NPA L4 Science and Health

# Course Rationale This National Progression Award develops knowledge and understanding of science and its applications in relation to human health. It links aspects of learning and skills in Physics, Chemistry and Health Science with employability skills. A special feature of this course its focus on practical skills, including practical skills relating to applying technology in the context of the health sector. It also helps to develop an understanding of health and safety practices and how these are applied in the workplace.

# Course Content

The NPA L4 Science and Health Group award is made up of 3 full SQA units, and two half-units.

**Chemistry: Nature’s Chemistry -** In this unit you will explore the use of plants as a source of food and products such as soaps and cosmetics. You will investigate their potential to provide renewable fuels and compare this with the use of fossil fuels and their impact on the environment. You will learn about how plants are used to produce alcohol and medicines, and how these can impact our health, both positively and negatively.

**Physics: Waves and Radiation**

This unit investigates the use of sound, electromagnetic radiation and nuclear radiation in contexts such as using ultrasound, noise-cancelling headphones, medical imaging and treatment, and correcting eye-sight. You will learn about the potential risks of these technologies, and how to use them safely.

**Science: Human Health** Here you will explore what is meant by health and it can be monitored. You will consider threats to health such as poverty, drug abuse and stress in the context of individuals, families, society and the global population. You will choose an aspect of health to investigate in the media.

**Science: Practical skills (half-unit)**

Practical skills are developed through all the above units – this unit practices and assesses skills in using measuring apparatus, carrying out scientific procedures and recording and analysing data.

**Health Sector: Life Sciences Industry (Skills for work half-unit)**

In this unit you will investigate the range of products made by the life sciences industry and learn about how these are used within health-based careers. You will develop practical skills in using biomedical devices and interact with people working in careers within the health sector.

# Skills

Through this course you will develop practical laboratory skills and investigative skills as well as practical employment skills. You will also have opportunity to develop numeracy and problem-solving skills.

# Course Assessment

You will gain credit for each unit you pass, and if you pass all units will gain this level 4 group award, equivalent to a National 4 course award. Your work will be assessed by your teacher on an ongoing basis throughout the course. Assessments will include class-based “tests”, research assignments, performing practical laboratory skills and procedures, and demonstrating how to use medical devices safely.

# Progression

Following this course you could progress to Nat 4 qualifications in Physics, Chemistry or Biology, (or in some cases Nat 5). You could also progress to further training and employment in a range of science-based industries.

**Career Pathways**

Ambulance technician Aromatherapist Brewer Beauty therapist Dental nurse Care support worker Food scientist Farm/Fish farm worker Laboratory technician Midwife Nurse Occupational Therapy support worker Pharmacy technician Physiotherapy assistant Sports therapist Paramedic SSPCA inspector Zookeeper