



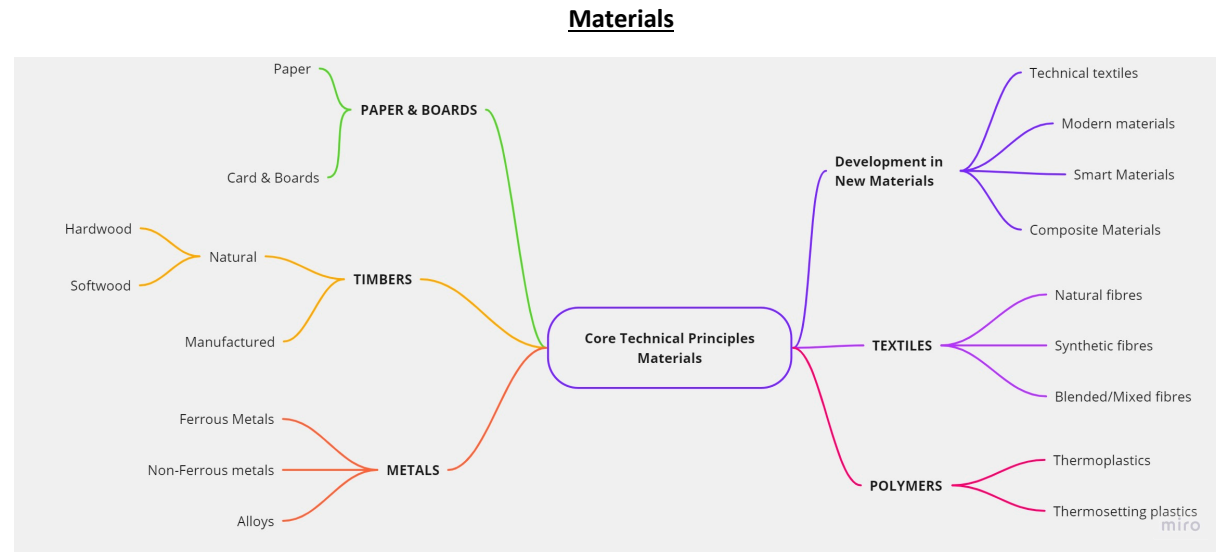
Highsted Knowledge Organiser: GCSE Design & Technology Year 10 Term 5

What I need to know:
 Modern/Smart Materials
 Composite & technical textiles
 Materials & their working properties

Key Vocabulary:
 Physical properties
 Working properties

Physical & working properties

Physical properties	
Absorbency	The ability to soak up or draw heat, light or moisture
Density	The mass per unit volume
Electrical Conductivity	The measure at which a material can transport electricity
Fusibility	The ability of a material to be converted from a solid to a fluid state by heat and combined with another material.
Thermal Conductivity	The measure of a material's ability to transfer heat.
Working properties	
Ductility	The ability of a material to be stretched or drawn or pulled without breaking.
Elasticity	The ability to return to its original shape after stretching or compression.
Hardness	The ability to withstand impact, wear, abrasion and indentation.
Malleability	The ability to be bent and shaped without cracking or splitting.
Strength	The ability to withstand a force such as pressure, compression, tension or shear.
Toughness	The ability to absorb shock with fracturing.



Challenge question: Describe the difference between toughness and hardness.

Suggested reading: BBC GCSE Bitesize, Technology Student, AQA GCSE DT Specification



Highsted Knowledge Organiser: GCSE Design & Technology Year 10 Term 6

What I need to know:

Understand NEA Context and complete Section A of NEA .

SECTION A: Identifying & Investigating design possibilities

Key Vocabulary:

Context Analysis, Design brief, Design criteria/specification

Research

Target Market

DO's and Don'ts of Section A

DO:

- Investigate the contexts thoroughly
- Identify and choose a client wisely
- Look at work of others
- Investigate the impact on society with social and economic effects
- Make sure the research helps your designs
- Explain where the sources have come from
- Address a NEED!

DO NOT:

- Investigate research that is irrelevant
- Chose a client that cannot provide feedback
- Ignore existing products
- Design with yourself in mind rather than the client
- Copy information without extraction and analysis
- Forget to tell a story and how the work has influenced your design thinking

Introduction:

Key Thoughts:

What is your target grade?

What band will you be aiming for?

MARK SCHEME	SECTION	CRITERIA	MARKS
<i>A01 – Identify, investigate & Outline design possibilities</i>	A	<i>Identifying & Investigating design possibilities</i>	10
<i>A01 – Identify, investigate & Outline design possibilities</i>	B	<i>Producing a design brief and specification</i>	10
<i>A02 – Design & make a prototype that are fit for purpose</i>	C	<i>Generating design ideas</i>	20
<i>A02 – Design & make a prototype that are fit for purpose</i>	D	<i>Developing design ideas</i>	20
<i>A02 – Design & make a prototype that are fit for purpose</i>	E	<i>Realising design ideas</i>	20
<i>A03 – Analyse & Evaluate</i>	F	<i>Analysing & Evaluating</i>	20
		TOTAL	100

Challenge question:

Create a questionnaire that you can analyse the results and present finding in a visual way.

Suggested reading: BBC GCSE Bitesize, Technology Student, AQA GCSE DT Specification