**Assessment task: Metalwork Spade Design Task**

 **Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Year level: 9 10**

By the end of Year 10 students will have had the opportunity to design and produce at least four designed solutions focused on one or more of the five technologies contexts content descriptions. There is one optional content description for each of the following: Engineering principles and systems, Food and fibre production, Food specialisations and Materials and technologies specialisations. There is an additional open content description to provide flexibility and choice. Students should have opportunities to experience creating designed solutions for products, services and environments.

Students work independently and collaboratively. Problem-solving activities acknowledge the complexities of contemporary life and make connections to related specialised occupations and further study. Increasingly, study has a global perspective, with opportunities to understand the complex interdependencies involved in the development of technologies and enterprises. Students specifically focus on preferred futures, considering ethics; legal issues; social values; economic, environmental and social sustainability factors and using strategies such as life cycle thinking. Students use creativity, innovation and enterprise skills with increasing confidence, independence and collaboration.

**Content Descriptors:**

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|  | **E** | **D** | **C** | **B** | **A** |
| **Strand: Knowledge & Understanding** |  |  |  |  |  |
| Investigate and make judgments on how the characteristics and properties of materials, systems, components, tools and equipment can be combined to create designed solutions (ACTDEK046)  | *No Attempt of investigating material properties, construction and joining methods* | *Partial evidence of investigating material properties, construction and joining methods* | *Competent evidence of investigating material properties, construction and joining methods* | *Capable evidence of investigating material properties, construction and joining methods* | *Accomplished evidence of investigating material properties, construction and joining methods* |
| **Strand: Processes and production skills** | ***Creating designed solutions by:*** |  |
| **Investigating and defining:**Critique needs or opportunities to develop design briefs and investigate and select an increasingly sophisticated range of materials, systems, components, tools and equipment to develop design ideas (ACTDEP048) | *No Attempt of investigating tools, equipment and techniques required to produce the project* | *Partial investigation into tools, equipment and techniques required to produce the project* | *Competent investigation into tools, equipment and techniques required to produce the project* | *Thoughtful investigation into tools, equipment and techniques required to produce the project* | *Highly developed investigation into tools, equipment and techniques required to produce the project* |
| **Generating and designing:**Develop, modify and communicate design ideas by applying design thinking, creativity, innovation and enterprise skills of increasing sophistication (ACTDEP049) | *No Attempt at producing sketches and working drawings with all dimensions* | *Partial production of sketches and working drawings with all dimensions* | *Competent production of sketches and working drawings with all dimensions* | *Capable production of sketches and working drawings with all dimensions* | *Accomplished production of sketches and working drawings with all dimensions* |
| **Producing and implementing:**Work flexibly to effectively and safely test, select, justify and use appropriate technologies and processes to make designed solutions (ACTDEP050) | *No Attempt at manufacturing the project* | *Partial safe and skillful use of tools and machines to manufacture the project* | *Competent, safe and skillful use of tools and machines to manufacture the project* | *Capable, safe and skillful use of tools and machines to manufacture the project* | *Highly developed, safe and skillful use of tools and machines to manufacture the project* |
| **Evaluating:**Evaluate design ideas, processes and solutions against comprehensive criteria for success recognising the need for sustainability (ACTDEP051) | *No Attempt at reflecting of learning and the criteria for success* | *Partial reflection of learning and the criteria for success* | *Competent reflection of learning and the criteria for success* | *Thoughtful reflection of learning and the criteria for success* | *Highly developed reflection of learning and the criteria for success* |
| **Collaborating and Managing:**Develop project plans using digital technologies to plan and manage projects individually and collaboratively taking into consideration time, cost, risk and production processes (ACTDEP052) | *No Attempt at managing timelines & producing a costing/cutting sheet* | *Partial evidence of managing timelines & producing a costing/cutting sheet* | *Competent evidence of managing timelines & producing a costing/cutting sheet* | *Thoughtful evidence of managing timelines & producing a costing/cutting sheet* | *Highly developed evidence of managing timelines & producing a costing/cutting* *sheet* |

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| **Final Grade:** |  |

**Comment:**