

**Istituto Istruzione Superiore “Galilei-Artiglio” - VIAREGGIO**

**PROGRAMMA SVOLTO a.s. 2022-2023**

**Classe 5 CT**

**Indirizzo: ELETTRONICA-ELETTROTECNICA**

**Disciplina: INGLESE**

**Docente: CRISTINA DONAGLIA**

Dal libro di testo **Working with new technology** - ed. Pearson - sono stati trattati i seguenti argomenti:

**MODULE 1 - ELECTRICITY**

- **GENERATING ELECTRICITY (Revision)**

Methods of producing electricity

Fossil fuel power station

Nuclear power station

Controlling a nuclear reactor

Renewable energy: water and wind - sun and earth

Innovative energy

Dangers of electricity

- **DISTRIBUTING ELECTRICITY**

The distribution grid

The domestic circuit

The transformer

Managing the grid – the smart grid

Storing energy on the grid

**MODULE 2 - THE INDUSTRIAL REVOLUTIONS**

- **THE 1<sup>ST</sup> INDUSTRIAL REVOLUTION**

Working and living conditions during the 1<sup>st</sup> Industrial Revolution. Charles Dickens (Coke town)

- **THE 2<sup>ND</sup> INDUSTRIAL REVOLUTION**

The birth of electricity, the battle of the currents, the beginning of mass production.

- **THE 3<sup>RD</sup> INDUSTRIAL REVOLUTION**

The birth of Electronics.

- **THE 4<sup>TH</sup> INDUSTRIAL REVOLUTION**

IT and AI

**MODULE 3 - ELECTRONICS**

- **ELECTRONIC COMPONENTS**

Applications of electronics

Semiconductors

The Transistor

Basic electronic components

Working with Transistors

- **ELECTRONIC SYSTEM**

Conventional and integrated circuits

Amplifiers - Oscillators – MEMS

How an electronic system works

Analogue and digital

The problem of electronic waste

## **MODULE 4 - AUTOMATION**

How automation works

Programmable logic Controller PLC

The development of automation

Automation at home and at work

How a robot works

Varieties and uses of robots

Robots in manufacturing

Robots fact and fiction

Artificial intelligence and robots

Per il Progetto interdisciplinare di Educazione Civica sono stati trattati argomenti relativi allo sfruttamento dell'energia nel passato, nel presente e in futuro.

Sono stati assegnati lavori di gruppo partendo dal tema “**Electricity changed our Lives, now we must be responsible for our Future**” esposti poi in classe a tutti gli studenti.

L'insegnante

**Cristina Donaglia**

