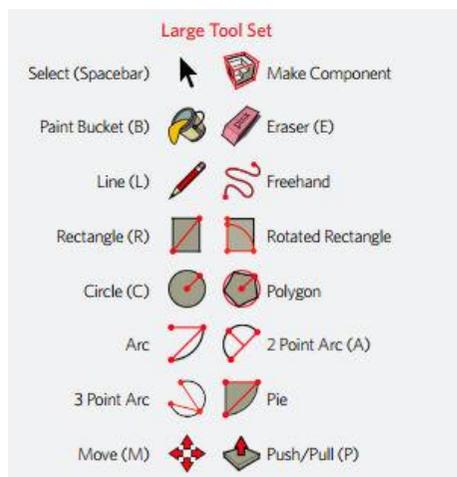


## Knowledge Organiser Year 10 Semester 2 : Exploring Engineering Sectors and Design Applications

### BOX A: KEY WORDS AND DEFINITIONS

1. **Justify** - Give reasons or evidence to support an opinion. Give full or evidence to support an opinion.
2. **Evaluate** - Bring together all information and review it to form a conclusion. Give evidence for each view or statement.
3. **Explain** - Provide details and give reasons and/or evidence to support the arguments being made. Start by introducing the topic, then give the 'how?' or 'why?' Give logical reasons to support your views. Provide full details and reasons to support the arguments you are making.

### BOX B: CAD DESIGN THEORY



### BOX C: ENGINEERING ROLES

1. **Maintenance technician** - Engineering maintenance technicians service and repair mechanical and electrical equipment and systems used in the engineering industry's many sectors.
2. **Machine operators** - Machine operators operate machinery, such as drills and lathes, which is used in the production of engineered product parts and components. This includes computer numerical control (CNC) machines.
3. **Aircraft fitter** - Aircraft fitters are employed in both aircraft manufacturing and aircraft maintenance. Their role may include various activities during assembly, such as in the build of wings and the fuselage, and carrying out structural repairs for old or damaged parts, such as on the wings or in the flooring and doors.
4. **Design engineers** - may be required in all engineering disciplines, but each engineer tends to specialise in their specific field of engineering. Design engineers develop an initial idea for a product by using their knowledge of scientific principles and undertaking mathematical calculations, and producing sketches and engineering drawings.
5. **Manufacturing engineer** - Manufacturing engineers use their engineering skills and knowledge to improve manufacturing processes, ensuring that a product can be manufactured efficiently and safely, and that the final engineered product can be made cost-effectively.
6. **Installation engineer** is quite a broad term, but generally refers to those who travel to the customer's premises to install the main equipment system and any ancillary equipment.