YEAR 10 REVISION PACK
2018-19 Half-term 2

east london
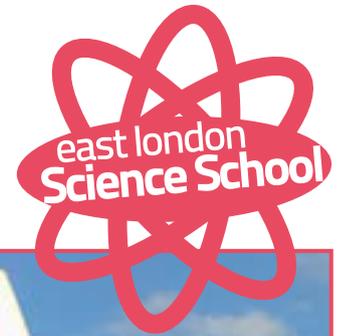Science School

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ASTRONOMY

You must be able to:

Describe divisions of latitude and longitude on the earth.

Recall the names of major lines of longitude and latitude.

Recall the names and units of different co-ordinate systems used to navigate the night sky.

Describe how the night sky changes based on your position on the earth.

Explain why the night sky changes over a period of a year.

Recall the definition of zenith, circumpolar and precession.

Explain why the pole star will change over a period of thousands of years.

Recall the angle of the earth's axis' tilt.

Describe solar and lunar eclipses.

Explain why the moon appears red during a lunar eclipse.

Explain why different areas of the earth see no eclipse, a partial eclipse and a total eclipse depending on location.

Recall the equation for f-ratio for a telescope

Recall the equation for magnification for a telescope.

Recall the equation of time.

Describe how the appearance of a shadow stick will change during the day.

Explain the difference between apparent and mean solar time.

Describe the uses of telescopes in different parts of the electromagnetic spectrum.

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BIOLOGY

Vocabulary

DNA, mtDNA, genes, evolution, natural selection, acquisition theory, genetic variation, bipedalism, classification, taxonomy, selective breeding, GMO

Revision questions from last term

What are the differences between eukaryotic and prokaryotic cells?- give examples

What makes eukaryotic cell division promote genetic diversity?

How can genetic variation occur in bacteria?

Are Mutations good or bad?

Evolution and classification

What did Darwin and Lamarck agree on? They had very different views otherwise

Explain the terms Natural Selection – give an example

How does both the archaeological and genetics point to humans originating in East Africa

How have we become adapted to walking on two feet. (explain using terms such as centre of gravity, balance, shock absorbents, position of the skull

What ability have we lost , that still exist in modern day apes? –What could have driven this change (give two reasons)

What are the negative sides of bipedalism?

How is MRSA (metoxylin resistant staphylococcus aureus) an example of evolution by natural selection?

There are two locations of DNA in the cell- how are they inherited?

The rate/ levels of mutations in two species can be used to determine how related those two are- explain

Explain two ways why Panthera leo (lion) and Panthmathera Tigris (tiger) are different species

What is selective breeding? Give examples

How would you classify the following species: dragonfly, Cheetah, Seagull, Iguana? You need to include Phylum, and class in your description

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CHEMISTRY: QUALITATIVE ANALYSIS

Section 1: Purity and formulations

Define the chemical term pure substance.

Identify a substance is pure based on its melting and boiling points.

Define the term formulation & give examples of it.

Use given information to identify if a substance is a formulation or not.

Section 2: Analysing paper chromatography

Define chromatography and state some of its uses.

Describe the two phases of chromatography & explain how different substances in a mixture are separate based on how long they spend in each phase.

Define the two phases of chromatography: mobile and stationary.

Explain the theory of paper chromatography and use R_f values to identify the components of a mixture.

Interpret chromatograms and calculate R_f values.

Describe in detail the practical of paper chromatography that you conducted. (required practical 6)

Section 3: Tests for common gases

Explain how to test for chlorine, oxygen, hydrogen and carbon dioxide gas.

Write a word equation for each reaction that gives off chlorine, oxygen, hydrogen and carbon dioxide.

Write a balanced symbol equation for each reaction that gives off Cl_2, O_2, H_2 and CO_2.

Section 4: Testing for common ions

Use a flame test to identify certain metal ions (lithium, sodium, potassium, calcium and copper).

Write balanced symbol equations for the formation of hydroxide precipitates in the test for metal ions.

Explain the 3 different methods of testing for negative ions.

Explain the chemical tests you will use to identify the ions in a compound (required practical 7).

(Solutions of aluminium, calcium and magnesium ions form white precipitates when sodium hydroxide solution is added, but only the aluminium hydroxide precipitate dissolves in excess sodium hydroxide solution.

Solutions of copper(II), iron(II) and iron(III) ions form coloured precipitates when sodium hydroxide solution is added. Copper(II) forms a blue precipitate, iron(II) a green precipitate and iron(III) a brown precipitate.

Halide ions in solution produce precipitates with silver nitrate solution in the presence of dilute

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nitric acid. Silver chloride is white; silver bromide is cream and silver iodide is yellow.

Sulfate ions in solution produce a white precipitate with barium chloride solution in the presence of dilute hydrochloric acid.)

Section 5: Flame emission spectroscopy

Define the term instrumental analysis and give some examples.

Explain in detail how flame emission spectroscopy works.

Use given spectra to identify ions in solution using visual or numerical data.

Explain the advantages of using instrumental methods over conducting chemical tests.

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CLASSICS: LATIN LITERATURE

Revise the Prose Author sections of "Germanicus et Piso" we have studied this half term (Section 3: Mourning; Section 4: Revenge).

Using your Prose Author workbook or our Quizlet page (ELSS-SNS-Latin2020, Year 10-11 Latin), learn the translations of these sections (ideally off-by-heart). Remember to compare the English to the Latin as you learn them.

Revision Technique

The same was the ill-feeling towards Plancina. And she herself, as long as Piso had a hope of acquittal, was promising that she would be his ally, whatever his misfortune, and, if it were necessary, his companion in death: but she gradually began to distance herself from her husband. And since Piso realised that this meant the end for him, he hesitated as to whether he should plead his case further. Therefore, as if he were thinking about his defence for the next day, he wrote a few words, and sealed them, and handed them over to his freedman; then he attended to his personal needs, as usual. Next, late into the night, when his wife had left the bedroom, he ordered the door to be shut; and at dawn he was discovered with his throat cut, and with his sword lying on the floor.

eadem erat Plancinae invidia. atque ipsa, dum Pisoni spes erat absolutionis, sociam se cuiuscumque fortunae futuram esse et, si necesse esset, comitem exitii promittebat: sed paulatim segregari a marito coepit. quod postquam Piso sibi exitiabile esse intellexit, dubitavit an causam diceret amplius. itaque, tamquam defensionem in posterum diem meditaretur, pauca scribit obsignatque et liberto tradit; tum solita curando corpori exsequitur. deinde multam post noctem, egressa cubiculo uxore, claudi ianuam iussit; et prima luce perfosso iugulo, iacente humi gladio, repertus est.

1. Highlight or underline the main verbs.

2. Translate these from memory, or by using your workbook and the GCSE vocabulary list.

3. Write in a few other 'trigger words/phrases' of which you are unsure.

4. Draw a circle around words which agree with each other if they are next to each other (e.g. "cuiusque fortunae", "posterum diem"), and draw arrows connecting words which agree if they are separated from each other.

5. Now try to translate the whole passage. Remember to use the number order above the words in your workbook to help you.

6. Use your workbook translation or Quizlet (a) if you get stuck and (b) to check your translation at the end.

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Style Questions

When answering these you must include:

1. The technique Tacitus is using (e.g. alliteration, polysyndeton, use of vivid present tense, emphasis by position)

2. The Latin quote, e.g. "sociam se...esse, et si necesse esset...segregari coepit" (alliteration); "pauca scribit obsignatque et liberto tradit" (polysyndeton); "pauca scribit obsignatque et liberto tradit...exsequitur" (use of vivid present tense); "exterae nationes regesque" (emphasis by position)

3. The effect of the technique (e.g. "the obvious sibilance in the frequently repeated letter "s" suggests that Tacitus considered Plancina to be a lying and duplicitous woman, and it prepares us for the proof of this view in the final phrase 'segregari coepit' (she began to distance herself)".

Note: Only mention something if it answers the question!

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COMPUTER SCIENCE

Section 1: Data Types and Operation/Pseudocode -

Understand and use data types: integer, real, Boolean, character and string

Declare and use constants and variables

Use input, output and assignment statements

Use arithmetic operators including MOD and DIV

Use string handling and conversion functions

Section 2: Sequence and selection in Pseudocode

Understand selection and nested selection statements

Understand NOT, AND and OR when creating Boolean expressions

Understand in-built functions such as "ROUND"

Understand random number generation

Section 3: Indefinite Loops in pseudocode

Understand and use iteration in an algorithm

Write algorithms in pseudocode involving sequence, selection and iteration

Know how to write While loops with if statement

Know how to write while loops

Know how to write Repeat-Until Loops

Know how to use Boolean Flags and break statement in your algorithm

Understand NOT, AND and OR when creating Boolean expressions in while loops

Section 4: Definite Loop in pseudocode:

Write algorithms in pseudocode involving sequence, selection and iteration

Know how to write For loops with if statement

Know how to write For loops

Know how to use Boolean Flags and break statement in your algorithm

Section 5 one- and two-dimensional arrays in pseudocode

Use one- and two-dimensional arrays in the design of solutions to simple problems

Know how to declare one dimensional and two dimensional arrays

Write programs with both type of arrays.

Know how to access the elements of an array individually

Know how to access all elements using for loops

Know how to access two dimensional arrays using nested for loops

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ECONOMICS

The four main economic objectives of the government

Know the 4 main economic objectives are: economic growth (increase in output per person, also known as GDP per capita), full employment (where almost everyone that is willing and able to work is able to find a job), low inflation (the government has a target of 2% rise in the general price levels or average prices in the economy each year), and a balance of payments coming in to and out of the country (e.g. a balance of trade where exports are similar to imports. If imports were a lot more than exports, it would mean a lot of money was leaving the UK to overseas countries).

Other objectives of the government

In addition to the 4 main economic objectives of the government, understand that the government has other objectives such as an equal distribution of income (incomes of households are quite similar) in the economy 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.

For example, if the government decides to go after more economic growth and employment, they might increase government spending. An increase in government spending will increase Aggregate Demand in the economy (since government spending is a component of Aggregate Demand). From the Aggregate Demand-Aggregate Supply model, a shift in Aggregate Demand will lead to more output produced (economic growth), however, it also leads to higher price levels (more inflation) which is against the objective of low inflation. The increase in price levels will also make our exports less competitive overseas since it is more expensive. With higher price levels in the UK, consumers might choose to purchase more imports which are relatively cheaper (this worsens the balance of trade). Also more output produced will mean more negative production externalities and will lead to damage of the environment.

Gross Domestic Product and Gross Domestic Product per capita

Gross Domestic Product (GDP) is the value of final output produced in a country over a period of time (usually one quarter or year).

Understand that GDP is calculated using one of three methods (all three methods will lead to the same GDP value): Expenditure method (adding all the components of aggregate demand/spending: consumption, investment, government, and exports minus imports), income method (adding all the income earned from production of goods and services such as wages, profits earned by firms, and rent), output method (adding the value of final output produced in an economy during the quarter or year).

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Gross Domestic Product per capita is the value of final output produced per person (on average). It is calculated as the GDP divided by the population. You need to be able to calculate GDP per capita using given data (refer to calculation examples from class).

Real GDP versus Nominal GDP

Nominal GDP is the Gross Domestic Product before any adjustments for inflation. Real GDP is Nominal GDP adjusted for inflation.

Understand why Real GDP is necessary for reporting purposes. GDP is used as a measure of the level of production in the economy in £. E.g. If an economy only produces one product each year and makes 1,000 units a year – at higher prices, it would mean nominal GDP would be higher. However, the level of production has remained the same – Real GDP is therefore used to adjust nominal GDP for inflation (higher average price levels) to provide an indication of the level of production and show the change in production levels between years.

Benefits of Economic Growth

Understand some of the key benefits of economic growth. Higher economic growth means more levels of consumption and income for individual households. More production means firms will hire more workers and there will be more employment in the economy. More employment of workers also means more income tax revenue (and national insurance contributions) received by the government – which can be used to increase spending on state benefits and other uses. Also more production and consumption levels mean that firms will invest in more capital goods (machines, equipment, factory buildings) which will increase the productive capacity in the economy (Aggregate Supply shifts right).

Costs of Economic Growth

Economic Growth that occurs through an increase in Aggregate Demand/spending generally leads to higher price levels (inflation) which is against the government objective of low inflation. Economic Growth negative impacts the environment due to the negative production externalities that result from higher output levels. Also, the gains from economic growth (e.g. higher income) might mainly go to the wealthier individuals, and lead to a more uneven distribution of income (against another of the objectives of the government).

Unemployment

Unemployment is the quantity of workers aged 16-64 that are actively seeking work and able to work (willing and able to work) at the current wage, but are unable to find work, expressed as a percentage of the total workforce of those aged 16-64 that are employed or unemployed.

Types and Causes of Unemployment

Know all the different types/causes of unemployment in an economy. Frictional unemployment: these are the individuals that are not working because they are in-between jobs – e.g. they have quit their job and looking for a new job, or they are new entrants to the labour market such as a university/school graduate.

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Structural unemployment occurs when there is a long-term decline in the demand for labour in an industry. For example, the use of robots in the manufacturing process has resulted in less labour demand for manufacturing workers (or online banking has resulted in less demand for bank tellers). Also, foreign competition and lower costs of production in some goods/services has resulted in a long-term reduction in demand for labour in the UK since those goods/services might no longer be produced in the UK.

Cyclical unemployment – occurs due to a lack of aggregate demand (lack of spending) in an economy. In general, during a recession (two consecutive quarters of negative GDP growth), there will be a lack of spending/Aggregate Demand and thus more cyclical unemployment.

Seasonal Unemployment – this occurs when individuals are unable to find work due to a lack of demand for the firm's goods/services in a particular season of the year. E.g. A ski instructor would be unable to find work during the summer months.

Costs of Unemployment

Understand the costs of unemployment to an economy. There will be lower levels of income and production in an economy when unemployment is higher. Since labour is not being utilized, it can be considered that a scarce economic resource (labour) has been wasted. Unemployment can cause knock-on or multiplied negative effects to the economy – more people not working will mean less spending and cause other firms to hire even less workers. It will also generally cause a worsening of the budget deficit – the government receives less income tax revenue since less people are working, and will need to pay out more unemployment benefits. Finally, there are social costs to individuals of unemployment. E.g. more crime, higher divorce rates, worsening of health and lower life expectancy.

Government policies to reduce unemployment

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

Government subsidies to firms for hiring unemployed youth workers (aged 15-24) will increase demand for labour by firms. Apprenticeship programs for workers to develop new skills will lead to a decrease in unemployment. Decreasing unemployment and welfare benefits to encourage individuals to search harder for work. Lowering income tax rates and increasing the personal tax-free threshold as an incentive for individuals to find work. Increasing government spending on goods/services that will lead to an increase in Demand for workers.

Inflation

Inflation being the sustained rise in the general price levels of goods/services in the Economy. The rate of inflation being the percentage change in the general (or average) price levels in the economy over a period of time (usually a quarter or a year).

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Measuring Inflation

Average Price levels are measured using the Consumer Price Index. The Consumer Price Index (CPI) is a weighted average basket of the prices of various goods/services including food, clothing, transport, leisure, household goods, and housing. E.g. If the CPI was 104 in one year and increased to 108 the next year, the inflation would be ((108-104)/104 * 100%) 3.8%.

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

Know that Demand-pull inflation is due to an increase in Aggregate Demand (either Consumption, Investment, Government, or Net Export spending). Refer to the Aggregate Demand – Aggregate Supply model and how an increase in Aggregate Demand causes higher price levels.

Cost-push inflation is due to increased costs of production facing many firms in the economy. It includes increase in wages in the economy (e.g. increase in minimum wage), increase in raw material/input costs impacting many firms in economy (e.g. increase in price of oil, or electricity), or increase in imported raw materials/input costs. Increase in costs of production impacting many firms in the economy leads to a leftward shift in the Aggregate Supply curve, thus resulting in higher average price levels.

Costs of inflation

Know that inflation has a number of costs to the economy. Inflation means that the price of exported goods/services become more expensive, and a reduction in export demand from overseas. Imports become relatively cheaper and domestic consumers might choose to purchase more imports rather than domestic goods/services.

Inflation makes it difficult for firms to predict costs and prices charged on goods/services. It causes business uncertainty and firms are likely to reduce capital/investment spending.

Inflation reduces the purchasing power of money (money can buy less goods/services) and can cause consumers to reduce their consumption spending. It also impacts lower-income households more (regressive impact) than higher-income families, since the increase in prices impact them more (larger percentage of their income).

Inflation also generally means banks will raise interest rates on loans since the value of money is decreasing. Higher interest rates will cause consumption and investment spending to decrease.

Distribution of Income

Define distribution of income. Distribution of income refers how income is spread in the country (and the differences in income levels). It can be measured in terms of the share of income going to the highest-earning 20% of the population, second-highest-earning 20% of the population, etc. It can also be measured as the percentage of population earning an income below the official poverty line for the country.

Know how unequal distribution of income can occur and methods the government can use

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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). Fiscal policy involves changing the level of government expenditure or changing the levels of direct and indirect taxes (e.g. income taxes and personal allowance thresholds, corporation taxes, etc).

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ELECTRONICS

You must be able to:

Recall the symbols for start/stop, process, input/output and decision boxes in flowcharts.

Design flowcharts that describe a stated system.

Recall the pins and their uses for

555 timers

Operational amplifiers

D-type flip-flops

Use 555 timers, operational amplifiers and d-type flip-flops to design circuits for a given problem.

Recall and apply the equation to calculate time period for a 555 timer in both monostable and astable configurations.

Recognise and correct errors in circuit designs.

Recall and apply the equations for:

Ohm's Law

Power

Energy

Potential dividers

Current

Resistors in series

Resistors in parallel

Design a circuit to convert a physical analogue input signal into a digital output.

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ENGLISH: FRANKENSTEIN – CONTEXT AND STRUCTURE

Context

Shelley lived **1797 – 1851**. Her feminist mother, **Mary Wollstonecraft**, wrote A Vindication of the Rights of Woman, but died in childbirth. Her father, **William Godwin**, was a radical intellectual. ·

Three of Shelley's four children died in infancy; in 1822, her husband, the Romantic poet **Percy Bysshe Shelley** drowned off Tuscany, leaving Mary a widow and single mother. ·

Frankenstein was initially composed as part of a **ghost story** challenge with PB Shelley and Lord Byron while by Lake Geneva during the '**Year without a Summer**' of **1816**, when Mary was just 18, then published in **1818**.

Intellectually, The **Enlightenment** was a time when power shifted from religion to man.

Politically, the **American War of Independence**, **Luddite Rebellion**, and **French Revolution** had inspired ideas of popular freedom and equality. Industrial Revolution brought advances in technology.

Scientific developments of the age:

Galvanism (using electric currents to stimulate muscle movement)

Body Snatching for research

Vivisections (dissecting living animals for the purpose of scientific study)

Polar Expeditions – explorers of the period travelled to previously uncharted territories.

Structure

Frame Narrative: The novel's form, with three narrators each telling their story. First you have Walton's letters, then Frankenstein's story, then the Monster's account.

Epistolary: a literary work in the form of letters, as in the opening letters written by Walton to his sister.

Intertextuality: Shelley brings in ideas from other works, including *Paradise Lost*, *The Rime of the Ancient Mariner* and *The Sorrows of Young Werther*.

Epigraph: (from John Milton's *Paradise Lost*) 'Did I request thee, Maker, from my clay/To mould Me man? Did I solicit thee/ From darkness to promote me?'

Subtitle: The Modern Prometheus

The Gothic Genre: Gothic literature, at its height from roughly 1764-1840, is characterised by the dark nature of its content.

Reoccurring **features** include gloomy, decaying settings, supernatural beings or monsters, curses or prophecies, damsels in distress, doppelgangers (doubles), nightmares, mental torment, graveyards, corpses and the misapplication of science.

Frankenstein also contains elements of the **Romantic** and is an early example of **Science Fiction.**

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FRENCH

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

Repas et nourriture	Meals and food
Je bois/mange/prends …	I drink/eat/have …
du café/lait/jus d'orange	coffee/milk/orange juice
du pain grillé/beurre	toast/butter
du yaourt/miel	yogurt/honey
du poulet/jambon/poisson	chicken/ham/fish
du saucisson/fromage	sausage/cheese
du pain/riz	bread/rice
du chou-fleur/raisin	cauliflower/grapes
de la confiture/glace	jam/ice cream
de la soupe/viande	soup/meat
de la mousse au chocolat/tarte au citron	chocolate mousse/lemon tart
de l'eau (minérale)	(mineral) water
des fruits (m)/bananes (f)	fruit/bananas
des fraises (f)/pêches (f)	strawberries/peaches
des pommes (f)/poires (f)	apples/pears
des légumes (m)/petits pois (m)	vegetables/peas
des champignons (m)/haricots verts (m)	mushrooms/green beans
des carottes (f)/pommes de terre (f)	carrots/potatoes
des céréales (f)/pâtes (f)	cereal/pasta
des crudités (f)/œufs (m)	crudités/eggs
Je ne mange pas de viande.	I don't eat meat.
Je suis végétarien(ne).	I'm vegetarian.
un paquet de …	a packet of …
un kilo de …	a kilo of …
une bouteille de …	a bottle of …
un pot de …	a jar/pot of …
cinq cents grammes de …	500 grams of …
quatre tranches de …	four slices of …
un morceau de …	a piece of …
un litre de …	a litre of …
une boîte de …	a tin/can of …

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Il faut aller …	You need to go …
à la boucherie	to the butcher's
à la boulangerie	to the baker's
à la charcuterie	to the deli/pork butcher's
à la pâtisserie	to the cake shop
à l'épicerie (f)	to the grocer's
au marché	to the market
Les vêtements	**Clothes**
D'habitude, je porte …	Usually I wear …
Je vais mettre …	I'm going to put on …
J'ai mis …	I put on …
un blouson	a jacket
un chapeau	a hat
un collant	tights
un costume	a suit
un jean moulant	skinny jeans
un manteau	a coat
un pantalon	trousers
un polo	a polo shirt
un pull	a sweater
un sac à main	a handbag
un short	shorts
un sweat à capuche	a hoody
un tee-shirt	a T-shirt
une casquette	a cap
une ceinture	a belt
une chemise	a shirt
une cravate	a tie
une écharpe	a scarf
une mini-jupe	a mini-skirt
une robe	a dress
une veste	a jacket
des baskets (f)	trainers
des bottes (f)	boots
des chaussettes (f)	socks

des chaussures (f)	shoes
des gants (m)	gloves
des lunettes de soleil (f)	sunglasses
blanc(he)(s)	white
bleu(e)(s)	blue
gris(e)(s)	grey
jaune(s)	yellow
kaki	khaki
marron	brown
mauve(s)	purple
noir(e)(s)	black
orange	orange
rose(s)	pink
rouge(s)	red
vert(e)(s)	green
en coton/cuir/laine/soie	(made of) cotton/leather/wool/silk
rayé(e)	striped
à carreaux	checked
de marque	designer
habillé(e)	smart
de couleur vive	brightly coloured
multicolore	multi-coloured
clair(e)	light
foncé(e)	dark
La vie quotidienne	**Daily life**
J'ai cours …	I have lessons …
tous les jours sauf …	every day except …
(cinq) jours par semaine	(five) days a week
Je vais au lycée …	I go to school …
en bus/en scooter/en voiture/à pied	by bus/by moped/by car/on foot
Les jours d'école, …	On school days …
je dois me lever tôt	I have to get up early
je prends mon petit-déjeuner	I have my breakfast
je quitte la maison	I leave the house
Le dimanche, …	On Sundays …

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je peux rester au lit/faire la grasse matinée	I can stay in bed/have a lie in
Le soir, …	In the evening …
je dois faire mes devoirs	I have to do my homework
je mange avec ma famille	I eat with my family
je regarde un peu la télé	I watch a bit of TV
Le mercredi/samedi après-midi, …	On Wednesday/Saturday afternoon …
je peux me détendre un peu	I can relax a bit
je reste à la maison/chez moi	I stay at home
Le week-end, …	At the weekend …
je sors avec mes copains	I go out with friends
je dois aider ma mère/mon père	I have to help my mum/dad
je vais au cinéma/au bowling	I go to the cinema/bowling alley

Les repas de fêtes — **Food for special occasions**

Ma fête préférée est …	My favourite festival is …
Noël/le 5 novembre/ Hanoukka/Aïd el-Fitr/Divali	Christmas/5 November/ Hanukkah/Eid al-Fitr/Diwali
parce que j'adore …	because I love …
D'habitude, je le/la fête …	I usually celebrate it …
en famille/chez nous	with my family/at home
chez mon/ma/mes …/avec …	at my …'s house/with …
On fait/décore/se souhaite …	We do/decorate/wish each other …

Les repas à la maison — **Meals at home**

Du lundi au vendredi, je prends le petit-déjeuner à … heures.	From Monday to Friday I have breakfast at …
Le week-end, je prends mon petit-déjeuner plus tard.	At the weekend I have my breakfast later.
Je grignote après l'école.	I have a snack after school.
Je ne grignote jamais en dehors des repas.	I never snack between meals.

Félicitations! — **Congratulations!**

Je suis né(e) en …	I was born in …
Je viens de fêter …	I have just celebrated …
Il y a (trois) mois, j'ai fêté …	(Three) months ago I celebrated …
C'était mon quatorzième/quinzième	It was my fourteenth/fifteenth birthday.

anniversaire ...

J'ai reçu beaucoup de ...

I received lots of ...

J'ai invité ... à un barbecue/une fête

I invited ... to a barbecue/party at

chez moi.

my house.

Les fêtes en France

Festivals in France

le jour férié

public holiday

le jour de l'An

New Year's Day

la fête des Rois/l'Épiphanie

Twelfth Night/Epiphany

la Chandeleur

Candlemas

la Saint-Valentin

St Valentine's Day

Mardi gras

Shrove Tuesday

le 1er avril

April Fool's Day

Pâques

Easter

la fête du Travail

May Day/Labour Day

la fête des Mères

Mother's Day

la fête de la Musique

music festival in France on 21 June

la fête nationale

Bastille Day, 14 July

stay open all night

la Toussaint

All Saints' Day

le jour de Noël

Christmas Day

la Saint-Sylvestre

New Year's Eve

Les mots essentiels

High-frequency words

à part

apart from

bien sûr

of course

chez (moi)

at (my) house

d'habitude

usually

de temps en temps

from time to time

en revanche

on the other hand

ensuite

next, then

jusqu'à

until

parfois

sometimes

sauf

except

si

if

sinon

if not

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GEOGRAPHY: THE CHANGING ECONOMIC WORLD

Section 1: Measuring Development

- Three Worlds Model
- Brandt Line
- BRICS Model
- The development gap: How do we measure? (HDI and NGI)
- The Demographic Transition Model

Section 2: Strategies to Combat Inequality

- Causes of uneven development: historical, physical and economical
- Top Down strategies: Aid and Debt Relief
- Bottom Up Strategies: Fair Trade and Intermediate Technology

Section 3: Tourism as a Development Tool

- Jamaica's economic development and tourism
- Quality of life and tourism in Jamaica
- Negatives of foreign owned resorts and travel companies
- Negative social and environmental effects of tourism: future solutions?

Section 4: Nigeria's Economy: Case Study

- NEE: Location, importance and context
- NEE: Industry and TNCs (Transnational Corporations)

Section 5: Nigeria's Development: Case Study

- NEE: External Aid
- NEE: NGOs (Non- Government Organisations
- Oil: A Blessing or a Curse?

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GEOGRAPHY: THE CHANGING ECONOMIC WORLD

GERMAN

accommodation	Unterkunft (f)
arrival	Ankunft
balcony	Balkon (m)
basement	Untergeschoss (n)
bath	Bad (n)
bath towel	Badetuch (n)
bath tub	Badewanne (f)
bathroom	Badezimmer (n)
bed	Bett (n)
bed and breakfast place	Pension (f)
bedlinen	Bettwäsche (f)
bedroom	Schlafzimmer (n)
bunk bed	Etagenbett (n)
camp site	Campingplatz (m)
caravan	Wohnwagen (m)
curtain	Vorhang (m)
dining area	Essecke (f)
dining room	Esszimmer (n)
door (front)	Haustür (f)
double room	Doppelzimmer (n)
drinking water	Trinkwasser (n)
exit	Ausgang (m)
farm	Bauernhof (m)
farm house	Bauernhaus (n)
floor	Boden (m)
floor (1st, 2nd)	Stock (m)
floor (e.g. 1st, 2nd)	Etage (f)
form	Formular (n)
free, available, vacant	frei
full board	Vollpension (f)
furnished	möbliert
games room	Aufenthaltsraum (m)
garden	Garten (m)
ground floor	Erdgeschoss (n)

guest	Gast (m)
half board	Halbpension (f)
heating	Heizung (f)
hotel	Hotel (n)
in advance	im voraus
in the country	auf dem Lande
included	inbegriffen
inclusive of, included	inklusiv
key	Schlüssel (m)
kitchen	Küche (f)
lift	Aufzug (m)
lift	Fahrstuhl (m)
luggage	Gepäck
occupied	besetzt
on the 1st floor etc	im ersten Stock usw.
overnight stay	Übernachtung (f)
pillow	Kopfkissen (n)
reception	Empfang (m)
reception	Rezeption (f)
receptionist	Empfangschef (m)
rent	Miete (f)
reservation	Reservierung (f)
room	Zimmer (n)
shared room	Mehrbettzimmer (n)
sheet	Betttuch (n)
shower	Dusche (f)
single room	Einzelzimmer (n)
sitting room	Wohnzimmer (n)
sleeping bag	Schlafsack (m)
soap	Seife (f)
staircase	Treppe (f)
suitcase	Koffer (m)
television	Fernsehen (n)
television set	Fernsehapparat (m)
tent	Zelt (n)

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to arrive	ankommen
to book	buchen
to camp (in a tent)	zelten
to function, to work	funktioneren
to hire, to rent	mieten
to reserve	reservieren
to stay/spend the night	übernachten
to unpack	auspacken
toilet	Toilette (f)
toilet paper	Toilettenpapier (n)
toothbrush	Zahnbürste (f)
toothpaste	Zahnpasta (f)
twin room	Zweibettzimmer (n)
view	Aussicht (f)
village	Dorf (n)
wardrobe	Kleiderschrank (m)
wash basin	Waschbecken (n)
WC	WC (n)
window	Fenster (n)
with a view of, overlooking	mit Blick auf

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/YEAR10/2018-19/HT2

HISTORY

The 'Scramble for Africa'

The 'Scramble for Africa' began with the 1884 Berlin Conference, a meeting of the major European powers to determine how Africa would be partitioned, in order to prevent colonial rivalries from spilling out into open war. Between 1884-1914, Africa went from being largely free of colonial rule, to 90% foreign governed, Abyssinia (Ethiopia) the only remaining free state, would be taken by the Italian's in 1935. Although Europeans had been exploiting African's for centuries; most notably by trading them as slaves across the Atlantic, efforts to colonise the continent did not begin in earnest until the 1870's. Explorers such as Livingstone, who searched for the source of the Nile, and Christian missionaries motivated by a sense of religious duty, were among the first to visit the continent. Cash crops; cotton, tea, coffee and cocoa could be grown, and diamonds mined in areas such as Botswana, ivory and big game hunting, was another attraction to European traders and settlers. African resources, both human and natural, were heavily exploited by their colonial rulers, and those Africans who resisted, brutalised by European forces.

Africa – British Colonisation

Britain took no less than 16 African colonies, holding an unbroken swathe of land across the continent from Cairo to Cape Town, which encompassed a third of Africa's entire land mass. British interest in coastal Africa stemmed from the desire to insulate shipping routes to India, which ran either around the southern tip of the continent, or via the Suez canal in western Egypt. Across central Africa, control of The Sudan, Nigeria, North and South Rhodesia (Zimbabwe and Zambia today), gave the British access to land, diamonds, ivory, but perhaps most importantly, huge markets. The British imperial model had always been one of private economic exploitation; colonise a foreign population and demand that they trade exclusively with you, goods would be sold to Africans and resources extracted, a mere fraction of their market value in Europe, going to local populations.

The Boer War

On the discovery of diamonds in the Dutch Boer territories of the 'Transvaal' and the 'Orange Free State', in 1867, the British began a military operation to compel the Boer's to align themselves with British owned 'Natal' and 'Cape Colony'. A stunning victory by Boer forces at Majuba Hill in 1881 placed British plans indefinitely on hold. However, 1886 saw the discovery of Gold, Cecil Rhodes, now a major actor in the region, sponsored a plan to remove Paul Kruger, the Boer leader, on the pretext that British workers now streaming into Boer territories to work in the mines, were offered no political rights by Afrikaan leaders. Rhodes' failed coup drew the British into a 'Second Boer War' 1899-1902. The Boer's guerrilla tactics, comprising of small, disguised units, living off the land for days, who performed lightening raids before fleeing on horseback, initially frustrated the British forces. Kitchner's resulting decision to employ a 'scorched earth' policy, and mass Boer civilians into concentration camps, led to at least 30,000 civilian deaths. By 1902 the Boer's had surrendered, and the British took control

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of all of South Africa, however, the Boer's retained a degree of autonomy. The failure of so many British men to meet the health criteria for joining the army during the conflict, was among the factors which motivated a raft of social reforms, such as free school meals, to be introduced in 1906.

19th Century Migration Within Britain and the Empire

Between 1815 and 1914 an estimated 22 million people left Britain, searching for new opportunities around the Empire, in Canada, Australia, South Africa and the like. Industrial working conditions drove many abroad, whilst councils supported migration by the poor and criminals, hoping this would reduce the impact of poverty and crime, at home in Britain. The industrial period also saw enormous internal migration; around 70% of the population moved from the countryside to urban centres, having lost their jobs to agricultural machinery, and seeking new employment in factories. Many Irish migrants moved to Britain in the wake of the potato famine, and in search of new employment, by 1851, 15% of the population of Liverpool, and 10% of the population of Manchester, were Irish.

The Impact of Urbanisation

The rapid growth of expensive, large industrial technologies, which required power sources, saw the centralisation of labour into factories. Machines eliminated the jobs of many agricultural labourers and could outperform skilled workers who had previously engaged in activities such as spinning cotton. 70% of Britain's population moved from the countryside to work in factories, centred in rapidly growing cities. As a nation Britain became immensely wealthy, it's GDP growing 500%, a growing middle class benefited enormously from this and many agricultural labourers who had struggled to find regular work, were offered stability in constant factory labour. However, conditions in factories were inhumane and the drive for profit suppressed wages. The rapid growth of cities had not been managed, slums had begun to develop and many people now lived in appalling, cramped, polluted conditions, working extremely hard in exchange for very little.

Exam Preparation

Answer the following questions using the information on this sheet.

Explain the factors which drove the Scramble for Africa.

Explain the significance of Cecil Rhodes to the nature of British rule in Africa.

Explain the causes and consequences of the second Boer War.

Explain how industrialisation led to mass migration within Britain.

Explain the impact of mass migration to cities and towns, on the lives of working class people, during the industrial revolution.

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MATHS

Use Mathswatch when revising.

Section 1: Factors and Primes

Prime numbers

Prime factorization

HCF

LCM

Problem solving

Section B: Powers and Roots

Squares ad cubes

Finding roots of numbers

Applying laws of indices

Write numbers as powers

Section 2: Surds

Rational and irrational numbers

Simplifying surds

Rationalising the denominator

Problem solving

Section 3: Equations of straight lines

Gradients and y-intercepts

Find the equation of straight lines given gradients and y-intercept

Find the equation of straight line perpendicular to another line.

Section 4: Linear and Quadratic functions

Identify intercepts on the graph

Find the turning point of the graph

Drawing quadratic graphs

Problem solving

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PHOTOGRAPHY

Coursework portfolio expectations September –December

Experimental abstract edits

Edits of the photos you have created so far in various photoshoots from half-term 1.

Jane Thomas study page

A concise visual study page of the artist Jane Thomas, must contain some biography, analysis and imagery.

Response to Jane Thomas Photo shoot

Contact sheet of group shoot illustrating the response and annotation explaining the intention and result.

Favourites and best selection edited.

A selection of the best photos from the shoot, presented and then edited in basic methods in various ways, annotated and presented in book.

Pattern experiments

Edited favourite developed into a pattern using layering and duplicating method, kaleidoscope effect images created as an extension with symmetrical repeat pattern editing.

Formal element selection ideas

Mind map and or visual mind map of the formal element you have chosen for final piece.

Formal element photoshoot

20 -30 images of the abstract topic you've chosen (HW)

Photoshop experiments

Several evidenced experiments of the shoot completed at home, must be appropriate edits for chosen theme.

Manual experimentation

Several art methods tested on own photos to create varied outcomes which are relevant to theme.

Final abstract piece

A consolidation of your best experiments and refined ideas and photos.

Your grade will be based on the standard of coursework you submit, all photography books will be collected after the break, to include time to complete all work before the deadline, you will also be given a half term homework which ill be included in this deadline.

Any queries please email Hannah.shapley@eastlondonscienceschool.co.uk or visit the shared area on one drive for access to resources mentioned.

PHYSICS: ELECTRICITY

You need to know the following information. For anything you are unsure off, make sure you use your exercise book to look it up and make notes.

Explain how materials can become statically charged.

Describe how electrons move when objects become charged but positive charges do not.

Explain what happens when object with the same charge or opposite charges are bought together.

Describe how sparks are caused.

State what an electric field is.

Describe how the electric field is stronger closer to an object.

Draw an electric field for a spherical positive and negative object, including direction.

Draw an electric field for two spherical like charges or opposite charges, including direction.

Identify and draw circuit symbols for common components.

State that current is the rate of flow of charge.

State that potential difference (p.d.) is the driving force behind a current, and the amount of energy per unit of charge.

Recall, apply and rearrange the equation $Q=It$

Recall, apply and rearrange the equation $V=IR$

Describe how resistance affects current and potential difference.

Identify current-p.d. graphs for the following components: ohmic conductor, LDRs, thermistors, diodes, filament lamps.

Know that resistance of a thermistor decreases as temperature increases.

Know that resistance of a LDR decreases as light intensity increases.

Know that current is measured using an ammeter connected in series.

Know that potential difference is measured using a voltmeter connected in parallel.

Know that current is the same around a closed loop (series circuit).

Know that the potential difference of the power supply is shared between components in a series circuit.

Know that the total resistance in a series circuit is the sum of resistance in each component ($R_{total} = R_1 + R_2$).

Know that for a parallel circuit, the current splits at a junction/through each branch (Kirchoff's First Law).

Know for a parallel circuit, potential difference is the same across each branch.

Know that for a parallel circuit, the total resistance is always lower than the component with

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least resistance.

Explain why total resistance decreases in a parallel circuit, however it increases in a series circuit.

Sketch series and parallel circuits, along with components to measure current and potential difference.

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SPANISH

Before the exam you should revise module 4, focusing on these points:

Sección 1

Talking about free time activities

Using stem verbs like 'jugar' and 'soler'

Sección 2

Talking about TV programs

Sección 3

Talking about what you normally do

Using soler + infinitive

Talking about sports

Sección 4

Using the imperfect tense to talk about what you used to do

Sección 5

Talking about what is trending

Using the perfect tense

Sección 6

Discussing different types of entertainment

Using algunos/ciertos/otros/muchos/demasiados

END