

Subject:

Design & Technology Resistant Materials



HECKMONDWIKE
GRAMMAR SCHOOL

KS4 - Year 10 Curriculum Overview

Autumn Term

Topics being taught

Energy and Controlled Movement

- Unit 3: Wider Implications: Sources of Energy.
- Unit 6: Controlled Movement.
- Sketching initial ideas.
- Prototype modelling and development.

New and Emerging Technologies

- Unit 3: Wider Implications: New and Emerging Technologies
- Unit 7: New and Emerging Technology.
- Sketching initial ideas.
- CAD modelling and development.
- 3D printing of a final idea.

Term 1

What you will be assessed on

Stepping Stone Assessment

- Unit 3: New and Emerging Technologies: Sources of Energy.
- Unit 6: Controlled Movement
- **Progress grade:** quality of project submission.

Term 2

Milestone Assessment

- Unit 7: New and Emerging Technologies.
- **Progress grade:** quality of project submission.

How you can support at home

Seneca: 8 Technical Understanding; 3.2 Energy Generation and Storage.

Independent Reading: Chapter 6 Sources of Energy; 12 Controlled Movement; 13 Electronic Systems.

Seneca: 2.2 Impact of New and Emerging Technologies

Independent Reading: Chapters 5 and 14 New and Emerging Technologies.

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Spring Term

Topics being taught

Mechanical systems

- Unit 8: In-Depth Papers and Boards.
- Sketching initial ideas
- Dieline prototype modelling and development.
- Using Adobe Illustrator to create graphics for packaging.

Illustration / working with textiles.

- Unit 5: Material Categories - Textiles.
- Advanced Adobe Illustrator skills.
- CAD preparation for 2D Design.
- Applying vinyl graphics to textiles.

Term 3

What you will be assessed on

Stepping Stone Assessment

- Unit 8: In-Depth Papers and Boards.
- **Progress grade:** quality of project submission.

Term 4

Milestone Assessment

- Unit 5: Material categories - textiles.
- **Progress grade:** quality of project submission.

How you can support at home

Seneca: 9 Manufacturing Processes & Techniques.

Independent Research: Timber mechanisms and components

Seneca: 5 Material categories (5.1.6 Textiles).

Independent Reading: Chapter 10 Categories of Materials (Pg. 32-33)

EASTER HOLIDAYS - EASTER HOLIDAYS - EASTER HOLIDAYS - EASTER HOLIDAYS - EASTER HOLIDAYS

Summer Term

Topics being taught

Exam Technique and Practice.

- Unit 1: Identifying Requirements.
- Unit 2: The work of others.
- Unit 3: Wider Implications.
- Unit 4: Design Communication.
- Unit 5: Material Categories.
- Unit 6: Controlled Movement.
- Unit 7: New and Emerging Technologies.
- Unit 9: In-Depth Timbers.

Non Exam Assessment (NEA).

Term 5

What you will be assessed on

Stepping Stone Assessment

- GCSE exam style extended questions.

Term 6

Year 10 Finals Assessment

- GCSE Level exam paper.
- **Progress grade:** Teacher Assessed Grade.

How you can support at home

Independent Revision.

GCSE exam style extended questions.

Independent NEA study.

Independent Reading: Chapter 16 natural and manufactured timbers.