

Area of Experience: Materials Technology: Metal

MTM

At Junior Certificate level the student can:

- | | |
|---|--|
| 1 Theory | <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> |
| Demonstrate knowledge of engineering materials, equipment, processes and workshop safety | |
| 2 Production of a piece of work | <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> |
| Apply the basic knowledge and skills necessary to produce artefacts using engineering materials | |
| 3 Engineering Drawings | <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> |
| Interpret basic engineering drawings and follow basic design procedures | |

Work begun | Work in progress | Work completed

Theory

MTM

Statement Code no: 1

Student:

Class:

At Junior Certificate level the student can:

Demonstrate knowledge of engineering materials, equipment, processes, and workshop safety

Date Commenced: / /

Date Awarded: / /

Learning Targets - This has been demonstrated by your ability to:

- | | | | | |
|----|--|--------------------------|--------------------------|--------------------------|
| 1 | State rules for safe and correct use of specified tools and procedures | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 2 | Observe and comply with workshop rules | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 3 | Identify typical measuring tools and measuring devices in everyday classroom use | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 4 | Recognise common engineering metals and plastics | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 5 | Identify plastics and metals in everyday use in the environment | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 6 | Suggest different uses for common engineering metals and plastics | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 7 | Suggest reasons for choices of material for everyday purposes, e.g. nuts and bolts/cars/drill bits/buses | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 8 | Identify basic metalwork hand tools | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 9 | Identify workshop machines | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 10 | List different joining methods (nuts and bolts/solder/rivets/ adhesive etc.) | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 11 | Suggest reasons for choice of joining method | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 12 | Suggest appropriate finishes for different jobs | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

Refer also to: English, Art, Materials Technology: Wood, Technical Graphics, Maths, Science

Work begun | Work in progress | Work completed

Production of a piece of work

MTM

Statement Code no: 2

Student:

Class:

At Junior Certificate level the student can:

Apply the basic knowledge and skills necessary to produce artefacts using engineering materials

Date Commenced: / /

Date Awarded: / /

Learning Targets - This has been demonstrated by your ability to:

- | | | | | |
|----|---|--------------------------|--------------------------|--------------------------|
| 1 | Observe and comply with workshop rules | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 2 | Select and use the correct tools to mark out a piece of work | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 3 | Use hand tools to shape a piece of work | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 4 | Demonstrate correct use of a drilling machine | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 5 | Join metals using soft solder technique | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 6 | Produce a piece of work which contains internal and external thread | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 7 | Produce a piece of work which uses rivets | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 8 | Produce a piece of work using a centre lathe | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 9 | Produce a piece of work which uses adhesive | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 10 | Produce at least two examples of different types of finish | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 11 | Use a stencil to aid a decorative finish (e.g. enamelling) | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

Refer also to: English, Art, Maths, Materials Technology: Wood, Technical Graphics, Science

Work begun | Work in progress | Work completed

Engineering Drawings

MTM

Statement Code no: 3

Student:

Class:

At Junior Certificate level the student can:

Interpret basic engineering drawings and follow basic design procedures

Date Commenced: / /

Date Awarded: / /

Learning Targets - This has been demonstrated by your ability to:

- | | | | | |
|----|--|--------------------------|--------------------------|--------------------------|
| 1 | Recognise basic engineering drawings | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 2 | Relate pictorial views to engineering views | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 3 | Match engineering drawings to objects at different stages of production | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 4 | Extract some information from basic engineering drawings | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 5 | Recall the steps followed in producing a piece of work | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 6 | Produce a sketch of a finished piece of work | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 7 | Identify the steps which caused problems and those which were easy in the production of a finished item | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 8 | Identify the steps enjoyed most when producing an item | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 9 | Examine a finished item you have made and identify changes you would consider | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 10 | Change the piece of work if necessary | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 11 | Find a simple object and list the steps needed to make it (e.g. teapot stand/bracket for hanging basket) | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

Refer also to: English, Art, Maths, Materials Technology: Wood, Technical Graphics, Science

Work begun | Work in progress | Work completed