

ENGINEERING IS THE  
CLOSEST THING TO  
MAGIC THAT EXISTS IN  
THE WORLD

ELON MUSK  
PICTUREQUOTES.COM

# Our KS4 Btec Engineering level 1/2 Learning Journey:



**POST-16  
PATHWAY**

Firm up your  
post 16 pathway



**Diagnostic  
period science  
related topics-**

**YEAR  
11**

**Manufacture a  
selection of  
tools using all  
workshop  
equipment to  
a good  
standard**



Prepare for and sit your  
written exam



**Revision: Theory recap  
for written exam**

Develop your wellbeing and  
relaxation techniques ready for  
the examination period

Focus on analysing the  
existing product, with  
reference:  
Materials used in  
production: aluminium,  
types of steel, polymers  
Manufacturing processes

**A: Carry out  
a process to  
meet the  
needs of an  
engineering  
brief**

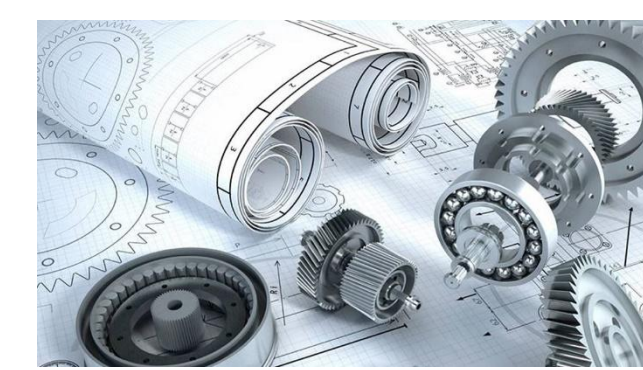
Explore and investigate the  
practical processes used in  
engineering including:  
Using tools and equipment to  
carry out engineering processes  
Disassembly and assembly of  
components to produce  
engineering products

**Assignment 4 –  
Learning Aim C of  
Component 2** Focus  
on, and review of,  
topics C1 and C2  
Students will plan  
and manufacture an  
engineering  
component from  
their investigation  
carried out for  
Learning Aim B

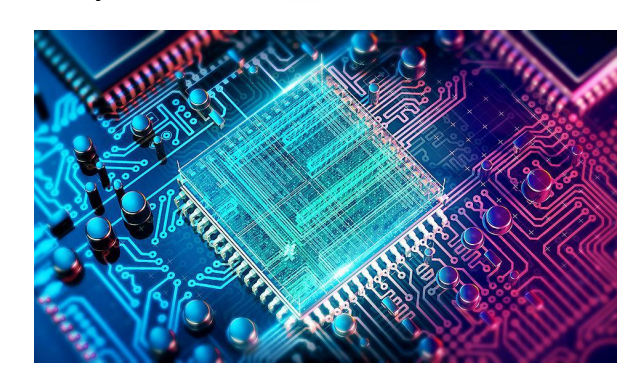


Explore safe use of tools  
and equipment  
Risk assessments to  
complete activities safely  
Disassembly techniques,  
including:  
Removal of  
semi-permanent fixings  
Parts removal

**B1, Producing  
initial design  
proposals:  
using creative  
thinking and  
evaluation  
technique**



**Assignment 3 – Learning Aim A of Component 2** Focus on,  
and review of, topics A1, A2 and A3  
Students will be given an engineering product to investigate  
to identify the proprietary and specialist components used  
to make the product and then investigate the materials  
used to make the components.



Properties of materials  
such as: strength,  
hardness and  
toughness  
Qualities of materials  
such as: Machinability,  
workability and  
durability



**Assignment 2 – Learning Aim B  
of Component 1** Focus on, and  
review of, topics B1  
Students will be given a brief  
and respond to this with design  
sketches, models and evidence  
of design meetings

**Be able to produce working drawings to a good standard**

Experience the  
world of work  
and be  
inspired

Introduce students to engineering working  
drawings, including:  
Sketches  
component drawings

Introduce students to methods used to produce  
engineering drawings.  
Demonstrate to students typical and common CAD  
commands  
Students begin to familiarise themselves with simple  
the problem, brainstorming,

Focus on aspects of creative  
thinking and methods of  
evaluation, to include:  
Creative thinking: Rewording  
the problem, brainstorming,

Sept

Oct

Nov

Dec

Jun/May

Apr

Mar

Feb

Jan

**Preparation and  
completion of the  
externally set  
task.**

Focus on the use of engineering  
information to complete engineering  
activities. Review with students the  
processes they carried out when doing  
practical work for component 2.  
Students should gain familiarisation with:  
Job cards  
Production data

Apply skills and techniques to carry out engineering  
activities:  
Processes to follow  
Manufacturing processes to use  
Students to be able to select the most appropriate  
processes for the product to be made

**Attend regular after-school  
catch-ups from September**

Focus on presenting designs and ideas,  
including sketching of components and  
products:  
2D annotated sketches  
3D sketches: isometric, oblique, perspective

Students to focus on wider factors that will  
influence the ability to meet the briefs:  
issues related to design, tooling or  
manufacturing processes  
Need for batch production  
Safety implications  
Environmental impact and considerations

Focus on analysing the existing product,  
with reference:  
to the brief  
Features of the product: dimensions,  
surface finishes and the physical form

Attend Feb ½ term  
practical exam  
preparation workshop

Embed excellent study  
habits and get ahead by  
attending catch-up and  
completing homework