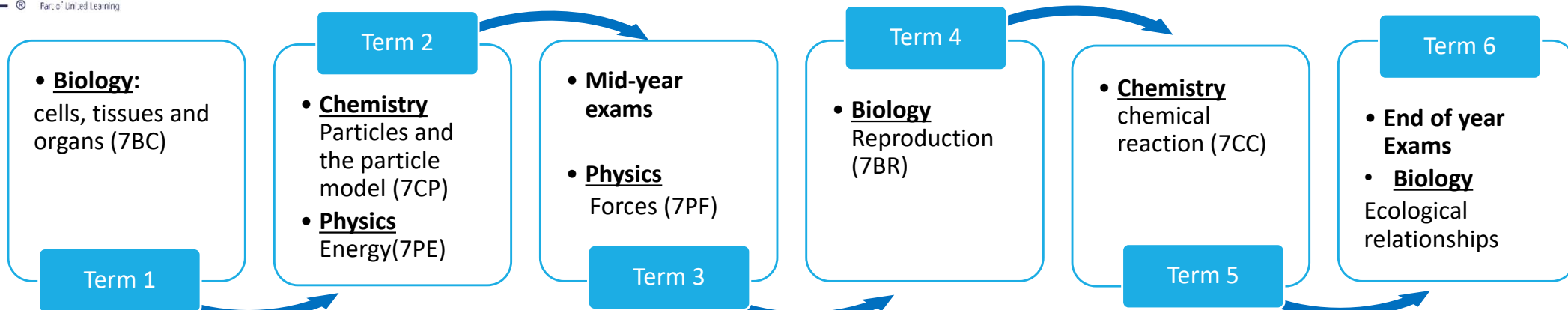
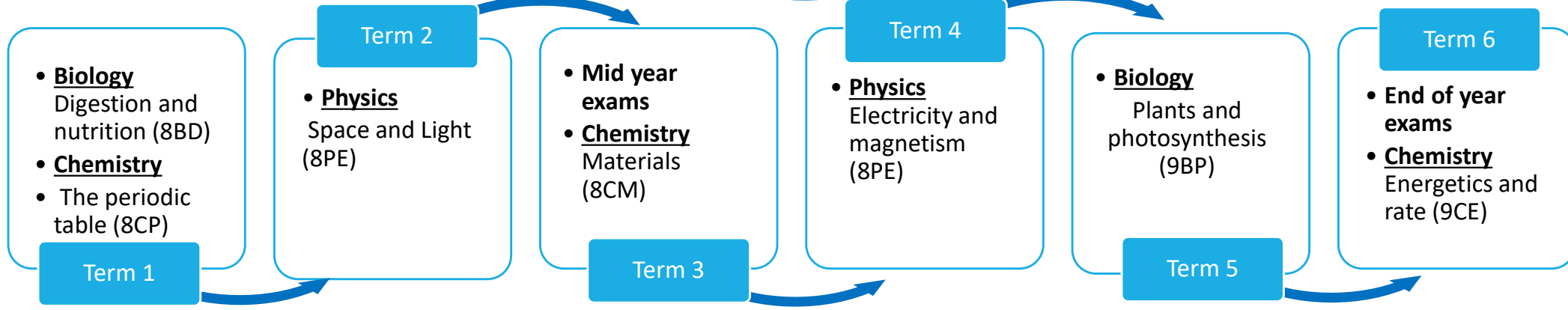


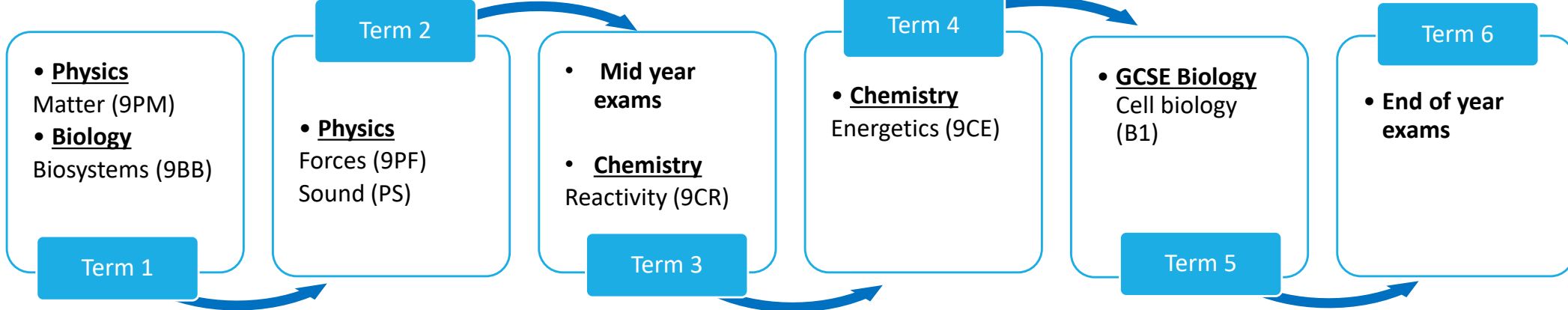
**YEAR 7**



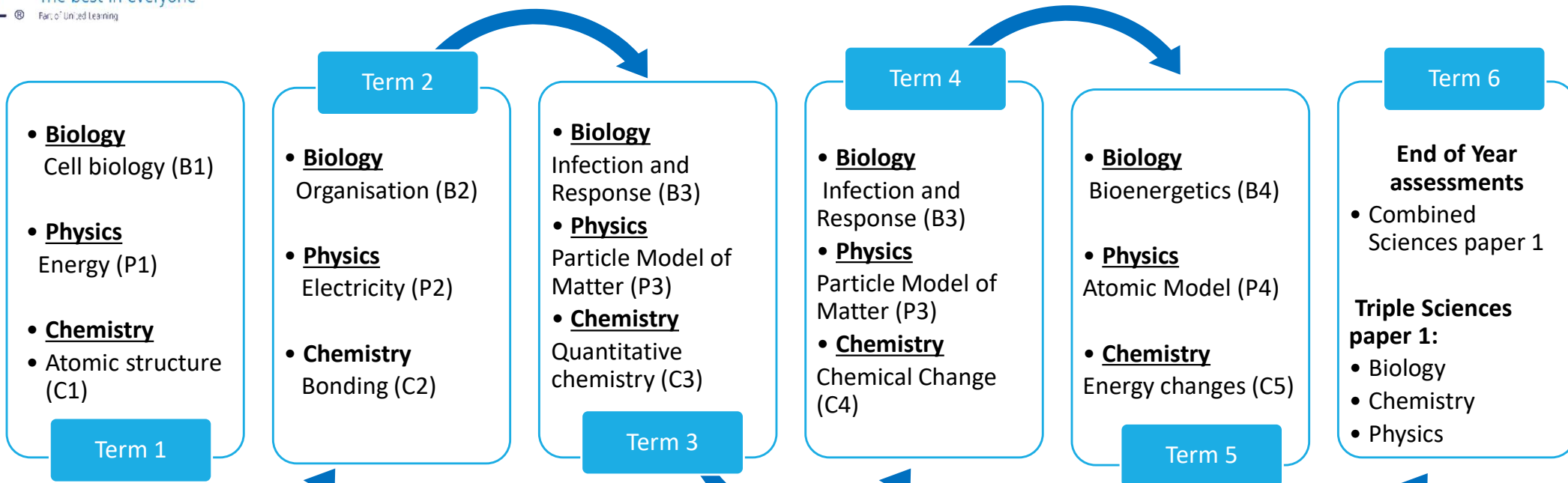
**YEAR 8**



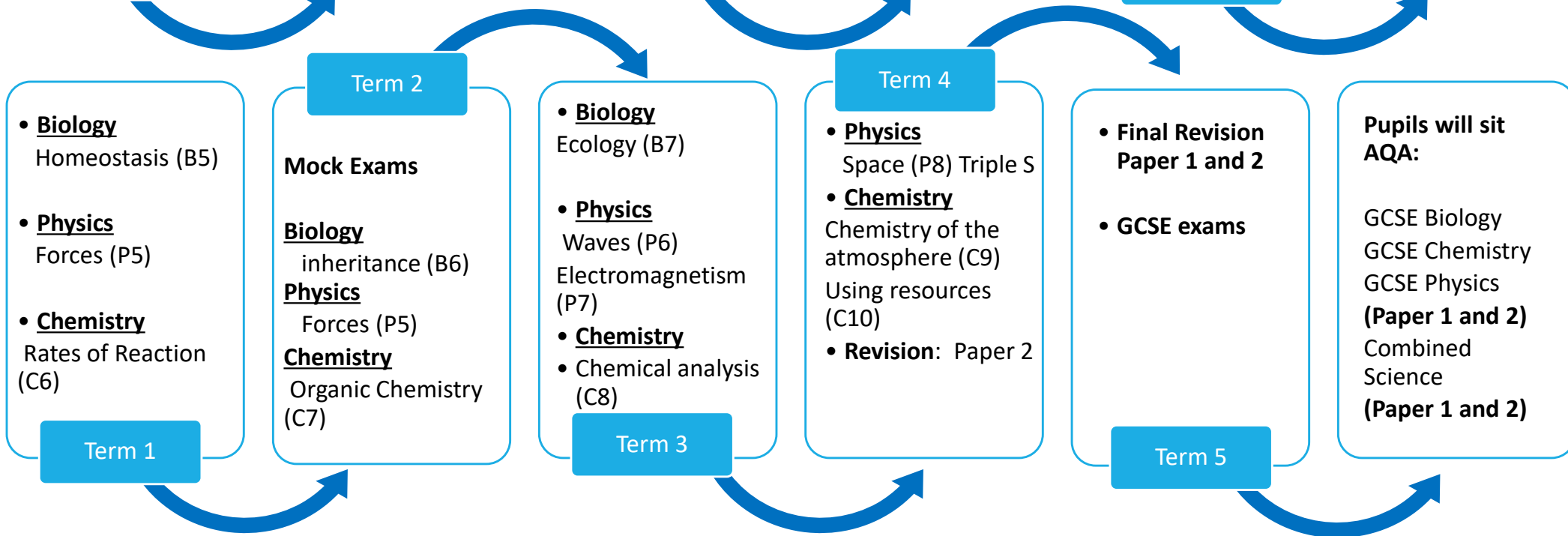
**YEAR 9**



**YEAR 10**

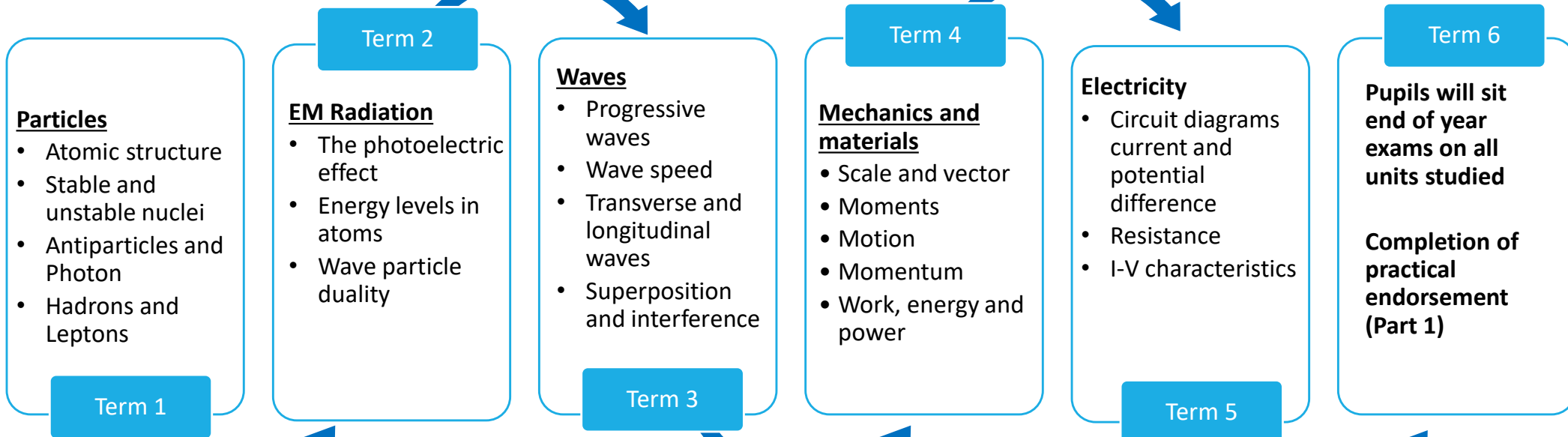


**YEAR 11**

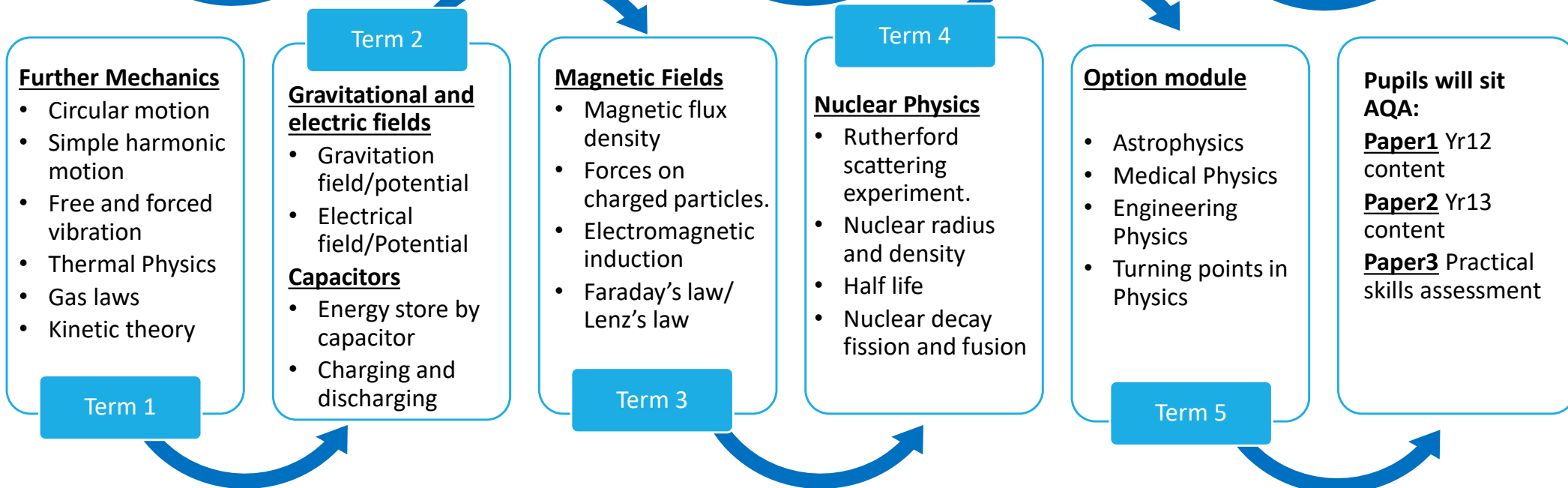


# A-level Physics

YEAR 12



YEAR 13



# A-level Biology

YEAR 12

## Biological Molecules

- Molecules of life
- Sugar and Polysaccharides
- Proteins and lipids
- Enzymes
- DNA and RNA
- DNA replications
- ATP
- Water
- Inorganic ions

Term 1

Term 2

- Cell structure and division
- Prokaryotic cells and viruses
- Cell components
- Cell division
- Cell membranes
- Diffusion
- Osmosis
- Active transport

## DNA, RNA and protein synthesis

- DNA
- Genes and chromosomes
- RNA and protein synthesis
- Transcription and translation
- The genetic code and nucleic acids

Term 3

Term 4

## Cells and the immune system

- Antigens
- Immune response
- Immunity and vaccines
- Antigenic variation
- Antibodies in medicine
- HIV/AIDS

## Exchange and transport systems

- Size and surface area
- Gas exchange in organisms
- Lung disease
- Digestion and absorption
- Circulatory system
- Transport in plants

Term 5

Term 6

**Pupils will sit end of year exams on all units studied**

**Completion of practical endorsement (Part 1)**

YEAR 13

## Photosynthesis and respiration

- Light-dependent reactions
- Light-independent reactions
- Limiting factors
- Aerobic and Anaerobic respiration
- Experiments

Term 1

Term 2

## Energy transfer and Nutrient cycle

- Energy transfer in Ecosystems
- Farming practices
- Nutrient cycles in natural Ecosystems
- Fertilisers and eutrophication

## Genetics

- Genetic terms
- Genetic diagrams
- Linkage
- Epistasis
- Chi-Squared test
- Population and evolution
- Variation and selection
- Conservation

Term 3

Term 4

## Homeostasis

- Survival and response
- Nervous system
- Response in plants
- Control of blood glucose
- Diabetes
- The kidneys
- Controlling blood water potential

## Gene expression

- Mutation
- Cancer
- Stem cells
- Epigenetic control
- Phenotype data
- Genome project
- DNA fragments
- Gene therapy
- Gene Probes and medical diagnoses

Term 5

**Pupils will sit AQA:**

**Paper1 Yr12 content**

**Paper2 Yr13 content**

**Paper3 Practical skills assessment**