



**Level 3 Composites Technician
Apprenticeship (ST0094/1.1)**

AM1: Observation with Questions Guidance

Version 2

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INTRODUCTION

In this assessment method an independent assessor (assessor), who is employed by PIABC Limited (PIABC) as the End Point Assessment Organisation (EPAO), will observe you in your workplace and asks questions.

Observation assessment method is being used because it allows you to demonstrate knowledge, skills and behaviours (KSBs) while performing complete your day-to-day duties under normal working conditions using your employer's resources and equipment. These resources and equipment will be familiar to you and thus allowing you to perform at your best.

Wherever possible you will undertake the observation assessment on the same day as the AM3 Multiple-Choice Test. PIABC will advise you if this is not the case.

KNOWLEDGE, SKILLS AND BEHAVIOURS (KSBs)

The observation with questions will be assessing the following KSBs:

KNOWLEDGE

K4	Health and safety practice. Risk assessment and risk mitigation in composites process manufacturing environment. Personal protective equipment (PPE) requirements: selection, inspection, operation, wearing, and disposal.
K16	Plant, equipment, machinery, and hand tools used within composites manufacture: application and operation.
K22	Composite mould tool preparation and operation.
K23	Composite manufacture processes and principles: moulding, laminating, and curing.
K26	Standard operating procedures, drawings, and work instructions: what are they, why they are important.
K28	Quality assurance, testing and inspection methods.
K29	Documentation requirements.
K34	Verbal communication techniques. Composite industry terminology.
K37	Planning, prioritising, and time management techniques.

SKILLS

S1	Review drawings, instructions, or information to understand task.
S2	Plan work. Identify and organise resources.
S3	Identify hazards and risks in the workplace.
S4	Apply health and safety procedures in compliance with regulations and standards.

S5	Apply environmental and sustainability procedures in compliance with regulations and standards.
S7	Prepare and use mould tools.
S8	Select and check hand tools, equipment and machinery including calibration record.
S9	Use or operate hand tools, equipment, and machinery.
S10	Store mould tools, hand tools, and equipment.
S11	Select, check, and prepare materials for example, weigh resins, cut reinforcement.
S12	Follow quality control processes during manufacture for example, check for contaminants, record batch numbers or expiry dates.
S13	Apply laminate to mould for example, cut, add darts, corner definition, orientation, position, and order.
S14	Complete preparation for and start curing process for example, select and apply consumables for example vacuum bag, infuse with resin, add heat or pressure.
S15	Extract product from mould (break out).
S16	Conduct final product quality assurance procedure. For example, conduct grading parameters checks (size, appearance, weight), and take samples for laboratory testing.
S19	Segregate resources for reuse, recycling, and disposal.
S20	Record or enter data - paper based or electronic. For example, process and production records, traceability records, and quality assurance records.
S25	Communicate with others verbally for example, colleagues and stakeholders.

BEHAVIOUR

B1	Prioritise health and safety.
B4	Take responsibility for the quality of work.

STRUCTURE

The observation is structured to give you the opportunity to demonstrate the KSBs mapped to this assessment method to the highest available grade.

The assessor will conduct and assess the observation asking you questions about what you are doing and why.

It will only be you being observed by the assessor to ensure quality and rigour and will be as unobtrusive as possible.

The observation will take at least 4 hours in total. If required, the assessor can increase the time by up to 10% to allow you to complete a task or respond to a question.

Your observation session may be split into discrete sections totalling 4 hours, but it will be held on the same day.

The assessor will:

- explain to you the format and timescales of the observation with questions before it starts. This does not count towards the assessment time.
- manage your invigilation during the assessment, to maintain security of the EPA, in line with PIABC's Malpractice & Maladministration Policy. This includes breaks and moving between locations.

The assessor should observe the following during your observation:

- complete composite pre-processing activities: risk assessment, organise and prepare materials, mould tool, hand tools and equipment
- conduct composite processing activities: use mould tool, laminate, complete preparation for and start curing process, and remove item from mould
- conduct final quality assurance procedure
- complete process manufacturing documentation - digital or paper based

Activities may relate to the same or different products.

These activities provide you with the opportunity to demonstrate the KSBs mapped to this assessment method.

The assessor will ask questions. Questioning can occur both during and after the observation.

The purpose of the assessor's questions is to assess the level of competence against the grading descriptors.

The time for questioning is included in the overall assessment time. The assessor will ask at least 5 questions. To remain as unobtrusive as possible, the assessor will ask you questions during natural stops between tasks and after completion of work rather than disrupting your flow. Follow-up questions can be used for clarification.

The assessor will ask questions about KSBs that were not observed to gather assessment evidence. These questions are in addition to the above set number of questions for the observation with questions and will be kept to a minimum.

The assessor will make the grading decision. The assessor will assess the observation and responses to questions holistically when deciding the grade.

The assessor will keep accurate records of the assessment and record:

- the KSBs observed.
- your answers to questions.
- the KSBs demonstrated in answers to questions.
- the grade achieved.

LOCATION

The observation will take place in your normal place of work for example, your employer's premises (or at a customer's premises, if applicable). Equipment and resources needed for the observation must be provided by your employer and be in good and safe working condition. The assessor will liaise directly with your employer to ensure that everything is in place for your observation.

Any questioning that occurs after the observation will take place in a quiet room, free from distractions and influence.

Simulated Environments

In exceptional circumstances, the venue could be a simulated environment selected by PIABC. PIABC will ensure suitable and familiar tools, equipment, machinery, resources, and materials are available within the simulated environment that replicate workplace and industry standards. Simulated environments will only be used if you cannot be observed in your workplace and remote observation is not a suitable alternative.

ASSESSMENT DESCRIPTORS

You will only be assessed on KSBs mapped this assessment method.

The full grading descriptors for AM1 is on the following pages:

Fail – An apprentice will be deemed to have failed if they do not meet the criteria outlined in the pass descriptor.

Theme (KSBs)	Pass (Apprentice must demonstrate all the pass descriptors)	Distinction (Apprentice must demonstrate all the pass descriptors and all of the distinction descriptors)
Planning (K37, S2)	Plans work and identifies and organises resources required to complete tasks using planning, prioritising, and time management techniques. (K37, S2)	None
Work environment: health and safety, environment (K4, S3, S4, S5, S19, B1)	<p>Identifies and documents hazards and risks in the workplace. Applies health and safety procedures in compliance with regulations and standards mitigating against risks including correct selection, inspection, operation, wearing, and disposal of personal protective equipment. Prioritises health and safety over other factors. (K4, S3, S4, B1)</p> <p>Applies environmental and sustainability procedures in compliance with regulations and standards including segregating resources for reuse, recycling, and disposal. (S5, S19)</p>	Justifies their choice to comply with and prioritise health and safety legislation in their composites work. (K4, S4, B1)

Theme (KSBs)	Pass (Apprentice must demonstrate all the pass descriptors)	Distinction (Apprentice must demonstrate all the pass descriptors and all of the distinction descriptors)
Tools and equipment (K16, S8, S9, S10)	Selects and checks hand tools, equipment, and machinery for the task including checking calibration records if relevant. (S8) Uses or operates hand tools, equipment, and machinery in line with their employer's and manufacturers' instructions. (K16, S9) Stores hand tools and equipment after use in line with employer's guidelines. (S10)	None
Materials (S11)	Selects, checks, and prepares materials in line with manufacturing specification. (S11)	None
Composite processing (K22, K23, K26, S1, S7, S13, S14, S15)	Performs the composite manufacturing processes of moulding, laminating, and curing and extracts product from the mould in line with drawings, instructions, and information for the task. Identifies the principles behind the curing process used. (K22, K23, K26, S1, S7, S13, S14, S15)	Produces a consistent high-quality output, mitigating against potential issues for example, attention to detail, right first time, minimises scrap rate, minimises defects. Explains how they can change the curing process to influence the quality of the final laminate. (K22, K23, K26, S1, S7, S13, S14, S15)
Quality assurance (K28, S12, S16, B4)	Applies quality control processes during manufacture and conducts final product quality assurance procedure in line with task requirements, taking responsibility for outcomes. (K28, S12, S16, B4)	Justifies the use of quality control and assurance methods for composite manufacturing. (K28, S12, S16, B4)
Communication (K34, S25)	Uses verbal communication techniques suitable for the context, adapting style and use of terminology to suit the audience. (K34, S25)	None
Documentation (K29, S20)	Records or enters data to complete work records required for tasks correctly and in full - paper based or electronic. (K29, S20)	None

MAPPING KSBs TO THEMES

KSBs grouped by Theme	Knowledge	Skills	Behaviour
Planning (K37, S2)	Planning, prioritising, and time management techniques. (K37)	Plan work. Identify and organise resources. (S2)	None
Work environment: health and safety, environment (K4, S3, S4, S5, S19, B1)	Health and safety practice. Risk assessment and risk mitigation in composites process manufacturing environment. Personal protective equipment (PPE) requirements: selection, inspection, operation, wearing, and disposal. (K4)	Identify hazards and risks in the workplace. (S3) Apply health and safety procedures in compliance with regulations and standards. (S4) Apply environmental and sustainability procedures in compliance with regulations and standards. (S5) Segregate resources for reuse, recycling, and disposal. (S19)	Prioritise health and safety. (B1)
Tools and equipment (K16, S8, S9, S10)	Plant, equipment, machinery, and hand tools used within composites manufacture: application and operation. (K16)	Select and check hand tools, equipment and machinery including calibration record. (S8) Use or operate hand tools, equipment, and machinery. (S9) Store mould tools, hand tools, and equipment. (S10)	None
Materials (S11)	None	Select, check, and prepare materials for example, weigh resins, cut reinforcement. (S11)	None

KSBs grouped by Theme	Knowledge	Skills	Behaviour
Composite processing (K22, K23, K26, S1, S7, S13, S14, S15)	Composite mould tool preparation and operation. (K22) Composite manufacture processes and principles: moulding, laminating, and curing. (K23) Standard operating procedures, drawings, and work instructions: what are they, why they are important. (K26)	Review drawings, instructions, or information to understand task. (S1) Prepare and use mould tools. (S7) Apply laminate to mould for example, cut, add darts, corner definition, orientation, position, and order. (S13) Complete preparation for and start curing process for example, select and apply consumables for example vacuum bag, infuse with resin, add heat or pressure. (S14) Extract product from mould (break out). (S15)	None
Quality assurance (K28, S12, S16, B4)	Quality assurance, testing and inspection methods. (K28)	Follow quality control processes during manufacture for example, check for contaminants, record batch numbers or expiry dates. (S12) Conduct final product quality assurance procedure. For example, conduct grading parameters checks (size, appearance, weight), and take samples for laboratory testing. (S16)	Take responsibility for the quality of work. (B4)

KSBs grouped by Theme	Knowledge	Skills	Behaviour
Communication (K34, S25)	Verbal communication techniques. Composite industry terminology. (K34)	Communicate with others verbally for example, colleagues and stakeholders. (S25)	None
Documentation (K29, S20)	Documentation requirements. (K29)	Record or enter data - paper based or electronic. For example, process and production records, traceability records, and quality assurance records. (S20)	None

GRADING

The assessor will make all grading decisions. The assessor will assess the observation and responses to questions holistically when deciding the grade.

The observation with questions will be assessed Distinction, Pass or Fail.

RESITS AND RETAKES

If you fails one or more assessment method(s) can take a re-sit or a re-take at your employer's discretion. Your employer would need to agree that a re-sit or re-take is appropriate. A re-sit does not need further learning, whereas a re-take does.

You would have a supportive action plan to prepare for a re-sit or a re-take.

Your employer and PIABC will agree the timescale for a re-sit or re-take. A re-sit is typically taken within 2 months of the EPA outcome notification. The timescale for a re-take is dependent on how much re-training is required and is typically taken within 4 months of the EPA outcome notification.

Failed EPA methods must be re-sat or re-taken within a 6-month period from the EPA outcome notification, otherwise the entire EPA will need to be re-sat or re-taken in full.

Re-sits and re-takes are not offered if you wish to move from pass to a higher grade. You would get a maximum EPA grade of pass for a re-sit or re-take, unless the PIABC determines there are exceptional circumstances.