



Jerry Clay Academy Subject Knowledge Organiser

Subject: D&T Year Group: 6 Term: Spring (or Autumn TBC?)

Core Learning of This Unit:

The children will create a **clock** as part of their **Treasures/Adversity** theme.

As part of this, pupils should be able to Select appropriate tools, materials, components and techniques; assemble (and disassemble) components make working models; use tools safely and accurately; construct products using permanent joining techniques; make modifications as they go along

The result will be that the children can achieve a quality product, which has been modified and adapted using a working drawing and specific work plan. This should be referenced using a sequential diagram (flow chart).

Prior Learning:

- Draw up a specification for their design
- Develop a clear idea of what has to be done, planning how to use materials, equipment and processes, and suggesting alternative methods of making

if the first attempts fail

- Use results of investigations, information sources, including ICT when developing design ideas
 - Select appropriate materials, tools and techniques
 - measure and mark out accurately
 - use skills in using different tools and equipment safely and accurately
 - cut and join with accuracy to ensure a good-quality finish to the product.

National Curriculum Statements:

- generate, develop, model and communicate their ideas through discussion, annotated sketches, cross-sectional and exploded diagrams, prototypes, pattern pieces and computer-aided design
- investigate and analyse a range of existing products
- evaluate their ideas and products against their own design criteria and consider the views of others to improve their work
 - select from and use a wider range of tools and equipment to perform practical tasks [for example, cutting, shaping, joining and finishing], accurately
 - explore and use mechanisms in their products

Key Vocabulary:

Pie chart
Disassembly
Dismantle
Engineering
Mock up
Orthographic
Prototype
Sequential diagram
Construct
Destruct
Mechanism
Modification
Reclaimed materials
Rivet
Solder
Framework
Work plan
Working drawing
Orthographic (object drawn from 3 different views – front, end, aerial)

Significant People

- Warren Morrison and J.W.Horton (designers of the first Quartz clock)
- William Clement (British grandfather clock designer – 1860) Use of anchor escapement system
- Hans Wilsdorf (founder of Rolex watches)