

# 50

# GCSE DESIGN REVISION CARDS

## GCSE DESIGN REVISION CARD #001

- 1 What is 'automation'?
- 2 Why might a company prefer to use robots rather than humans?
- 3 What do we mean by 'flexible manufacturing'?
- 4 A company has no storerooms – what system of stock control are they probably using?



MANUFACTURING

## GCSE DESIGN REVISION CARD #001

- 1 Automation is when we use machines to perform tasks with little human input.
- 2 Robots are faster, cheaper, more accurate, don't need supervising etc.
- 3 Flexible manufacturing is when CAD/CAM machines are used and easily altered to perform different tasks.
- 4 'Just In Time' (JIT) Manufacturing uses materials that are delivered and used straightaway so no need to store materials!

MANUFACTURING

## GCSE DESIGN REVISION CARD #025

- 1 Apple are making an eco-friendly wooden phone. Why might they use wood from their own country?
- 2 Why might wood be more eco-friendly than plastic?
- 3 What does a designers 'social responsibility' mean?
- 4 Give two cultural factors that we might consider for overseas markets.



CHOOSING MATERIALS

## GCSE DESIGN REVISION CARD #009

- 1 Alkaline batteries can be recharged – true or false?
- 2 What are kinetic pumped storage systems used for?
- 3 What happens when we recharge a battery?
- 4 Hospitals need an uninterrupted power supply for emergencies – why would rechargeable batteries be best?



ENERGY

## GCSE DESIGN REVISION CARD #046

- 1 True or False: Seasoning wood makes it stronger.
- 2 Describe what happens when annealing a metal.
- 3 How might annealing alter a metal's malleability?
- 4 The plastic child's toy car was bright red when it was bought but has faded over time – why might this be?



MODIFYING MATERIALS

## GCSE DESIGN REVISION CARD #036

- 1 True or False: Making paper can cause deforestation.
- 2 How might using timber (woods) be bad for the environment?
- 3 Producing polymers can pollute the environment – how?
- 4 Why might mining metals be bad for the environment?



ENVIRONMENT

# INCLUDES QUESTIONS AND ANSWERS

# GCSE DESIGN REVISION CARD #001

**1**

**What is 'automation'?**

**2**

**Why might a company prefer to use robots rather than humans?**

**3**

**What do we mean by 'flexible manufacturing'?**

**4**

**A company has no storerooms – what system of stock control are they probably using?**



**MANUFACTURING**

# GCSE DESIGN REVISION CARD #001

**1**

**2**

**3**

**4**

MANUFACTURING

# GCSE DESIGN REVISION CARD #002

**1**

**What do 'CAD' and 'CAM' stand for?**

**2**

**Give an advantage of using CAD/CAM over traditional pencil and paper drawings.**

**3**

**Cordelia loves vampire shows and wants to make a 3D plastic vampire – what CAD machine is best for this?**

**4**

**What are some disadvantages of using CAD/CAM?**



## MANUFACTURING

# GCSE DESIGN REVISION CARD #002

**1**

**2**

**3**

**4**

MANUFACTURING

# GCSE DESIGN REVISION CARD #003

**1**

**Give one way of making a product more sustainable.**

**2**

**What is the difference between a material that is finite and one that is non-finite (infinite)?**

**3**

**What is planned obsolescence?**

**4**

**How can planned obsolescence be very bad for the environment?**



## MANUFACTURING

# GCSE DESIGN REVISION CARD #003

**1**

**2**

**3**

**4**

MANUFACTURING

# GCSE DESIGN REVISION CARD #004

**1**

**Give a negative impact new products can have on the environment.**

**2**

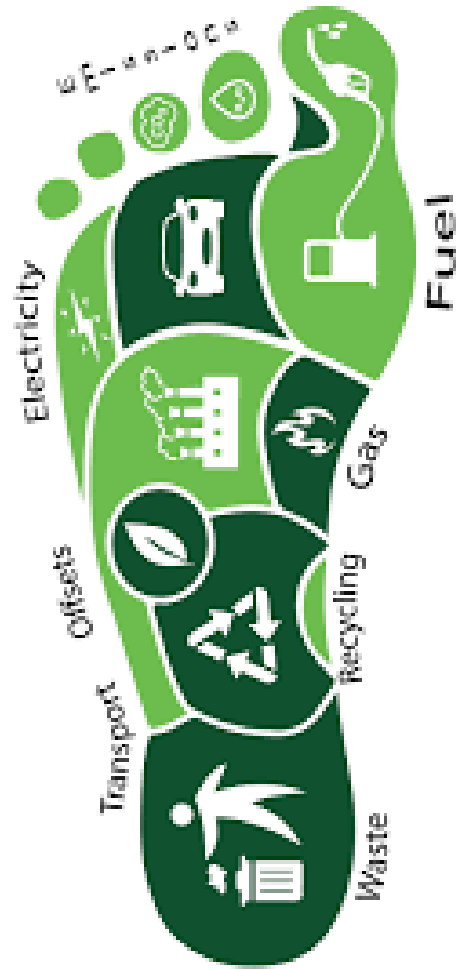
**What does 'design for maintenance' mean?**

**3**

**If a product has a 'big carbon footprint' why is it bad for the environment?**

**4**

**Why might paper straws be better for the environment than plastic ones?**



## MANUFACTURING

# GCSE DESIGN REVISION CARD #004

**1**

**2**

**3**

**4**

MANUFACTURING

# GCSE DESIGN REVISION CARD #005

**1**

**What are the 6 Rs?**

**2**

**How can 'rethink' make a product more sustainable?**

**3**

**How might a manufacturer improve its social footprint?**

**4**

**Kodey replaces his old fridge with a new energy efficient one – give a positive and a negative impact.**



**SOCIAL ISSUES**

# GCSE DESIGN REVISION CARD #005

**1**

**2**

**3**

**4**

**SOCIAL ISSUES**

# GCSE DESIGN REVISION CARD #006

**1**

**What is 'enterprise'?**

**2**

**Why might designers avoid using religious symbols?**



**3**

**Why might a company only sell on the internet instead of having a physical shop?**

**4**

**What is 'market pull'?**

**SOCIAL ISSUES**

# GCSE DESIGN REVISION CARD #006

1

2

3

4

SOCIAL ISSUES

# GCSE DESIGN REVISION CARD #007

**1**

A UK manufacturer agrees to pay its suppliers in Ghana a fair product price – what is this an example of?

**2**

What is a 'co-operative'?

**3**

Describe crowdfunding.

**4**

A company is designing a smartwatch for the elderly – what sorts of features might they consider?



## SOCIAL ISSUES

# GCSE DESIGN REVISION CARD #007

**1**

**2**

**3**

**4**

**SOCIAL ISSUES**

# GCSE DESIGN REVISION CARD #008

**1**

**Name three non-renewable energy sources.**

**2**

**Give two disadvantages of fossil fuels.**

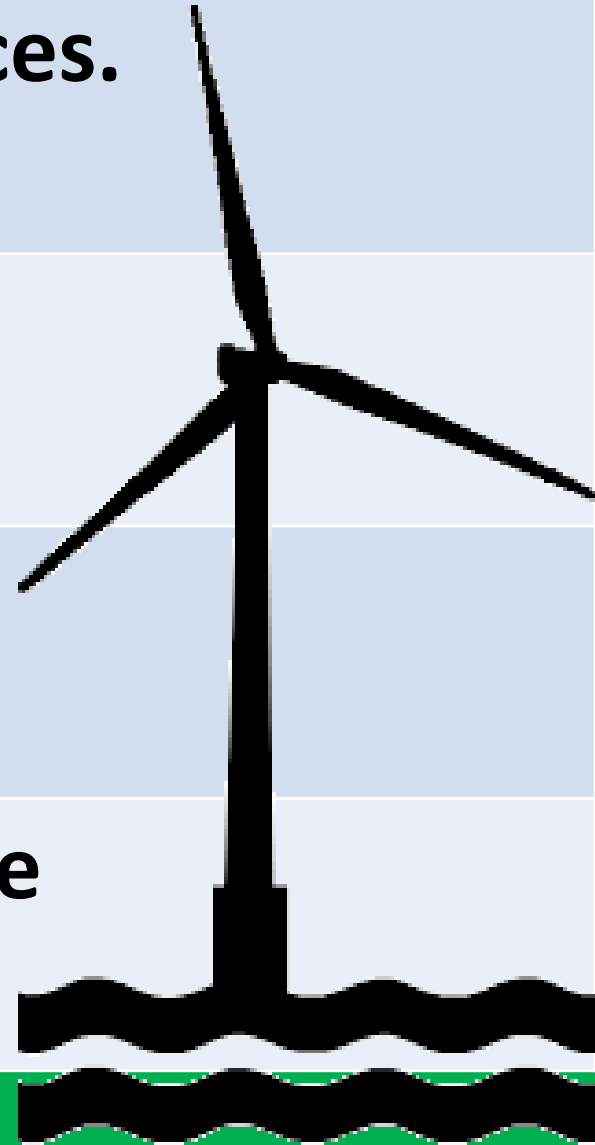
**3**

**Describe how a nuclear power station generates electricity.**

**4**

**Why do some people object to renewable sources like wind, wave and biomass?**

**ENERGY**



# GCSE DESIGN REVISION CARD #008

**1**

**2**

**3**

**4**

ENERGY

# GCSE DESIGN REVISION CARD #009

1

Alkaline batteries can be recharged – true or false?

2

What are kinetic pumped storage systems used for?

3

What happens when we recharge a battery?

4

Hospitals need an uninterrupted power supply for emergencies – why would rechargeable batteries be best?



ENERGY

# GCSE DESIGN REVISION CARD #009

**1**

**2**

**3**

**4**

ENERGY

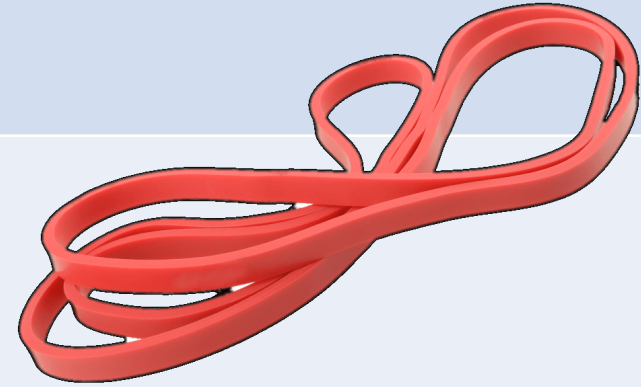
# GCSE DESIGN REVISION CARD #010

**1**

**True or False: Toughness means a material can be drawn into a wire.**

**2**

**What is meant by 'elasticity'?**



**3**

**Lead is malleable but not ductile. Aluminium is malleable and ductile. Which might be best for wires?**

**4**

**Buildings often have steel frame skeletons. What property does steel have that makes it suitable?**

## MATERIAL PROPERTIES

# GCSE DESIGN REVISION CARD #010

**1**

**2**

**3**

**4**

**MATERIAL PROPERTIES**

# GCSE DESIGN REVISION CARD #011

**1**

**What does 'fusibility' mean?**

**2**

**Give two ways the physical properties of non-metals differ from those of metals.**

**3**

**Kai soaked a polyester shirt and a cotton shirt with water – which would dry more quickly?**

**4**

**True or false: Metals are good electrical conductors.**

**METALS**



# GCSE DESIGN REVISION CARD #011

**1**

**2**

**3**

**4**

METALS

# GCSE DESIGN REVISION CARD #012

**1**

**Which has a higher 'gsm' – board or paper?**

**2**

**What material contains a fluted inner board sandwiched between two outer layers?**

**3**

**What type of paper is most suitable for using felts and marker pens and why?**

**4**

**Holly is making model house – what materials might be best and why?**

**PAPER AND BOARDS**



# GCSE DESIGN REVISION CARD #012

**1**

**2**

**3**

**4**

PAPER AND BOARDS

# GCSE DESIGN REVISION CARD #013

**1**

**List three softwoods.**

**2**

**List three hardwoods**

**3**

**Why might beech be a good material to use for the curved parts of a rocking horse toy?**

**4**

**Dylan is making a model of a boat – why might mahogany not be a suitable modelling material?**



**WOOD**

# GCSE DESIGN REVISION CARD #013

**1**

**2**

**3**

**4**

WOOD

# GCSE DESIGN REVISION CARD #014

**1**

Which of these is an alloy? *BRASS, ZINC, TIN, ALUMINIUM.*

**2**

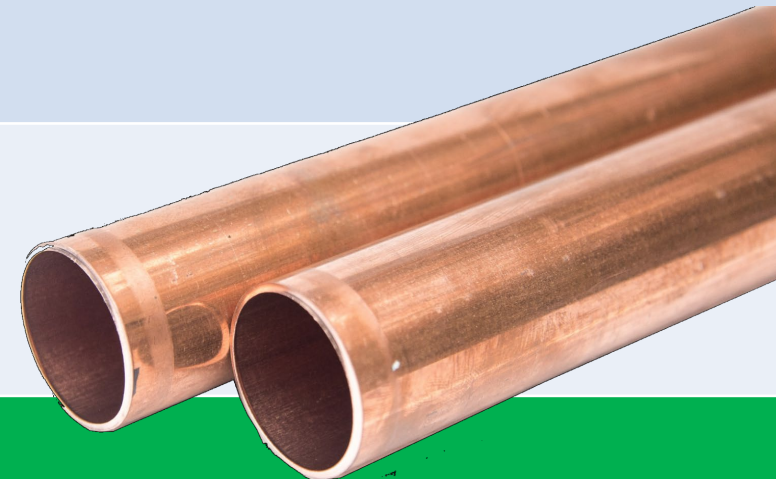
Why are protective coatings often applied to ferrous metals?

**3**

Why is aluminium more suitable to create aeroplanes than steel?

**4**

What properties of copper make it suitable for making water pipes?



**METALS & ALLOYS**

# GCSE DESIGN REVISION CARD #014

**1**

**2**

**3**

**4**

**METALS & ALLOYS**

# GCSE DESIGN REVISION CARD #015

**1**

**True or False: Thermoplastics are More rigid than thermosets.**

**2**

**Give a suitable thermoplastic for Making drinks bottles and explain why.**



**3**

**Why might cooking utensils are made from thermosets rather than thermoplastics?**

**4**

**Give property of PR that makes it suitable for garden furniture.**

**POLYMERS (PLASTICS)**

# GCSE DESIGN REVISION CARD #015

**1**

**2**

**3**

**4**

**POLYMERS (PLASTICS)**

# GCSE DESIGN REVISION CARD #016

**1**

Which of these is not a natural fibre: ELASTENE, COTTON, WOOL, SILK.

**2**

Why might silk not be used for making jumpers?



**3**

Give one advantage and one disadvantage of making a winter hat from wool.

**4**

Courtney is tie-dyeing a cushion cover – would cotton or polyester be better to use?

**TEXTILES**

# GCSE DESIGN REVISION CARD #016

**1**

**2**

**3**

**4**

TEXTILES

# GCSE DESIGN REVISION CARD #017

**1**

**True or False: MDF is made from layers of woods glued together.**

**2**

**Describe how chipboard is made.**



**3**

**Kathryn is making a cupboard – what type of manufactured board could be painted for this?**

**4**

**Why is chipboard a terrible choice to make a shed from?**

## MANUFACTURED BOARDS

# GCSE DESIGN REVISION CARD #017

**1**

**2**

**3**

**4**

MANUFACTURED BOARDS

# GCSE DESIGN REVISION CARD #018

**1**

**True or false: A sensor is type of input device.**

**2**

**What type of switch can be held down to complete a circuit?**

**3**

**Maddie is designing a night light that turns on when it gets dark – what input device could she use?**

**4**

**Carl is making a fan that starts when it gets hot – what type of input device could he use?**



**ELECTRONICS**

# GCSE DESIGN REVISION CARD #018

**1**

**2**

**3**

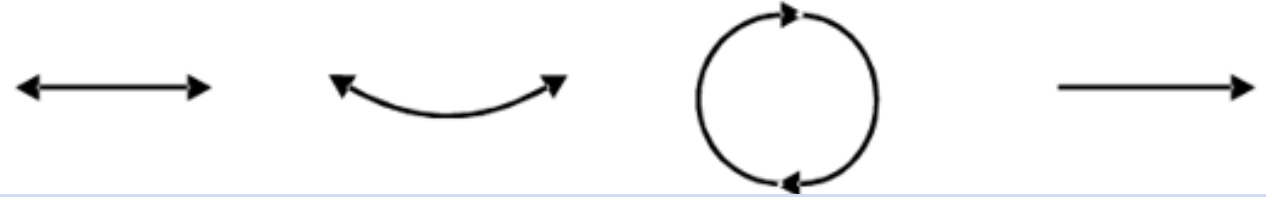
**4**

**ELECTRONICS**

# GCSE DESIGN REVISION CARD #019

1

Name the four main types of motion.



2

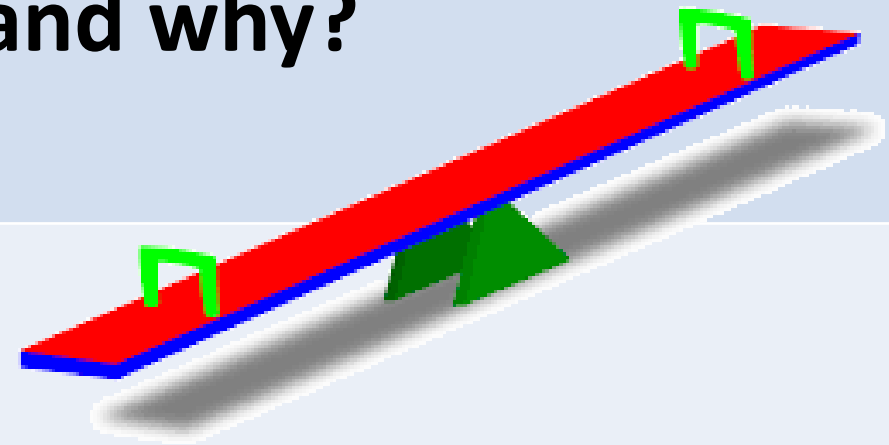
Which type of motion could be described as 'moving backwards and forwards in a straight line'?

3

What type of lever is a see-saw and why?

4

What is a 'second order lever'?



## MOVEMENT AND LEVERS

# GCSE DESIGN REVISION CARD #019

**1**

**2**

**3**

**4**

**MOVEMENT AND LEVERS**

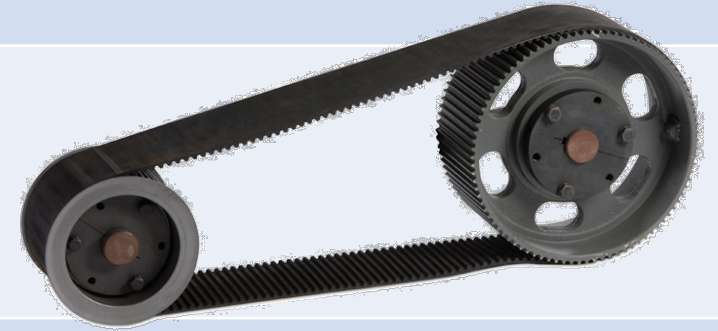
# GCSE DESIGN REVISION CARD #020

**1**

Katie makes a gear train using two gears. The driver has 5 teeth and the driven has 15 teeth – what is the ratio?

**2**

Describe how a belt drive works.



**3**

Explain how using a pulley can make lifting a load easier.

**4**

A cam mechanism converts \_\_\_\_\_ motion into \_\_\_\_\_ motion.

## MOVEMENT AND LEVERS

# GCSE DESIGN REVISION CARD #020

**1**

**2**

**3**

**4**

**MOVEMENT AND LEVERS**

# GCSE DESIGN REVISION CARD #021

**1**

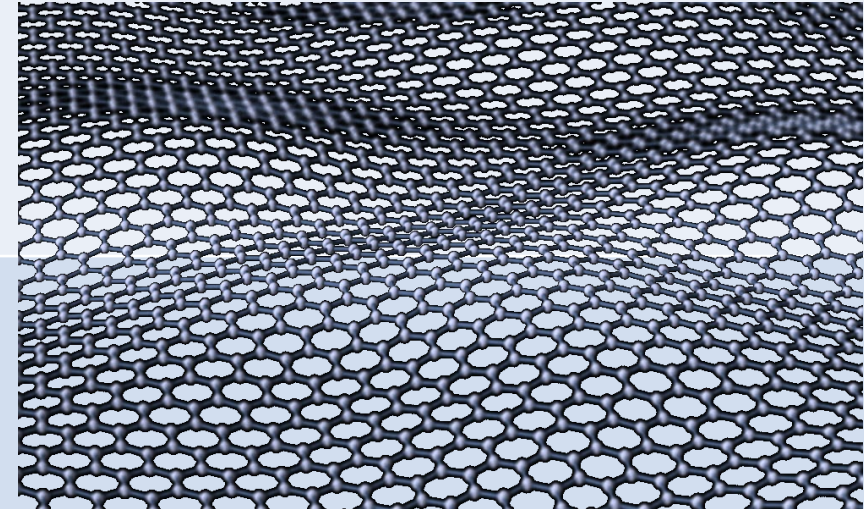
**Give an example of a nano-material.**

**2**

**What is graphene made from?**

**3**

**What useful properties does graphene have?**



**4**

**Coated metals are modern materials. How can coating metals improve their properties?**

**NEW MATERIALS**

# GCSE DESIGN REVISION CARD #021

**1**

**2**

**3**

**4**

**NEW MATERIALS**

# GCSE DESIGN REVISION CARD #022

**1**

**Titanium is found in the earth's crust. Why is it classed as a modern material?**

**2**

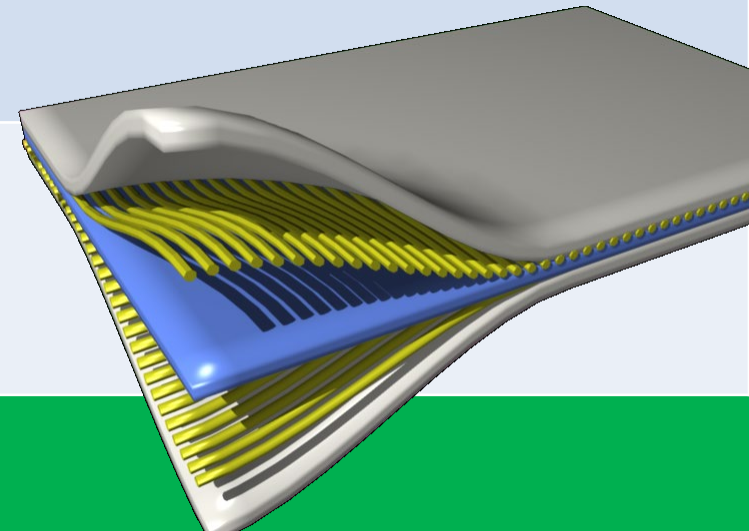
**Why might 'aluminium foam' be good for making artificial limbs from?**

**3**

**Give three stimuli that can change the properties of a smart material.**

**4**

**What is a composite material?**



**NEW MATERIALS**

# GCSE DESIGN REVISION CARD #022

**1**

**2**

**3**

**4**

**NEW MATERIALS**

# GCSE DESIGN REVISION CARD #023

**1**

**Kevlar is used in some textiles – what positive properties does Kevlar have?**

**2**

**What does GRP stand for?**

**3**

**Why is using GRP often better than using just plastic?**

**4**

**Kristina has a mug that changes colour when it gets hot and disappears when it cools. Why is this?**



**NEW MATERIALS**

# GCSE DESIGN REVISION CARD #023

**1**

**2**

**3**

**4**

**NEW MATERIALS**

# GCSE DESIGN REVISION CARD #024

**1**

**What does this FSC logo mean?**



**2**

**What does 'aesthetics' mean?**

**3**

**Give two aesthetic factors that might be considered in the designing of a product.**

**4**

**Kai is making a bicycle helmet – what material properties would be useful?**

## CHOOSING MATERIALS

# GCSE DESIGN REVISION CARD #024

**1**

**2**

**3**

**4**

**CHOOSING MATERIALS**

# GCSE DESIGN REVISION CARD #025

**1**

Apple are making an eco-friendly wooden phone. Why might they use wood from their own country?

**2**

Why might wood be more eco-friendly than plastic?

**3**

What does a designers 'social responsibility' mean?

**4**

Give two cultural factors that we might consider for overseas markets.



## CHOOSING MATERIALS

# GCSE DESIGN REVISION CARD #025

**1**

**2**

**3**

**4**

**CHOOSING MATERIALS**

# GCSE DESIGN REVISION CARD #026

**1**

**How might buying materials in bulk reduce the cost of making a product?**

**2**

**Give an advantage and a disadvantage of using ethically sourced cotton.**

**3**

**Give two social benefits of using recycled materials.**

**4**

**What is the difference between reusing and recycling?**



## CHOOSING MATERIALS

# GCSE DESIGN REVISION CARD #026

**1**

The buyer can negotiate a discount so the finished product will cost less to make.

**2**

Advantages: It is fair to the workers and environment.  
Disadvantage: More expensive.

**3**

Less pollution, less raw materials, less land dug up, less mines, less drill sites, less oil rigs...

**4**

Reusing: using for the same/similar purpose.  
Recycling: using the materials for a different purpose.

## CHOOSING MATERIALS

# GCSE DESIGN REVISION CARD #027

**1**

**What does compression do to an object?**

**2**

**What forces must a screwdriver resist when it removes a screw from a plank of wood?**

**3**

**Holly uses scissors to cut up a pizza – what force is being used?**

**4**

**What force might be described as a 'pulling force'?**



## FORCES

# GCSE DESIGN REVISION CARD #027

**1**

**Compression forces squash, crush and shorten objects.**

**2**

**Torsion. This is a twisting force – the screwdriver shouldn't snap when removing a screw!**

**3**

**Shear force. The blades move in opposite directions causing it to 'cut'.**

**4**

**Tension.**

**FORCES**

# GCSE DESIGN REVISION CARD #028

**1**

**Thick paper is folded – how is the paper along the fold affected?**

**2**

**Fabric can be strengthened by sewing an extra layer of fabric – what is this called?**

**3**

**Seatbelts are made from ‘webbing’ – why?**

**4**

**Corrugated card has a middle layer with bends in it – why does this make the card strong?**



## ENHANCING MATERIALS

# GCSE DESIGN REVISION CARD #028

**1**

**It is more flexible (think origami!)**

**2**

**Interfacing – like in collars, cuffs, pockets, button holes...**

**3**

**Webbing has very high tensile strength so it won't snap in a car crash.**

**4**

**The bends reinforce and stiffen the card. It resists compression and can hold heavy objects.**

**ENHANCING MATERIALS**

# GCSE DESIGN REVISION CARD #029

**1**

**True or False: One-off production requires highly skilled workers.**

**2**

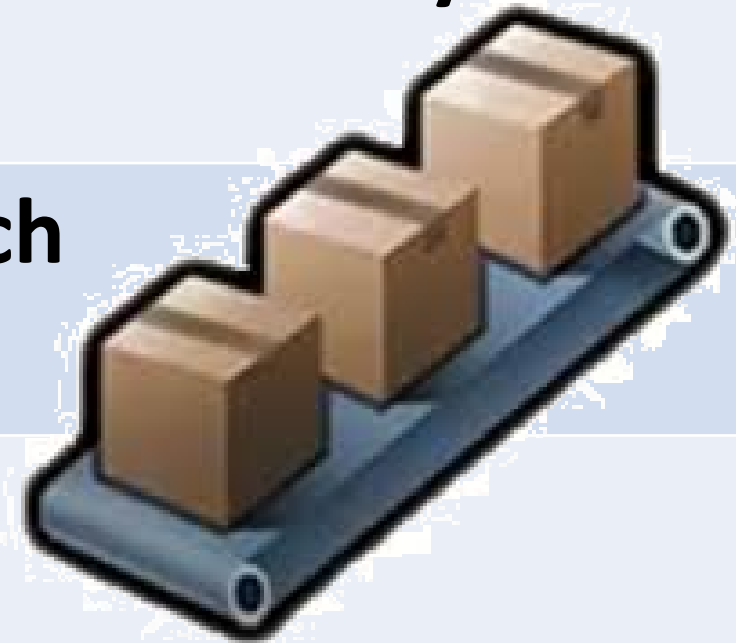
**What type of production can run 24 hours a day without stopping?**

**3**

**What is the difference between batch production and mass production?**

**4**

**Mass production or continuous production – which never stops?**



## SCALES OF PRODUCTION

# GCSE DESIGN REVISION CARD #029

**1**

**True: One-off products are usually high quality so needs skilled workers.**

**2**

**Continuous production.**

**3**

**Batch: small quantities, whole batch worked on.  
Mass: Large quantities, products move along a line.**

**4**

**Continuous production never stops and is likely to be automated with machines and robots.**

## SCALES OF PRODUCTION

# GCSE DESIGN REVISION CARD #030

**1**

**True or False: Every product created is checked for good quality.**

**2**

**Why is it important components are made within tolerances?**

**3**

**If a phone case measuring 120mm x 220mm must have a production tolerance of  $\pm 1\text{mm}$  – what is the largest it could be?**

**4**

**How does a go/no-go fixture check the sizes of a product?**



## QUALITY CONTROL

# GCSE DESIGN REVISION CARD #030

**1**

**False: only a sample is quality checked as it would take too long to check every single item.**

**2**

**Tolerance make sure that products are the correct sizes. Very important if they fit together!**

**3**

**121mm x 221mm, as this is 1mm larger than the ideal size.**

**4**

**A product must be able to fit into the 'go' part and not fit into the 'no-go' part if it's the correct size.**

## QUALITY CONTROL

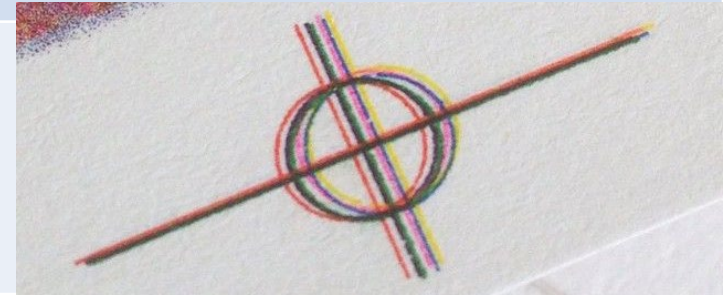
# GCSE DESIGN REVISION CARD #031

**1**

**Laser cutters cut to a high degree of accuracy – why do we still check it has been done correctly?**

**2**

**What does this colour registration mark check?**



**3**

**Lennon needs to drill holes to the same depth – what could he use to help?**

**4**

**A curtain is made by hand using a repeated flower print – how might we check the print is correct?**

## QUALITY CONTROL

# GCSE DESIGN REVISION CARD #031

**1**

The laser may have malfunctioned or been programmed incorrectly.

**2**

Colour registration marks check printing is correct – if it is the lines should line up perfectly or the image will look ‘fuzzy’.

**3**

A depth stop. This is clamped to the drill to stop it at a certain point.

**4**

By eye – it is quicker and often more accurate than using a machine to check it.

## QUALITY CONTROL

# GCSE DESIGN REVISION CARD #032

**1**

**Why are templates usually hard-wearing?**

**2**

**What are 'reference points'?**

**3**

**Emma needs to mark holes every 30 cm on a sheet of 90cm MDF – how might she mark them?**

**4**

**Give an advantage of using a template.**

**PRODUCTION AIDS**



# GCSE DESIGN REVISION CARD #032

**1**

Templates are used repeatedly so they need to last a long time without damage.

**2**

Reference points are where measurements are made from, eg the edge of a plank of wood.

**3**

She might use the edge of the sheet as a reference point and measure every 30cm along a line.

**4**

Speeds up production, makes sure they're all the same, means no measuring needed...

## PRODUCTION AIDS

# GCSE DESIGN REVISION CARD #033

**1**

How are 'patterns' used to help make a textiles product?

**2**

Explain how using a 'jig' might speed up production.

**3**

Kristina is making a one-off wooden jewellery box – why might she not use a jig?

**4**

What material might be good to make the pattern for a metal statue?



## PRODUCTION AIDS

# GCSE DESIGN REVISION CARD #033

**1**

Tissue paper patterns are pinned to the fabric so we can cut around the pattern with scissors.

**2**

Jigs guide the tools so we don't need to measure each time.

**3**

Jigs can take a long time to make – the box is a one-off so it would likely take too long.

**4**

Wood, metal or resin.

## PRODUCTION AIDS

# GCSE DESIGN REVISION CARD #034

**1**

**What process breaks down crude oil fractions into smaller molecules?**

**2**

**One way of extracting metals is electrolysis – describe another method.**

**3**

**After metal is refined how is it turned into a 'stock form'?**

**4**

**Explain briefly how crude oil is turned into plastics.**



**PRODUCTION**

# GCSE DESIGN REVISION CARD #034

**1**

**Cracking.**

**2**

**Ore is crushed and heated. The metal separates out and can be scooped up.**

**3**

**The metal is cast into a mould and allowed to cool into a shape such as a bar or ingot.**

**4**

**A refinery heats it using fractional distillation. Some fractions are linked together into polymers which turns them into plastics.**

## PRODUCTION

# GCSE DESIGN REVISION CARD #035

**1**

**Animals can be used to make fibres.  
One is a sheep – name another.**



**2**

**True or False: Fibres are spun before they are cleaned.**

**3**

**When a sheep has been sheared the wool is scoured.  
What is scouring?**

**4**

**Some fibres are made from oil/plastics. Name some.**

**FIBRES**

# GCSE DESIGN REVISION CARD #035

**1**

**Silk worm, Angora Rabbit, Cashmere Goat, Mink, Weasel, Dogs, Yak, Llama and many more!**

**2**

**False – fibres are cleaned first, then spun.**

**3**

**Scouring cleans the wool. It removes grease and dried sweat!**

**4**

**Polyester, lycra and nylon. These are very thin plastics which are spun together into fibres.**

**FIBRES**

# GCSE DESIGN REVISION CARD #036

**1**

**True or False: Making paper can cause deforestation.**

**2**

**How might using timber (woods) be bad for the environment?**

**3**

**Producing polymers can pollute the environment – how?**

**4**

**Why might mining metals be bad for the environment?**



**ENVIRONMENT**

# GCSE DESIGN REVISION CARD #036

**1**

**True! If the trees aren't replaced deforestation will happen!**

**2**

**Cutting timber can destroy habitats which can kill plants and animals that live(d) there.**

**3**

**Polymers (plastics) are made from oil. It can leak or spill into animal habitats.**

**4**

**Pollution and greenhouse gases are released. It can destroy animal habitats. Chemicals can leak into water sources. It is noisy and smelly.**

**ENVIRONMENT**

# GCSE DESIGN REVISION CARD #037

1

What process is used to make paper white?

2

**MDF** (Medium Density Fibreboard) is a manufactured board – describe how it is made.

3

Producing paper involves pulping – what is the purpose of pulping?

4

Describe how trees are turned into paper.



## PAPERS, BOARDS AND TIMBERS

# GCSE DESIGN REVISION CARD #037

**1**

**Bleaching.**

**2**

**Small particles of wood are mixed with glue, heated, pressed into sheets and dried.**

**3**

**Pulping converts wood/grasses into cellulose fibres.**

**4**

**Trees are taken to a paper mill. Bark is stripped and the wood chipped. The small chips are then pulped.**

**PAPERS, BOARDS AND TIMBERS**

# GCSE DESIGN REVISION CARD #038

**1**

**Give a property of card that a cake box should have.**

**2**

**Leaflets/flyers are usually printed on low quality paper – why?**

**3**

**Why is corrugated card often used for a coffee cup sleeve?**

**4**

**Juice cartons are often made from foil-lined board. What properties make it useful for this?**



**PAPERS AND BOARDS**

# GCSE DESIGN REVISION CARD #038

**1**

**Flexibility, rigidity, lightweight, non-toxic...**

**2**

**Leaflets don't need to last for a long time so it is cheaper to use low-weight cheaper papers.**

**3**

**It is thick and a good insulator so people won't burn their hands.**

**4**

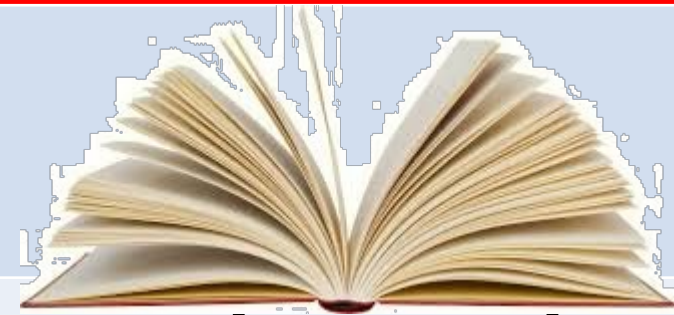
**Foil-lined board keep air out, it is waterproof, it can be printed on...**

**PAPERS AND BOARDS**

# GCSE DESIGN REVISION CARD #039

**1**

**Which is bigger – A4 or A3 paper?**



**2**

**Give an example of a standard component that can be used to loosely join board together.**

**3**

**Paris is making a 30 page book – how might she bind it together cheaply?**

**4**

**Luke is making a photo display – what sort of adhesive could he use to mount the photos onto card.**

## STOCK AND STANDARD FORMS

# GCSE DESIGN REVISION CARD #039

**1**

**A3 paper is bigger than A4.**

**2**

**Treasury tag, paper clip, split pin...**

**3**

**Comb binding, spiral binding, saddle stitching, hole punching, stapling...**

**4**

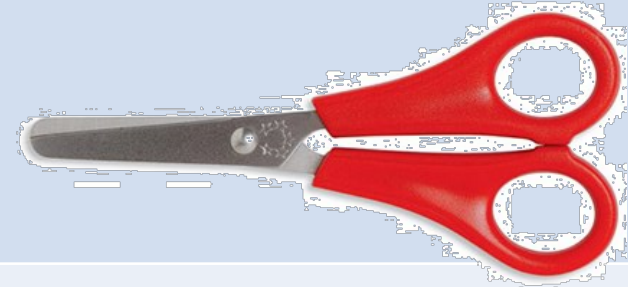
**Spray adhesive as this covers a large area and can be repositioned.**

## STOCK AND STANDARD FORMS

# GCSE DESIGN REVISION CARD #040

**1**

**True or False: Cutting paper with a laser cutter is cheap.**



**2**

**Which are scissors best for cutting with? Tracing paper, corrugated card or solid white board.**

**3**

**Skye wants to cut 10 large sheets of paper in half – what equipment might she use?**

**4**

**Describe how a die cutter might cut out a card net.**

**PAPERS AND BOARDS**

# GCSE DESIGN REVISION CARD #040

**1**

**False! Laser cutters are very expensive! They are very precise though!**

**2**

**Tracing paper and similar thin materials.**

**3**

**A paper trimmer as this is designed to make large straight cuts.**

**4**

**A die cutter is made of sharp blades in the correct shape. The die is pressed onto the card.**

## PAPERS AND BOARDS

# GCSE DESIGN REVISION CARD #041

1

**True or False: Die cutters can cut through more than one sheet of material at a time.**

2

**How might we cut a letter stencil out of card by traditional hand methods.**

3

**Why might we score a net before folding it?**

4

**Describe how we would score card ready for folding.**

**PAPERS AND BOARDS**



# GCSE DESIGN REVISION CARD #041

**1** True! This is so many nets can be made quickly.

**2** Scalpel, craft knife, trimming knife, Stanley knife...

**3** Scoring makes sure the folds are straight and in the correct place.

**4** Draw a guideline with a pencil. Gently run the knife along a ruler. Press lightly with the knife so it doesn't cut.

## PAPERS AND BOARDS

# GCSE DESIGN REVISION CARD #042

**1**

**What four colours do CMYK printers use?**

**2**

**Describe how a wide range of colours are created in CMYK digital printing.**

**3**

**True or False: Offset lithography produces low quality prints.**

**4**

**Which would be better for printing 200 leaflets – digital printing or offset lithography?**



**PRINTING**

# GCSE DESIGN REVISION CARD #042

**1**

**Cyan (C), Magenta (M), Yellow (Y), Black (K).**

**2**

**The digital printer combines these colours to create virtually any colour you need!**

**3**

**False: Offset lithography printing is very high quality and very expensive.**

**4**

**Digital printing would be best as offset lithography would be far too expensive for just 200 leaflets.**

**PRINTING**

# GCSE DESIGN REVISION CARD #043

**1**

**What do we mean if a sheet of card is 'laminated'?**

**2**

**What type of finish is applied to magazine covers?**

**3**

**How does a piece of card get 'embossed'?**

**4**

**Why do a lot of companies apply a high quality finish like UV varnishing to their advertising leaflets?**



## PAPER AND CARD FINISHING

# GCSE DESIGN REVISION CARD #043

**1**

Laminating is when the document is heat sealed between two sheets of plastic.

**2**

UV (ultra violet) varnishing.

**3**

A die is pushed onto the card leaving a raised impression.

**4**

Finishes improve the look. It seems like the company makes high quality products.

## PAPER AND CARD FINISHING

# GCSE DESIGN REVISION CARD #044

**1**

What finish could be used to give a sheet of card a bumpy texture?

**2**

What sort of laminated products might you find in a classroom?

**3**

UV (ultraviolet) varnish can be applied to make a finish shiny – what does the UV light do?

**4**

For a party invitation RSVP card why might it be a bad idea to varnish the whole card?



## PAPER AND CARD FINISHING

# GCSE DESIGN REVISION CARD #044

**1**

Embossing would leave a raised impression on the card.

**2**

Poster, revision card, worksheet, set of instructions, anything like those...

**3**

The UV light is used on the wet varnish to cure (dry) it.

**4**

Varnish is hard to write on as it is shiny, so the invitee wouldn't be able to respond easily.

## PAPER AND CARD FINISHING

# GCSE DESIGN REVISION CARD #045

**1**

**Why would wood be good to use for a traditional children's toy?**



**2**

**Why are polymers good to use for electrical fittings and sockets?**

**3**

**Why is steel a suitable metal for making the blade of a saw from?**

**4**

**Polypropylene (PP) is often used for garden furniture – why might this be?**



## MATERIAL USES

# GCSE DESIGN REVISION CARD #045

**1**

**It is hard, durable and does not break easily. When sanded smooth it will not have splinters.**

**2**

**They are electrical insulators, hard, rigid and resistant to heat and fire.**

**3**

**It is hard and does not corrode quickly.**

**4**

**It is flexible, hard, waterproof, comes in lots of colours...**

## MATERIAL USES

# GCSE DESIGN REVISION CARD #046

**1**

**True or False: Seasoning wood makes it stronger.**

**2**

**Describe what happens when annealing a metal.**

**3**

**How might annealing alter a metal's malleability?**

**4**

**The plastic child's toy car was bright red when it was bought but has faded over time – why might this be?**



## MODIFYING MATERIALS

# GCSE DESIGN REVISION CARD #046

**1**

**True! Seasoning is when we dry wood to make it stronger.**

**2**

**Annealing is when metal is heated until it glows and then left to cool slowly.**

**3**

**Annealing makes a metal softer and easier to bend and shape (more malleable).**

**4**

**The sun's UV light will have faded it. The polymer's chemical structure has been altered.**

## MODIFYING MATERIALS

# GCSE DESIGN REVISION CARD #047

**1**

What does the 'gauge' of polymer film tell us?

**2**

Polymers (plastics) usually comes in stock forms – what type of stock forms?

**3**

Merse is making a table with round legs, what stock forms could he use for them?

**4**

How do timber (wood) mouldings differ from wooden planks?



## STOCK FORMS

# GCSE DESIGN REVISION CARD #047

**1**

**The gauge tells is the thickness of the film.**

**2**

**Plastic comes in sheets, tubes, rods, foam, films, granules and powders.**

**3**

**Tubes or rods.**

**4**

**Planks are square or rectangular – mouldings are shaped eg skirting boards and door frames.**

## STOCK FORMS

# GCSE DESIGN REVISION CARD #048

**1**

**True or False: Screws are permanent fixings.**

**2**

**Name the two components shown:**



**3**

**When joining wood with screws we often drill small holes – what are they called and why do we use them?**

**4**

**Why would it be a good idea to have a range of different screwdrivers in a workshop?**

**STANDARD COMPONENTS**

# GCSE DESIGN REVISION CARD #048

**1**

**False! Screws are temporary so we can take them out when taking the product apart.**

**2**

**A nut and bolt.**

**3**

**Pilot holes are used to guide the screw into the wood.**

**4**

**Screws come in a wide range of sizes and types of heads so we need different screwdrivers for them.**

## STANDARD COMPONENTS

# GCSE DESIGN REVISION CARD #049

**1**

**What material are rivets usually used to join?**



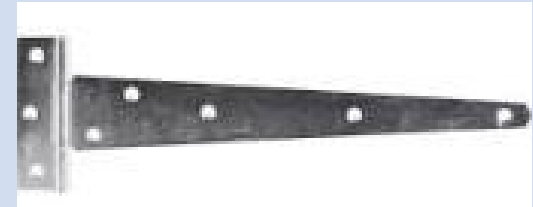
**2**

**What does 'KD' in KD fittings stand for?**



**3**

**Why might a 'tee hinge' be good to use on a shed door?**



**4**

**Why might KD fittings like this one be used in flatpack furniture?**



## STANDARD COMPONENTS

# GCSE DESIGN REVISION CARD #049

**1**

**Rivets usually join metal. Rivets are metal pegs with a head on one end.**

**2**

**Knock Down.**

**3**

**Tee hinges are long which allows them to support the weight of a heavy door.**

**4**

**They are quick and easy to fit and usually temporary so can be taken apart easily in the future.**

## STANDARD COMPONENTS

# GCSE DESIGN REVISION CARD #050

**1**

**What tool is shown and how is it used?**



**2**

**Why might we use the whole length of a saw blade rather than just the middle?**



**3**

**How might we smooth the edges of a metal keyring?**

**4**

**What saw might be best for cutting a spider shape out of acrylic?**

## HAND TOOLS

# GCSE DESIGN REVISION CARD #050

**1**

A (bench) plane. It is pushed across the surface of wood to shave thin layers from it.

**2**

So some teeth don't wear out more quickly than others.

**3**

A file or abrasive paper.

**4**

A coping saw as it is thin, cuts acrylic and cuts curves.  
(A fret saw could be used but it is not a hand tool.)

## HAND TOOLS