

# Materials Science Technologist (Degree) ST0675/V1.0

Level: 6  
Duration: 48 months  
EPA: 9 months

## Assessment Methods

- Work Based Project (comprising of Project Report, Presentation and Questioning)
- Professional Discussion
- Knowledge Test

## Gateway Requirements

- Employer is satisfied the apprentice is consistently working at, or above, the level of the occupational standard
- Achieved English & Mathematics at Level 2\*
- Level 6 degree in Materials
- Apprentices must agree a project outline and scope with their employer and PIABC
- Gateway Declaration Form

## Occupation Summary

The Materials Science Technologist occupation is at the forefront materials innovation in the Petrochemical, Pharmaceutical, Engineering, Construction, and Manufacturing industries.

The broad purpose of the occupation is to ensure materials used in those industries are fit for purpose in terms of product innovation, performance, failure diagnosis, operational management, process and manufacturing, and the positive advancement of materials science, thus enhancing economic and social value today and in the future.

Materials technologists will engage in high level activities such as materials testing, novel product development, solving manufacturing issues, laboratory management, team leadership, technological sales, and client management, depending on which of the variety of related businesses their employer is in.

Work involves testing materials used by clients through activities such as investigation, gathering physical evidence, critical analyses, drawing conclusions, and recommending courses of action. Depending on context, technologists may be involved in designing new materials or production processes, combining materials, or additive manufacturing. In addition, they may need to provide technical leadership in the design and development of new material products by choosing correct materials and applications through data derived from analysis in the field or lab.

## End Point Assessment

### Work Based Project (comprising of Project Report, Presentation and Questioning)

Summary Report - The apprentice must first prepare and submit project plan to PIABC and then complete the project report. The report should comprise of 2,500 words (+/-10%). The report (and project plan) will be reviewed by PIABC prior to the presentation taking place.

Presentation and Questioning - The presentation will be based on the project carried out in Component 1 and made to the independent assessor. The presentation and questioning will last for 90 minutes, which will include 50 minutes for delivery of the presentation, then 40 minutes of questioning (minimum of 8 questions).

### Professional Discussion

The professional discussion between the apprentice and independent assessor will last for 60 minutes. It is to enable to apprentice to demonstrate their competence and excellence and cover the KSBs assigned to the professional discussion. The independent assessor will ask a minimum of nine open questions.

### Knowledge Test

The test will consist of 16 multiple choice questions and the apprentice has 60 minutes to complete. The test is closed book.

## Order of Assessment Methods

The assessment methods can be delivered in any order. The result of one assessment method does not need to be known before taking the other.

## Grading

The standard is graded overall: Fail, Pass or Distinction.

To view Materials Science Technologist assessment plan visit:  
[https://www.instituteforapprenticeships.org/media/3199/st0675\\_materials\\_science\\_technologist\\_l6\\_for-publication\\_120619.pdf](https://www.instituteforapprenticeships.org/media/3199/st0675_materials_science_technologist_l6_for-publication_120619.pdf)

\* Apprentices who are aged 16 to 18 at the start of their training, are required to achieve English and maths qualifications to support their career progression. Adult apprentices, aged 19 and over at the start of their apprenticeship training, are no longer required to hold or achieve English and maths qualifications to pass their apprenticeship. Instead, these apprentices will need to demonstrate their proficiency through the development and assessment of occupationally relevant English and maths skills as part of their apprenticeship. Funding will continue to be available for English and maths qualifications for all apprentices, including those aged 19 and over, when either the employer or apprentice feels this is required.