YEAR: 10 Science (Applied Science) Finsh Unit 1, Unit 2

Knowledge Focus: Finish 1.3.3 Producing useful compounds in the lab, 2.1 Ou planet, 2.1.1 Our place in the universe

Skills, knowledge and understanding to be developed in this Learning Plan:
The practical skills to produce useful compounds in the laboratory. The scientific processes to make useful salts in the lab. The ability to complete thorough risk assessments for experiments. The skill of writing and balancing symbol equations for chemical reactions. The electromagnetic spectrum, how the wave length/frequency changes and uses for each section.

Key terms to be learned in this LP: Acids, recations, metals, salts, hazards, risks, neutalisation, wave speed, frequency, cosmic microwave background radiation, electromagnetic spectrum, wave length

Week 1 - 2 Learning Objectives: **1.3.3 Producing useful compounds in the lab** • Apply existing exam knowledge and skills to targeted recall tasks (continued recall of previous topics) • Notice patterns and use them to make predictions of reactions of metals, metal oxides, hydroides,carbonates and ammonia • Practical techniques to making soluble (copper sulfate, zinc sulfate etc) and insoluble salts (precipitation reactions) • Complete appropriate risk assessments for above practicals. Assessment Unit 1 – Mock/full paper	***Objective assessments:*** Be able to: Confidently balance equations Create and analyse risk assessments for lab practices Make, predict and name soluble and insoluble salts Complete past exam questions	**Homework:** Set: Due: **Homework:** Set: Due:
Week 3 - 4 Learning Objectives: **2.1.1 Our place in the universe** • Understand what the electromagnetic spectrum is, the wavelengths and frequencies that make up the electromagnetic spectrum • Uses of each section of the electromagnetic spectrum • The relationship between the speed, frequency and wavelength of electromagnetic spectrum waves: wave speed = frequency × wavelength • Steady state and big bang as theories of the universe and the evidence that supports them both such as CMBR, red shift etc Assessment 2.1.1 Mid topic QER	***Objective assessments:*** Be able to: Label the electromagnetic spectrum and link wavelength and frequency to uses Calculate the wave speed from frequency and wavelength Explain the two theories of the universe with relevant evidence	**Homework:** Set: Due: **Homework:** Set: Due:
Week 5 Learning Objectives: **2.1.1 Our place in the universe** • Understand the structure of the solar system • Understand the sun in its relative size to Earth, nuclear fission as solar energy, sun spots and solar flares • Identify patterns and be able to compare patterns in rotations, time, temperature etc	***Objective assessments:*** Be able to: Label the solarsystem Explain the source of solar energy Use knowledge to answer	**Homework:** Set: Due:

	Assessment 2.1.1 End of Topic	exam questions	**Homework:** Set: Due:
			Homework: Set: Due:
Week 6-7 Learning Objectives: **2.1.2 World of life** • Understand biodiversity as a measure of the health of a biological system over time • Understand and explain adaptations of organisms (morphological and behavioural) • Understand classifications of organisms through the binomial naming system • Understand genetic sequencing as a tool and classification isn't always external features Assessment 2.1.2 PPQ		***Objective assessments:*** Be able to: Confidently use the binomial naming system for organisms and use information to classify them accordingly Understand and explain the importance of biodiversity Identify adaptations of organisms and link them to likelihood of survival in their environment Use knowledge to answer past exam questions	**Homework:** Set: Due: **Homework:** Set: Due: