

BRIEF

Young children today tend to have a lot of equipment and possessions. Much of which is stored and used in their bedrooms. At the same time, the cost of housing means the **child's bedroom might be quite small**—this can lead to mess, damage and loss of expensive items, and general misery all round! Design product that helps address this area of need. Make a prototype and evaluate this in terms of suitability for commercial manufacture.

Things I will need to look at

First Thoughts

People I will need to talk to

What type of facilities or multiple uses could you design into the product?

Name

BRIEF

Toys based on transport themes—cars, trains, aeroplanes have always been popular with children and their parents. Design a toy based on this theme that includes some form of activity to encourage learning. Devise a suitable company image and include a logo for your company on each sheet and some examples of the kind of products that would carry the logo. Make a high quality prototype to explore how the product might be manufactured in larger quantities. Consider what impact its manufacture and sale might have.

Things I will need to look at

First Thoughts

People I will need to talk to

What type of learning activities could be designed into the toy?

Name

TIME PLANNING—WHY IS IT IMPORTANT? HOW CAN I PLAN?

What type of people will use my product?

Who will buy my product?

Where will the product be used?

How will cost influence the design?

GANTT CHART

Name

What is an image board used for?

Name

A brand image is so important to a company. Here, I have analysed some well known logos, sketched some ideas of my own and produced a final design to use for my project.

Analysis of existing LOGOS

My Designs

Name

## **How is the 'Image' Projected?**

The brand image needs to be projected in order to be effective. Here are some examples of how this might be done. Headed note paper; business cards; packaging, delivery vans.

Name

*Product Design*

Drawing of product here

### Analysis of Existing Products

Manufacturing processes

Name

Specification is a list of targets—here are mine

**How will I know if I've met the specification?**

Name

On this page I have sketched 4 different ideas to work on.


Name

*Product Design*

To find out what others think of my ideas I have devised a questionnaire.

Market Research

The results of the questionnaire show :

Name

*Product Design*

Using addition resources to help me design

Pictures have collected to help me design



Design Development 1

Name

To explore my idea in 3 dimensions I have constructed a simple model.

Pictures of Card Model Here

Name

On this sheet I have made three modifications to the initial design

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This is how I will use CAD/CAM

Name

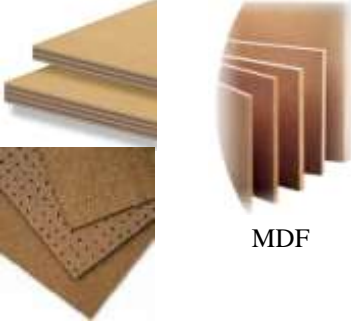
*Product Design*

This sheet shows my final design. I have included as many dimensions as I can.

Final Design

Name

I have studied a range of materials and finishes and made the following choices based on their properties

Part	Options	Choice	Properties that make it the right choice	Picture
Train Cab	MDF, Ply-wood, Pine, hardboard	MDF	<p>Because the part is quite thin (about 8mm) I don't want to use Pine because it may warp or snap along its grain lines. I could use a hardwood but it seems that manufactured boards are the obvious choice here. Plywood is strong, readily available and cheap but its layered construction means the edges will need to be carefully finished. Also, the edges tend to be rather splintery and rough. Hardboard has one very smooth face but the reverse is unfinished and very rough. In addition it is weak and flimsy and would be very difficult to join. This leaves MDF which would seem the ideal choice—it's cheap and we've got loads of it in the workshop. It's available in a range of thicknesses (3, 6, 8, 10, 12, 18 are the most common) and the clinched is that the cut edges are easy to finish. Together with the fact that it takes a paint finish beautifully I think it is the ideal choice for this part.</p>	 <p>MDF</p>

Name

*Product Design*

These screenshots and photographs show how I used CAD/CAM to manufacture parts

CAD-CAM

Name

Boxford V10 is a CAM programme ProDesktop is a 3D modelling program. This sheet illustrates how I them

Name

Quality Control and Quality Assurance.

Have you used any jigs—how did you ensure quality?

Maintain a safe working environment

Things to check when Cutting + Shaping.

Things to check—FINISHES

**What should I check when it's finished?**

Name

How could the manufacture and sale of your product harm the environment?

Is your product beneficial to the user—does it improve their quality of life?

As the manufacturer of the product what could you do make the most positive impact on the wider community and global community?

Name



