Year 12 Applied Science Diploma

Pearson

BTEC Applied Science Learning Journey

Year 7 — Understanding and Applying Scientific Skills — Year 11

Understanding variables; Drawing graphs and analysing graphical data; Writing methods; Analysis of secondary data; Assessing impact of scientific concepts; Modelling scientific concepts; Understanding relationships between science and society; Drawing conclusions; IDEAL Identify, describe, explain, apply, link; Applying math's to the scientific concepts; Risk Assessment; Describe patters

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Coursework D – Professional practice

Coursework C - TLC Chromatography

Coursework D - Preparation

Coursework A - Titration and colorimetry

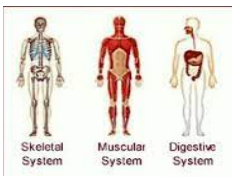
Coursework A - Preparation

Unit 2 – Practical scientific procedures and techniques

Coursework C - Preparation

Coursework B - Calorimetry

Coursework B - Preparation



Unit 8 Physiology of Human Body Systems

PLANTS & THEIR ENVIRONMENT

ELECTRICAL CIRCUITS

Health & safety associated with investigations

Method for data collection & analysis

Processing data

Interpretation/ analysis of data

DIFFUSION OF MOLECULES

Unit 3 EXTERNAL EXAM

Unit 3 Science Investigation Skills

Selection of appropriate equipment, techniques and standard procedures

Variables in the investigation

Collection of quantitative & qualitative data

ENERGY CONTENT OF FUELS

Evaluation

ENZYMES IN ACTION

Unit 1 EXTERNAL EXAM

Energy Levels and Spectra

Electromagnetic spectrum

Unit 1 Principles and Applications of Science Waves in Communication

Total Internal Reflection

Diffraction

Reflection & Refraction

Properties of waves

Chemical trends

2:1

Calculating empirical formula

Relative formula mass

Calculating moles

6.02×10^{23}

Avogadro constant

Unit 1 Principles and Applications of Science Periodicity and Properties of Elements

Metallic bonding

covalent bonding

Ionic bonding

Electronic configuration

Groups and periods

Prokaryotes and Eukaryotes

Specialised cells

Microscopy

Unit 1 Principles and Applications of Science Structure and Functions of Cells and Tissues

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Gas exchange

Respiratory system

Circulatory system

Cells and organisation

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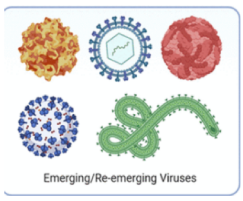
Year 7 — Understanding and Applying Scientific Skills — Year 11

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University/ Apprenticeship

A: Understand the importance of health and safety in scientific organisations

B Explore manufacturing techniques and testing methods for an organic liquid



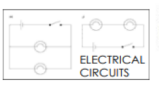
Unit 4: Lab technique and their application

Unit 12 Diseases and Infection

C Explore manufacturing techniques and testing methods for an organic solid

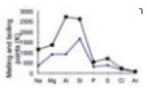
D Understand how scientific information may be stored and communicated in a workplace laboratory







Method for data collection & analysis



Interpretation/ analysis of data



Unit 6 Investigative project

Unit 6 Investigation Skills

Selection of appropriate equipment, techniques and standard procedures

Variables in the investigation

Collection of quantitative & qualitative data



Evaluation



Unit 5 EXTERNAL EXAM

3: Fluids in motion

Unit 5 Principles and Applications of Science II Physics

1: Thermal physics in domestic and industrial applications

2: Materials in domestic and industrial applications

3: Energy changes in industry

Unit 5 Principles and Applications of Science II Chemistry

1: Relating properties to uses and production of substances

2: Structures, reactions and properties of commercially important organic compounds

4: Cell transport mechanisms

3: Urinary system structure and function

Unit 5 Principles and Applications of Science II Biology

2: Ventilation and gas exchange in the lungs

1: The cardiovascular system

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