

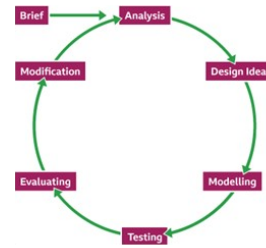
Year 9 DT knowledge organiser

What is sustainability

- A strategy by which communities seek economic development approaches that also benefit the local environment and quality of life

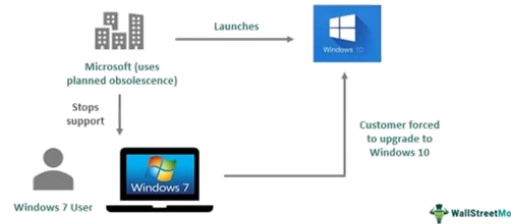
Design Modification

A design modification is a change made to a product. A design modification can be made at any stage of the design process and is usually implemented to fix a fault or improve a product.



Planned Obsolescence

Planned obsolescence is a business technique of developing a product with reduced life to force customers to replace them often.

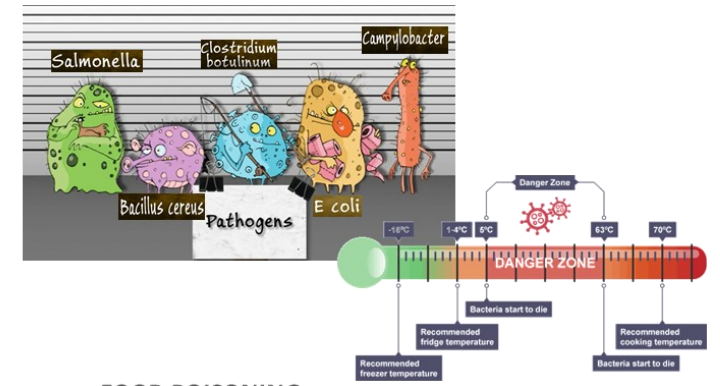


Technological "Push"

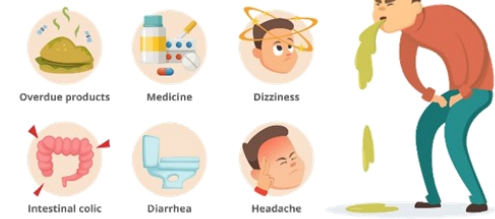
New knowledge develop new technologies that "push" the possibility of developing new products or services

Market "Pull" New Marketing Needs

New needs in the market that provide opportunities for the introduction of new products or services are discovered



FOOD POISONING



cross-contamination

the transfer of disease-causing agents from one point to another, usually in a food preparation setting

SECTION 1: Biological contamination

Food contamination Physical contaminants

- Finger nails
- Screws, nuts and bolts
- Bottle tops/bits of plastic
- Hairs and eyelashes
- Mouse poo
- Coins and bits of metal
- Dead flies
- Dead mice/rats
- Jewellery

SECTION 1: Biological contamination

Food contamination Biological contamination

Biological contaminants include:

- bacteria
- viruses
- moulds
- yeasts and fungi.

Biological contaminants are microscopic, single-celled organisms found everywhere and are quite hard to detect until they have formed large colonies.

Pests can spread diseases through their fur, feet, droppings, urine and saliva, as well as harmful bacteria like salmonella and E.coli if they are carrying it. This can inevitably cause illness and food poisoning in those who consume affected food.

Softwoods	Hardwoods	Manufactured boards														
<p>Coniferous trees - Trees stay evergreen all year round.</p> <ul style="list-style-type: none"> Coniferous trees will grow at a faster rate. Tend to have needles rather than leaves. <p>Deciduous trees - Trees will lose their leaves in the winter.</p> <ul style="list-style-type: none"> Hardwood trees tend to be slow growing broad leaved trees. <p>Examples of softwoods</p> <p>PINE - used in household furniture</p> <p>CEDAR - used for outdoor furniture</p>	<p>Manufacture - It means the making of goods by manual labour or by machinery.</p> <p>MDF - stands for Medium Density Fibreboard.</p> <ul style="list-style-type: none"> A high quality board made by pulping wood fibres and then compressing them together in a very smooth and stable. It can be used to make high quality furniture. Easy to work with Stable and uniform strength <p>Plywood</p> <p>Plywood is made by gluing together thin layers of wood called veneers. Each layer has the grain going across the one below. This makes it very flat and strong. It is used for tops, interior doors and bottoms of drawers.</p> <ul style="list-style-type: none"> Veneers glued at 90 degrees Very flat and strong Used in tops and interior doors <p>Examples of Manufactured Boards</p> <p>Normally household items</p>															
<p>Examples of hardwoods</p> <table border="1"> <thead> <tr> <th>Name</th> <th>Properties</th> <th>Uses</th> </tr> </thead> <tbody> <tr> <td>Beech</td> <td>Hard wearing and strong</td> <td>Fruit Bowl</td> </tr> <tr> <td>Oak</td> <td>Tough and durable</td> <td>Garden furniture</td> </tr> <tr> <td>Maple</td> <td>Durable and easy to work with</td> <td>Tables and chairs</td> </tr> <tr> <td>Tok</td> <td>Strong, durable, resistant to moisture</td> <td>Boats</td> </tr> </tbody> </table>	Name	Properties	Uses	Beech	Hard wearing and strong	Fruit Bowl	Oak	Tough and durable	Garden furniture	Maple	Durable and easy to work with	Tables and chairs	Tok	Strong, durable, resistant to moisture	Boats	
Name	Properties	Uses														
Beech	Hard wearing and strong	Fruit Bowl														
Oak	Tough and durable	Garden furniture														
Maple	Durable and easy to work with	Tables and chairs														
Tok	Strong, durable, resistant to moisture	Boats														

We use ACCESS FM to help us write a **specification** - a list of requirements for a design - and to help us **analyse and describe** an already existing product.

ACCESS FM - Helpsheet

A is for **Aesthetics**

Aesthetics means what does the product look like? What is the Colour? Shape? Texture? Pattern? Appearance? Feel? Weight? Style?

C is for **Cost**

Cost means how much does the product cost to buy? How much does it Cost to Buy? Cost to make? How much do the different materials cost? Is it good value?

C is for **Customer**

Customer means who will buy or use your product? Who will buy your product? Who will use your product? What is their Age? Gender? What are their Likes? Dislikes? Needs? Preferences?

E is for **Environment**

Environment means will the product affect the environment? Is the product: Recyclable? Reusable? Repairable? Sustainable? Environmentally Friendly? Bad for the environment? **6R's of Design:** Recycle / Reuse / Repair / Rethink / Reduce / Refuse

S is for **Size**

Size means how big or small is the product? What is the size of the product in millimeters (mm)? Is this the same size as similar products? Is it comfortable to use? Does it fit? Would it be improved if it was bigger or smaller?

S is for **Safety**

Safety means how safe is the product when it is used? Will it be safe for the customer to use? Could they hurt themselves? What's the correct and safest way to use the product? What are the risks?

F is for **Function**

Function means how does the product work? What is the products job and role? What is it needed for? How well does it work? How could it be improved? Why is it used this way?

M is for **Material**

Material means what is the product made out of? What materials is the product made from? Why were these materials used? Would a different material be better? How was the product made? What manufacturing techniques were used?

Scale of production

One-off

Advantages

High-quality craftsmanship, prototypes can be tested

Volumes are made for demand which reduces waste, templates and jigs can be reused to produce identical products

Batch

High volumes can be produced, materials can be bulk purchased at cheaper rates, low-skilled workforce required

Mass

Disadvantages

Expensive, requires specialist labour, time consuming

Downtime between batches

Expensive to set up because of specialised equipment, expensive machinery repairs