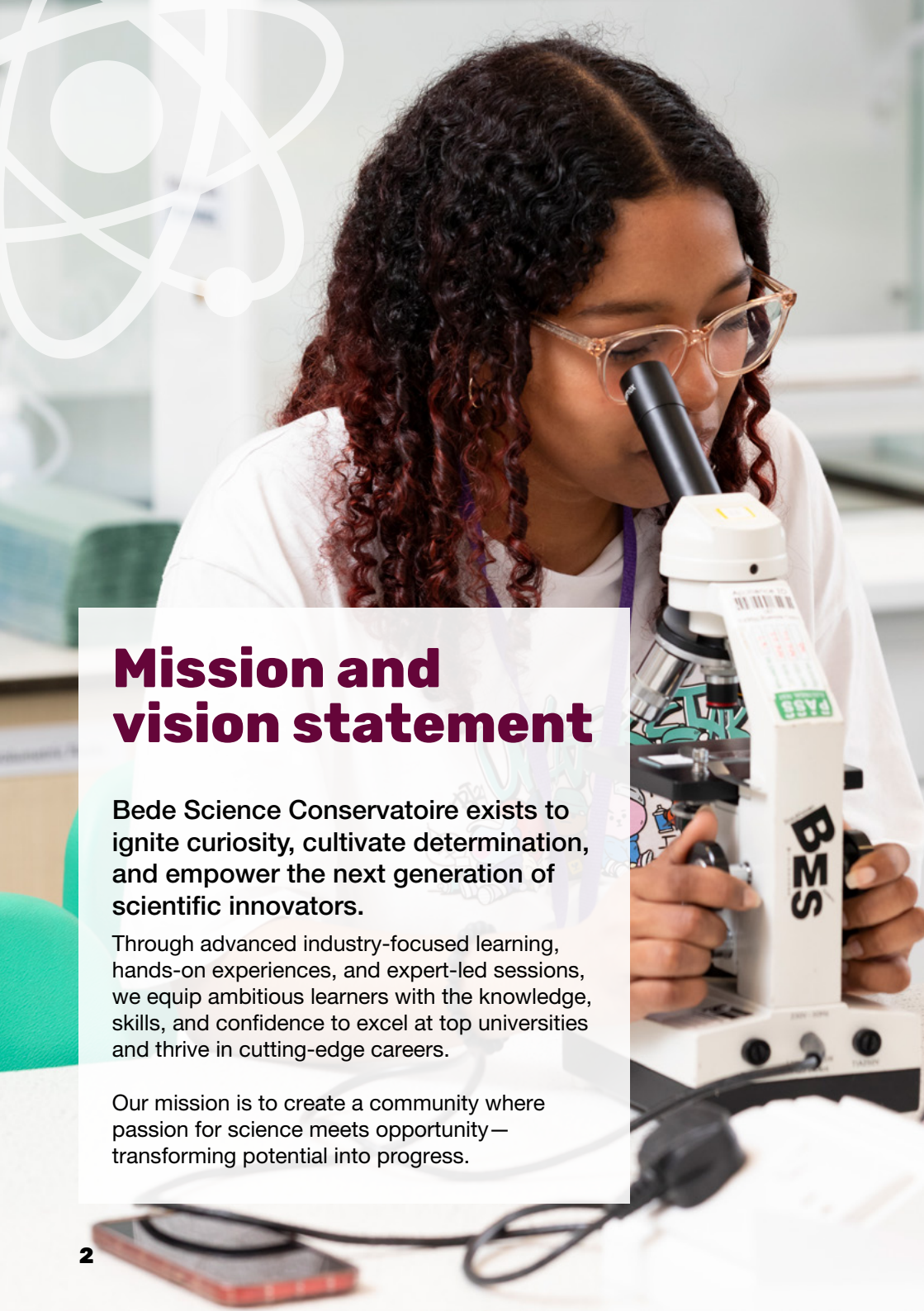




A young woman with dark, curly hair and glasses is looking through a white and black microscope. She is wearing a white lab coat. The background is a blurred laboratory setting. In the top left corner, there is a white graphic of an atom. A semi-transparent white box with text is overlaid on the lower left of the image.

Mission and vision statement

Bede Science Conservatoire exists to ignite curiosity, cultivate determination, and empower the next generation of scientific innovators.

Through advanced industry-focused learning, hands-on experiences, and expert-led sessions, we equip ambitious learners with the knowledge, skills, and confidence to excel at top universities and thrive in cutting-edge careers.

Our mission is to create a community where passion for science meets opportunity — transforming potential into progress.

Biological and Healthcare

Who is it for?

This pathway introduces ambitious students pursuing Biology-related or Healthcare pathways, including medicine, dentistry, veterinary science, biological degrees, or science based degree apprenticeships.



Skills Developed

Through a practitioner-led approach, students will build:

- Analytical skills: problem-solving, critical thinking, and data interpretation
- Communication and teamwork, essential for STEM careers
- Academic research and writing through extended lab reports, designed like a mini-dissertation and academic poster competitions
- Surgical Dexterity via specialist fine-motor skills workshops
- Practical laboratory skills, including measurement, experiment design, and safety in a laboratory setting



Strand Specific Activities

Students will participate in activities such as:

- **Experimental and procedural labs:** Targeted sessions developing practical scientific techniques in fully equipped labs
- **Lab reports:** Preparing extended lab reports to develop research and writing skills
- **Academic poster competitions:** Create and present research to expert panels, mirroring professional scientific conferences
- **Suturing workshops:** Practical stitch and knot-tying training using clinical kits
- **Visiting universities, industry and innovation hubs:** including the centre for life with access to Life Lab facilities and engagement with biotechnologists and fertility specialists
- **NHS partnerships:** Hospital visits and mock clinical trail including links with the surgical society
- **Guest speakers and workshops from industry/ NHS and higher education:** including Nursing workshops covering the six Cs, with mini practical activities and Health care role play
- **Personal statement:** Subject specific guidance
- **UCAT preparation:** Library and online resources/courses and guidance
- **Mock mini interviews:** Practice MMI to prepare for university interviews for Medicine, Dentistry, Veterinary Science





- **Care home visits:** Christmas quiz and Easter craft activities, community engagement and develop of six Cs (Care, Compassion, Competence, Communication, Courage, and Commitment)
- **Women into STEM:** Engaging in initiatives promoting gender equity and access to careers in science
- **British Science Week:** Participation in national enrichment activities celebrating science and innovation
- **Primary school outreach:** Delivering science sessions to local primary schools, promoting engagement and developing communication skills

Intended Careers

Graduates progress toward roles in:

- **Medicine and clinical practice:** Surgeon, GP, specialist consultant, dentistry
- **Veterinary medicine:** Clinical vet, zoological researcher.
- **Biosciences:** Drug discovery, genetics, biochemistry, zoology, marine biology
- **Allied health:** Physiotherapy, pharmacy, diagnostic radiography



Employers in the region

The North East is a growing centre for health, life sciences, and bioscience, offering excellent opportunities for students interested in biology-related degrees and careers in medicine, dentistry, veterinary science, biomedical science, and pharmacy.

Key employers and organisations include:

- NHS hospital trusts, providing a wide range of clinical and scientific careers
- The Centre for Life, a leader in biomedical research and science engagement
- Fujifilm, specialising in biotechnology and biopharmaceutical development
- Local universities and research institutes focused on health and life sciences

Students can access work experience, apprenticeships, lab placements, and research opportunities across healthcare, pharmaceuticals, biotechnology, and veterinary science. Schools and colleges also benefit from strong partnerships with employers and universities through guest speakers, career events, and visits to specialist labs and facilities.

These opportunities help students explore routes into STEM and healthcare professions while connecting them with the region's expanding life-science sector.



Student Success



Name: Alfie

Courses studied: Biology, Chemistry, Geography

Destination: Integrated Master's in Biochemistry at the University of York

Chemical and Pharmaceutical Industries

Areas Covered

This pathway introduces students to the chemical and pharmaceutical sectors, showing how innovative products are developed, tested, and manufactured. Students explore laboratory techniques, chemical reactions, quality control, safety procedures, and sustainability in industry, alongside insights into regulatory frameworks and innovation in STEM.

Skills Developed

- Practical laboratory skills, including measurement, experiment design, and safe handling of chemicals
- Analytical skills: problem-solving, critical thinking, and data interpretation
- Communication and teamwork, essential for STEM careers
- Academic research and writing through extended lab reports, designed like a mini-dissertation



Strand Specific Activities

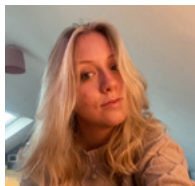
Students will participate in activities such as:

- **Experimental and procedural labs:** Targeted sessions developing practical scientific techniques in fully equipped laboratories, focusing on precision, safe working practices, and competence in core experimental methods
- **Lab reports:** Preparation of extended scientific reports based on experimental work, developing skills in data presentation, analysis, evaluation, and formal scientific writing aligned with higher education standards
- **Academic poster competitions:** Creation and presentation of research on chemical and pharmaceutical topics to expert panels, replicating the format and expectations of professional scientific conferences
- **Pharmaceutical simulations:** Practical sessions simulating drug development, product testing, and quality control processes, applying scientific principles to industry-relevant pharmaceutical scenarios
- **Data analysis:** Interpretation and evaluation of experimental and chemical data using structured methods, focusing on accuracy, reliability, and scientific justification of conclusions
- **Scientific problem-solving:** Application of theoretical chemical knowledge to structured problems and experimental scenarios, developing logical reasoning and analytical thinking skills
- **Research skills:** Development of investigative planning skills, including forming hypotheses, selecting appropriate methodologies, and evaluating experimental validity and limitations
- **Scientific communication:** Training in presenting scientific ideas clearly and effectively through written, visual, and oral formats, including structured presentations and poster design
- **University engagement:** Exposure to higher education through visits, taster lectures, and laboratory experiences, providing insight into undergraduate study in chemistry and related disciplines



- **Industry exposure:** Interaction with scientific industry contexts through talks and visits, exploring how chemical and pharmaceutical research is applied in real-world settings
- **Guest speakers and workshops:** Sessions led by professionals from academia and industry, offering insight into current research, laboratory practice, and career pathways in science
- **Science lectures:** Attendance at advanced lectures delivered in university-style formats, covering contemporary chemical and pharmaceutical topics and developments
- **Chemistry Olympiad:** Structured preparation and participation in the Chemistry Olympiad, developing advanced problem-solving skills, theoretical understanding, and application of challenging chemical concepts
- **Competition preparation:** Additional structured support for external science competitions, encouraging independent thinking, extension of subject knowledge, and application of advanced scientific reasoning
- **Career awareness in science:** Exploration of progression routes into chemistry, pharmaceuticals, and related scientific fields, including higher education and professional pathways
- **Women into STEM:** Engaging in initiatives promoting gender equity and access to careers in science
- **British Science Week:** Participation in national enrichment activities celebrating science and innovation
- **Primary school outreach:** Delivering science sessions to local primary schools, promoting engagement and developing communication skills

Student Success



Name: Grace

Courses studied: Maths, Biology and History

Destination: Biology at York University



Careers Intended

This pathway prepares students for roles such as:

- Laboratory technician
- Pharmaceutical scientist
- Chemical engineer
- Quality control analyst

It also provides a foundation for further study in:

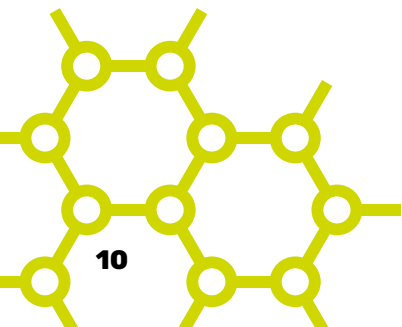
- Biomedical science
- Chemical engineering
- Environmental science

Career pathways span healthcare, environmental management, chemical and pharmaceutical manufacturing, and advanced manufacturing industries.

Employers in the Region

The North East of England is a thriving hub for chemicals, pharmaceuticals, and advanced manufacturing, with major employers including GSK, AstraZeneca, MSD, Accord Healthcare, and Unilever, alongside innovation hubs such as NETPark and International Advanced Manufacturing Park.

Historically reliant on heavy industry, the region is diversifying into advanced manufacturing, health and life sciences, and digital technology. These employers and hubs offer apprenticeships, entry-level roles, and work experience opportunities in labs, production, and research, while students benefit from guest speakers from industry and universities, as well as visits to universities to explore STEM courses and facilities, strengthening the connection between education and innovation.





Bede Sixth Form College's BSC cannot guarantee places, therefore, it is very important that you apply for Bede, interview, then attend our launch event and possible workshops. Please contact **judith.myers@stockton.ac.uk** for more information and you can also follow us on Instagram at **[@bedesixthformcollege](https://www.instagram.com/bedesixthformcollege)**



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