5 WORK SKILLS BIOLOGY WILL GIVE YOU

CURIOSITY

In school: You'll learn to ask penetrating questions which help you see how the different parts of the natural world fit together. Thinking about why nature is the way it is will give you a better grasp of the world.

ORGANISATION

In school: Biology is about the way the natural world is made up. This requires a well-organised, logical approach to help you reach a full understanding of the connections between different living things.

ANALYSIS

In school: Biologists use their findings – and those of others – to reach conclusions. You will analyse and interpret data from experiments and research, and combine this with the knowledge you have built up from your study of biology.

COMMUNICATION

In school: You will have to conduct experiments and summarise your findings to your classmate and teacher. You will need to convey your ideas clearly and informatively and offer persuasive conclusions based on your observations.

CRITICAL THINKING

In school: Evaluating problems with a rational eye is an essential skill for any scientist. For example, to control a disease epidemic, it is vital to understand the source and means of transmission in order to tackle the underlying problem.

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Sources: For source data please request the information by emailing data@successatschool.org

WHERE CAN BIOLOGY TAKE YOU?

AGRICULTURE

This sector employs over 350,000 people across the UK. Although core agricultural roles are expected to drop by 2030, **many new jobs will be created in 'agri-tech'.**

Career paths: Ecologist, farmer, food scientist

ENGINEERING

The proportion of young engineers has dropped over the last decade. This means there will be a **high demand for younger workers** in coming years.

Career paths: Biomedical engineer, design engineer, project engineer

MEDICINE & HEALTHCARE

The UK healthcare industry **employs over four million people**, making it one of the largest employment sectors. Four of the five highest average graduate salaries are in fields related to medicine.

Career paths: Dental nurse, physiotherapist, vet

POLICE & EMERGENCIES

There is a high demand for trained paramedics with **one in 10 vacancies unfilled.** Within the police force, digital and IT skills are highly sought after to better fight crime.

Career paths: Crime scene investigator, fire person, paramedic

SCIENCE & RESEARCH

Between 2016 and 2023, jobs in science and research will grow at twice the rate of other industries, creating 142,000 new jobs. **One in every six jobs will be in science and research.**

Career paths: Biotechnologist, laboratory technician, research scientist

SPORT & FITNESS

There are currently 431,000 people employed in the sport & fitness industry. The number of people employed in the industry has grown every year since 2013.

Career paths: Personal trainer, rehabilitation therapist, ski instructor

EMPLOYER

INVESTMENT 20/20
See your future in finance
Part of The Investment Association

By studying biology you will be able to start a career in the investment management industry, as a key part of your studies is to compare data, which is a useful skill in this field.

WANT MORE CAREERS ADVICE?

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Data sources: [1]https://www.engineeringuk.com/media/1356/enguk_report_2017_synopsis.pdf; [2]https://www.hesa.ac.uk/news/11-01-2018/sfr247-higher-education-student-statistics/subjects (Fig. 13); [3]No of workers: https://www.ons.gov.uk/employmentandlabourmarket/peopleinwork/employmentandemployeetypes/datasets/employmentbyindustryemp13 (May 2018). No of new rail jobs: https://successatschool.org/advicedetails/947/careers-in-rail (YPD); [4]No of workers: https://www.ons.gov.uk/employmentandlabourmarket/peopleinwork/employmentandemployeetypes/datasets/employmentbyindustryemp13 - May 2018. No of businesses: https://www.statista.com/topics/3797/construction-industry-in-the-uk/; [5]New jobs: http://ec.europa.eu/social/BlobServlet?docId=14107&langId=en (UK 2011 roadmap references here). No of workers: https://www.ons.gov.uk/employmentandlabourmarket/peopleinwork/; [6]https://www.ediforenergy.com/sites/default/files/jobs-of-the-future.pdf (p.4) employmentandemployeetypes/datasets/employmentbyindustryemp13 (May 2018)

Careers in Biology

Biology is widely recognised as the study of life and living matter. One of the three main scientific disciplines, biology can be divided into numerous specialised fields, although ultimately all of the different branches of biology can be brought together by their common understandings about living things.

All biological disciplines work on the basis that cells are the basic units of life and they make up the composition of all living things, while genetic information within the cells is responsible for determining the structure and function of each individual cell.

Cells can evolve, which creates new species, and all living things require energy to exist. The final common understanding in biology is that homeostasis must be maintained, meaning a state of balance between the living matter and its environment. Since the 1953 discovery of the structure of DNA, our collective understanding of the field of biology has rapidly increased.

Jobs directly related to Biology include:

- Academic researcher
- Higher education lecturer
- Marine biologist
- Microbiologist
- Nature conservation officer
- Secondary school teacher
- Soil scientist

Jobs where Biology would be really useful include:

- Anatomical pathology technologist
- Animal physiotherapist
- Dentist
- General practice doctor
- Genetic counsellor
- Neuroscientist
- Science writer

Typical employers

- Employers recruiting graduates for biology-related jobs include:
- universities and clinical research organisations
- pharmaceutical and biotechnology companies
- private hospitals and NHS trusts
- national and global health, conservation and environmental charities
- scientific and technical consultancies
- schools and colleges
- outreach organisations, such as museums, science centres and broadcast companies.

Skills for your CV

In addition to subject-specific knowledge of biological systems and concepts, you develop a range of practical and technical skills and learn how to use specialist techniques and technical equipment.

You also develop more general skills, which are attractive to employers in all sectors. These include:

- communication, through report writing and presentations
- teamworking and collaboration, through group projects and seminars
- the ability to work independently
- organisation and time management, through meeting course work deadlines
- numeracy and maths
- IT and computer literacy
- research and data analysis
- problem-solving and creative thinking
- project management
- self-reliance, initiative and business awareness.

Studying Biology at university

Biology degrees come in many different forms. You can choose to study straight biology or a closely related subject, for example:

- a human biology degree
- a marine biology degree
- a molecular biology degree
- a cell biology degree
- a life sciences degree
- an anatomy degree
- a physiology degree
- a microbiology degree.

Biology degree modules

First year topics often include:

- cell biology
- ecology and evolution
- molecular genetics
- physiology
- basic biochemistry
- microbiology.

CARDINAL NEWMAN CATHOLIC HIGH SCHOOL	To enrol for the A Level Biology course at The Amethyst Sixth Form you must have: • Biology/Science Grade 6 or Grade 44 in Combined Science Trilogy • English Grade 5 • Maths Grade 6