MAKING

safety rules.



KNOWLEDGE

Acquiring

I understand the design brief with some

I understand the specification with some explanation

I can produce different design ideas My design ideas are sketched and show some use of colour

I can name some of the tools I use. I can name the main material I use. I need reminding about health and My practical skills show some degree of

I can say what is good about my product. I can say how my product would be used. With some guidance I can suggest things that could be improved.

I understand the properties of some of the materials I have used. With some support I understand:

- Mechanical systems
- Electronic systems
- CAD/CAM

Developing

I understand the design brief and user needs with some guidance

I can use a simple specification to help me design ideas

My design ideas are sketched, show some use of colour and are annotated.

I can name some of the tools I use.

I can explain why I am using certain materials. I can name some of the skills I am using in my practical work.

With some guidance I can work in a safe manner. My practical work shows some skill and some accuracy.

I can say what is good about my product. I can say how my product would be useful to

the end user.

Using feedback I can suggest things that could be better about my product.

I understand the properties of the materials I have used.

With guidance and prompting I understand:

- Mechanical systems
- Electronic systems
- CAD/CAM

Securing

I understand the design brief and user

I can write my own simple specification. I can produce different design ideas and improve them.

My design ideas are sketched, they are annotated and mention materials and processes.

I can name some tools and describe what they are used for.

I can name the materials that I am using. I work safely and follow the health and safety rules.

My practical work is mostly accurate.

I know how my product could benefit the

I am aware how my product and it's materials could affect the environment. I have looked at existing products to help me develop my own ideas

I understand the properties of all the materials I have used.

I understand some mechanical systems and how things work.

I understand basic electronic systems. I understand CAD/CAM and I can explain why it is used.

Consolidating

I use research to help identify user needs. I have a good understanding of the design

I can use research to help me write my own specification.

I can produce different design ideas and improve on them

My ideas are well annotated and mention materials and processes

I can give reasons for the tools that I am

I can explain why I am using certain materials.

I can name the skills that I am using. My practical work is accurate and has a good surface finish.

I know how my product will benefit the end

I am aware of the environmental impact of my product and my responsibilities as a

I can evaluate my work using the original specification.

I have a good understanding of the qualities of the materials I have used.

I understand how my product works and have knowledge of some mechanical

I can use simple electronic systems in my

I understand how CAD/CAM can be used to improve the quality of a product.

I understand moral, environmental, social and sustainability issues.

I can solve a design situation by writing a brief and specification.

I can use research to inform and develop my ideas allowing me to produce creative responses.

I present my ideas in a variety of ways using ICT, sketching and isometric drawing.

I can select appropriate tools for my practical work.

I can explain why I am using certain materials describing their properties. I can apply a variety of skills to my practical

My practical work is very accurate and has a good surface finish.

I know how my product will benefit the end user and society.

I understand the responsibilities of designers to the environment.

I can test and evaluate my product against the original specification.

I have a good understanding of the qualities of the materials I have used. I have a good understanding of mechanical systems in terms of tension, force and torsion.

I can use simple electronic systems in my work and describe input/output. I understand how CAD/CAM can be used to improve the quality of a product.

Extending