



COURT FIELDS SCHOOL

Student Guide:

Year 11 November PPE Checklist 2021/22

(Checklist for Student – Oct 2021)



Achieve | Belong | Participate

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1.1 Computer Science

2.1 Algorithms

- Designing, creating and refining algorithms
- Searching and sorting algorithms

2.2 Programming fundamentals

- Programming fundamentals
- Data types

2.4 Boolean logic

- Logic gates & truth tables

1.1 Systems Architecture

- Architecture of the CPU
- CPU performance

1.2 Memory & Storage

- Units
- Data Storage (characters, images, sound)
- Conversions (hex-decimal-binary and back)

1.2 Creative iMedia

Your PPE exam, will be a full exam paper containing questions relating to unit R081. This is the Pre-Production Document work we have been working on since September in preparation for your full exam in January 2022.

Questions in the exam will relate to the following topics:

- Mind Maps
- Mood boards
- Visualisation Diagrams
- Scripts
- Storyboards
- Target Audiences
- Research types and methods
- Computer hardware and software

1.3 Technology

Materials

- **For this paper you must have:**
- **Normal writing and drawing instruments**
- **A calculator might be useful**

Key terminology

It would be wise exam preparation to ensure you understand the following terminology:

Materials

- Properties of materials including 'new' materials- Kevlar/ graphene etc.
- Origins of materials
- Processing base form materials into 'workable' products

Forces

- Tension
- Compression
- Shear
- Torsion

Manufacturing Processes and Production Techniques

- Quality Control
- Jigs
- JIT
- Addition Processes- laminating, welding, soldering etc.
- Removal Processes- die cutting, turning, sawing, cutting- inc. laser cutting etc.

Environmental impact of products

- 6 R's
- Environmental impact of materials and processes
- Consumer choice and how it can affect products
- Examples of environmentally sound products.

Evaluating Existing Products

- Suitability for use
- Safety for targeted user

Anthropometric Data

- What it is
- How it is used in designing products

Surface Finishes

- Reasons for- aesthetic/ functional
- Types of finishes and examples of use

2D/3D drawing

- Advantages and disadvantages
- Drawing methods and Techniques

1.4 English

English Language Paper 2

You will need to revise the following questions:

- Analysis of language and structure (Q3)
- Evaluation (Q6)
- Summarise and synthesize (Q7a)
- Comparison of writers' ideas and viewpoints (Q7b)
- Transactional writing (Q8/9)

English Literature

You will need to revise the following:

- Plot of An Inspector Calls
- Characters in An Inspector Calls
- Themes in An Inspector Calls
- Context of An Inspector Calls
- What is expected in a Part B question

March PPEs

English Language Paper 1

You will need to revise the following questions:

- Analysis of language and structure (Q3)
- Evaluation (Q4)
- Imaginative writing (Q5/6)

English Literature Papers 1 & 2

You will need to revise the following:

- Macbeth - plot, characters, themes and context
- An Inspector Calls - plot, character, themes and context
- Jekyll & Hyde - plot, characters and themes
- What is expected in Part A and Part B questions

1.5 Physical Education

- 3.1.1.1 Structure and Function of the musculoskeletal system
- 3.1.1.2 Structure and Function of the cardio-respiratory system
- 3.1.1.3 Anaerobic and aerobic exercise
- 3.1.1.4 The Short and Long term effects of exercise
- 3.1.2.1 Lever Systems & mechanical advantage
- 3.1.2.2 Planes and Axes
- 3.1.3.1 Relationship between Health and Fitness
- 3.1.3.2 Components of fitness and how they are measured H&F and role of exercise
- 3.1.3.3 Principles of training and their application to training programmes
- 3.1.3.4 How to optimise training and prevent injury
- 3.1.3.5 Effective use of warm-up and cool down
- 3.2.1.1 Classification of skills (basic/complex, open/closed)
- 3.2.1.2 Use of goal setting, SMART targets
- 3.2.1.3 Information Processing
- 3.2.1.4 Guidance on feedback
- 3.2.1.5 Mental Preparation for performance
- 3.2.2.1 Engagement patterns
- 3.2.2.2 Commercialisation of physical activity and sport

Resources you will need:

- Paper 1 and Paper 2 specification
- Key word list
- Revision guide and workbook
- Exercise books
- Planet PE site on YouTube
- Bitesize

Send me a Gmail if you need some help/guidance with any of these.

You will just be attempting 1 paper that covers all content on the topic list and will last 1hr 15mins.



Paper 1 (1 hr 20 mins) - Living with the Physical Environment

The Challenge of Natural Hazards:

- The conditions needed for the formation of a tropical storm.
- Why tropical storms happen in a seasonal pattern.
- The structure of tropical storms.
- Primary and secondary effects of a tropical storm, using a case study **(Typhoon Haiyan)**.
- Types of plate margins- constructive, conservative and destructive.
- How we can use prediction, preparation and planning to reduce the risk of tectonic hazards.
- Evidence for climate change- tree rings, ice cores, etc.
- Strategies for mitigating and adapting to climate change- carbon capture, alternative energies, planting trees, international agreements.



UK Physical Landscapes - Coasts

- Using map skills to identify and locate coastal landforms on an OS map.
- Explain the formation of a spit.
- Evaluating the use of hard and soft engineering at the coastline.

UK Physical Landscapes - Rivers

- Identify and locating river landforms on an OS map.
- Identify the important features of a river long profile.
- Explain the formation of a river floodplain.
- Human and physical causes of flooding along a



Key skills assessed; Grid references, direction using photos, measuring distance on a map, calculating the range from a data set, percentages from data.

1.7 History

You will sit one paper. It will be 1 hour and 45 minutes.

It will be a combination of all 3 module and focused only on the topics below.

Crime and Punishment

1500-1700- Early Modern Crime and Punishment:

- How did religious changes led to new definitions of crime in 1500-1700 (think Catholic/Protestant)
- Explain the extent of change and continuity in community law enforcement during this time
- Explain why there were significant changes in punishments during this time.
- Understand the impact of the Gunpowder Plot 1605 on crime and punishment
- Know about the rise and decline of witch-hunts- and in particular the role of Matthew Hopkins 1645/1647

American West

The Development of Settlement in the West

- **Causes** of the American Civil War
- **Consequences** of The American Civil War
- Homesteading & Railroads 1862-1876
- Continuing Law & Order Problems 1862-1876
- Ranching, Cattle & Cowboys 1862-1876

Changes in the Way of Life of the Plains Indians

- Impact of Railroads & Settlers 1862-1876
- Impact of the Peace Policy & Reservations
- The Indian Wars (1862-1868)

USA: At Home and Abroad

The Civil Rights Movement, 1954–60

- The Position of Black Americans, Early 1950s
- Progress in Education
- The Montgomery Bus Boycott
- Opposition to the Civil Rights Movement

1.8 HSC

Values of care PIRAB MC PEAD

1. Promote equality and diversity
2. Maintain confidentiality
3. Promote individuals rights and beliefs 18&19 exam answer pg38

Values of care for early years 21

1. Practising anti-discrimination
2. Encouraging children's learning and development
3. Ensuring the welfare of the child is paramount
4. Working with others
5. Keeping children safe and maintaining a healthy environment

Individuals rights 3cs and p e use single sheet

HOW TO ENSURE EQUAL OPPORTUNITIES AND DIVERSITY Look at the equality act, the mental health act –what do we mean by health and safety at work act Have a quick look at the principles of all the acts 42 onwards for all legal and law

Complaints procedures –what do they do?

What is advocacy? What is diversity? 28 & 31

How to challenge discriminatory behaviour from staff and service users

Security measures (locks on window, staff wearing lanyards) and safety measures (no nail varnish protective clothing) safety procedures/emergency **safety procedures (first aid procedure, dbs checks, first aid etc.) (Fire drill) Health and social care settings for elderly and for younger users. LO4 59 onwards**

A MEASURE IS DIFFERENT TO A PROCESS/PROCEDURE

- Physical Intellectual language emotional and social effects
- What is confidentiality and how do you maintain it

(Numbers are text book pages)

1.9 Maths PPE - Foundation

Topic	R	A	G
Averages and ranges			
Place Value			
Calculation with negative numbers			
Convert metric units of length			
Simplify ratios			
Calculations with time			
Formal written calculations			
Pictograms			
Bar Charts			
Calculations with money			
Decimal calculations			
Venn Diagrams			
Transformations			
Solve and manipulate equations			
Area and perimeter			
Two way tables			
Equation of a line			
Fractions and percentages of amounts			
Probability			
Scatter graphs			
Different types of sequences			
Using formula			
Fractions to decimals			
Divide into a given ratio			
Factorise			
Circumference of circles and perimeter of part circles			
Trigonometry			
Rearrange equations			
Standard Form			

1.10 Maths PPE - Foundation

Topic	R	A	G
Equivalent ratios			
Angle rules			
Substitution			
Term to term rules			
Solve equations			
Averages			
Coordinates			
Properties of numbers			
Fractions and percentages			
Function machines			
Using a calculator			
Simplifying expressions			
Rates of pay			
Parts of a circle			
Calculations with money			
Compound area			
Area of triangles			
Transformations			
Problem solving with money			
Scale drawings			
Inequalities			
Problem solving with ratio			
Quadratic graphs			
Time series graphs			
Volume and surface area of cuboids			
Tables of grouped data			
Ratio problem solving			
Percentages			
Density			
Gradient of a line			

1.11 Maths PPE – Higher

Topic	R	A	G
Fractions and decimal conversions			
Column vectors			
Properties of numbers			
Reciprocals			
Trigonometry			
Scatter graphs			
Venn Diagrams			
Geometric reasoning			
Different types of sequences			
Ratio problems			
Decimals and fractions			
Perimeter of parts of circles			
Algebraic manipulation			
Solve by factorising			
Product of primes			
Index laws			
Algebraic ratios			
Iteration			
Equation of lines			
Simultaneous equations			
Algebraic fractions			
Index laws			
Surds			
Direct and inverse proportion			
Forming and solving equations			
Exact values of trig			
Histograms			
Surds			
Similar solids: Area and volume			
Factorise			
Transformation of graphs			

1.12 Maths PPE – Higher

Topic	R	A	G
Equations and inequalities			
Congruent triangles			
Standard form			
Inequalities			
Time series graphs			
Highest common factor			
Quadratic graphs			
Problem solving with ratio			
Volume and surface area of cuboids			
Reasoning with the mean			
Density			
Equation of a line			
Area of a trapezium			
Exponential growth			
Rearrange equations			
Combining Probability			
Cumulative frequency			
Trigonometry			
Simplify algebraic fractions			
Geometric reasoning			
Reciprocal and exponential graphs			
Transformation of graphs			
Pythagoras in 3D			
Transformations			
Factorise quadratics when a is not 1			
Bounds			
Conditional probability			
Speed time graphs			
Solve algebraic fractions			

1.13 Spanish

There will be exams in **Reading & Writing** (done in the Hall) and **Listening** (done during lesson time).

The PPE in November will focus on FOUR broad topic areas...

1. Holidays & Tourism
2. School & Education
3. Work
4. Environment

The sections in your Revision Guide to cover are:

p43-48 (Environment)

p49-61 (Holidays)

p63-76 (School)

p78-81 (Work)

Additionally, you should revise the key grammar, which could (and will) appear in all of the different topic areas...

p82 – 96, 100, 104

1.14 Science - Combined Biology

FOUNDATION:

Topic	Content to revise
CB1	Plant and animal cells, bacteria cells, core practical: using microscopes, enzymes action, enzyme activity, enzymes and nutrition, diffusion, osmosis & active transport.
CB2	Growth in plants,
CB3	Meiosis, DNA, core practical: DNA extraction, genome.
CB4	Selective breeding
CB5	Communicable disease, immune system

HIGHER:

Topic	Content to revise
CB1	Plant and animal cells, core practical: using microscopes, core practical: pH and enzymes
CB2	Mitosis & cell cycle, growth in plants, the nervous system, neurotransmission speeds
CB3	DNA
CB4	Natural selection, classification
CB5	Communicable disease, immune system, BMI, cardiovascular disease

1.15 Science - Chemistry – Foundation Tier

Topic	Paper	Content
CC2	1	Separating mixtures, hazard symbols,
CC8	1	Acids and group 1, pH scale, metal oxides and acids, chemical formulae, making copper sulfate, concentration of acids and alkalis,
CC3-CC4	1	Electron shells, electronic configuration, Group 1, group 7, atomic charges, Structure of atom, calculating neutron number, Isotopes, Mendeleev, periodic table,
CC1	1	States of matter, change of state,
CC11	1	Reactivity of metals, ores, redox,
CC9	1	Empirical formulae, calculating concentration, relative formula mass
CC10	1	Electrolysis, testing for hydrogen

Chemistry – Higher Tier

Topic	Paper	Content
CC10	1	Electrolysis, testing for hydrogen
CC9	1	calculating concentration, conservation of mass, calculating formula
CC8	1	chemical formulae, Acid and metal carbonates, identifying acids, making copper sulfate, ionic equations, neutralisation
CC3-CC4	1	Electron shells, electronic configuration, Periodic table, group 1 metals, properties of groups,
CC1	1	Separating rock salt, chromatography and rock salt.
CC9	1	Calculating MR,

1.16 Science - Combined Physics

FOUNDATION:

Topic	Content to revise
CP1	Vectors, speed, velocity/time graphs, acceleration
CP2	Newton's 2 nd law, stopping distances
CP3	Energy transfers, gravitational potential energy, kinetic energy,
CP4	Transverse waves, wavelength, frequency, seismic waves
CP5	Uses of EM spectrum, frequencies.
CP6	Atomic structure, half-life, measuring radiation, types of radiation, dangers or radioactivity.

HIGHER:

Topic	Content to revise
CP1	Vectors, speed, velocity/time graphs, acceleration
CP2	Newton's 3 rd law, momentum, crumple zones
CP3	Energy transfers, gravitational potential energy, kinetic energy,
CP4	Longitudinal waves, wavelength, core practical: investigating waves, reflection
CP5	Core practical: Refraction
CP6	Atomic structure, radioactive decay, half-life, measuring radiation, dangers or radioactivity

1.17 Science - Triple Biology

Foundation

Topic	Content to revise
SB1	Food tests, comparing Eukaryotic and prokaryotic cell structure, transport in cells, diffusion and practical's for diffusion, active transport, enzymes and temperature affecting enzymes, enzymes and digestion, enzyme structure and lock and key model, Light microscope, preparing microscope slides, structure of plant cells
SB4	GM and GM crops, biological controls and advantages of these controls, selective breeding advantages and disadvantages, genome and genome project
SB5	Non communicable diseases, cancer, antibiotics, Measles, HIV, the human immune system,
SB1	The eye, structure and function and how we see images, rods and cones, long and short sighted, Meristems and mitosis,
SB3	DNA extraction using fruit practical

Higher

Topic	Content to revise
SB5	Lytic Pathway (how a virus reproduces), HIV, How the immune system works, Measles data, Aseptic techniques and agar plates, calculating BMI,
SB3	Genomes, Gregor Mendel and monohybrid crosses, Punnett Square cross, sexual reproduction and advantages, Structure of DNA, genetic disorders and sex linked disorders. Effect of mutations on phenotype
SB2	Meristems and mitosis, required practical reaction times, Structure of a neurone, painkillers and synapse. Cancer cells and how it develops, Cell division and the cell cycle, correcting long and short sightedness.
SB1	Preparing microscope slides, Structure of plant cells, Food tests, enzyme and temp required prac, enzymes and pH,
SB4	Explaining Natural selection, 3 domain system in classification, genetic engineering, advantages and disadvantages of GM crops

1.18 Science - Triple Chemistry

Foundation

Topic	Content to revise
SC1	States of matter, word equations, hazard symbols
SC3	Structure of an atom, isotopes, electronic configuration
SC4	The Periodic Table. Modern periodic table vs Mendeleev's Periodic table
SC5/6/7	Types of bonding – ionic/covalent, Properties of metals, Dot and cross diagrams
SC8	Acids and Alkalis, bases and salts, Preparing copper sulphate, alkalis an neutralisation, reactions of acids with metals and carbonates, Balancing equations, pH
SC9	Empirical formula, RFM, Concentration
SC10	Electrolysis, test for hydrogen
SC11	Ores, Alloys, Recycling materials
SC12	Transition metals
SC13	Corrosion, Electroplating, Alloys
SC15	Fertilisers and the Haber Process

Higher

Topic	Content to revise
SC1	States of matter, word equations
SC2	Mixtures, crystallisation, chromatography
SC3	Structure of an atom, isotopes, electronic configuration
SC5/6/7	Types of bonding – ionic/covalent, Properties of metals
SC8	Acids and Alkalis, bases and salts, Preparing copper sulphate, alkalis an neutralisation, reactions of acids with metals and carbonates, Balancing equations
SC9	Empirical formula, RFM, Concentration, Moles, Calculation of no. of atoms
SC10	Electrolysis, Ores, Alloys, Recycling materials
SC11	Ores, Alloys, Recycling materials
SC12	Dynamic equilibrium
SC13	Transition metals Corrosion, Electroplating, Alloys
SC14	Yields, atom economy, Titrations and calculations
SC15	Factors affecting equilibrium
SC16	Chemical cells and fuel cells

1.19 Science - Triple Physics

Foundation

Topic	Content to revise
SP1&2	Acceleration, weight, vectors and scalars, velocity time graphs, stopping distances,
Sp3	Radiation, non-renewable energy, energy stores and transfers, stored energies (GPE&KE)
Sp4	Types of wave, wave speed calculations, seismic waves,
Sp5	Lenses, Using the EMS, properties of EM waves,
Sp6	Atomic structure, half-life, background radiation, types of radiation, nuclear fission, using radiation, nuclear fusion
Sp7	The Solar System, life cycle of a star

Higher

Topic	Content to revise
SP1&2 Forces	Scalars and vectors, investigating acceleration, velocity time graphs, momentum, crash hazards, Newton's laws.
SP3 Conservation of energy	Energy stores and transfers, stored energy calculation, energy efficiency, non-renewable energy
SP4 Waves	Wave speed calculations, types of wave
SP5 Electromagnetic spectrum	Refraction,
SP6 Radioactivity	Using radioactivity, nuclear fission, nuclear fusion, atoms, radioactive decay, types of radiation, half-life, and back-ground radiation.
SP7 Astronomy	Life cycle of a star,