ITIS

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Programma di lingua straniera **Inglese**- Classe 5A MECC – a.s. 2022-23

LIBRO DI TESTO: **SMARTMECH** PremiumMechanical Technology &Engineering, di Rosa Anna Rizzo, Ed Eli Publishing

Module 2 CITIZENSHIP

Non-renewable energy sources

-Fossil fuels- how coal was formed

-petroleum:black gold

-Non-fossil fuels

-nuclear power plants

Renewable Energy sources

-Inexhaustible sources

-solar Energy

-wind power

-geothermal Energy

-Pollution

-Environmental policies, current commitments

Module 3

-what is material science

Properties of materials: mechanical, thermal, electrical

Module 5 Machining Operations

-Power-driven machines

-Machine tools

-the lathe: different types of lathes

- the major characteristics of traditional machining processes : drilling, boring, milling, grinding,

-planers shapers, presses

-Non-traditional machining processes: laser-bean, water-jet, ultrasonic

Module7: The Motor Vehicle

-History of the car- documentary on YouTube

-Bertha Benz: The first Driver - YouTube

-The first in 1886: before Mercedez, there was Benz- YouTube

- The Fifteen Millionth : Ford Model T –documentary on YouTube

-Henry Ford’s assembly line, video YouTube

-What makes a car move

-Drive train

- The four stroke internal combustion engine,

-The two-stroke internal combustion engine,

-The diesel engine,

-biofuels

-alternative engines: electric and Hybrid cars

-Tesla electrick truck, video: Tesla Semi è realtà.

Module 8 Systems and automation

-Mechatronics

- Robotics the robotic arm

-Automated factory organization: CIM; CAD; CAM

-Numerical control and CNC ,

-Robots

-Drones

-Sensors-smart sensors

-FILM: THE IMITATION GAME (2014) diretto da Morten Tyldum con Benedict Cumberbatch nel ruolo del matematico e critto analista Alan Turing

Modulo PCTO- Describing personal and professional skills acquired during the school work experience

La classe è stata inoltre impegnata a partire dal mese di gennaio nella preparazione per la prova INVALSI

Parma, 26 maggio 2023

La docente Gli alunni

Volghi Stefania