction profiles for endothermic, exothermic reactions, and catalysed reactions, then show overall energy changes.

Energy needed to break bonds and the energy released when bonds are formed can be calculated from bond energies.

The difference between the sum of the energy needed to break bonds in the reactants and the sum of the energy released when bonds in the products are formed is the overall energy change of the reaction

Exothermic = energy released from FORMING new bonds GREATER than BREAK existing bonds

TURN THE PAGE

Endothermic = energy released from BREAKING existing bonds GREATER than FORMING new bonds

Cells contain chemicals which react to produce electricity.

Voltage produced by a cell is dependent upon factors e.g. type of electrode and electrolyte.

Simple cells can be made by connecting two different metals in contact with an electrolyte.

Batteries consist of two or more cells connected together in series, so a greater voltage will be produced.

Rechargeable cells and batteries can be recharged because the chemical reactions are reversed when an external electrical current is supplied.

Non-rechargeable cells and batteries: chemical reactions stop when one of the reactants has been used up – e.g. Alkaline batteries.

Fuel cells are supplied by an external source of fuel (for example Hydrogen) and oxygen or air.

The fuel is oxidised electrochemically within the fuel cell to produce a potential difference.

The overall reaction in a hydrogen fuel cell involves the oxidation of hydrogen to produce water.

Hydrogen fuel cells offer a potential alternative to rechargeable cells and batteries.

Be able to distinguish between exothermic and endothermic reactions on the basis of the temperature change of the surroundings.

Topic 6: The rate and extend of chemical change

Success criteria

The rate of a chemical reaction can be found by measuring the quantity of a reactant used or the quantity of product formed over time - know the equations:

$$\text{Mean rate of reaction} = \frac{\text{quantity of reactant used}}{\text{time taken}}$$

$$\text{Mean rate of reaction} = \frac{\text{quantity of product formed}}{\text{time taken}}$$

The quantity of reactant or product can be measured by the mass in grams or by a volume in cm^3

And therefore, units of Rate can be g/s or cm^3/s

Use quantity of reactants in terms of moles and units for rate of reaction in mol/s

Factors that affect rate of reaction include concentration (of reactants), temperature, surface area (of solid reactants), pressure (of reacting gases), or using a catalyst

Know how the above factors increase the rate of chemical reactions

TURN THE PAGE



Collision theory explains how various factors affect rates of reactions, and it states that chemical reactions can occur only when reacting particles collide with each other and with sufficient energy and right orientation.

Predict and explain using collision theory the effects of changing conditions of concentration, pressure and temperature on the rate of a reaction

Catalysts change the rate of chemical reactions by lowering the activation energy, but are NOT USED UP during the reaction. Different reactions need different catalysts.

Some reactions can go in 'both ways' – i.e. products back to reactants, called reversible reactions, presented in the form: $A + B \leftrightarrow C + D$

Direction of reversible reactions can be changed by changing the conditions.

Know if a reversible reaction is exothermic in one direction, it is endothermic in the opposite direction, BUT same amount of energy is transferred each way.

When a reversible reaction occurs in apparatus which prevents the escape of reactants and products, equilibrium is reached when the forward and reverse reactions occur at exactly the same rate.

Equilibrium can only be reached in a closed system (no reactants nor products can escape).

Relative amounts of all the reactants and products at equilibrium depend on conditions.

If a system is at equilibrium and a change is made to any of the conditions, then the system responds to counteract the change (Le Chatelier's Principle).

If we change a condition of a reactant or product of a reversible reaction (e.g. changing concentration), no longer equilibrium, and the substances will change so equilibrium is reached again.

Be able to interpret appropriate given data to predict the effect of a change in concentration, pressure or temperature on given reactions at equilibrium.

TURN THE PAGE

Science Command Words

Command words are the words and phrases used in exams and other assessment tasks that tell students how they should answer the question.

Analyse

Separate information into components to identify their characteristics

Apply

Put into effect in a recognised way

Argue

Present a reasoned case

Calculate

Work out the value of something

Compare

Identify similarities and differences

Complete

Finish a task by adding to given information

Consider

Review and respond to given information

Contrast

Identify differences

Define

Specify meaning

Describe

Set out characteristics

Discuss

Present key points about different ideas or strengths and weaknesses of an idea

Evaluate

Judge from available evidence

Examine

Investigate closely

Explain

Set out purpose or reasons

Give

Produce an answer from recall

How (far)

Work out the correct answer

TURN THE PAGE

Identify

Name or otherwise characterise

Justify

Support a case with evidence

Name

Give the correct title or term

Outline

Set out main characteristics

Repeat (the pattern)

Maths specific; repeat a given pattern

State

Express clearly and briefly

What (is)

Give the correct information

Which 2

Select or give the correct information

TURN THE PAGE

CLASSICS

Grammar

In the language paper you will be asked questions on the grammar of the passage. These include: 'what case is this word and why?', 'what construction is this?', 'why is a subjunctive used here?' etc'. To revise for these questions you must be able to find and explain the following grammar points.

Prepositions + ablative case: a/ab (from, by), ex (out of), cum (with), de (about), in (in/on), pro (in front of), sine (without), sub (under)

Prepositions + accusative case: ad (to/towards), circum (around), contra (against), inter (among), per (through), post (after), prope (near)

Verbs + dative: approquino (approach), credo (trust/believe), faveo (favour), impero (order), persuadeo (persuade), resisto (resist),

Subjunctives: You will be asked why a subjunctive is used or to name the construction. It could be:

1. adeo/tanta/tantum/tam/tot/talis + ut + subj = result clause
2. fearing verb (timere) + ut/ne = fear clause
3. cum + subj: temporal clause or just 'cum + subjunctive
4. command verb (imperare - order/rogare - ask/monere - warn/petere - seek) + ut + subj = indirect command
5. question verb (rogare - ask) + question word (quis - who/quot - how many/quomodo - how) + subj = indirect question
6. verb + ut + subjunctive = purpose clause

If in doubt, translate the clause and then work out which type it is likely to be.

Ablative absolute: 2 words in the ablative, one noun and one participle. Translate as 'with/when/as'

Noli/nolite + infinitive: translates as: 'don't...)

Relative Clause anything using the relative pronoun qui/quae/quod - who/which/what.

Indirect statement: a verb of reporting/saying/thinking/feeling + accusative noun + infinitive verb.

Gerund: ends in ndum, ndi, ndo. If 'ad' comes before it shows purpose.

Causal Clause: quod (because) or cum (since) - explain the cause of an event.

Concessive Clause: quamquam (although) - saying that something is the case despite of something.

TURN THE PAGE

Time: accusative – ‘for 10 days.’ Ablative – ‘at dawn,’ ‘on the 1st day’

Place: accusative – motion towards (to/into), ablative – motion away from (out of/from),
ablative + in = in, on. Locative: Romae – at Rome (only used for names of cities).

Vocabulary

Vocabulary is the key. Learn all tenses/forms when revising. Do it gradually, only learn those you don’t know and learn gradually.

Top 100 words – these are the most common words in Latin GCSE over the past 15 years. Make sure you know all of them! There are given in the exact common form they have occurred.

erat – he was	deinde – then	Romani – Romans	multi – many
et – and	olim – once	nomine – called (by name)	amabat – he/she was loving
tamen – however	nunc – now	iuvenis – young man	volebat – he/she was wanting
ut – so that/as	omnes – all/everyone	sic – thus	quoque – also
est – he/she/it/there is	quamquam – although	dea – goddess	inter –between/ among
qui – who/which	subito – suddenly	mare – sea	pater – father
non – not	iam – now/already	dum –while	respondit – he/she replied
igitur – therefore	ei – to him/her	eam – her	sum – I am
cum – with/when	uxor – wife	urbem – city	dei – of the god
ubi – where/when	per – through	cives – citizens	omnia – all
ad – to/towards	hoc – this	contra – against	facere – to do
quod – because/that	tum – then	multos – many	tam – so
itaque – therefore	ab – from	advenit – he/she arrived	diu – for a long time
inquit – he/she said	haec – this	habebat – he/she was having	filiam – daughter
tandem – at last	mox – soon	homines – men	uxorem – wife
rex – king	ibi- there	milites – soldiers	cibum – food
eum – him	si – if	post – after	consilium – plan
de – about	statim – immediately	nam – for	constituit – he/she decided
se – himself	ego – I	terram – earth	regina – queen
esse – to be	dedit – he/she gave	vidit – he/she saw	servus – slave
sed – but	rogavit – he/she asked	etiam – even/also	eos – them
erant – they were	numquam – never	intravit – he/she entered	filius – son
eius – his/hers	iratus – angry	te – you	suam – his/her
sunt – they are	auxilium – help	filium – son	quam – than
dixit – he/she said	caput – head	cepit – he/she took	1donum - gift

TURN THE PAGE

COMPUTER SCIENCE

Fundamentals of algorithms

Representing algorithms .Understand and explain the term algorithm

Understand and explain the terms decomposition, abstraction

Explain simple algorithms in terms of their inputs, processing and outputs.

Using trace tables and determine what the algorithm's purpose is.

Efficiency of algorithms

Linear search and binary search. Also know, the advantages and disadvantages of both.

Merge sort and bubble sort. Also know, the advantages and disadvantages of both.

Programming

Data types

Programming concepts –sequence, iteration, selection

Arithmetic operations

Relational operations

Boolean operations

Data structures

Input/output and file handling

String handling operations

Random number generation

Subroutines (procedures and functions)

Structured programming

Robust and secure programming

Classification of programming languages

Fundamentals of data representation

Number bases : decimal (base 10) , binary (base 2), hexadecimal (base 16)

Converting between number bases

Units of information

Binary arithmetic

Character encoding

Representing images

Representing sound

Data compression

Boolean Logic

Construct truth tables for the following logic gates: NOT , AND , OR

Construct truth tables for simple logic circuits. Interpret the results of simple truth tables.

Create simple logic circuit diagrams.

TURN THE PAGE

ECONOMICS

Basic Circular flow of income extended and introduction to the national economy

Be able to draw the extended circular flow of income diagram representing the whole economy with injections and leakages.

Aggregate Demand

Define Aggregate Demand and the components of Aggregate Demand.

Know how to draw the Aggregate Demand curve with axis correctly labelled.

Understand some of the reasons for why the Aggregate Demand curve is downward sloping.

Factors impacting Aggregate Demand

Understand that a change in consumption spending, investment spending, government spending or net exports will shift the Aggregate Demand curve.

Factors impacting the level of Consumption spending

Be able to explain some of the factors impacting consumption spending in an economy.

Factors impacting the level of Investment spending

Explain some of the factors impacting investment spending in an economy.

Aggregate Supply curve

Define the Aggregate Supply curve and understand why it is upward sloping.

Factors impacting Aggregate Supply

Know the factors that would shift the Aggregate Supply curve to the Right

Equilibrium in an Economy and Changes to equilibrium

Be able to draw the Aggregate Demand and Aggregate Supply curve in one diagram and show the equilibrium position of an economy (equilibrium price level and real output level).

Understand how changes in Aggregate Demand or Aggregate Supply will impact the equilibrium price level and real output in the economy.

Government Revenue

Define Government revenue and know the main sources of government revenue.

Have a general understanding of the amounts for income tax, national insurance contributions, and VAT.

Government Expenditure

Know what Government Expenditure is and the main areas of government spending.

Budget Surplus and Budget Deficit

Know what a Budget Surplus and Budget Deficit is. Implications for a Budget Deficit.

TURN THE PAGE

Progressive and Regressive taxation

Know the difference between a Progressive tax and a Regressive Tax. Understand why Income Tax is a Progressive Tax and Value Added Tax is a Regressive Tax.

The four main economic objectives of the government

Know the four main economic objectives.

Other objectives of the government

Equal distribution of income and protection of the environment.

Conflict in economic objectives

Understand that as the government pursues a certain economic objective, it might lead to other economic objectives not being achieved.

Gross Domestic Product and Gross Domestic Product per capita

Define Gross Domestic Product (GDP) and understand it is calculated using one of three methods. Be able to calculate GDP per capita.

Real GDP versus Nominal GDP

Define Real GDP and Nominal GDP. Understand why Real GDP is reported.

Benefits of Economics Growth

Understand some of the key benefits of economic growth.

Costs of Economic Growth

Know the costs of economic growth.

Unemployment

Define unemployment.

Types and Causes of Unemployment

Know all the different types/causes of unemployment in an economy..

Costs of Unemployment

Understand the costs of unemployment to an economy.

Government policies to reduce unemployment

Understand some of the policies available to the government to reduce unemployment.

Inflation

Be able to define inflation.

Measuring Inflation

Price levels being measured by the Consumer Price Index (CPI) and the Inflation rate measured as the percentage change in the CPI.

TURN THE PAGE

Causes of inflation – demand-pull and cost-push inflation

Know that Demand-pull inflation is due to an increase in Aggregate Demand. Cost-push inflation is due to increased costs of production facing many firms in the economy.

Costs of inflation

Know that inflation has a number of costs to the economy.

Distribution of Income

Define distribution of income. Know how unequal distribution of income can occur and methods the government can use to redistribute income (e.g. progressive income taxes and government expenditure on state benefits).

Fiscal Policy

Understand that fiscal policy can be used by the government to help achieve its economic objectives. Know how fiscal policy can impact equilibrium output level and price levels (in Aggregate Demand – Aggregate Supply model).

Monetary Policy

Understand that monetary policy can be used by the government to help achieve its economic objectives. Know how monetary policy can impact equilibrium output level and price levels (in Aggregate Demand – Aggregate Supply model).

Supply-side policies

Understand that Supply-side policies shift out the Aggregate Supply curve and can be used to impact economic objectives. Know various supply-side policies that are available to the government.

Advantages and Disadvantages of Supply-side policies

Know the advantages and disadvantages of Supply-side policies in comparison to fiscal and monetary policy (which are 'Demand-side' policies).

Free Trade Area definition and examples

Tariff, Quota, and Non-tariff barriers to trade, plus examples.

Customs Union definition.

'Single Market' definition and example.

Monetary Union definition and examples

Significant UK exports

Significant UK imports

Advantages of Trade

Disadvantages of Trade

TURN THE PAGE

Balance of payments balance to zero. Know specifically the current account and the impact of exports and imports to the current account.

Current Account components and deficit figures for the UK

Financial Account components and examples

Demand for £ - know what this is and factors impacting it. Refer to graphs revision pack.

Demand curve for £ is downward sloping – understand why this is.

Increase in Demand for £ - know all the factors impacting Demand of £.

Supply of £ - know what this is and factors impacting it. Refer to graphs revision pack.

Supply curve for £ is upward sloping; understand why this is.

Increase in Supply of £ - know all the factors impacting Supply of £.

Equilibrium exchange rate: occurs where Demand of £ intersects Supply for £.

Changes to equilibrium exchange rate: understand how changes in Demand of £ or Supply of £ will impact the exchange rate.

Appreciation in £ and impact on trade balance: understand how a stronger (or appreciating £) will impact exports and imports.

Depreciation in £ and impact on trade balance: understand how a weaker (or depreciating £) will impact exports and imports.

Globalisation is the process by which the world is becoming increasingly interconnected as a result of massively increased trade and cultural exchange.

Factors causing globalisation: know the factors causing globalisation.

Impact of Globalisation: understand the different impacts of globalisation.

Factors attracting transnational corporations:

Positive impacts of Globalisation

Negative impacts of Globalisation

Money: definition

Four key functions of money: understand the 'medium of exchange', 'unit of account', 'store of value', and 'method of deferred payment'.

Key roles of the Bank of England (central/reserve bank): understand the key roles.

Key roles of commercial banks

Building societies (e.g. Nationwide) – define them and be able to explain how they are different to commercial banks.

TURN THE PAGE

ELECTRONICS

This exam will focus on content from component 1 – “Discovering Electronics”

You must be able to:

Electronic systems and sub-systems

Recognise that electronic systems are assembled from sensing, processing and output sub-systems, including:

- sensing units: light, temperature, magnetic field, pressure, moisture, sound, rotation
- signal processing: individual logic gates, latch, time delay, comparator
- output devices: lamp, buzzer, solenoid, LED, actuator (servo), motor, loudspeaker

State the need for and use of transducer drivers.

Design and test electronic systems.

Circuit concepts

Draw, communicate and analyse circuits using standard circuit symbols using standard convention.

Apply current and voltage rules in series and parallel circuits.

Use test equipment to make measurements to test electrical components and circuits including:

- multimeters (on voltage, current and resistance ranges)
- timing equipment
- logic probes and oscilloscopes (or computers configured as oscilloscopes), including investigating current-voltage characteristics

Analyse circuits in terms of voltage, current, resistance, energy and power and use the equations in your handouts.

- voltage = current \times resistance $V = IR$
- power = voltage \times current $P = VI$
- power = (current)² \times resistance $P = I^2R$
- power = voltage² \div resistance $P = V^2/R$
- energy transfer = power \times time $E = Pt$

Resistive components in circuits

TURN THE PAGE

Describe the effect of adding resistors in series and parallel.

Use equations for series and parallel resistor combinations:

$$R=R_1+R_2 \text{ resistors in series}$$

$$\frac{1}{R} = \frac{1}{R_1} + \frac{1}{R_2} + \frac{1}{R_3} \text{ resistors in parallel}$$

Select resistors for use in a circuit by using the colour and E24 codes for values, tolerances and power ratings .

Use photosensitive devices, ntc thermistors, pressure, moisture and sound sensors, switches, potentiometers and pulse generators in circuits.

Design and test sensing circuits using these components by incorporating them into voltage dividers Design and use switches and pull-up or pull-down resistors to provide correct logic level/edge-triggered signals for logic gates and timing circuits.

Select and apply the voltage divider equation in sensing circuits

$$V_{out} = \frac{R_2}{R_1+R_2} \times V_{in} \text{ for a voltage divider}$$

Determine the value of a current-limiting protective resistor for LEDs in DC circuits.

Switching circuits

Describe and analyse the operation and use of n-channel enhancement mode MOSFETs and npn transistors in switching circuits, including those which interface to outputs.

Select and apply the MOSFET equation $I_D = g_m(V_{GS} - 3)$

Use the following rules for an npn transistor circuit:

For $V_{IN} < 0.7 \text{ V}$, the transistor is off, $V_{BE} = V_{IN}$ and $V_{CE} =$ the supply voltage

For $V_{IN} \geq 0.7 \text{ V}$, the transistor is on, $V_{BE} = 0.7 \text{ V}$ and $V_{CE} = 0 \text{ V}$

and select and apply $I_C = h_{FE} I_B$ until saturation is reached

Describe and analyse the operation and use of voltage comparator ICs.

Compare the action of switching circuits based on MOSFETs, npn transistors and voltage comparator ICs.

Use data sheets to design switching circuits using MOSFETs, npn transistors and comparators.

Diodes

Describe the I-V characteristics of a silicon diode.

Describe the use of diodes for component protection in DC circuits and halfwave rectification of AC circuits.

Describe the use of zener diodes in voltage regulation circuits.

Combinational logic systems

TURN THE PAGE

Recognise 1/0 as two-state logic levels.

Identify and use NOT gates and 2-input AND, OR, NAND and NOR gates, singly and in combination.

Produce a suitable truth table from a given system specification and for a given logic circuit.

Use truth tables to analyse a system of gates.

Use Boolean algebra to represent the output of truth tables or logic gates and use the basic Boolean identities:

$$\overline{A \cdot B} = \overline{A} + \overline{B} \quad \overline{A + B} = \overline{A} \cdot \overline{B}$$

Design processing systems consisting of logic gates to solve problems.

Simplify logic circuits using NAND gate redundancy.

Analyse and design systems from a given truth table to solve a given problem

Use data sheets to select a logic IC for given applications and to identify pin connections.

TURN THE PAGE

ENGLISH LANGUAGE: NON-FICTION

The paper consists of two parts – the reading and the writing.

For the reading:

Look over your classwork answers and work out exactly what you need to include in your answers to all four of the questions.

Go over key tones and techniques to answer the 'how' question, as well as revising useful comparison connectives for pointing out differences and similarities.

Read newspaper and magazine articles, as well as 19th century texts.

Do a practice paper under timed conditions.

For the writing:

Look over your classwork and note down both your strengths and weaknesses. Are there any recurring errors you make with spelling, punctuation or sentence structure?

Find examples of articles, speeches, letters, reviews, leaflets and other non-fiction texts, ensuring that you know the different conventions of each form of writing.

Read through your A3 sheet, looking at the different examples, persuasive writing features and sentence starters to use.

ENGLISH LITERATURE: ROMEO AND JULIET AND JEKYLL AND HYDE

For both Romeo & Juliet and Jekyll & Hyde:

Read over the text again, so that you have a thorough knowledge of the plot, characters and themes.

Read summaries on revision websites such as Sparknotes, Cliffnotes, Shmoop and YouTube videos from Mr Bruff or Mr Salles.

Go over your notes on how to score marks for the specific learning objectives – language, structure, form and context.

Learn 40 or more short quotes per text – and remember that you need to know who says them, where they occur and what they mean.

TURN THE PAGE

FRENCH

The following is a **sample** of some of the **vocabulary** you need to revise. Refer to your classroom handouts for the full list.

Vocabulaire

Des conseils pour être en bonne santé

se concentrer en classe
se coucher tôt
se détendre
dormir huit heures par nuit
éteindre les écrans
être en bonne forme physique
se faire de nouveaux amis
faire de la méditation ou du yoga
faire une activité sportive
manger équilibré
participer à la chorale
profiter des sorties scolaires
se reposer
respirer
le corps
l'esprit
le sommeil
les matières grasses

Ce que je fais

Je mange sainement.
J'essaie de manger cinq portions de fruits et de légumes par jour.
Je suis végétarien(ne).
Je mange rarement des bonbons.
Je fais attention à ce que je bois.
Je ne bois pas de boissons gazeuses.
Je bois uniquement de l'eau.
Je fais du sport régulièrement.

Advice for being healthy

to concentrate in class
to go to bed early
to relax
to sleep eight hours per night
to turn off screens
to be in good physical shape
to make new friends
to do meditation or yoga
to do a sport/sporting activity
to eat a balanced diet
to participate in the choir
to make the most of school trips
to rest
to breathe
the body
the mind
sleep
fat(s)

What I do

I eat healthily
I try to eat five portions of fruit and vegetables per day.
I'm a vegetarian.
I rarely eat sweets.
I am careful about what I drink.
I don't drink fizzy drinks.
I only drink water.
I do sport regularly

TURN THE PAGE

Je dors suffisamment.
Je me couche de bonne heure.
Les examens me stressent.
Je médite tous les jours.
Je m'amuse avec mes copains.

Quand et comment?

calmement
dur
également
énormément
facilement
heureusement
lentement
mieux
rarement
récemment
régulièrement
sainement
suffisamment
uniquement

En vacances

l'Algérie
l'Allemagne
l'Angleterre
l'Autriche
la Belgique
la Croatie
l'Espagne
les États-Unis
la France
le Japon
le Pakistan
les Pays-Bas

I sleep enough/get enough sleep.
I go to bed early.
Exams make me stressed.
I meditate every day.
I have fun with my friends.

When and how?

calmly
hard
equally, also
enormously, hugely
easily
fortunately
slowly
better
rarely
recently
regularly
healthily
enough, sufficiently
only

On holiday

Algeria
Germany
England
Austria
Belgium
Croatia
Spain
USA
France
Japan
Pakistan
Netherlands

TURN THE PAGE

le pays de Galles	Wales
la Pologne	Poland
la Suisse	Switzerland
Normalement, je passe mes vacances en/au/à l'/aux ...	Normally, I spend my holidays in ...
Je vais au bord de la mer/à la campagne/à la montagne.	I go to the seaside/the countryside/the mountains.
Je voyage en train/avion/ferry/voiture.	I go by train/plane/ferry/car.
Je fais du camping.	I go camping.
Je loge dans un gîte/un hôtel/chez ma tante.	I stay in a holiday cottage/a hotel/with my aunt.
Je vais avec ma famille/mes grands-parents/mon petit frère	I go with my family/my grandparents/my little brother.
C'est génial/extra/assez ennuyeux.	It's great/excellent/quite boring.
Je me lève tôt.	I get up early.
On se couche tard.	We go to bed late.
Je me repose/me prépare.	I rest/get ready.
Je m'habille.	I get dressed.
Je vais à la plage.	I go to the beach.
Je me baigne dans la mer.	I bathe/swim in the sea.
Je me promène.	I go for a walk.
Je rentre à l'hôtel.	I go back to the hotel.
Je sors au restaurant.	I go out to a restaurant.
On peut ...	You can ...
faire une visite de Paris	visit Paris
faire de l'escalade	go climbing
visiter les musées/monuments	visit museums/monuments

Les vacances passées et futures

Tous les ans/Normalement/Tous les étés, ...
j'achète/je fais/je vais ...
Hier/L'année dernière/Le week-end dernier, ...
j'ai vu/visité/acheté ...

Holidays past and future

Every year/Normally/Every summer, ...
I buy/do/go ...
Yesterday/Last year/Last weekend, ...
I saw/visited/bought ...

TURN THE PAGE

je suis allé(e) à ...	I went to ...
L'année prochaine/Le week-end prochain/ Demain, ...	Next year/Next weekend/Tomorrow, ...
je vais faire/prendre/aller/visiter ...	I'm going to do/take/go/visit ...
Des vacances de rêve	Dream holidays
Je logerais ...	I would stay ...
dans un gîte à la campagne	in a holiday cottage in the countryside
dans un hôtel 4 étoiles	in a 4-star hotel
dans une auberge de jeunesse	in a youth hostel
dans une caravane	in a caravan
dans une chambre d'hôte	in a bed and breakfast
dans une tente, sur une île déserte	in a tent on a desert island
sur un bateau	on a boat
Je voyagerais ...	I would travel ...
avec mes copains/copines	with my friends
avec ma famille	with my family
avec mes parents	with my parents
avec mes grands-parents	with my grandparents
avec mon lycée	with my school
avec une organisation	with an organisation
seul(e)	alone
Je regarderais le coucher du soleil.	I would watch the sunset.
Je nagerais avec les poissons tropicaux.	I would swim with tropical fish.
Je ferais des randonnées.	I would go hiking.
Je ferais du canoë-kayak.	I would go canoeing.
Je me reposerais.	I would rest.
Je m'amuserais avec mes copains/copines.	I would have fun with my friends.
Je mangerais bien.	I would eat well.
Il y aurait ...	There would be ...
un café qui serait ouvert toute la nuit	a café which would be open all night
une salle de jeux	a games room
des feux d'artifice tous les soirs	fireworks every night

TURN THE PAGE

GEOGRAPHY

Year 9 Topics:

Tectonic Hazards

Define a natural hazard

Define a natural disaster

Define and provide an example of each of the four types of natural hazards.

a) Describe and explain the global distribution of earthquakes and volcanic eruptions.

b) What is their relationship to plate margins?

Draw a cross section diagram of a destructive (subduction zone) plate margin e.g Indonesia

Draw a cross section diagram of a constructive plate margin e.g Iceland

Draw a cross section diagram of a conservative plate margin e.g San Francisco

Draw a cross section diagram of a collision plate margin e.g Himalayas

Using examples from a range of disasters explain how the effects (primary and secondary) and responses vary with contrasting levels of development.

Case Studies: Haiti Earthquake and Japan Earthquake and Tsunami.

Urban Issues and Challenges

Describe the factors affecting the rate of urbanisation in LICs and NEEs

Define megacity.

Using a case study you have learned of either an LIC or NEE, explain how urban growth has created both opportunities and challenges.

Case study: Mumbai

Using an example of a major UK city you have studied, explain how regeneration can be both positive and negative for people.

Case Study: London

Using an example of a major UK city, describe the impact of urban sprawl on the rural fringes of a city.

Case Study: London

Describe and explain the waves of migration that East London has experienced since the 1860s.

Case Study: London

Explain the costs and benefits that the regeneration is bringing to East London.

Case Study: Olympic park/ Strand East

TURN THE PAGE

Year 10 Topics:

Weather Hazards

Describe and explain the global distribution of tropical storms.

Explain the causes of tropical storms

Explain the pattern of storm tracks

Why do storms die out over land.

Using named examples from a range of tropical storms explain how monitoring, prediction, protection and planning can reduce the effects.

Case Studies: Hurricane Katrina (USA) and Typhoon Haiyan (Philippines)

Coastal Landscapes in the UK

Describe and explain the rock cycle in reference to the 3 different types of rocks: Igneous, Metamorphic and Sedimentary.

Concordant and discordant coastline geology

Explain the difference between a constructive wave and a destructive wave.

Explain the four different types of erosion involved in the destruction of a UK coastal landscape.

What is the difference between weathering and erosion?

Describe and explain how long shore drift contributes to the deposition of new sediment on a UK coastal landscape. Learn a diagram!

Describe how the formation of a headland results from erosion processes. Learn the key features found on a headland including wave cut platform, caves, arches, stacks and stumps.

Explain how a spit, tombolo and bar is formed due to transportation and deposition processes.

Describe the costs and benefits of both soft and hard engineering techniques.

Explain the process of managed retreat.

Using an example of a UK coastal landscape you have studied, explain why a variety of management strategies can be used to protect coastlines from the effects of physical processes.

Case Study: Holderness Coastline

Glacial Landscapes in the UK

Explain the glacial process of freeze-thaw. (you may include a diagram)

Define plucking.

Explain why glaciers deposit sediment as the global climate is warming.

TURN THE PAGE

Describe three different landforms which are resulting from erosion at a glacial landscape

Describe three different landforms which are resulting from transportation and deposition at a glacial landscape.

Define the following terms:

- U shaped valley
- Lateral, medial, terminal moraine
- Corrie/ cirque
- Pyramidal peak
- Arete
- Drumlins
- Ribbon lake

Describe and explain how glaciated upland areas can provide economic opportunities.

Using a UK glaciated landscape you have studied explain the conflicts that arise between development and conservation.

Using a UK glaciated landscape you have studied explain the social, economic and environmental impacts of tourism.

Using a UK glaciated landscape you have studied explain the strategies used to managed the impacts of tourism.

Case Study: Lake District National Park, UK

The Changing Economic World

Using the Demographic Transition Model:

- a) Explain why the death rate and birth rate are high in stage 1
- b) Explain what has caused the changes in death rate in stage
- c) What causes the birth rate to fall?
- d) Why are the birth and death rate low in stage 4?
- e) Why is there a natural decrease in stage 5?

Describe the physical, economic and historical causes of uneven global development.

Using an example of an LIC or NEE explain how growth in tourism helps to reduce the development gap.

Case study: Jamaica

What are the causes of the development gap?

What methods are used to reduce the development gap e.g. Fair Trade, Aid, Tourism development,

TURN THE PAGE

Describe the role of TNCs (Transnational corporations) in relation to industrial development

Using an example of an LIC or NEE explain how rapid economic development has led to significant social and environmental change.

Case Study: Nigeria

Hot Deserts

Describe the physical characteristics of a hot desert.

Explain the distribution of hot deserts.

Explain the location of hot deserts in terms of latitude and rain shadows.

Using named examples describe how animals and plants have adapted to living in hot deserts

Using a case study you have learned explain how hot deserts create both developmental opportunities and challenges

e.g. Sahara, Madagascar Spiny Thicket

Define desertification.

Describe and explain two causes of desertification

Explain using named examples, the variety of strategies that are used to reduce the risk of desertification.

Case Study: Sahel/ Sahara

Year 11 Topics:

Fresh Water Ecosystems: The River Lea

Describe and explain the interrelationships between producers, consumers, and decomposers within a food chain.

Explain why the statement, "*Fresh water ecosystems have a high level of complexity*" is true.

Describe how humans have had a detrimental impact on the River Lea

Describe and explain how the River Lea ecosystem has been restored since 2005

Tropical Rainforests

Describe and explain the global distribution of tropical rainforests

Explain the importance of nutrient cycling within a tropical rainforest ecosystem. (you may include a diagram)

Using named examples describe how animals and plants have adapted to living in tropical rainforest ecosystems.

Describe each of the four different layers of a tropical rainforest.

Define biodiversity.

Using a case study you have learned, explain the causes and impacts of deforestation.

Case Study: Malaysia

Using a case study you have learned, explain how tropical rainforests can be sustainably managed.

Case Study: Masoala Madagascar

TURN THE PAGE



GERMAN

Vocabulary

<p>Greetings</p> <p>Guten Morgen – good morning</p> <p>Guten Tag – good day</p> <p>Guten Abend – good evening</p> <p>Auf Wiedersehen – goodbye</p> <p>Tschüss – goodbye (informal)</p>	<p>Key verbs</p> <p>sein – to be</p> <p>haben – to have</p> <p>heißen – to be called</p> <p>aussehen – to look like</p> <p>essen – to eat</p> <p>trinken – to drink</p>	<p>Numbers</p> <p>Eins → zwanzig</p> <p>Months</p>
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<p>Family members</p> <p>das Einzelkind – the only child</p> <p>das Enkelkind – the grandchild</p> <p>das Familienmitglied – the family member</p> <p>die Mutter – the mother</p> <p>der Vater – the father</p> <p>der Bruder – the brother</p> <p>die Schwester – the sister</p> <p>die Zwillinge – the twins</p> <p>der Großvater – the grandfather</p> <p>die Großmutter – the grandmother</p> <p>die Tante – the aunt</p> <p>der Onkel – the uncle</p> <p>der Neffe – the nephew</p> <p>die Neffin – the niece</p> <p>der Stiefvater – the stepfather</p> <p>die Stiefmutter – the stepmother</p> <p>der Halbbruder – the half-brother</p> <p>die Halbschwester – the half-sister</p> <p>der Schwager – the brother-in-law</p> <p>die Schwägerin – the sister-in-law</p>	<p>Adjectives to describe personality</p> <p>berühmt – famous</p> <p>egoistisch – selfish</p> <p>ehrlich – honest</p> <p>ernst – serious</p> <p>frech – cheeky</p> <p>geduldig – patient</p> <p>gemein – mean</p> <p>höflich – polite</p> <p>hilfsbereit – helpful</p> <p>humorlos – humourless</p> <p>humorvoll – humorous, witty</p> <p>lebhaft – lively</p> <p>ruhig – calm</p> <p>schüchtern – shy</p> <p>witzig – funny</p> <p>großzügig – generous</p> <p>zuverlässig – reliable</p>
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TURN THE PAGE

<p>Physical description and colours</p> <p>die Augen – eyes die Haare – hair blau – blue grün – green braun – brown schwarz – black grau – grey rot – red lockig – curly glatt – straight lang – long kurz – short hübsch – pretty hässlich – ugly</p>	<p>Feelings</p> <p>traurig – sad froh – happy wütend – angry aufgeregt – excited müde – tired</p>
<p>Possessive adjectives</p> <p>mein – my dein – your sein – his ihr – her unser – our eure – your ihr – their</p>	

TURN THE PAGE

Verb tables

Ich habe	I have
Du hast	You have
Er/sie hat	He/she has
Wir haben	We have
Ihr habt	You have
Sie/sie haben	They have
Ich bin	I am
Du bist	You are
Er/sie ist	He/she is
Wir sind	We are
Ihr seid	You are
Sie/sie sind	They are

Ich liebe	I love
Du liebst	You love
Er/sie liebt	He/she loves
Wir lieben	We love
Ihr liebt	You love
Sie/sie lieben	They love

← Conjugation of present tense (regular)

TURN THE PAGE

1. Konjugiere "heißen", "essen" und "trinken"!
2. Beantworte die Fragen!
 - a) Wie heißt du?
 - b) Woher kommst du?
 - c) Wo wohnst du?
 - d) Wie alt bist du?
 - e) Wann ist dein Geburtstag?
3. Beschreibe deine beste Freundin oder deinen besten Freund! Physical description and personality!
4. Lies den Text und beantworte die Fragen!
5. Übersetze den Text!

Ich heiße Hans, ich bin zwölf Jahre alt und ich wohne in Berlin mit meiner familie.

Ich habe einen Bruder und eine Schwester. Mein Bruder ist ehrlich und

witzig. Meine Schwester ist großzügig und intelligent, aber sehr schüchtern. Und

meine Eltern? Sie sind ziemlich ernst aber auch geduldig. Meine Mutter hat lange,

lockige, blonde Haare und blaue Augen. Mein Vater hat kurze, glatte, schwarze

Haare und grüne Augen. Sie lieben Berlin. Sie lieben Marlene Dietrich und Egon Schiele.

Marlene Dietrich ist eine Schauspielerin und Egon Schiele ist ein Maler.

- a) How old is Hans?
- b) How does Hans describe his brother?
- c) How does Hans describe his sister?
- d) What does his mother look like?
- e) What does his father look like?

TURN THE PAGE

HISTORY

1. Hundred Years War: causes, events, turning points, outcome

- What were the five most important dates in the Hundred Years War? Why?
- What were the three most important dates in the Hundred Years War? Why?
- Why did England lose in the end?
- What were the results of the Hundred Years War for Britain?
- What was the most important turning point in the Hundred Years War? Why?

2. American War of Independence, Indian Mutiny and rise of British Empire

- What were the causes of the American War of Independence?
- Why did England lose the war?
- What was the impact of the loss of America on the British Empire?
- Why was there a mutiny in India in 1857?
- What were the results of the Indian Mutiny?
- How important were these events for the British Empire?

3. British rule in Africa: Scramble for Africa/Rhodes/Boer War/Suez

- What was the Scramble for Africa? Why did it happen?
- What was the role of Cecil Rhodes in Africa? Why was he important?
- Why did the Boer War break out?
- What were the consequences of the Boer War?
- How did Britain influence Egypt at the end of the 19th century?

4. Norman conquest and control: castles, Domesday, religion, cathedrals, force

- How and why did William win the Battle of Hastings?
- How did William control England after Hastings?
- What was the Domesday Book and why was it important?
- Name ten castles that the Normans built to help control the English. Why were they built and which was the most important?

5. Migration essay – religion, economics, politics, conflict

- How did religion affect migration to and from Britain from the Vikings to the modern era?
- How did economics affect migration to and from Britain from the Vikings to the modern era?
- How did politics affect migration to and from Britain from the Vikings to the modern era?
- How did conflict affect migration to and from Britain from the Vikings to the modern

TURN THE PAGE

MATHS

Use Mathswatch to help you revise. Tick off the topics when you are confident and make a note of the topics which you are still unsure about after revising.

Revision list for non-calculator exam

Bodmas
Circle Theorem
Compound measures
Compound units
Cumulative frequency
Equation of Straight Lines
Estimation
Evaluating expressions
Forming and Solving Equations
Fractions
Inequalities
Laws of indices
Powers and Roots
Properties of Graphs
Quadratic sequence
Ratio
Scatter diagrams
Solving equations
Standard form
Transformation of shapes
Tree diagrams
Venn diagrams

TURN THE PAGE

Revision list for calculator exam

Angles in Polygons
Area of Shapes
Averages
Bearings
Calculating with Fractions
Compound Units
Equation of a straight line
Forming Expressions
Interpreting data
Limits and Bounds
Manipulating formulae
Perimeter of shapes
Rearranging formula
Sequences
Solving linear and quadratic equations
Surface area and Volume of 3d shapes
Trigonometry & Pythagoras Theorem
Use of calculator

TURN THE PAGE

PHOTOGRAPHY

Coursework checklist

Mind Map/title page – initial exploration of your chosen starting points

Mood board of 20+ own photographs which relate to your chosen theme (broad ideas)

Further research - Collect and add other relevant research sources- images, artefacts, poems, books, quotes, evidence of experiences, cultural sources, symbols, illustrations, fabrics, film, video or web based material, places, events, craft works, textures, etc. (scrap book style)

Photo shoots

Initial ideas photo shoots – contact sheet, favourites, best presented.

First response to an artist – 10 – 20 photos (idea 1)

Second response to an artist - 10 – 20 photos (idea 2)

Third response to a technique - 10 – 20 photos (idea 1)

Fourth response to a technique - 10 – 20 photos (idea 2)

Artist Research 1 (approximately three pages)

Biographical information about the artist/photographer, their work and the art movement they belong to. Detailed paragraph explaining your thoughts, feelings and opinion of the artist's work. Why do you have this opinion? How can their work inspire yours? What elements, key styles could you develop in your own work? How has the artist used the formal elements in their work?

An in-depth analysis of one piece of their work to show your understanding.

Try to copy a photo of their exactly – best transcript.

Artist interpretation(s) – photo shoot (their aims – your style) based on the style of your chosen artist/photographer, using appropriate medias which link to their style.

Artist Research (two to three pages of sketchpad)

Biographical information about the artist/photographer, their work and the art movement they belong to. Detailed paragraph explaining your thoughts, feelings and opinion of the artist's work. Why do you have this opinion? How can their work inspire yours? What elements, key styles could you develop in your own work? How has the artist used the formal elements in their work?

An in-depth analysis of one piece of their work to show your understanding.

Try to copy a photo of theirs exactly – best transcript

Artist interpretation(s) – photo shoot (their aims – your style) based on the style of your chosen artist/photographer, using appropriate medias which link to their style.

TURN THE PAGE

Starting experimentation

Three pages of experiments from own photographs to change outcome. Linked to artists Explore the formal elements e.g. pattern, colour, texture.

Ideas; Mixed media - cut up photos and layer onto various surfaces, cut up and collage onto, remove elements of the image, image transfer, paint or draw onto photos, soak photos, tea stain photos, etc.

Photoshop – shape cutting, layering, black and white, threshold, filters, adjustments, invert, opacity, colour splash etc. Ensure edits are appropriate to theme.

Refine choose one image from last pages to develop into a series, where each one is edited differently, but retains a theme - either digitally or manually.

(This can be manually edited or on photoshop. Present your findings – screen shot.)

Refine

Two possible ideas for final piece leading on from experiments and artist research.

These must link to at least one artist you have researched and be from your own photographs used.

Two refined design ideas, from above, for final piece leading on from previous design ideas.

Again, these must link to at least one artist you have researched and be from your own photographs/ sources. They must be of good quality.

Develop plan for final photos – drawn images (photoshoot plan)– mind map – visual mind map – collect relevant resources

Develop

Choose best images and circle/select present best 25 larger with explanations of intentions for editing etc. A4 final piece design - detailed annotation to explain intentions. Final piece

TURN THE PAGE

PHYSICS

Revision checklist

This mock exam is made up of a mixture of topic 1 and topic 2 from the specification. You will get a full practice paper in February.

Section 1: Energy

Different energy stores and transfers and examples of objects where energy can be stored (e.g. chemical energy stored in a battery).

How KE and GPE is transferred in an object that is falling, bouncing up and down or swinging.

How energy is wasted by dissipation.

Equation for power and work done, including units.

The equations for kinetic energy, gravitational potential energy and elastic potential energy, including how to rearrange and use.

Section 2: Forces, braking and momentum

What stopping distance is.

What affects thinking and braking distance

Average reaction time (0.2-0.9 seconds).

$v^2 = u^2 + 2as$ equation (memorized and how to rearrange/use)

Equation for momentum.

Equation for force, linked to momentum (change in momentum over time)

Conservation of momentum – using it to answer questions about collision of objects that stick together.

How reducing the rate of change of momentum slowly can reduce impact force and keep you safe.

Section 3: Electricity

Current is the same around a closed loop.

Must memorise all the equations for electricity and how to use them.

I-V Characteristics graphs for diodes, filament lamps and resistors.

Section 4: Waves

Meaning of transverse and longitudinal waves MUST BE MEMORISED.

Examples of transverse and longitudinal waves.

Parts of a transverse and longitudinal wave (e.g. wavelength, compression).

TURN THE PAGE

$v=f\lambda$ equation and $f=1/T$

Uses and dangers of EM waves.

Section 5: Atomic Structure

Must know nuclear model of the atom.

Must know how to read atomic notation

Must know definition of isotope.

Must know properties of alpha beta and gamma radiation.

Must be able to write a balanced nuclear equation.

Definition of activity.

Must know how to calculate half-life from a graph. Must know how to use half-life to calculate how much radioactive isotope remains after a certain amount of time.

Must know definition of fission and fusion and their processes.

TURN THE PAGE

SPANISH

For your exam you should revise modules 2, 3, 6 and 7. Revise the vocabulary of the modules with vocabulary pack and do the following translations to get ready for the exam.

The school

1. Translate the following text into English.

En mi insti las clases de español son divertidas y variadas y aprendemos mucho acerca del idioma y del país. Es muy útil saber otro idioma porque te abre puertas para encontrar un trabajo bien pagado. Empecé español cuando tenía doce años y en el futuro me gustaría aprender italiano también, ya que es una lengua muy bonita. En mi escuela primaria no había clases de español. Además las reglas eran menos estrictas, por lo que algunos alumnos eran muy groseros con los profesores sin tener consecuencias. Sin embargo, mi escuela primaria era mucho más grande que mi insti y tenía mejores instalaciones. Sorprendentemente, ahora saco mejores notas que antes y no tengo ninguna asignatura suspensa. El trimestre que viene voy a apuntarme al club de judo, ya que me encanta el deporte. En el futuro me gustaría ser profesor de educación física.

Family

2. Read the following email and translate it into English.

¡Hola guapa!

¿Cómo estás? ¡Yo estoy superbien! En tu último email me preguntaste acerca de mi familia.

En mi familia somos cinco: mi madre, mi padre, mi hermano y mi abuela, que vive con nosotros. Todo el mundo dice que me parezco físicamente a mi madre, ya que las dos tenemos los ojos verdes y el pelo negro y ondulado. Sin embargo, soy alta y delgada como mi padre. Mi hermano es muy optimista y está siempre de buen humor. Se parece a mi padre en eso. Me llevo genial con mis padres, ya que siempre respetan mis decisiones y me apoyan en todo. Sin embargo, a veces son estrictos con las notas y tienen expectativas muy altas. Mi padre trabaja como médico en un hospital muy importante de la ciudad y mi madre es abogada, por lo que trabajan muchas horas a la semana. Normalmente, después del insti paso tiempo con mi abuela y mi hermano, cuando no vamos a ninguna actividad escolar. En definitiva, me encanta mi familia y sé que va a estar siempre cuando la necesite.

Cuéntame tú acerca de tu familia.

¡Hasta luego!

TURN THE PAGE

Festivals and Events

3. Read the text about how Cristina likes to celebrate her birthday and translate the text into English.

Me encanta celebrar mi cumpleaños. Todos los años, invito a todos mis amigos y familiares y juntos vamos a pasar el día a un centro comercial, donde hay restaurantes, recreativos, una bolera, un cine y un karaoke. El año pasado comimos en un restaurante italiano, ya que soy fan de la pasta y la pizza, y después fuimos al cine a ver una película de terror. ¡Qué miedo! Sin embargo, mi mejor amiga, Carla, no pudo venir a mi cumpleaños porque estaba enferma. ¡Qué pena! Además, mis tíos me hicieron un regalo que no me gustó nada: ¡unos calcetines! ¿Quién puede querer unos calcetines por su quinceavo cumpleaños? Este año me gustaría recibir un vestido elegante para llevar en mi fiesta de graduación, ya que vamos a salir de fiesta, y unos zapatos a juego. ¡Crucemos los dedos!

Work

4. Read the following letter in which a student would like to apply for a part time job in a clothes shop and translate it into English:

Estimados señores,

Me llamo Carlos Mercadal y me gustaría postular para el puesto de trabajo a tiempo parcial en su tienda de ropa.

Tengo el graduado escolar y más de cinco años de experiencia en tiendas. He trabajado como dependiente en Zara, Bershka y Gucci. Además, hice prácticas laborales en Massimo Dutti durante seis meses como gerente de tienda.

Sin embargo, ahora mismo estoy estudiando un grado en Diseño y Moda, por lo que no tengo mucho tiempo libre. Por eso, me gustaría encontrar un trabajo a tiempo parcial que me permita ganar dinero y continuar en el sector.

Me considero una persona muy activa y trabajadora. Estoy acostumbrado a trabajar bajo presión y suelo tener una buena relación con mis compañeros y jefes.

Si está interesado en mi perfil, no dude en contactarme vía telefónica o por email.

Atentamente,

Carlos Mercadal

END