

PROGRAMMA SVOLTO DI INGLESE

CLASSE V D AUTOMAZIONE

a.s. 2024-2025

Docente: Cristiana Giovati

Libro di Testo: Bolognini, Barber, O'Malley: Career Paths in Technology, Pearson
Fotocopie da parte della docente materiale su classroom e video secondo la sitografia indicata o proposti dal libro di testo

MODULE 1: ELECTRICAL ENERGY

- Electricity and current
- Conductors and insulators
- Superconductors and semiconductors

MODULE 2: ELECTRIC CIRCUITS

- Circuits: simple, series and parallel
- Current, Voltage and resistance
- Edison - How electrifying changed the world - The American Industrial Revolution

MODULE 3: ELECTROMAGNETISM AND MOTORS

- Electricity and magnetism
- Applications of electromagnetism
- The electric motor
- Types of electric motors
- Electric cars
- Maglev: The transport of the future?

MODULE 4: GENERATING AND DISTRIBUTING ELECTRICITY

- Methods of producing electricity
- The generator
- Fossil fuel power station

CITIZENSHIP

- Nuclear power stations- pros and cons Controlling a Nuclear reactor
- **RENEWABLE ENERGY:** water and wind-sun and earth
- Power distribution grid

MODULE 5: ELECTRONIC COMPONENTS

- Application of electronics
- Semiconductors
- Basic electronic components
- Working with transistors
- Colour coding of components
- Pioneers in electronics

MODULE 6: ELECTRONIC SYSTEMS

- Conventional and integrated circuits
- Amplifiers
- Oscillators
- Surface mounting and through-hole mounting
- How an electronic system works
- Analogue and digital

MODULE 5: MICROPROCESSORS

- What is a microprocessor?
- How a microprocessor works
- Logic gates
- Reading data-sheets

MODULO 6: AUTOMATION

- What is automation?
- How automation works
- Programmable logic controller
- The development of automation
- Automation at work
- How a robot works
- Varieties and uses of robots
- Robots in manufacturing
- Artificial intelligence and robots

ATTIVITA' DI CONSOLIDAMENTO DELLE STRUTTURE MORFO-SINTATTICHE

Durante l'anno sono state svolte attività di recupero in itinere e consolidamento, mentre tutte le attività sono state accompagnate da video proposti dal libro di testo

Gli alunni sono stati esercitati in Laboratorio linguistico con Reading and Listening comprehensions in preparazione alla prova INVALSI.

DIDATTICA ORIENTATIVA

- Report on training and apprenticeship
- English for Robotics

Social Studies: School outing to Berlin

Parma, 15 maggio 2025

La docente
Cristiana Giovati

I rappresentanti degli studenti