



ENGINEERING STUDY APPLICATIONS

Write part of a personal statement for the application to the MEng Engineering degree at the Dyson Institute giving examples to show that you have some of the non-academic requirements for admission.

Objectives: To understand the purpose of personal statements in the application process for further and higher education and to see how the opportunities from studying engineering can support an application.

Outcomes: Produce a piece of writing that gives examples of your skills and experiences and how they link to a proposed study route.

Suggested use: Homework or class activity

Age group: 16–18

Time length: 30 minutes

Skills developed: Communication, reflecting on progress, goal setting

Resources: Show the webpage from the Dyson Institute application entry requirements

Subject links: Engineering

Gatsby Benchmarks: 3 – Addressing the needs of each student | 7 – Encounters with further and higher education

STEM Focus

Link to *STEM Careers* (2nd Edition)



Chapter 5

Careers context: skills (problem solving, reflecting on progress), academic pathways, demonstrating skills.

STEM CAREERS



- Curriculum follow up → Provide opportunities in the subject to help students to develop the skills and attributes areas listed on the Dyson Institute entry requirements as these are transferable to many future course and job applications.
- Adapting to other STEM subjects → All STEM subjects: this activity can be applied to help students practice linking their skills and experiences to any course at further or higher education.

Websites

- <https://www.dysoninstitute.ac.uk/undergraduate/applying/entry-requirements/>



HERO IN STEM

Name: Sir James Dyson

Biography (from *STEM Careers (2nd Edition)*, see page 63): ‘Enjoy failure and learn from it. You never learn from success.’ This is a famous quote from James Dyson.

Sir James Dyson is an inventor and engineer, who started out studying architectural design at the Royal Academy of Arts. His early work involved designing the Sea Truck and it was his innovative reinvention of the wheelbarrow, the Ballbarrow, that led him to become an entrepreneur.

Resilience and perseverance are qualities of James Dyson. He had the idea of creating a vacuum cleaner that didn't need a disposable bag to hold the dust and dirt. (Ask someone older about the old-fashioned vacuum cleaners!) It took four years and thousands of prototype models to create the first bagless vacuum cleaner that uses cyclonic technology. However, manufacturers rejected his designs as the market for vacuum cleaner replacement bags was worth hundreds of millions of pounds!

Not one to give up, Dyson started his own manufacturing company, and the rest, as they say, is history. You are likely to see Dyson products in your home and in other locations (he invented the Dyson Airblade hand dryer in 2006). Not all his projects

STEM CAREERS

work (for example, his electric car ideas) but Dyson believes that we can learn from failure.

Sir James Dyson is a philanthropist and supports scientists and engineers with their research and development. In response to the UK shortage of engineers, in 2017 he opened the Dyson Institute of Engineering and Technology, a new type of higher education establishment.

For further guidance and more resources read *STEM Careers* by Liz Painter.

