Design and Technology

USEFUL INFORMATION

TERMINOLOGY

VOCABULARY

Aesthetic
Analyse
Analysis
Anthropometrics
Assurance
Automation
Brief
CAD
CAM
Client
Colour
Construction
Consumer
Continuous
Control
Criteria
Customer
Decision
Design
Develop
Development
Dimensions
Ecological
Environment
Ergonomics
Ethics
Evaluate
Evaluation
Fabricate
Finite
Function
Graphic
Idea
Industrial
Innovation
Isometric
Iteration
Make
Making
Manufacture
Manufacturing
Material
Mechanical
Mechanism
Millimetre
Modification
Modify
Obsolescence
Organise
Orthographic
Process
Product
Production
Properties
Prototype
Quality
Research
Safety
Sketch
Situation
Society
Solution
Specification
Suitable
Technology
Testing
Tolerance
User

COMMAND WORDS

ANALYSE: Separate information into key parts to identify their characteristics.
COMPARE: Identify similarities and differences.
DEFINE: Give a clear, precise meaning of a word or phrase.
DESCRIBE: Give a detailed description of something.
EVALUATE: Use evidence and knowledge to come to a conclusion.
EXPLAIN: Give reasons to show why.
JUSTIFY: Support a case or reason with evidence.
STATE: Give a short answer.

SENTENCE STARTERS

POSITIVES

In my opinion this is my best idea because…... I like…...
I feel that my client would like this idea as it..…and also…...
This idea links to my specification because……and it has…...
The best part of this idea is..... because.....
I like this idea because.....
This idea is good because…...

NEGATIVES

The worst part of this idea is..... because.....
I dislike this idea because.....
This idea is poor because…...

MODIFICATIONS

The part of this idea I would change is…... because…...
You could improve this idea by…...
I could change this idea by..... this would be better because.....
If I..... to this idea it would improve it by.....

NUMERACY

MEASURING

1cm = 10mm 6cm = 60mm
0.1cm = 1mm 3.2cm = 32mm

AREA


length x width


πr^2


½ base x height

VOLUME


length x width x height

ACCESS FM

ANALYSIS OF EXISTING PRODUCTS AND DESIGN IDEAS

AESTHETICS

Does the product look attractive? THINK shape, form, materials, size, beauty, ugliness

Does it make good use of colour and texture?

Where did the designer get his or her inspiration for the design?

COST

What is the retail cost? Why does it cost this much?

Is the product affordable?

Does the price reflect any social or moral considerations (e.g. Fair Trade)?

CUSTOMER

Who is the product designed for?

How and where would they use it?

What impact does it have on the customer's quality of life?

ENVIRONMENT

What is the product's impact on the environment? THINK batteries, rethink, refuse, reduce, reuse, recycle, life cycle.

THINK about its manufacture, general use, distribution and final disposal when it is no longer needed.

SAFETY

How has the designer considered safety issues when designing the product?

THINK about the way the product is used and how different parts have been joined together.

Does the product meet recognised safety standards?

SIZE

What size is it? THINK about actual measurements e.g. volts, weight, area, volume etc.

Is the product comfortable to use? THINK anthropometrics or ergonomics.

Are its proportions appropriate for its use?

FUNCTION

How well does the product work?

Why does it work this way?

How could it be improved?

MATERIALS

What is the product made from?

Would another type of material work better?

How has the scale of production affected the designer's choice of material and manufacturing processes?

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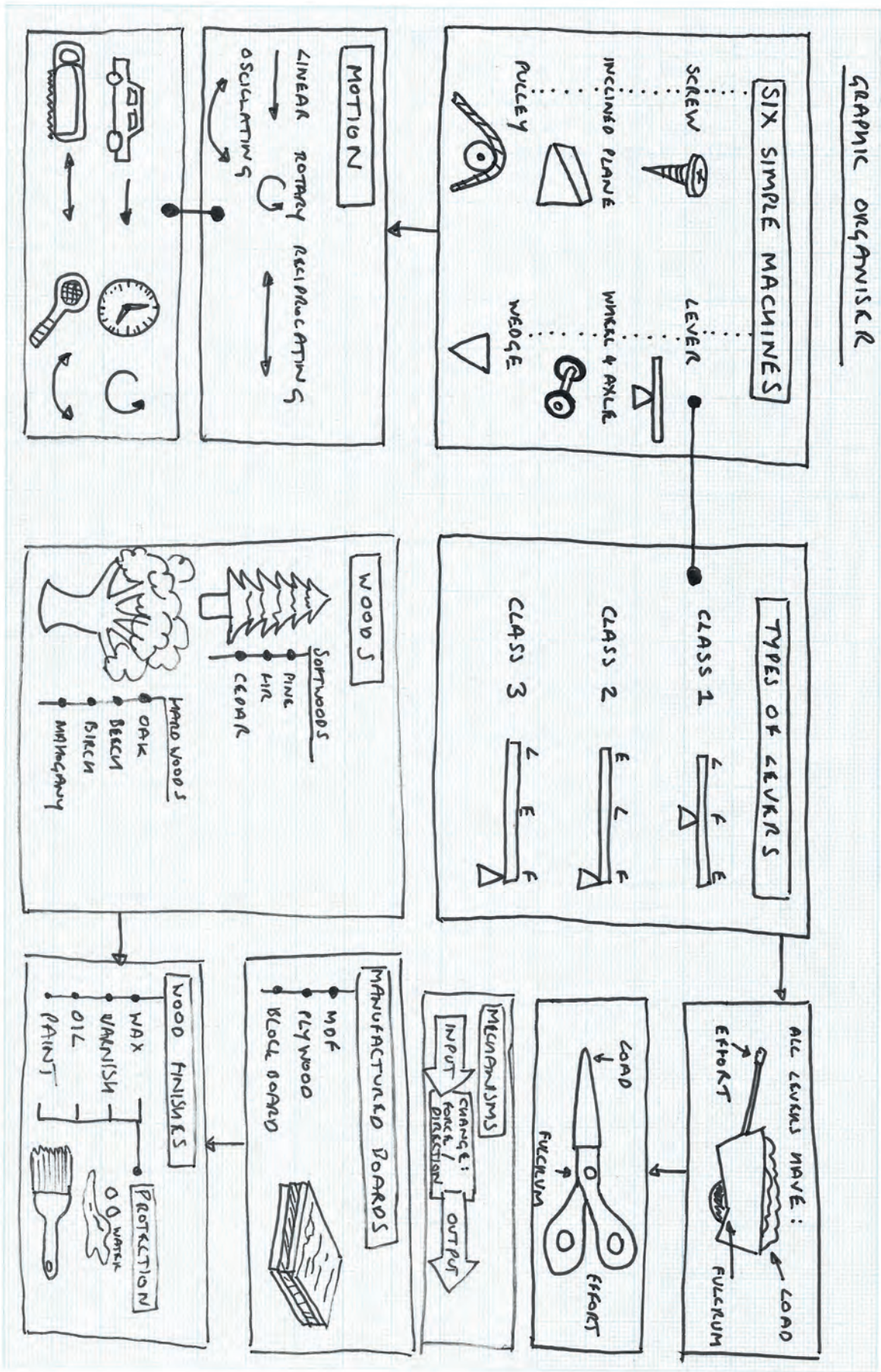

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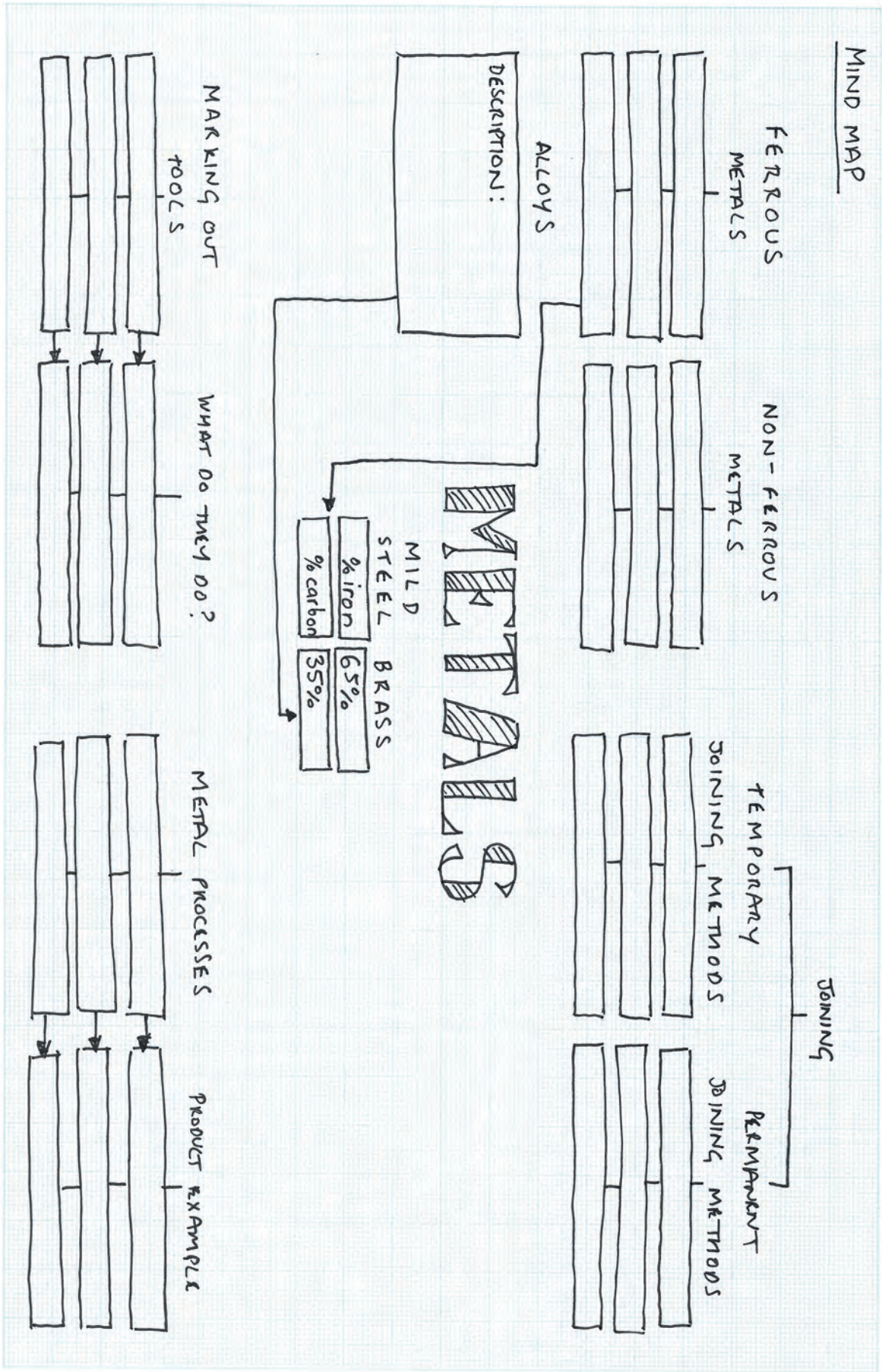
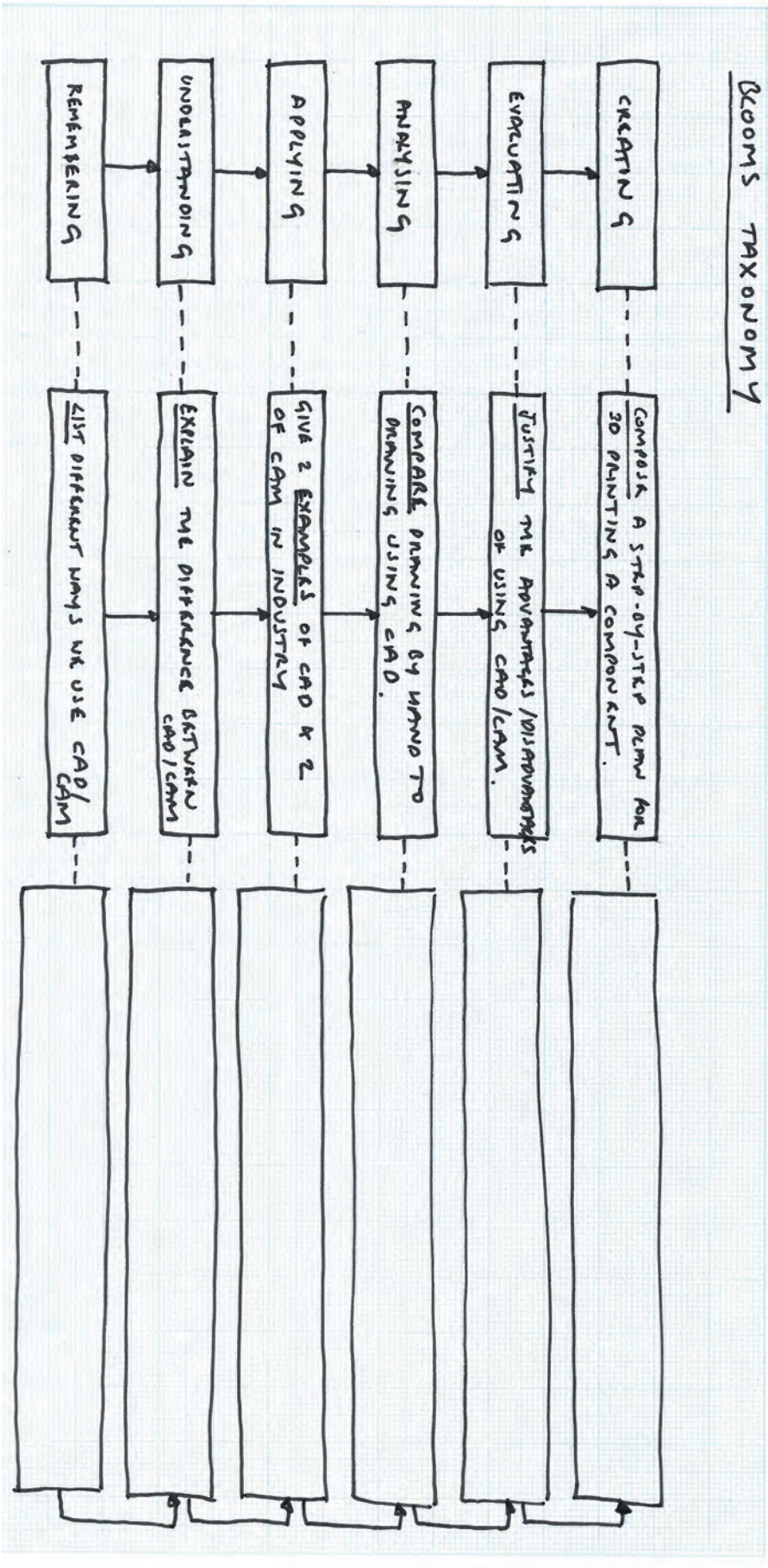


Design & Technology

READ THE INFORMATION SHEET THEN COVER THE SHEET. RECALL THE INFORMATION USING THE TECHNIQUE ABOVE. WORK YOUR WAY FROM BOTTOM TO TOP.



STRUCTURE STRIP

COMPUTER-AIDED DESIGN (CAD) IS OFTEN USED BY MANUFACTURERS TO CREATE DESIGNS FOR THE PLASTIC CASINGS OF ELECTRICAL PRODUCTS. DISCUSS THE ADVANTAGES AND DISADVANTAGES OF USING CAD.

[8 MARKS]

Key points to include:

- _____
- _____
- _____
- _____
- _____
- _____
- _____
- _____
- _____
- _____

Introduce the question. ☐

Have you identified some advantages? ☐

Have you also identified some disadvantages? ☐

Have you justified all of your advantages and disadvantages? ☐

Have you included any specialist engineering terms? ☐

DO NOT USE BULLET POINTS AS YOU WILL ONLY GAIN 2 MARKS MAX.