

Year 11 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 exam.

Key Skills **Graphical drawing skills**

- Re cap on ranges of drawing/graphics skills that can be used in the NEA, such as 2D sketches, isometric, Orthographic etc.
- Improving quality of designs with shading and rendering.
- The designing and making process, working in a logical order.
- Annotation of ideas to clarify parts of the design, fixings and fittings, materials etc.
- Analysing the best material to use, knowing properties of materials.

Safety

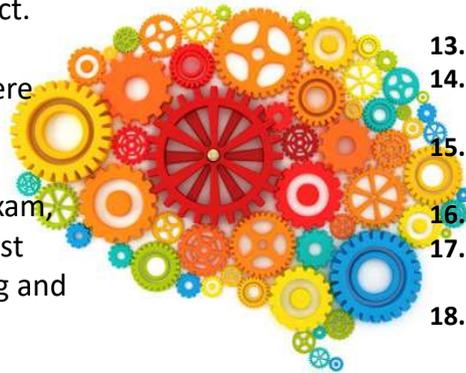
- Health and safety.
- Assessing the best method of making the desired product.
- Safe use of all tools and equipment for practical elements of the project.

Practical Skills

- Testing and evaluating the product.
- Assessing and implementing modifications to the product where necessary.

Theory

- Product Analysis.
- Preparation for all areas of the exam, Core technical principles, specialist technical principles and designing and making principles.



Key words

1. **Annotation** The importance of annotating and labelling all your ideas and thought processes.
2. **Graphics skills** Showing a variety of drawing skills in your NEA
3. **Enterprise** A business or company
4. **Resource consumption** The consumption (use) of non- renewable, or less often renewable resources.
5. **Different types of energies** How renewable energies are generated and stored, for example renewable energy.
6. **Input/output/process** Electronic systems to provide different functions to products.
7. **Mechanical devices** Using different types of movement to produce linear, rotary, reciprocating and oscillating movements.
8. **Sustainability** The ability to maintain something at a certain rate or level, for example cutting down trees and re planting.
9. **Ecological and social footprint** The measure of human activity on the environment, for example replacing woodlands.
10. **Properties of materials** The characteristics or identification of the material, for example, strength, durability, flexibility etc.
11. **CAD/CAM** Computer aided design and computer aided manufacture.
12. **Scales of production** For example is the product a one off, batch, or mass produced, such as cars in a factory.
13. **Stock forms** the standard shapes and sizes in which a material is available.
14. **Environmental challenge** Is the selection of these materials going to affect the environment, for example plastic pollution, deforestation.
15. **Social and economic challenge** This may effect designing and making, for example, fair trade, lifestyles, trends, supply and demand.
16. **Cultural links** Respecting people regardless of faith and belief.
17. **Evaluation** The importance of testing, evaluating and modifying the product throughout the task.
18. **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.