

**Assessment Week 1:
03.01.23****Revision
topics:**

Based on work covered during Year 10 Autumn term.

Electronic and programmable components: -

- Graphical conventions for communicating concepts: circuit diagrams, block diagrams and flowcharts.
- Symbols and components
- The 'systems' approach – input; process; output.
- Control component, semiconductors such as transistors IC and programmable microcontrollers
- Ohms law $V=I \times R$
- Resistor colour codes

Smart and new materials:

- Thermochromic materials
- Photochromic materials
- Shape memory alloy
- Quantum Tunnelling Composite
- Kevlar
- Nomex
- Rhovyl
- Polymorph

New and emerging technologies:

- Product life cycle
- Technology Push / Market Pull
- Planned obsolescence
- 6Rs and the impact of manufacturing on the environment
- Carbon footprint
- Sustainability