



COMPLESSO SCOLASTICO INTERNAZIONALE

GIOVANNI PAOLO II

Programma Annuale

PROGRAMMAZIONE DIDATTICA

ISTITUTO: Istituto Tecnico Informatico e delle Telecomunicazioni

CLASSE: 4^a A

MATERIA: Lingua Inglese

DOCENTE: Prof.ssa Romina Capriati

Modulo n° 1	Contenuti Cognitivi
ELECTRONIC COMPONENTS	<p>UNIT 6: Applications of electronics</p> <ul style="list-style-type: none">• Semiconductors• The Transistor• Basic electronic components• Working with transistors• Color coding of components <p>Safety: Soldering electronic components</p> <p>Culture: Reading transistor's data sheet</p>

Modulo n° 2	Contenuti cognitivi
ELECTRONIC SYSTEMS	<p>UNIT 7: Types of electronic circuit</p> <ul style="list-style-type: none">• Amplifiers• Oscillators• Surface mounting and through-hole mounting• Microelectromechanical systems (MEMS)• Internet of things (IoT)• Analogue and digital• Digital recording <p>Safety: Security signs</p> <p>Citizenship: The problem of e-waste</p>

Modulo n° 3	Contenuti Cognitivi
<p>MICROPROCESSORS</p>	<p>UNIT 8: What is a microprocessor?</p> <ul style="list-style-type: none"> • How a microprocessor works • Logic gates • Microprocessor vs microcontrollers • Digital kitchen scales • How microchips are made • Microprocessor performance <p>Culture: The men who invented the microprocessor Culture: Reading a microcontroller data sheet Culture: Reading a full-adder's data sheet Citizenship: Raspberry Pi Foundation Project: pcs and coding lessons for everyone</p>

Modulo n° 4	Contenuti Cognitivi
<p>AUTOMATION</p>	<p>UNIT 9: What is automation?</p> <ul style="list-style-type: none"> • Advantages of automation • Programmable logic controller • Automation in operation: a heating system • Automation at work • How a robot works • Varieties and uses of robots • Robots in manufactories • Types of industrial robots – Collaborative Robots • Robotics in the news • Artificial intelligence and robots <p>Culture: Robots fact and fiction</p>

Modulo n° 5	Contenuti cognitivi
<p><u>INFORMATION TECHNOLOGY AND TELECOMMUNICATIONS</u></p> <p>RADIATION AND TELECOMMUNICATIONS</p>	<p>UNIT 10: Electromagnetic waves</p> <ul style="list-style-type: none"> • Types of electromagnetic radiation • Radio waves • What happens to radio signals • Microwave oven • Medical imaging • Transmitting telecommunications signals • Landline network • Cables • Cellular networks <p>Culture: Are we getting too much screen time? Safety: Use radiation equipment safely</p>

Modulo n° 3	Contenuti Cognitivi
COMPUTER HARDWARE	UNIT 11: Types of computers <ul style="list-style-type: none"> • The computer system • Input-output devices • Computer storage • Computer ports and connections • Upgrading hardware • Describing a computer • Choosing a computer • Computers of the future • Solving laser printer problems <p>Culture: Standing on the shoulder of giants</p> <p>Safety: Making your password secure</p>

Modulo n° 4	Contenuti Cognitivi
COMPUTER SOFTWARE AND PROGRAMMING	UNIT 12: System Software <ul style="list-style-type: none"> • Application programming • Computer languages • Programming languages most in demand • How the Windows OS works • Cloud & Edge computing <p>Citizenship: Women pioneers in computing Culture: The hidden hero that died in disgrace</p> <p>Safety: Software safety</p>