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| **PROGRAMMA SVOLTO** | | |
| **DOCENTE**  **Frangi Anna Maria** | **MATERIA**  **Inglese** | **CLASSE**  **5MM2** |
| * **“Animal Farm”, by G.Orwell (svolto presenza/DDI)**   + Plot and characters   + Historical background   + Animation movie (1954) * **History of Materials and Machines (svolto presenza/DDI)**   + The First Industrial Revolution   + The Steam Engine   + The Second Industrial Revolution   + Coketown (description of the industrial town by C.Dickens) * **Shaping Materials conventionally (svolto presenza/DDI)**   + Casting   + Rolling, Extrusion and Drawing   + Machine tools and CNC machine tools   + Turning and Milling   + Drilling and Grinding * **Shaping Materials unconventionally (svolto presenza/DDI)**   + Waterjet Machining (WJM) and Ultrasonic Machining (USM)   + Electrical Discharge Machining (EDM)   + 3D Printing * **Safety (svolto presenza/DDI)**   + The importance of safety: hazards and risks   + Personal Protective Equipment   + Safety education: fire safety plan; fire extinguishers; evacuation drills   + Safety signs: warning, prohibition, obligation   + Electrical hazards of welding * **Vehicles and Engines (svolto presenza/DDI)**   + Main parts of a car; driving rules   + Main parts of an internal combustion engine   + The four-stroke petrol engine   + The two-stroke petrol engine   + The four-stroke diesel engine   + The dangers of diesel pollution (video)   + The electric car   + How Tesla is driving electric car innovation (article)   + Are electric cars really better for the environment? (video)   + Alternative engines: fuel cell vehicles, hybrid vehicles * **Renewable Energy (svolto presenza/DDI)**   + Renewable and non-renewable energy sources   + Agenda 2030 – Goal 7 (affordable and clean energy)   + Wind, solar, tidal and hydropower   + The boy who harnessed the wind (movie) * **Automation and robotics** (da svolgere dopo 15 maggio)   + Robotic arms   + Industrial robots   + Industry 4.0 and smart factory      * **FCE format exercises (svolto presenza/DDI)** | | |

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| **TESTI IN ADOZIONE** |
| M. Robba – L. Rua, **MECHPOWER**, Edisco  **FIRST FOR SCHOOLS TRAINER 2**, Cambridge |