

# Manufacturing Trades 11

*Foundational Outcomes*

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Prepared by the Department of Education and Early Childhood Development

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## Manufacturing Trades 11 Outcomes (7)

As teachers determine their lesson plans for Term 1 of the 2020-2021 school year, one of the considerations will be the sequencing of learning activities. Where possible, activities that will be difficult or impossible to do at home should be done early in the term, to be better prepared to shift to a blended or learning-at-home model, if required. The colour-coded outcomes below can serve as a guide for teachers as they make activity sequencing decisions.

 In-class learning priority (2/7 outcomes)

 In-class learning preferred (1/7 outcomes)

 Outcome could be met from home (4/7 outcomes)

### **Learners will analyse current and evolving careers, including pathways for diverse groups of people.**

#### Indicators

- Investigate the roles and responsibilities of various manufacturing trades careers, including entrepreneurial opportunities (COM/PCD/CT/TF)
- Compare labour market information including current and future opportunities for employment, trade's needs, and salary scales (COM/PCD/CT/TF)
- Analyse the essential skills necessary for a range of manufacturing trades careers (CZ/COM/PCD/CT)
- Analyse personal suitability for careers in the manufacturing trades (CZ/COM/PCD/CT)
- Compare different types of manufacturing (welding/fabricating, pipe fitting, sheet metal) (COM/PCD/CT/TF)

### **Learners will evaluate employability skills necessary for manufacturing trades related careers.**

#### Indicators

- Investigate how technology changes in manufacturing trades (CZ/COM/PCD/CT/TF)
- Analyse personal development of employability skills (CZ/COM/PCD/CT)
- Investigate businesses of personal interest, including opportunities for entrepreneurship (COM/PCD/CT/TF)
- Apply personal management and teamwork skills (CZ/COM/PCD/CT)

**\*\*Learners will implement applicable workplace health and safety practices and procedures.**

Indicators

- Evaluate safe operating procedures associated with required tools and other equipment (COM/PCD/CT/TF)
- Implement safety training that could be expected in a workplace setting (COM/PCD/CT/TF)
- Implement the safe use of personal protective equipment, materials, tools and equipment (COM/PCD/CT/TF)
- Implement safety testing for individual manufacturing tools and equipment (COM/PCD/CT/TF)

**Learners will plan a construction project including the use of manufacturing trades' related documents and drawings.**

Indicators

- Interpret manufacturing drawings (COM/PCD/CT/TF)
- Scale manufacturing-related drawings (COM/PCD/CT/TF)
- Apply spatial perception through orthographic and isometric projection (COM/PCD/CT/TF)
- Estimate length, area, and volume (COM/PCD/CT/TF)
- Implement template development (COM/PCD/CT/TF)

**Learners will apply various manufacturing trades related systems of measurements in calculations.**

Indicators

- Use applicable layout tools for manufacturing trades (COM/PCD/CT/TF)
- Use applicable measurement tools for manufacturing trades (PCD/CT/TF)
- Apply imperial measurement system (PCD/CT/TF)
- Apply metric measurement system (PCD/CT/TF)

**\*\*Learners will implement the safe use of tools and equipment during the construction process.**

Indicators

- Compare different types of welding materials, processes, and properties (COM/PCD/CT/TF)
- Select the best materials for a job (PCD/CT/TF)
- Use applicable tools for the job (PCD/CT/TF)

- Implement safe handling of materials and by-products (PCD/CT/TF)

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Manufacturing Trades 11—Outcomes and Indicators

Learners will implement proper procedures to store and maintain tools, equipment, and products.

Indicators

- Implement inspections, repairs and maintenance on equipment and tools where applicable (PCD/CT/TF)
- Implement applicable recording, storing and safety procedures (PCD/CT/TF)
- Apply lockout, tagout procedures (PCD/CT/TF)
- Apply safe, effective, and sustainable procedures when moving, storing, assembling and disassembling materials and by-products (PCD/CT/TF)
- Implement sustainable processes to re-enter components into the manufacturing system (CZ/PCD/CT/TF)

**\*\*Learners will construct a manufacturing trades project.**

Indicators

- Construct a product to specifications and acceptable standards (PCD/CI/CT/TF)
- Implement applicable and safe manufacturing trades processes (PCD/CT/TF)
- Use a procedural guide (COM/PCD/CI/CT/TF)
- Plan appropriate order of assembly (PCD/CT/TF)
- Apply finishing techniques and quality control checks (PCD/CT/TF)
- Evaluate the process and final product in relation to the planned design (COM/PCD/CT/TF)