

ISTITUTO ISTRUZIONE SUPERIORE "CIGNA – BARUFFI - GARELLI" MONDOVI'

A.S. 2022/2023

PROGRAMMA DI INGLESE SVOLTO NELLA CLASSE 5° AEE

INSEGNANTE: MELLANO MORENA

ELECTRICITY, ELECTRONICS AND IT

Unit 7: How does an electronic circuit work?

- Printed circuit boards (p. 77)
- The first printed circuit boards (p. 78)
- Let's learn to prototype (p. 79)
- Design rules (p. 82)
- Circuit Symbols (p. 84)
- The tools of the trade (p. 86)
- Analogue and digital (dispense)
- The race to build the integrated circuit (dispense)
- Oscillators (dispense)
- The problem of electronic waste (dispense)

Unit 8: Amplifiers

- What is an amplifier? (p. 89)
- Classification of amplifiers (p. 91)
- Operational amplifiers (p. 93)
- Audio mixers (p. 95)
- Reading a data sheet (dispense)

Unit 9: Let's get started with computers

- The history of computers (dispense)
- Computational thinking (p. 103)
- What is an Algorithm? (p. 105)
- Ubiquity of algorithms (p.106)
- Flowcharts (p. 107)
- Binary logic (p. 109)
- Logic gates and truth tables (p. 110)
- What were computers like before the binary number system? (p. 112)

Unit 10: Computers: how do they work?

- A look at computer systems (p. 116)
- Who designed the first microprocessor? (p. 117)
- The man who invented the microprocessor (dispense)
- How a microprocessor works (dispense)
- Internal memory (p. 118)
- Input/output devices (p. 120)
- Bus architecture (p. 121)
- Has the age of quantum computing arrived? (p. 123)

Unit 11: Computers: what's in there?

- Software, an overview (p. 128)
- Alan Turing and breaking the Enigma (p. 129)
- Film: The Imitation Game (dispense)
- Programming languages (p. 130)
- Operating systems (p. 132)
- Types of interface used with operating systems (p. 134)
- Databases (p. 136)

Unit 16: How does new technology work as humans do?

- Automation technology (p. 191)
- Programmable Logic Controllers (p. 193)
- PLC Inputs (p. 196)
- The Arduino platform (p. 198)
- Smart home automation for homes security (p. 200)
- Database management system (pag. 195)

Unit 17: What is robotics?

- The world of robotics (p. 204)
- Early robots (p. 205)
- Parts of a robot (p. 206-207)
- Robots in manufacturing (dispense)

CULTURAL BACKGROUND: HISTORY

- Mass production (dispense)

- The Great Depression (dispense)
- Key moments in the 20th century (dispense)

LITERATURE AND CIVILIZATION

The United States of America

- Old Glory (p. 93)
- The Constitution (p. 98)
- George Washington (p. 101)
- The War of Independence (p. 103)
- Ethnic diversity (p.104)
- African Americans (p. 110)
- The Civil Rights Movement (pp. 112-113)
- Henry Ford (p.130)
- Slavery in the Southern states (p.136)
- North and South (pp.138-139)
- The Cold War (p.159)
- The protests movements (p. 170)
- The Vietnam War (p. 171)

George Orwell and “Animal Farm”

- George Orwell (life and works)
- “Animal Farm”: plot, characters and allegorical meaning
- Russian Revolution: figures, key ideas and concepts

Civil rights

- Martin Luther King and his speech “I have a Dream” (dispense)
- Film “Selma” (dispense): main scenes
- Malala Yousafzai and her speech at the United Nations (dispense)

Sustainability

- Renewable sources of energy: main types, advantages and disadvantages (dispense)
- Nuclear power: fission and fusion (dispense); Enrico fermi and the atomic bomb (dispense)

EDUCAZIONE CIVICA

- Discrimination, human and civil rights:
Different types of discrimination
The suffragette Movement, Nelson Mandela and Rosa Parks

Mondovì, 30 / 05 / 2023

L'insegnante

I rappresentanti
