Year 12 A’ level physics Induction Day MGGS

Task 1: Fundamental physics poster
Fundamental particles – the universe is made of a number of fundamental particles – 6 quarks and 6 leptons and their anti-particles. Find the names, properties and family structure of these particles. What is the internal structure of a proton and a neutron?

Fundamental forces – physics is the study of interactions or forces. Find the names of the 4 fundamental forces and describe the situations where each force would act. Rank them in order of strength

Produce a poster for display on fundamental particles and forces

Task 2: Prefixes and base units
Find and define all commonly used prefixes e.g. kilo (k) and include their value (10³) in standard form. HINT: there are 10 that are commonly used

There are a number of base quantities and base units that are used in physics. Find out which are the base quantities and their units

Express the following units in terms of base units: coulomb, newton, joule, watt, pascal, and volt (e.g. the unit of density is expressed as kgm⁻³ – this is already expressed in base units)

HINT: if you are struggling find a simple equation that can help you break down the units e.g. F = ma