

Unit A: Lesson 1.1 / 70mins / 15-24yrs

Industry Pathways in Fitting and Machining

Learning Objectives

Explore and **Identify** career roles, qualifications, and pathways in the fitting and machining industry.
Define Unit A objectives.

Success Criteria

By the end of this lesson, students will:

1. Successfully Identify various career pathways in the fitting and machining industry.
2. Understand Unit A Objectives

Core Resources

- Lesson 1.1 PowerPoint Slides
- [MSQ Career Profiles](#)
- [Manufacturing Matters website](#)

Additional Resources

- Sample fitting and machining projects

Preparation Checklist – Before the Lesson

Review the lesson plan and slides to understand the flow and key learning objectives.
Review the videos in PowerPoint slide to check that they are working. Select one of the videos or insert your own.
Print Career Pathways handouts (or prepare links for digital access: https://manufacturingmatters.com.au/careers/)
Prepare paper and markers for mind map activity
Prepare photos or actual examples of sample projects (insert photos into PowerPoint slides)
Familiarise yourself with the Manufacturing Skills Queensland's Manufacturing Matters website
Think about how you'll set the tone: share your own enthusiasm and curiosity about how these skills matter in real jobs.

Description	Resource
<p>1.1</p> <p>Unit Introduction and Industry Context / Duration: 15mins</p> <p>Purpose: Spark curiosity, connect classroom to real-world context and careers</p> <p>Pedagogical Approach: Direct instruction with multimedia prompts</p> <p>Unit Introduction and Industry Context</p> <ol style="list-style-type: none"> 1. Set the context for the unit and connect classroom to real-world pathways. 2. Share the unit objectives. 3. Show a short video to spark interest (Slide 4, 5, or 6). Ask students what they noticed/what stood out in the video. Prompts – ‘What materials were they working with?’, ‘What did you see them doing?’, ‘Did you notice the PPE they were wearing?’ 4. Extension option – Invite students to share personal connections (family or community) to fitting and machining. 	<p>Slides 1-6</p> <p>How to Become a Fitting and Machining Engineer</p>
<p>1.2</p> <p>Show Sample Projects / Duration: 5mins</p> <p>Purpose: Connect classroom learning to real-world standards and expectations.</p> <p>Pedagogical Approach: Direct instruction + visual modelling</p> <p>Show sample projects / images</p> <ol style="list-style-type: none"> 1. Introduce students to examples of the real projects they will be working on in this unit. 2. Explain that the skills they will learn in the unit while working on these projects are the kinds of skills that are needed in the workplace. They will learn how to manufacture tools they can use themselves (e.g. drill gauge) and/or tools that can be used by others (e.g. meat mallet). 3. Pass around or show photos to highlight craftsmanship and precision. 4. Discussion prompts – ‘What details stand out in these examples?’, ‘How important do you think accuracy and precision is when making these items?’ 5. Extension option – Introduce students to other items that are made in fitting and machining. This could include items yourself or other teachers have made, or items shared by industry. 	<p>Slide 7</p> <p>Samples of actual projects or photos/videos</p>
<p>1.3</p> <p>Group Activity / Duration 15mins</p> <p>Purpose: Students co-construct knowledge about roles, skills, and qualifications.</p> <p>Pedagogical Approach: Guided group work</p> <p>Career Pathways Mind Mapping</p> <ol style="list-style-type: none"> 1. Students will work in small groups to create mind maps linking careers to skills and qualifications 2. Provide groups with Career Pathway handouts from MSQ (or direct students to access them online) 3. Model how to make a mind map: centre idea (fitting and machining careers), branches (roles, skills, qualifications) 4. Monitor the groups listening for student ideas. Check for group participation and accuracy. 5. Discussion questions – ‘which role seems most interesting?’ ‘What skills or qualifications do roles share?’ 6. Troubleshooting – students may only list jobs, not skills → prompt: ‘What makes someone good at this job?’ 	<p>Slide 8</p> <p>MSQ Career Profile handouts</p> <p>(Suggested profiles: Machine Operator, Engineering Technician, Fabrication Tradesperson, Trade Assistant, Toolmaker)</p>
<p>1.4</p> <p>Class Sharing and Discussion / Duration: 15mins</p> <p>Purpose: Broaden understanding and create a collective class resource.</p> <p>Pedagogical Approach: Dialogic sharing – teacher-led but open-ended</p> <p>Record ideas on the whiteboard</p> <ol style="list-style-type: none"> 1. Ask each group to share what they found. 	

<ol style="list-style-type: none"> 2. Record ideas on the board for everyone to see. Clarify and expand ideas as needed. 3. Discussion questions – ‘What surprised you?’ ‘Do you think these jobs might look different in the future (e.g. automation)?’ 	
<p>1.5</p> <p>Individual Reflection / Duration: 5 mins</p> <p>Purpose: Consolidate what was learned and connect to career exploration.</p> <p>Pedagogical Approach: Critical reflection and self-assessment</p> <p>Reflection Activity</p> <ol style="list-style-type: none"> 1. Provide students with two short written prompts: <ol style="list-style-type: none"> a. ‘What job interests you most and why?’ b. ‘What skill(s) would you like to develop in this unit and why?’ 2. Students to record a brief reflection in their notebooks. 3. Extension option – Discuss opportunities for students to engage in work experience. 	<p>Slide 9</p>
<p>1.6</p> <p>Recap and What’s Next / Duration: 5 mins</p> <p>Purpose: Consolidate what was learned and create interest in upcoming practical work.</p> <p>Pedagogical Approach: Direct instruction + reflection / previewing next steps</p> <p>Recap</p> <ol style="list-style-type: none"> 1. Summarise key points: <ol style="list-style-type: none"> a. ‘Today we saw how the same skills you’ll learn and use in this unit are essential in real-world manufacturing jobs.’ b. We also learned that these jobs require precision, safety, (add others as discussed in class) 2. Discussion prompt – ‘What was one thing that stood out for you today?’ <p>What’s Next</p> <ol style="list-style-type: none"> 1. Provide a brief preview of what students will learn and do in the next lesson 2. Highlight how the next lesson builds on today’s learning 	

Teacher Notes and Reflection

What worked well? What would you do differently next time? Any ideas for extending, enriching, or scaffolding learning?