The Design Process

Design Process

1 Investigation

Learn from what you have seen

Observation

Research

- Books
- Magazines
- Internet

Interview

Question people with knowledge

Survey

Set of questions, asked to many people

Experimentation

Try a solution, find undiscovered information

2 Designing

Design Brief

- Short statement
- Shows how to solve problem
- What will you make?
- Who is it for?
- What will it do?

Specification & Constraints

Size, materials, etc. specified

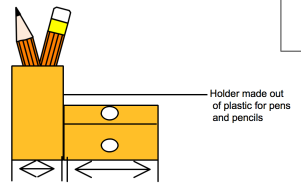
M E S S

- Materials — What will be used to make the product?
- Explain — How will I make the product?
- Size — How big will the parts be? (*always in mm*)
- Show — Different view top, side, front

Final Design

- Detailed drawing
- Drawing instruments
- Labels & notes
- In colour

3 Making



Step-by-step instructions

Steps to follow when making the product

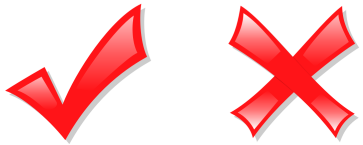
Tools & materials

What will I need to make the product?

4 Evaluating

Did my solution solve the problem?

What could I have done differently?



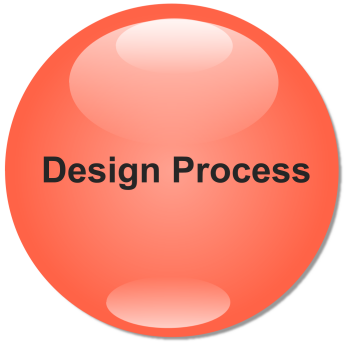
Communication

Communication

Communication

The Design Process

Use this space to see what you can remember.
Make you own summary of the Design Process. Be creative!



Design Process - Terminology

Term	Definition
Technology	The use of knowledge, skills and resources to meet people's needs and wants by developing practical solutions to problems, taking social and environmental factors into consideration.
Needs	Things people cannot live without, or that people need to survive, e.g. water, food, etc.
Wants	Non-essential items that people want, but without which they can still survive, e.g. cell phones, television, etc.
Design process	Also known as the technological process. This is a specific process that has to be followed when designing any product.
Investigating	First step in the design process. The process of gatering information about the problem that the design will solve. Investigation can be done using research, interviews, observations, surveys or experiments.
Designing	Second step in the design process. The Design brief has to be written, a list of specifications and constraints should be made, several sketches of various ideas are made and then the final design can be drawn.
Design brief	A short, clear statement that will explain how the problem should be solved. It will include details on what will be made, who it will be made for and what it will do.
Specifications	Any design will include specifications, which are specific details of the characteristics of the design, e.g. the size, colour, materials etc. of the final product.
Constraints	Any product will have limitations e.g. the bookcase can only be 1,8 m tall, otherwise it will not fit through the door.
MES principle	**M**- Materials used when making the product. **E** - Explain exactly how each part will work and how each part will fit together. **S** - Size - specify the exact size of each part of the product in *mm*. **S** - Show - Indicate different views of the drawing (top, front, side views)
Final design	The final design is drawn with drawing instruments (e.g. ruler), done in colour with labels, measurements and notes.
Making	The third step in the design process and should include step-by-step instructions and a list of all materials and tools that will be used when making the product.
Evaluating	The final step in the design process. After the product has been made and tested, ask if the product solved the problem and what can be changed to make the product better.
Isometric drawing	A three-dimensional drawing of an object, drawn at a 30° angle.
Orthographic drawing	A two-dimensional drawing of an object, showing separate views of the object (side, front and top view).

Design Process - Terminology

Term	Definition
Technology	
Needs	
Wants	
Design process	
Investigating	
Designing	
Design brief	
Specifications	
Constraints	
MES principle	
Final design	
Making	
Evaluating	
Isometric drawing	
Orthographic drawing	