HOLY ROOD RC
HIGH SCHOOL

COURSE PATHWAY INFORMATION

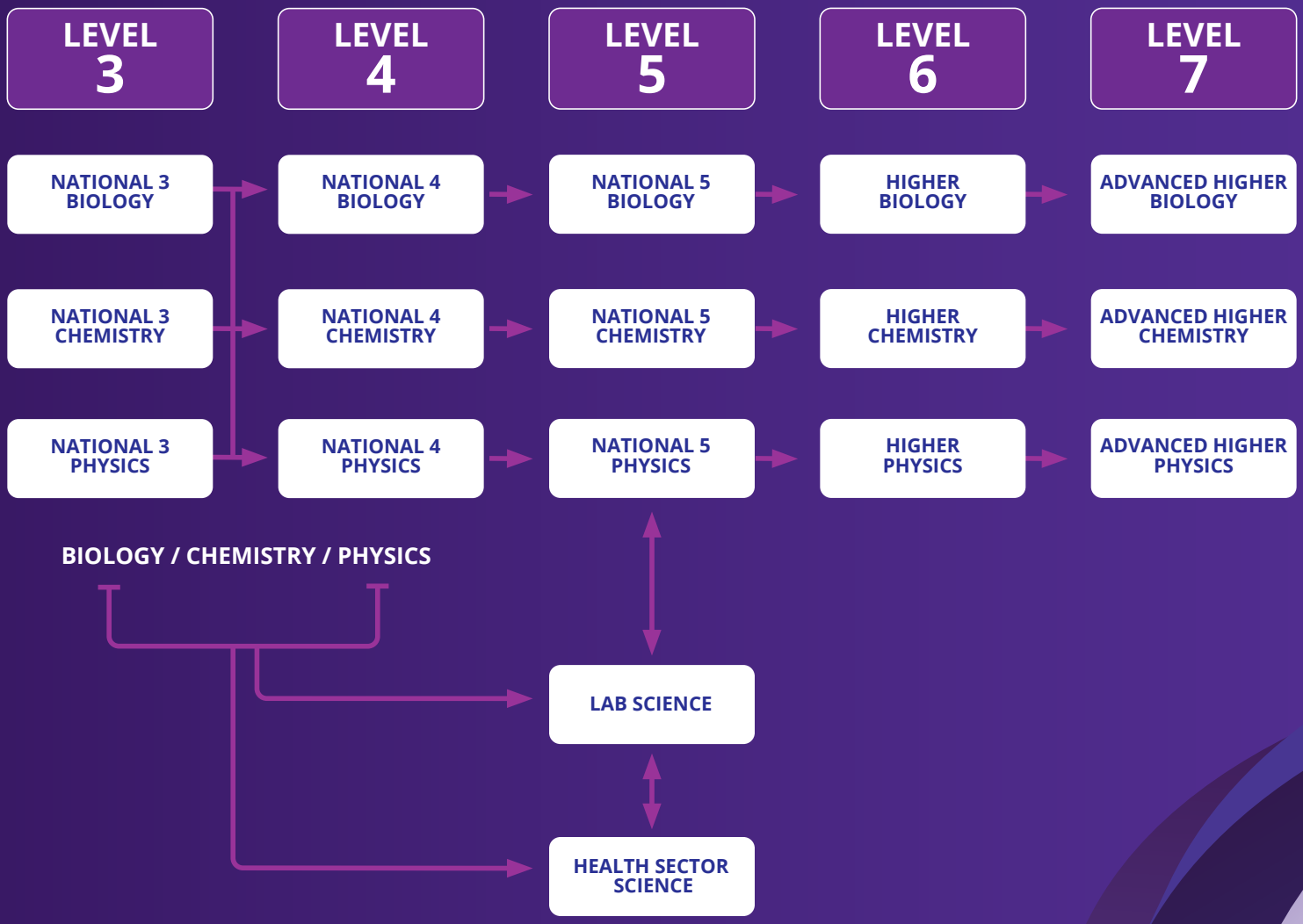
SESSION 2025-26

SCIENCE

Love * Forgiveness * Justice * Compassion

HOLY ROOD RC HIGH SCHOOL

SCIENCE



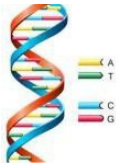
Love * Forgiveness * Justice * Compassion

HOLY ROOD RC HIGH SCHOOL

BIOLOGY

NATIONAL 5

SQA COURSE UNITS



- Cell Biology
- Biology: Multicellular Organisms
- Biology: Life on Earth

NAT 5 – COURSE ENTRY REQUIREMENTS

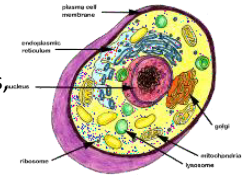
- National 4 Biology

SKILLS DEVELOPED ON THIS COURSE

- An understanding of biology in society and the environment
- Scientific inquiry skills to plan and carry out experiments
- Scientific analytical thinking skills
- The ability to use technology, equipment and materials, in scientific activities
- Problem-solving skills
- Use and understand scientific literacy
- Information-handling skills (selecting, presenting, processing information)

COURSE INFORMATION

Cell Biology – Pupils will investigate cell structure, DNA, genetic engineering and photosynthesis**.**



Biology: Multicellular Organisms – Pupils will investigate tissues and organs, stem cells, reproduction, variation and inheritance.

Biology: Life on Earth - Pupils will learn about biodiversity, sampling and measurement techniques, natural selection and evolution.

ASSESSMENT

NATIONAL 5 - To gain the course award, pupils **must pass** the **Course Assessment**. The Course Assessment consists of an Assignment (a research investigation) and a Question Paper (exam). Both are marked by the SQA and will be graded A to D.

CAREER PATHWAY

Successful completion of the course could support progression towards:

- Higher grade course if National 5 has been achieved
- College/University courses
- Employment in areas such as immunology, beauty therapy, environmentalist

SCIENCE

For further information about this course please contact:
Curriculum Leader: Mr. A Gillies
Teaching Staff: Biology
S5/6 Year Head

Love * Forgiveness * Justice * Compassion

HOLY ROOD RC HIGH SCHOOL

BIOLOGY HIGHER

SQA COURSE UNITS

- DNA and the Genome
- Metabolism and Survival
- Sustainability and interdependence

HIGHER – COURSE ENTRY REQUIREMENTS

The course is suitable for pupils who are secure in their attainment of National 5 Biology.

SKILLS DEVELOPED ON THIS COURSE

- Analytical and problem solving skills
- Planning and designing
- Investigations/experiments
- Safely carry out investigations/experiments and record detailed observations and collecting data
- Drawing valid conclusions and giving explanations supported by evidence
- Communicating findings/information

COURSE INFORMATION

DNA and the Genome – pupils will develop knowledge through study of DNA and the genome. This unit explores the molecular basis of evolution and biodiversity, while the unit of life is emphasised in the study of gene expression.

Metabolism and Survival - analytical thinking and problem-solving skills will be developed in context, through investigation of how cellular respiration is fundamental to metabolism and by examining the stages of respiration.

Sustainability and Interdependence – pupils will develop knowledge by investigating how humans depend on sufficient and sustainable food production from a narrow range of crop and livestock species, focusing on photosynthesis in plants.

ASSESSMENT

To achieve the course award at Higher Grade all pupils must pass the course assessment. The final course assessment will include a question paper and an assignment.

CAREER PATHWAY

Successful completion of the course could support progression towards:

- Advanced Higher Grade courses
- College/University courses
- Employment in areas such as marine biology, hygienist, ranger …

SCIENCE FACULTY

For further information about this course please contact:
Curriculum Leader: Mr A Gillies
Teaching Staff: Biology
S5/6 Year Head

HOLY ROOD RC HIGH SCHOOL

BIOLOGY

ADVANCED HIGHER

SQA COURSE UNITS

- Cells and Proteins
- Organisms and Evolution
- Investigative Biology

ADVANCED HIGHER – COURSE ENTRY REQUIREMENTS

- The course is suitable for pupils who are secure in their attainment of Higher Biology.

SKILLS DEVELOPED ON THIS COURSE

- Analytical and problem solving skills
- Planning and designing
- Investigations/experiments
- Safely carry out investigations/experiments and record detailed observations and collecting data
- Drawing valid conclusions and giving explanations supported by evidence
- Communicating findings/information
- Independent study

COURSE INFORMATION

The general aim of this Course is to develop skills of scientific inquiry, investigation, analytical thinking along with knowledge and understanding of biology. The course is particularly suitable for candidates who wish to progress to degree courses either in biology or in subjects of which biology is a major component such as medicine and environmental and health sciences.

ASSESSMENT

To achieve the course award at Advanced Higher Grade all pupils must pass all assessment outcomes for the SQA Units along with the course assessment. These will be assessed with a question paper and assignment investigation.

CAREER PATHWAY

Successful completion of the course could support progression towards:

- College/University courses
- Employment in areas such as Medicine, Veterinary Medicine and Life Sciences

SCIENCE

For further information about this course please contact:

Curriculum Leader: Mr A Gillies
Teaching Staff: Biology
S5/6 Year Head

HOLY ROOD RC HIGH SCHOOL

CHEMISTRY

NATIONAL 5

SQA COURSE UNITS

- Chemical Changes and Structure
- Nature's Chemistry
- Chemistry in Society

NAT 5 - COURSE ENTRY REQUIREMENTS:

- Suitable for pupils who have completed a National 4 Chemistry Course.

SKILLS DEVELOPED ON THIS COURSE

- Scientific inquiry and investigation skills
- Scientific analytical thinking skills
- The ability to use technology, equipment and materials
- Questioning and independent thinking
- Problem-solving in a chemistry context
- Using and understanding scientific literacy in everyday contexts
- Planning experiments to test hypotheses or illustrate effects
- Recording observations
- Collecting, processing and analysing data
- Making predictions and generalisations based on evidence
- Drawing valid conclusions with explanations and evidence

COURSE INFORMATION

Chemical changes and structure – pupils will develop scientific skills and knowledge of the chemical reactions in our world.

Nature's Chemistry – pupils will investigate the physical and chemical properties of cycloalkanes

Chemistry in Society – pupils will focus on the chemistry of metals and their bonding, reactions and uses.

COURSE ASSESSMENT

NATIONAL 5 - To gain the course award, pupils **must pass** the **Course Assessment**. The Course Assessment consists of an Assignment (a research investigation) and a Question Paper (exam). Both are marked by the SQA and will be graded A to D.

CAREER PATHWAY

Successful completion of this course could support progression towards

- Higher Chemistry if National 5 is achieved
- College/University courses
- Careers in areas of work such as Pharmaceuticals, Forensic Science, Oil and Gas Industry .....

SCIENCE

For further information about this course please contact:
Curriculum Leader: Mr A Gillies
Teaching Staff: Chemistry
S5/6 Year Head

HOLY ROOD RC HIGH SCHOOL

CHEMISTRY HIGHER

SQA COURSE UNITS

- Chemical Changes and Structure
- Researching Chemistry
- Nature's Chemistry
- Chemistry in Society

HIGHER – COURSE ENTRY REQUIREMENTS

- The course is suitable for pupils who are secure in their attainment of National 5 Chemistry.

SKILLS DEVELOPED ON THIS COURSE

- Applying knowledge of chemistry to new situations
- Interpreting information and solving problems
- Planning and designing experiments
- Safely carry out experiments, recording detailed observations and collecting data
- Drawing valid conclusions from research data
- Communicating findings/information

COURSE INFORMATION

Chemical Changes and Structures – this unit covers the knowledge and understanding of controlling reaction rates and periodic trends and strengthens the pupil's ability to make reasoned evaluations by recognising underlying patterns and principles.

Researching Chemistry - this unit covers the key skills necessary to undertake research in chemistry. Pupils will research the relevance of chemical theory to everyday life by exploring the chemistry behind a topical issue.

Nature's Chemistry – pupils develop their knowledge and understanding of organic chemistry within the context of the chemistry of food and the chemistry of everyday consumer products, soaps, detergents, fragrances and skincare.

Chemistry in Society – pupils develop their knowledge and understanding of the principles of physical chemistry which allow a chemical process to be taken from the researcher's bench through to industrial production.

ASSESSMENT

To achieve the course award at Higher Grade all pupils must pass the course assessment. This will be assessed with a question paper and an assignment.

CAREER PATHWAY

Successful completion of the course could support progression towards:

- Advanced Higher Grade courses
- College/University courses
- Employment in areas such as teacher, geoscientist, phlebotomist

SCIENCE FACULTY

For further information about this course please contact:
Curriculum Leader: Mr A Gillies
Teaching Staff: Chemistry
S5/6 Year Head

Love * Forgiveness * Justice * Compassion

HOLY ROOD RC HIGH SCHOOL

CHEMISTRY

ADVANCED HIGHER

SQA COURSE UNITS

- Organic Chemistry and Instrumental Analysis
- Inorganic and Physical Chemistry
- Researching Chemistry

ADVANCED HIGHER – COURSE ENTRY REQUIREMENTS

- The course is suitable for pupils who are secure in their attainment of Higher Chemistry.

SKILLS DEVELOPED ON THIS COURSE

- Applying knowledge of chemistry to new situations
- Interpreting information and solving problems
- Planning and designing experiments
- Safely carry out experiments, recording detailed observations and collecting data
- Drawing valid conclusions from research data
- Communicating findings/information
- Independent study and time management

COURSE INFORMATION

The general aim of this Course is to develop skills of scientific inquiry, investigation, analytical thinking along with knowledge and understanding of chemistry. The course is particularly suitable for pupils who wish to progress to degree courses either in chemistry or in subjects of which chemistry is a major component such as medicine, chemical engineering, and the environmental and health sciences.

ASSESSMENT

To achieve the course award at Advanced Higher Grade all pupils must pass all assessment outcomes for the SQA Units along with the course assessment. These will be assessed with a question paper and assignment investigation.

CAREER PATHWAY

Successful completion of the course could support progression towards:

- College/University courses
- Employment in areas such as Medicine, Engineering, Veterinary Medicine

SCIENCE

For further information about this course please contact:

Curriculum Leader: Mr A Gillies
Teaching Staff: Chemistry S5/6
Year Head

HOLY ROOD RC HIGH SCHOOL

PHYSICS

NATIONAL 5

SQA COURSE UNITS

- Electricity and Energy
- Waves and Radiation
- Dynamics and Space

NAT 5 – COURSE ENTRY REQUIREMENTS

- National 4 Physics

SKILLS DEVELOPED ON THIS COURSE

- Knowledge and understanding of Physics
- Applying this knowledge and understanding to new situations
- An understanding of the role of Physics in scientific issues and relevant applications of Physics in society and the environment
- Scientific inquiry, investigative, analytical and evaluative thinking skills in Physics and real life contexts
- The ability to use technology, equipment and materials
- Problem-solving skills and creativity in a Physics context

COURSE INFORMATION

Electricity and Energy – Pupils will investigate energy transfer, heat and the gas laws

Waves and Radiation – Pupils will learn about waves and nuclear radiation

Dynamics and Space – Pupils will research issues involving kinematics, forces and space.

ASSESSMENT

NATIONAL 5 - To gain the course award, pupils **must pass** the **Course Assessment**. The Course Assessment consists of an Assignment (a research investigation) and a Question Paper (exam). Both are marked by the SQA and will be graded A to D.

CAREER PATHWAY

Successful completion of the course could support progression towards:

- Higher grade course if National 5 has been achieved
- College/University courses
- Employment in areas such as Engineering, Robotics, Optometrist .....

SCIENCE

For further information about this course please contact:
Curriculum Leader: Mr A Gillies
Teaching Staff: Physics
S5/6 Year Head

Love * Forgiveness * Justice * Compassion

HOLY ROOD RC HIGH SCHOOL

PHYSICS HIGHER

SQA COURSE UNITS

- Our Dynamic Universe
- Particles and Waves
- Electricity
- Researching Physics

HIGHER – COURSE ENTRY REQUIREMENTS

The course is suitable for pupils who are secure in their attainment of National 5 Physics.

SKILLS DEVELOPED ON THIS COURSE

- Analytical and problem solving skills
- Planning and designing investigations/experiments
- Safely carry out investigations/experiments and record detailed observations and collecting data
- Drawing valid conclusions and giving explanations supported by evidence
- Communicating findings/information

COURSE INFORMATION

Our Dynamic Universe – Develop skills of scientific inquiry, investigation and analytical thinking, along with knowledge and understanding of our dynamic universe.

Particles and Waves – Develop skills of scientific inquiry, investigation and analytical thinking, along with knowledge and understanding of particles and waves.

Electricity - Develop skills of scientific inquiry, investigation and analytical thinking, along with knowledge and understanding of electricity. Pupils will apply these skills when considering the applications of electricity on our lives, as well as the implications on society/the environment.

Researching Physics – Develop skills to undertaking research in Physics. Pupils will collect and synthesize information from different sources, plan and undertake a practical investigation, analyse results and communicate information related to their findings.

ASSESSMENT

To achieve the course award at Higher Grade all pupils must pass the course assessment. The final course assessment will include a question paper and an assignment.

CAREER PATHWAY

Successful completion of the course could support progression towards:

- Advanced Higher-Grade courses
- College/University courses
- Employment in areas such as engineer, architect, meteorologist ……

SCIENCE

For further information about this course please contact:

Curriculum Leader: Mr A Gillies
Teaching Staff: Physics
S5/6 Year Head

Love * Forgiveness * Justice * Compassion

HOLY ROOD RC HIGH SCHOOL

PHYSICS

ADVANCED HIGHER

SQA COURSE UNITS

- Rotational Motion and Astrophysics
- Quanta and Waves
- Electromagnetism
- Investigating Physics Unit Specification

ADVANCED HIGHER – COURSE ENTRY REQUIREMENTS

- The course is suitable for pupils who are secure in their attainment of Higher Physics.

SKILLS DEVELOPED ON THIS COURSE

As a result of following an Advanced Higher Physics course, candidates should acquire:

- A deeper knowledge and understanding of the nature of physics and its applications
- Skill in applying their knowledge and understanding in a wide variety of theoretical and practical problem solving contexts
- Skills associated with carrying out experimental and investigative work in physics and analysing the information obtained.

COURSE INFORMATION

The Advanced Higher course is designed to increase your awareness of applications of Physics in everyday life and of the new developments taking place at present. The project work in the course allows pupils to do some independent research.

ASSESSMENT

To achieve the course award at Advanced Higher Grade all pupils must pass all assessment outcomes for the SQA Units along with the course assessment. These will be assessed with a question paper and assignment investigation.

CAREER PATHWAY

Successful completion of the course could support progression towards:

- College/University courses
- Employment in areas such as Medicine, Veterinary Medicine and Engineering

SCIENCE

For further information about this course please contact:

Curriculum Leader: Mr A Gillies
Teaching Staff: Physics
S5/6 Year Head

HOLY ROOD RC HIGH SCHOOL

SKILLS FOR WORK HEALTH SECTOR

NATIONAL 5

SQA COURSE UNITS

- Working in the Health Sector
- Life Sciences and the Health Sector
- Improving Health and Wellbeing
- Physiology of the Cardiovascular System
- Working in Non-Clinical Roles

NAT 5 - COURSE ENTRY REQUIREMENTS

- Suitable for pupils who have completed a National 3 or 4 science qualification.

SKILLS DEVELOPED ON THIS COURSE

- Communication
- Numeracy
- Information and Communication Technology
- Problem Solving
- Working with Others

Skills and attitudes for employability are developed throughout the course these include:

- Understanding of the workplace and the employee's responsibilities, for example, timekeeping, appearance, customer care etc. Self-evaluation skills
- Positive attitude to learning
- Flexible approaches to solving problems
- Adaptability and positive attitude to change
- Confidence to set goals, reflect and learn from experience.

COURSE INFORMATION

Unit 1: Working in the Health Sector
Introduces pupils to the range of provision and the services provided by the health sector in their local area, employability skills and attitudes.

Unit 2: Life Sciences and the Health Sector
Introduce pupils to the contribution of the life sciences industry in the diagnosis and treatment of illness. Pupils will investigate the safety of pharmaceutical products made by the life sciences industry and the health and safety responsibilities of employers and employees in the life sciences industry.

Unit 3: Improving Health and Wellbeing
Introduce pupils to the wide range of options available in the health sector that help tackle current health and lifestyle issues, health and safety risks to workers in the health sector and the importance of a healthy lifestyle.

Unit 4: Physiology of the Cardiovascular System
Provides pupils with an introduction to the structure and function of the cardiovascular system. Pupils will apply this knowledge to investigate the effect of a specific disorder on the structure & function of the cardiovascular system.

Unit 5: Working in Non Clinical Roles
Introduces pupils to the range and diversity of careers in non-clinical roles in the health sector. Pupils will undertake an investigation into the roles and responsibilities of non-clinical roles and career opportunities.

COURSE ASSESSMENT

NATIONAL 5 - There is no external assessment for this Course. Pupils must successfully complete each Unit to achieve the course award.

CAREER PATHWAY

Successful completion of this course could support progression towards

- SVQs in Health and Social Care at level 2
- National courses or units
- Further/higher education
- Training/employment

SCIENCE

For further information about this course please contact:
Curriculum Leader: Mr A Gillies
S5/6 Year Head

Love * Forgiveness * Justice * Compassion

HOLY ROOD RC HIGH SCHOOL

SKILLS FOR WORK LABORATORY SCIENCE

NATIONAL 5

SQA COURSE UNITS

- Careers using Laboratory Science
- Working in a laboratory
- Practical Skills
- Practical Investigation

NAT 5 - COURSE ENTRY REQUIREMENTS

- Suitable for pupils who have completed a National 3 or 4 science qualification.

SKILLS DEVELOPED ON THIS COURSE

- Skills working in a laboratory
- Pupils to foster a good ethic, including positive attitudes, time management and working with others
- Confidence
- Develops laboratory skills involving weighing, measuring and preparing chemical solutions
- Develops an understanding of health and safety in a laboratory setting
- Develops problem solving and numeracy skills in a laboratory setting
- Develops pupils' awareness of their own strengths and weaknesses

COURSE INFORMATION

Unit 1: Careers using Laboratory Science
Investigate how laboratory skills are used in a wide range of industries and services, investigating career opportunities available which require laboratory skills.
Unit 2: Working in a Laboratory
Practical skills such as weighing, measuring, handling chemicals and preparing solutions, basic laboratory safety such as storage of chemicals.
Unit 3: Practical Skills
Develop practical skills such as handling microorganisms, measuring radioactivity and performing titrations.
Unit 4: Practical Investigation
Investigate a scientific topic as part of a team. Pupils will also work individually on one aspect of the investigation and produce a scientific report.

COURSE ASSESSMENT

NATIONAL 5 - There is no external assessment for this Course. Pupils must successfully complete each Unit to achieve the course award.

CAREER PATHWAY

Successful completion of this course could support progression towards

- Suitable training/employment in science laboratories
- Further/Higher Education

SCIENCE

For further information about this course please contact:
Curriculum Leader: Mr A Gillies
S5/6 Year Head

Love * Forgiveness * Justice * Compassion

ROOD RC

HOLY

SCIENCE

LEVEL 3	LEVEL 4	LEVEL 5	LEVEL 6	LEVEL 7
NATIONAL 3 BIOLOGY	NATIONAL 4 BIOLOGY	NATIONAL 5 BIOLOGY	HIGHER BIOLOGY	ADVANCED HIGHER BIOLOGY
NATIONAL 3 CHEMISTRY	NATIONAL 4 CHEMISTRY	NATIONAL 5 CHEMISTRY	HIGHER CHEMISTRY	ADVANCED HIGHER CHEMISTRY
NATIONAL 3 PHYSICS	NATIONAL 4 PHYSICS	NATIONAL 5 PHYSICS	HIGHER PHYSICS	ADVANCED HIGHER PHYSICS

BIOLOGY / CHEMISTRY / PHYSICS

LAB SCIENCE

HEALTH SECTOR SCIENCE

SPES NOSTRA

Love * Forgiveness * Justice * Compassion