S5/S6
Options in Science

Higher Chemistry

Higher Biology

Higher Physics

National 5 Lab Skills

Adv Higher Chemistry

Adv Higher Biology

Adv Higher Physics

Health Sector

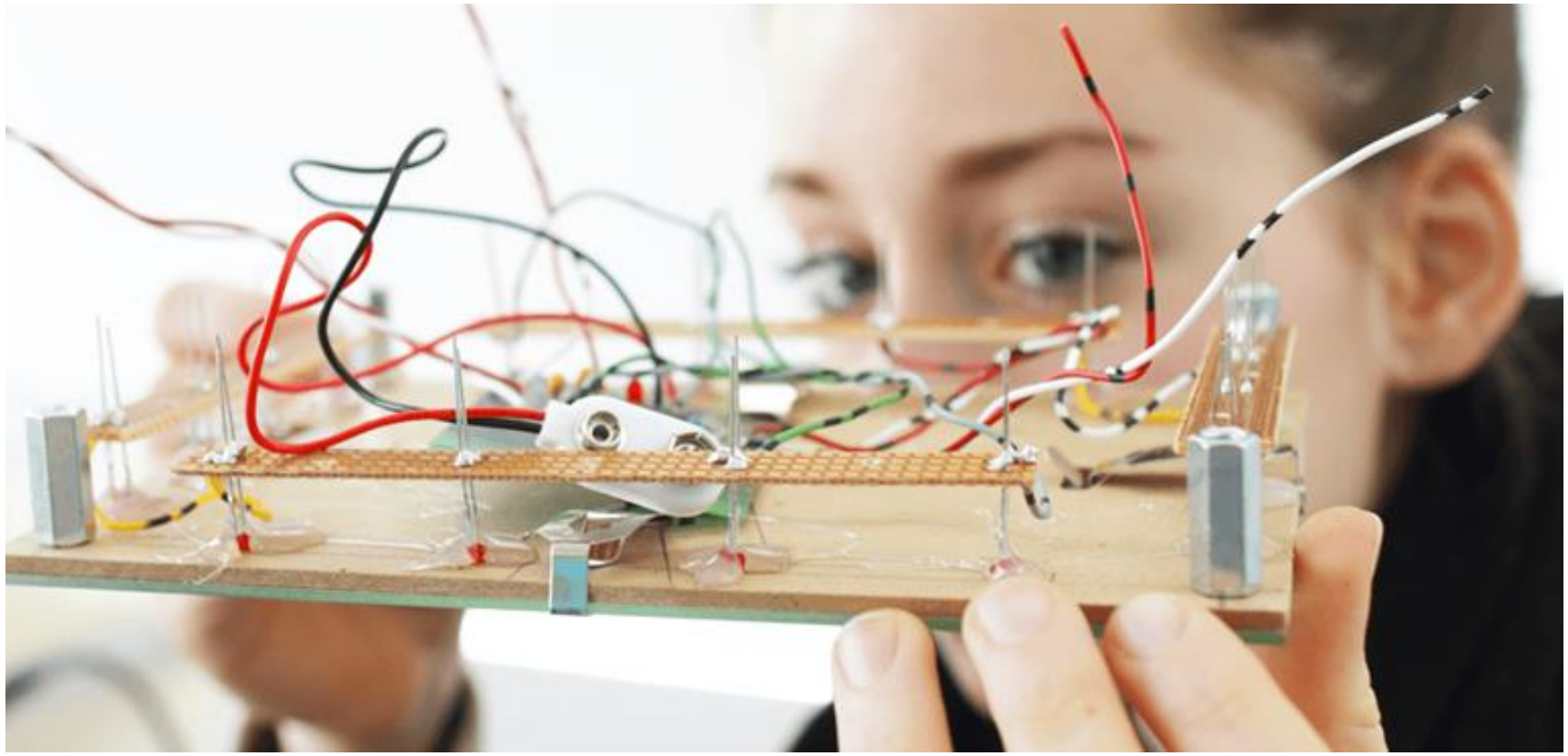
SPERO MELIORA - I HOPE FOR BETTER THINGS

STEM & Glasgow's Economy

Glasgow's Economic Leadership define the key sectors for Glasgow's economy as:

- Low Carbon Industries
- Engineering
- Life Sciences
- Finance & Business Services
- Tourism
- Higher/Further Education

Developing STEM skills will ensure you are well equipped to pursue future careers in these growth areas.

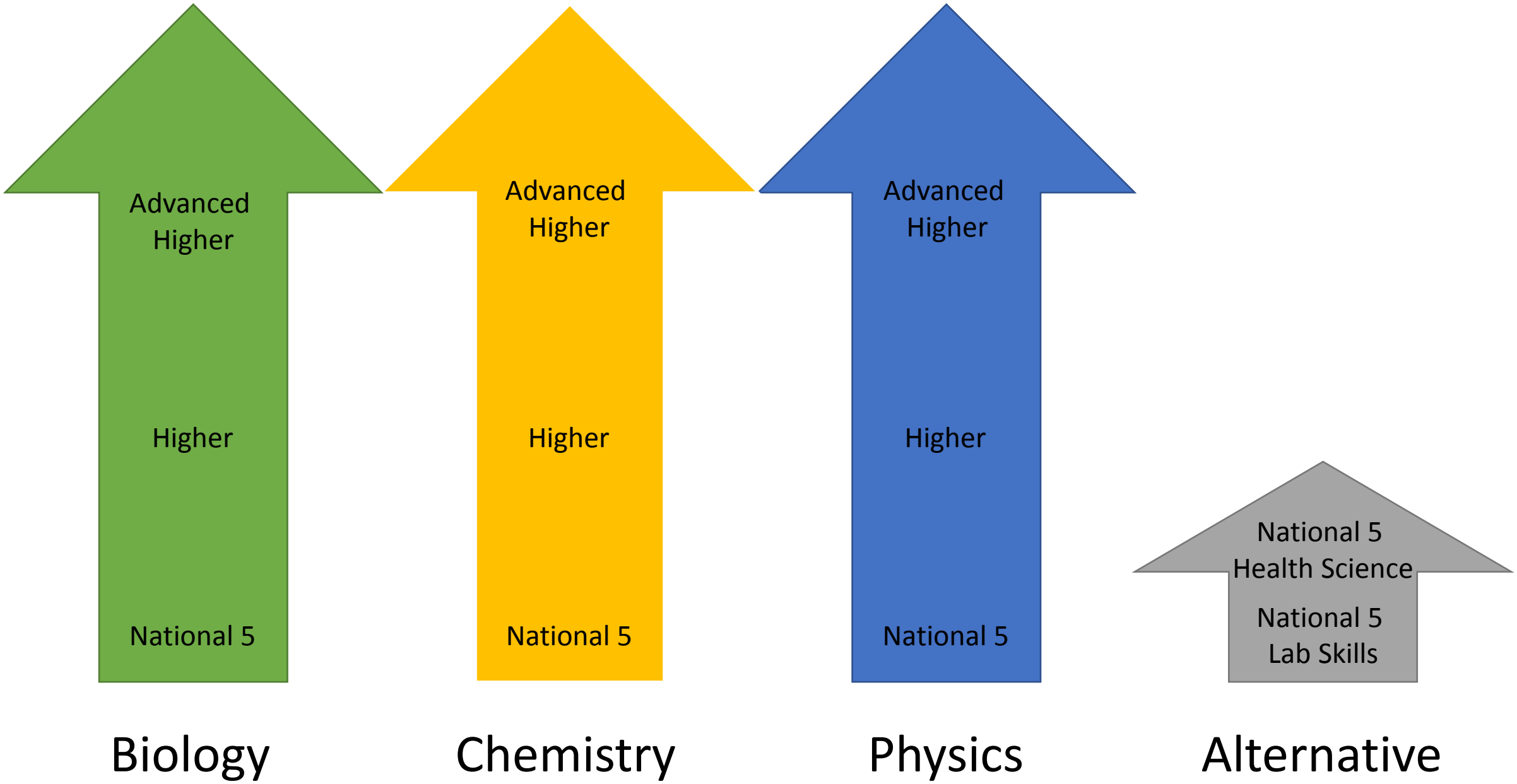


- In 2016 there were 963,400 people working in STEM related sectors in Scotland – an increase of 70,500 (8%) from 2010
- 37% of the total employment in Scotland (Great Britain Average = 32%)
- Glasgow & Lanarkshire regions account for the highest numbers of STEM related employment in Scotland.
- 80% of STEM jobs in Scotland were full time. (2016)
- Oxford Economics project a 4% growth (42,600 jobs) in STEM related employment in Scotland from 2015 to 2027.
- Much of this growth concentrated between 2021 and 2024.
- The UK has a shortfall of approximately 400,000 STEM graduates each year.

There are 8 areas in which the UK has the potential to be a global leader:

- Big Data
- Satellites
- Robotics & autonomous systems
- Life sciences, genomics and synthetic biology
- Regenerative medicine
- Agri science
- Advanced materials and nanotechnology
- Energy & it’s storage

Science enables us to develop our interest in, and understanding of, the living, material and physical world and develop the skills of collaboration, research, critical enquiry, experimentation, exploration and discovery.


Advanced Higher
Higher
National 5
Advanced Higher
Higher
National 5
Advanced Higher
Higher
National 5
National 5 Health Science
National 5 Lab Skills
Biology
Chemistry
Physics
Alternative

Biology

Higher Curriculum

3 units are studied: DNA and the Genome, Metabolism and Survival, Sustainability and Interdependence.

Advanced Higher Curriculum

3 units are studied: Investigative Biology, Cells and Proteins, Organisms and Evolution.

- Biology in the 21st century is an exciting and ever expanding field with a vast number of career paths.
- Most universities require Higher biology for studying medicine, veterinary medicine or dentistry.

Chemistry

Higher Curriculum
3 units are studied: Chemical Changes and Structure, Nature's Chemistry, Chemistry in Society

Advanced Higher Curriculum
3 units are studied: Inorganic and Physical Chemistry, Organic Chemistry and Instrumental Analysis, Researching Chemistry

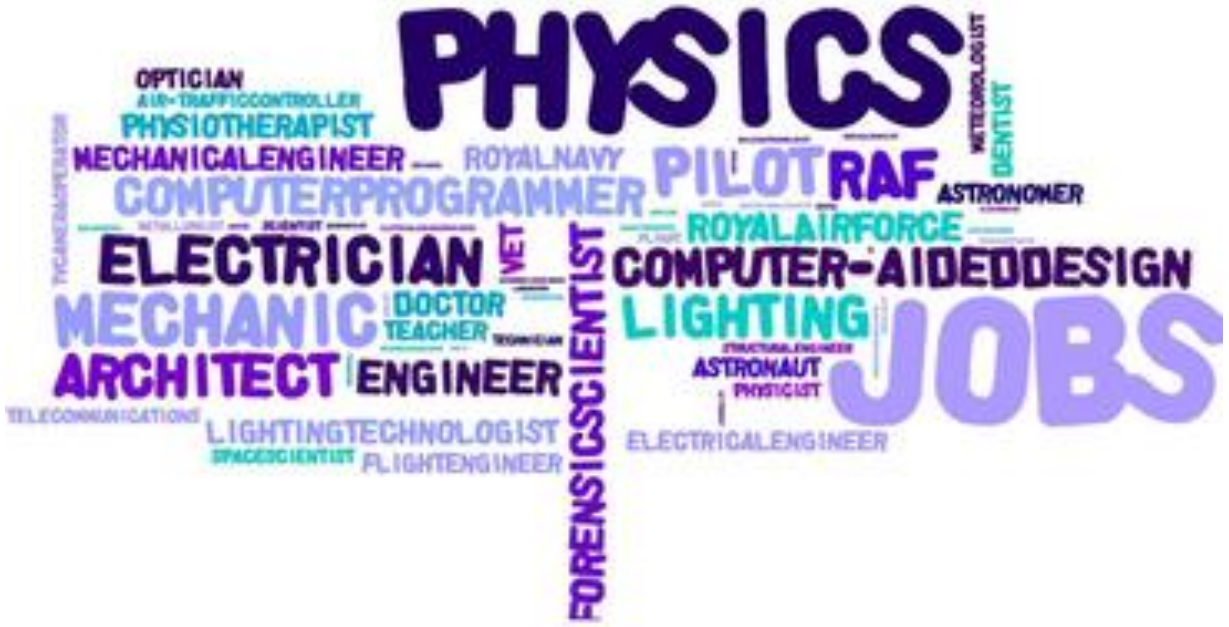
- The main employers of chemistry graduates are in the chemical and related industries, you will also find opportunities with employers in many different sectors, including the food and drink industry, utilities and research, health and medical organisations, government, and scientific research organisations and agencies.

Physics

Higher Curriculum
3 units are studied: Our Dynamic Universe, Particles and Waves, Electricity

Advanced Higher Curriculum
Units studied are: Rotational Motion and Astrophysics, Quanta and Waves, Electromagnetism

- A physics degree is a great starting point for a career in scientific research, as well as in a range of careers in the business, finance, IT and engineering sectors

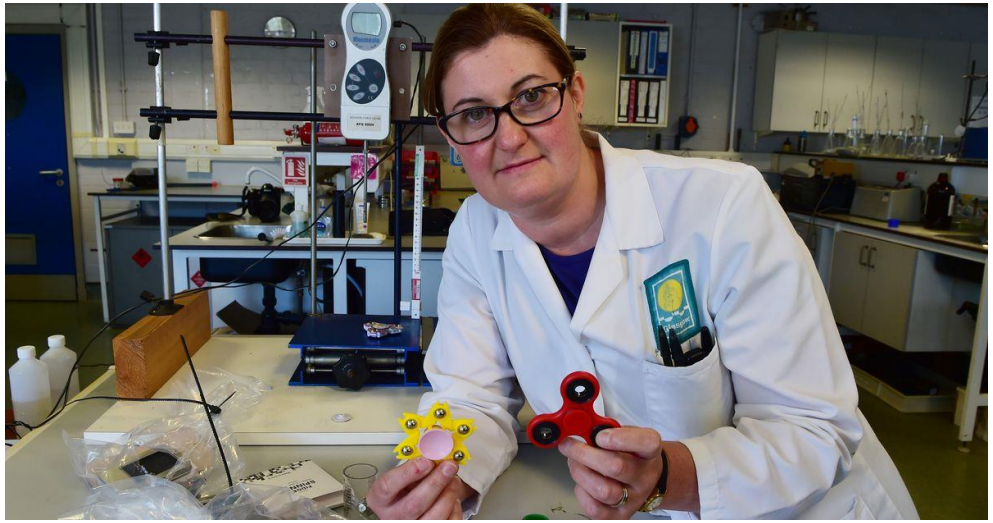


Lab Skills

National 5 Lab Skills Curriculum
4 units are studied: Careers Using Laboratory Science, Working in a Laboratory, Practical Skills, Practical Investigation

Although there is no final exam for the Lab Skills course, pupils must maintain a portfolio of work completed throughout the year.

The National 5 Lab Skills Course is designed to introduce candidates to the knowledge and skills which are required for employment/further study in the wide range of industries and services using laboratory science, and to develop an awareness of the opportunities and range of employment within the sector.



Health Sector

The National 5 Course is designed as an introduction to the health sector.

The emphasis of this Course is to prepare candidates for working in the health sector and develop employability skills valued by employers. Candidates will develop a range of knowledge and skills required in this vocational area. Candidates will investigate a range of job roles and career opportunities as well as participating in a job interview.

Candidates will also develop a wide range of skills, including research and self-evaluation skills. Emphasis throughout all Units is on the employability skills and attitudes which will help prepare candidates for the workplace.

The Skills for Work Course in Health Sector at SCQF level 5 consists of five mandatory Units.

- Health Sector: Working in the Health Sector
- Health Sector: Working in the Health Sector – Scotland
- Health Sector: Life Sciences Industry and the Health Sector
- Health Sector: Improving Health and Well- being
- Health Sector: Physiology of the Cardiovascular System
- Health Sector: Working in Non Clinical Roles

Brittany Wenger

When Brittany Wenger was fifteen, her cousin was diagnosed with breast cancer. Two years later, she designed an artificial brain to detect signs of this devastating disease that took home first prize in the 2012 Google Science Fair! Her breast cancer test, which has its own app, is now in beta tests with two cancer research centers.