|   | utumn Term 1   | MAGHULL   | HIGH SCHOOL – CURRIC  | ULUM MAP   |   |   |
|---|--|---|---|--|---|---|
| HALF TERM 1   | WEEK 1   | WEEK 2  | WEEK 3  | WEEK 4   | WEEK 5  | WEEK 6  |
| TOPIC (S)   | OBJECTIVE.   | OBJECTIVE.  | OBJECTIVE.  | OBJECTIVE.   | OBJECTIVE.  | OBJECTIVE.  |
|   |  | Completion of<br>Component 1<br>Learning Aim B due<br>to the pandemic.<br>Nows' based on Compon<br>omponent 2 knowledge.  | Completion of<br>Component 1<br>Learning Aim B due<br>to the pandemic.<br>ent 2 knowledge.  | Completion of<br>Component 1<br>Learning Aim B due<br>to the pandemic.   | Completion of<br>Component 1<br>Learning Aim B due<br>to the pandemic.  | Completion of<br>Component 1<br>Learning Aim B due<br>to the pandemic.  |
| Knowledge & Skills<br>development   | <ul> <li>Pupils working on Component 1 Learning Aim B assignment.</li> <li>A1 Materials • Engineering material categories: o ferrous, e.g. mild steel, wrought iron, stainless steel o non-ferrous, e.g. aluminium, titanium, copper, silver, zinc o thermosetting polymers, e.g. phenol-formaldehyde, polyimides, polyurethane o thermoforming polymers, e.g. polyethylene, polypropylene, acrylic. • Properties of engineering materials: o strength o hardness o toughness. • Characteristics of engineering materials, such as: o machinability o workability o durability. A2 Components • Types of components, such as: o proprietary, e.g. rivet, nut and bolt, screw, key, mechanical fixings, electronic components, such as resistors, capacitors, fuses, diodes o product specific, e.g. bush, flange, printed circuit board (PCB). • Characteristics of components, e.g. permanent/semi-permanent, sizes/dimensions, surface roughness, values, fixing methods. A3 Processes Types of engineering processes: • cutting, e.g. drilling, sawing, filing, shearing • shaping, e.g. turning, milling • forming, e.g. forging, casting, extruding, moulding, folding, bending • joining, e.g. fastening, bonding, soldering, brazing</li> </ul> |   |   |  |   |   |
|   | engineering ma<br>e.g. rivet, nut a<br>specific, e.g. bu<br>sizes/dimensio<br>filing, shearing   | ne, polypropylene, acrylic<br>aterials, such as: o machin<br>and bolt, screw, key, mecl<br>ush, flange, printed circuit<br>ons, surface roughness, va<br>• shaping, e.g. turning, n   | c. • Properties of enginee<br>nability o workability o d<br>hanical fixings, electronic<br>t board (PCB). • Characte<br>lues, fixing methods. A3  | ering materials: o strengt<br>urability. A2 Components<br>components, such as res<br>eristics of components, e.<br>Processes Types of engin  | h o hardness o toughness<br>• Types of components,<br>sistors, capacitors, fuses,<br>g. permanent/semi-pern<br>peering processes: • cutti | s. • Characteristics of<br>, such as: o proprietary,<br>diodes o product<br>nanent,<br>ng, e.g. drilling, sawing, |
| Assessment /<br>Feedback<br>Opportunities   | engineering ma<br>e.g. rivet, nut a<br>specific, e.g. bu<br>sizes/dimensio<br>filing, shearing<br>fastening, bond<br>• Summative ass   | ne, polypropylene, acrylic<br>aterials, such as: o machin<br>and bolt, screw, key, mecl<br>ush, flange, printed circuit<br>ons, surface roughness, va<br>• shaping, e.g. turning, n   | c. • Properties of enginee<br>nability o workability o d<br>hanical fixings, electronic<br>t board (PCB). • Characte<br>lues, fixing methods. A3<br>nilling • forming, e.g. forg<br>e assessment.   | ering materials: o strengt<br>urability. A2 Components<br>components, such as res<br>eristics of components, e.<br>Processes Types of engin<br>ging, casting, extruding, n                     | h o hardness o toughness<br>• Types of components,<br>sistors, capacitors, fuses,<br>g. permanent/semi-pern<br>peering processes: • cutti | s. • Characteristics of<br>, such as: o proprietary,<br>diodes o product<br>nanent,<br>ng, e.g. drilling, sawing, |
| Feedback  | engineering ma<br>e.g. rivet, nut a<br>specific, e.g. bu<br>sizes/dimensio<br>filing, shearing<br>fastening, bond<br>Summative ass<br>Teacher can or   | ene, polypropylene, acrylic<br>aterials, such as: o machin<br>and bolt, screw, key, mecl<br>ush, flange, printed circuit<br>ons, surface roughness, va<br>• shaping, e.g. turning, n<br>ding, soldering, brazing<br>sessment at the end of the                                | c. • Properties of enginee<br>nability o workability o d<br>hanical fixings, electronic<br>t board (PCB). • Characte<br>lues, fixing methods. A3<br>hilling • forming, e.g. forg<br>e assessment.<br>ignment brief if they req                              | ering materials: o strengt<br>urability. A2 Components<br>components, such as res<br>eristics of components, e.<br>Processes Types of engin<br>ging, casting, extruding, n<br>uire assistance. | h o hardness o toughness<br>• Types of components,<br>sistors, capacitors, fuses,<br>g. permanent/semi-pern<br>peering processes: • cutti | s. • Characteristics of<br>, such as: o proprietary,<br>diodes o product<br>nanent,<br>ng, e.g. drilling, sawing, |
| Feedback<br>Opportunities<br>Cultural Capital<br>SMSC / Promoting<br>British Values<br>(Democracy, Liberty, Rule of   | engineering ma<br>e.g. rivet, nut a<br>specific, e.g. bu<br>sizes/dimensio<br>filing, shearing<br>fastening, bond<br>Summative ass<br>Teacher can or   | ene, polypropylene, acrylic<br>aterials, such as: o machin<br>and bolt, screw, key, mech<br>ush, flange, printed circuit<br>ons, surface roughness, va<br>• shaping, e.g. turning, n<br>ding, soldering, brazing<br>sessment at the end of the<br>nly guide pupils to the ass | c. • Properties of enginee<br>nability o workability o d<br>hanical fixings, electronic<br>t board (PCB). • Characte<br>lues, fixing methods. A3<br>hilling • forming, e.g. forg<br>e assessment.<br>ignment brief if they req                              | ering materials: o strengt<br>urability. A2 Components<br>components, such as res<br>eristics of components, e.<br>Processes Types of engin<br>ging, casting, extruding, n<br>uire assistance. | h o hardness o toughness<br>• Types of components,<br>sistors, capacitors, fuses,<br>g. permanent/semi-pern<br>peering processes: • cutti | s. • Characteristics of<br>, such as: o proprietary,<br>diodes o product<br>nanent,<br>ng, e.g. drilling, sawing, |
| Feedback<br>Opportunities<br>Cultural Capital<br>SMSC / Promoting<br>British Values<br>(Democracy, Liberty, Rule of<br>Law, Tolerance & Respect)<br>Reading | engineering ma<br>e.g. rivet, nut a<br>specific, e.g. bu<br>sizes/dimensio<br>filing, shearing<br>fastening, bond<br>Summative ass<br>Teacher can or<br>. Group working will he  | ene, polypropylene, acrylic<br>aterials, such as: o machin<br>and bolt, screw, key, mech<br>ush, flange, printed circuit<br>ons, surface roughness, va<br>• shaping, e.g. turning, n<br>ding, soldering, brazing<br>sessment at the end of the<br>nly guide pupils to the ass | c. • Properties of enginee<br>nability o workability o d<br>hanical fixings, electronic<br>t board (PCB). • Characte<br>lues, fixing methods. A3<br>nilling • forming, e.g. forg<br>e assessment.<br>ignment brief if they req<br>d respect for each other. | ering materials: o strengt<br>urability. A2 Components<br>components, such as res<br>eristics of components, e.<br>Processes Types of engin<br>ging, casting, extruding, n<br>uire assistance. | h o hardness o toughness<br>• Types of components,<br>sistors, capacitors, fuses,<br>g. permanent/semi-pern<br>peering processes: • cutti | s. • Characteristics of<br>, such as: o proprietary,<br>diodes o product<br>nanent,<br>ng, e.g. drilling, sawing, |