CURRICULUM MAP Year 10 Students will develop independence and understanding of the:

- Core Technical principles
- Designing and making principle



| | | | | | | | | EOY Assessment Point |
|---|---|---|--|---|---|--|--|--|
| | | | | | | | HT6: | HT1 – HT6 |
| | | | | | | HT5 | Overarching unit | End of Unit Assessments NEA |
| | | | | HT4: | Assessment Point: Summative or AFL | Overarching unit intent: | <u>intent:</u> | NEA |
| | | | | | | | Students will start their NEA during this half | <u>Key Disciplinary</u> Knowledge |
| | | | HT3: | Overarching unit intent: | HT3 and HT4 (with elements of HT1 | Core technical principles: | term. | Mechanical devices- End |
| | HT2: | Assessment Point:M Summative or AFL | Overarching unit intent: | Core technical principles: Systems | and HT2) End of Unit | Mechanical devices Types of movement, | Designing and | unit test Materials and their |
| | | Summative of AFL | | approach to designing, | Assessments | levers and linkages | making principles (NEA): Investigation, | working properties- End of unit test |
| HT1: | Overarching unit intent: | HT1 & HT2 End of Unit | Core technical principles: | Programming microcontrollers | Key disciplinary | Rotary systems | primary and secondary | unit test |
| | _ | Assessments | Developments in new materials | Input devices Output devices | knowledge Developments in new | Materials and their working properties. | data, Environmental, social and economic | Key Concepts • Core technical |
| Overarching unit | Core technical principles: | Key disciplinary | Modern materials | | materials – End of unit | Materials and their | challenge, The work of others. | principles : Mechanical devices |
| intent: | Energy generation and storage | knowledge New and emerging | Smart materials Composite materials | Designing and making principles | test Materials and their | properties Papers and boards | others. | Materials and their |
| • Core technical | Fossil fuels | technologies – End of | Technical textiles | (Project Based): Prototype | working properties – End of unit test | Natural and manufactured timbers | <u>Careers</u> Discussions into how | working properties. |
| orinciples: New and emerging | Nuclear power Renewable energy | unit test Energy generation and | Designing and making | development, Selection | End of unit test | Metals and alloys | the work produced | Condenda NEA - 111 ha |
| echnologies- | Energy storage systems | storage – End of unit test | principles (Project Based): Investigation, | of materials and components, | Key Concepts • Core technical | Polymers Textiles | during the NEA would allow them to gain | Students NEA will be assessed on the following |
| ndustry and enterprise People, culture and | Designing and making | | primary and secondary | Tolerances, Material | principles : Developments in new | Careers | valuable skills for future careers. | criteria:Researching and |
| ociety ustainability and the | principles (Project Based): Prototype | Key Concepts • Core technical | data, Environmental, social and economic | management, Specialist tools and equipment, | materials | Guest speaker/ the | | investigating (A) |
| nvironment | development, Selection of materials and | principles: New and emerging | challenge, The work of others, Design | Specialist techniques and processes. | Systems approach to designing, | STEM Ambassador Program. Mechanical | Catholic Social Teaching | |
| roduction techniques nd systems | components, | technologies | strategies, | · | 3 3, | Engineering. | Dignity Solidarity | |
| ritical evaluation of ew and emerging | Tolerances, Material management, Specialist | Energy generation and storage | Communication of design ideas. | Careers Guest speaker/ the | Project based work will be assessed on the | Catholic Social | The Common Good | |
| echnologies | tools and equipment, Specialist techniques | | Careers | STEM Ambassador Program. Electronics/ | following criteria: • Researching and | <u>Teaching</u> The Common Good | Option for the Poor Peace | |
| Designing and | and processes. | Project based work | Careers videos from | Engineering. | investigating (A) | Option for the Poor Peace | Creation and Environment | |
| aking principles roject Based): | Careers | will be assessed on the following criteria: | CAD/ CAM designers and companies. | Catholic Social | Writing a design brief(B) | Creation and | The Dignity of Work | |
| vestigation, primary | Research into the different careers within | Researching and investigating (A) | Catholic Social | Teaching The Dignity of Work | Generating ideas (C)Developing ideas (D) | Environment The Dignity of Work and | and Participation | |
| nd secondary data, nvironmental, social | energy generation. | Writing a design brief | Teaching The Common Good | and Participation | Realizing an idea (E) Reflecting and | Participation | | |
| nd economic hallenge, The work of | <u>Catholic Social</u> | (B) • Generating ideas (C) | Option for the Poor | | evaluating (F) | | | |
| thers, Design | <u>Teaching</u> | Developing ideas (D) | | | | | | |

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| strategies, Communication of design ideas Careers Research into the different careers within the manufacturing | Dignity Solidarity The Common Good Option for the Poor Peace Creation and Environment The Dignity of Work | Realizing an idea (E) Reflecting and evaluating (F) | Creation and Environment The Dignity of Work and Participation | | | |
|---|---|--|---|--|--|--|
| industry. Catholic Social Teaching Dignity Solidarity The Common Good Option for the Poor Peace | and Participation | | | | | |
| Creation and Environment The Dignity of Work and Participation | | | | | | |