

## Year 10 Design and Technology

Expanding on graphic drawing skills and extending Technology knowledge with theory and practical to prepare ready for the NEA and exams.

**Learning:** an understanding of all areas of Technology, practical and theory, in preparation for the NEA and year 11.

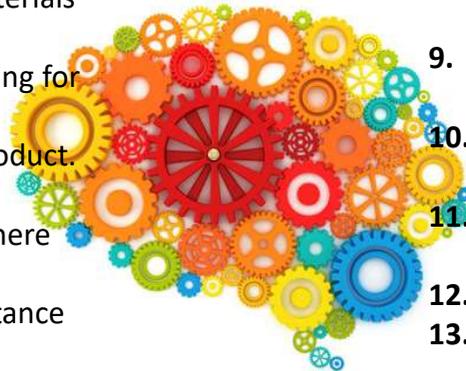
### **Key Skills**

#### **Graphical drawing skills**

- Work through a range of drawings/ graphics skills that will be used in their mock NEA, such as isometric, perspective and orthographic etc.
- Improving quality of designs and texture effects with rendering and shading.
- Use of annotation to clarify and label their designs, such as fixings, fittings, materials etc.
- Health and safety and rules of the room.
- Safe use of tools and equipment.
- Analysing the most suitable materials to used and properties.
- Assessing best methods of making for the product.
- Testing and evaluating and a product.
- Assessing and implementing modifications to the product where necessary.
- Product analysis and the importance for inspiring ideas.
- The designing and making process and importance of working in a logical order.

### **Safety**

### **Practical skills**



### **Key words**

1. **Perspective drawing** A Drawing from a certain view point. This can be drawn in one or two point.
2. **Isometric drawing** This allows your designs to be drawn in 3D using a grid to aid you.
3. **Orthographic Projection** A working Drawing, which is drawn in first or third angle.
4. **The Design Process** Understanding the logical order of coursework for the NEA.
5. **Annotation** The importance of annotating and labelling all your ideas and thought processes.
6. **Sustainability** The ability to maintain something at a certain rate or level, for example cutting down trees and re planting.
7. **Properties of materials** The characteristics or identification of the material, for example, strength, durability, flexibility etc.
8. **CAD/CAM** Computer aided design and computer aided manufacture.
9. **Scales of production** For example is the product a one off, batch, or mass produced, such as cars in a factory.
10. **Environmental challenge** Is the selection of these materials going to affect the environment, for example plastic pollution, deforestation.
11. **Social and economic challenge** This may effect designing and making, for example, fair trade, lifestyles, trends, supply and demand.
12. **Cultural links** Respecting people regardless of faith and belief.
13. **Evaluation** The importance of testing, evaluating and modifying the product throughout the task.
14. **Client evaluation** The importance of choosing and involving your client throughout the task, testing modifying and evaluating, relevant to how it would be in industry.