



DESIGN & TECHNOLOGY YEAR 8



Name:

Class code:

Teacher:

Workshop Expectations

1. Classroom to be entered calmly and sensibly, bags and coats stored on hooks or under desks to avoid trip hazards.
2. Sit in assigned seat and follow the teachers' instructions for the start of the lesson.
3. All work, practical or theory will be undertaken to the best of your ability.
4. Safety is highly important in the workshop and any unsafe behaviour could result in a ban from practical work.
5. All tools and machinery will be demonstrated before pupil use. Equipment must not be used until proper instructions have been given
6. Goggles must be worn when using machinery.
7. Hair must be tied up and loose clothing secured when using machinery.
8. If anything is broken/damaged during the lesson, please inform a teacher/technician to make it safe again.
9. Your work is your responsibility. Ensure you write your name on all of your items and keep them in your class box/tray.
10. Clear all tools and materials from your table at the end of the lesson and return to their correct place, help your classmates to do the same. Tables need to be empty by the end of the lesson.
11. Work left to dry must only be taken off the shelves by the owner, do not take items that do not belong to you.
12. Tools and materials are not to be taken from the workshops at any point.

Signing these expectations demonstrates your commitment to keeping yourself and your fellow students safe in the workshop.

I.....(pupil name) agree to the above expectations.

.....(signature)

Making a former and bending wood

What is a former?

.....

What tool is used to cut out the former?

.....

What glue is used to attach wood to wood?

.....

How do you secure your wood in the former?

.....

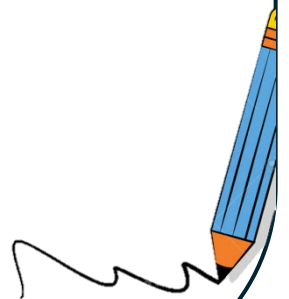
How long does the PVA take to dry?

.....

What is lamination?

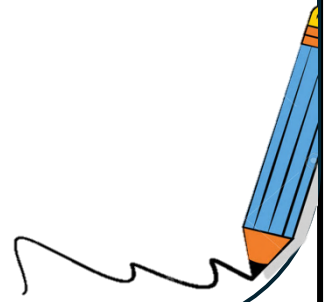
.....

**Watch the demonstration
and take notes on how to
create a former and then
bend the wood.**



Working with Acrylic

Watch the demonstration and take notes on how to work with Acrylic



What type of plastic is Acrylic?

.....

What does the answer to the above question mean?

.....

.....

What is the name of the glue that sticks wood to Acrylic?

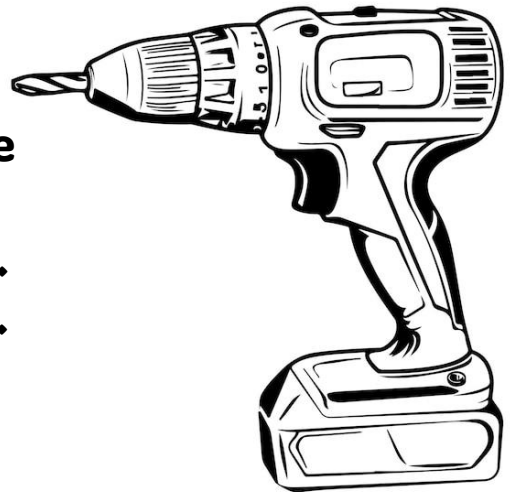
.....

What safety equipment do you need when using the convection oven?

.....

How long should you leave your Acrylic in the convection oven for?

.....



Using the drill
Be careful not to put too much pressure on your Acrylic and use a high speed

Lamp market research page

Fill this space with images of lamps that you like – write a small description about the bits you like and why.

Initial Ideas

Use the next 4 pages to draw 4 full-page design ideas for your lamp. Make sure to add colour and annotations.

Initial Ideas

Initial Ideas

Initial Ideas

CAD & CAM

What is CAD?

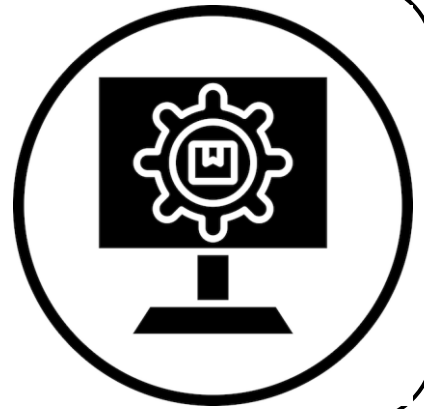
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What is CAM?

.....

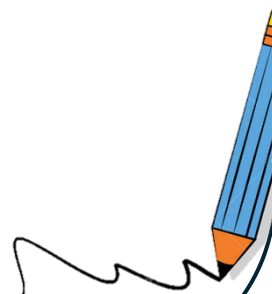
Why is it used?

.....



**Use this space to
take notes on how
to use 2D design**

**To Save
your work
to a USB:
File –
Export file –
Save as
type: DXF
file –
File Name:
Your
name/class
code**



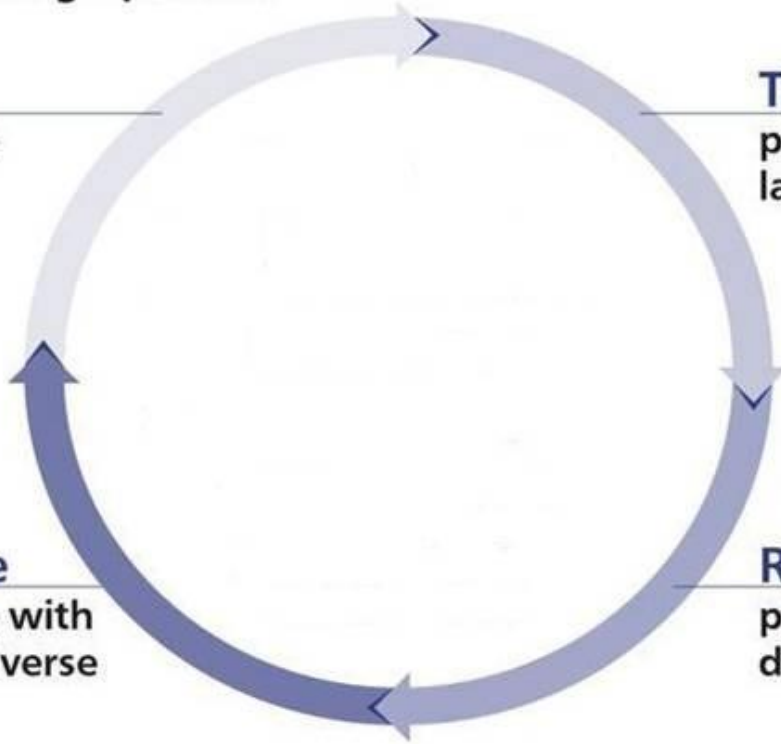
Iterative design process

Design
prototype
and/or
refine
features

Test
prototype in
laboratory

Evaluate
prototype with
users in diverse
settings

Refine
prototype
design



The Design Process

What is the importance of following a process when designing?

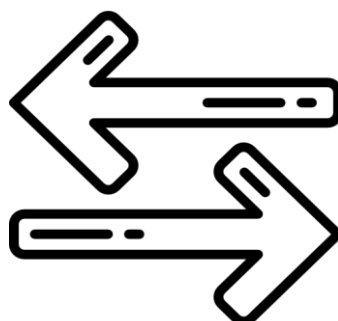
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Why are prototypes made?

.....
.....

What does the term iterative mean?

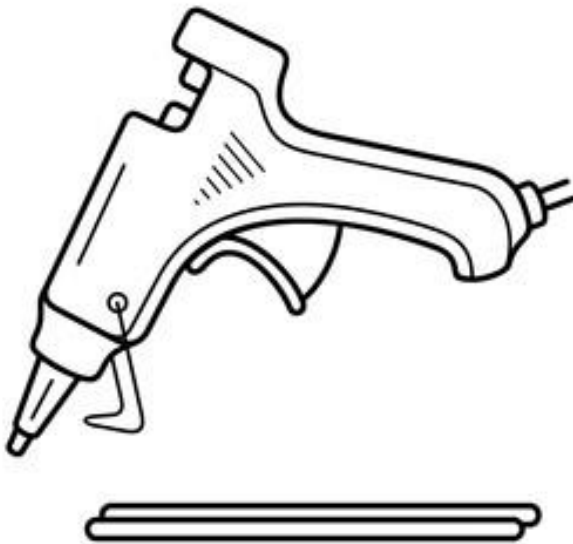
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Modelling

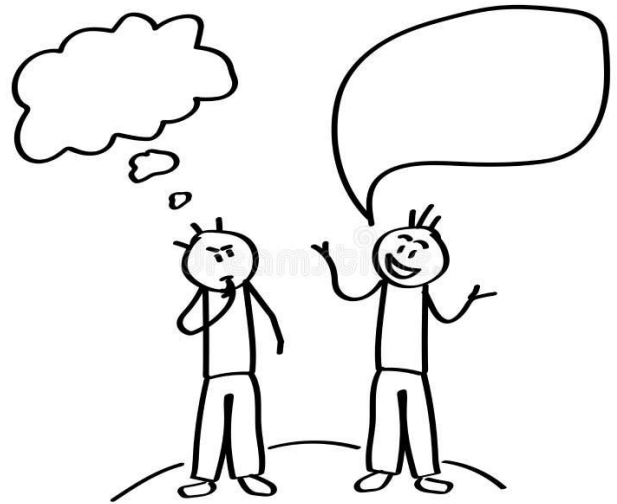
Making a prototype is an important part of designing.

Make a to-scale model of your design using card. Include as much detail as possible including moving parts and specific areas of design



Using the glue guns:

- Allow the gun time to heat up
- Only apply a small amount of glue to the areas that need joining
- Keep hands away from the end of the glue gun and the hot glue



Peer Feedback

Ask a friend in your class to give you feedback on your model/s

1. Do you think the model is well made? How could the construction be improved?

.....
.....

2. What do you think of the idea?

.....
.....

3. Give at least 2 ideas that could improve the design.

.....
.....
.....

3D drawing

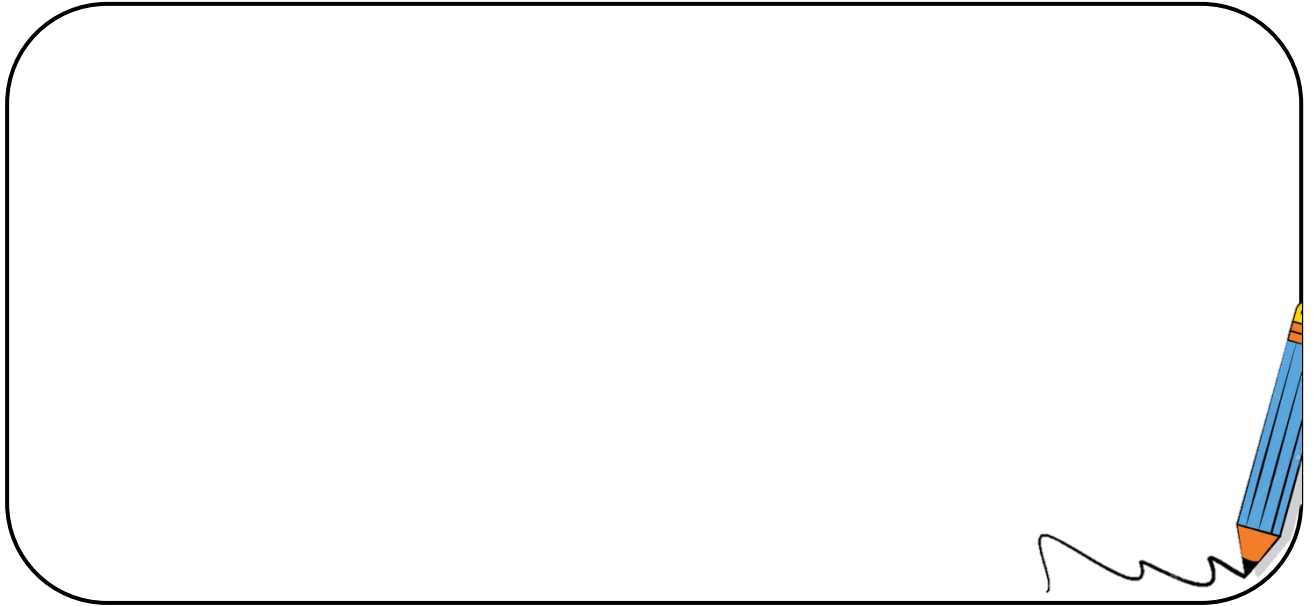
Watch the demonstration
and use this space to
practice your 3D drawing

Final Design

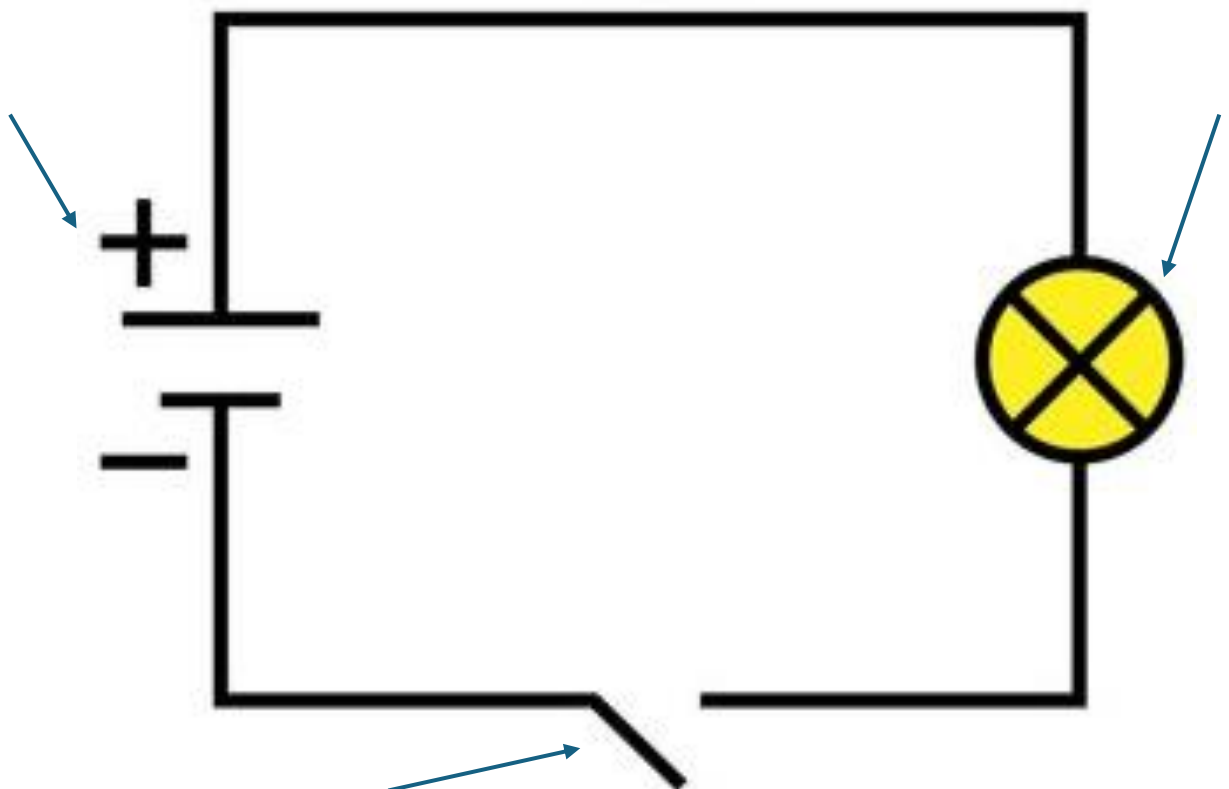
**Choose your final design
using 3D drawing style.
Make it neat/full colour and
annotated, include accurate
sizing.**

Working with electrical components

For your lamp you will need to add a light, which is powered by electricity. Use the space to take notes on your demonstration.

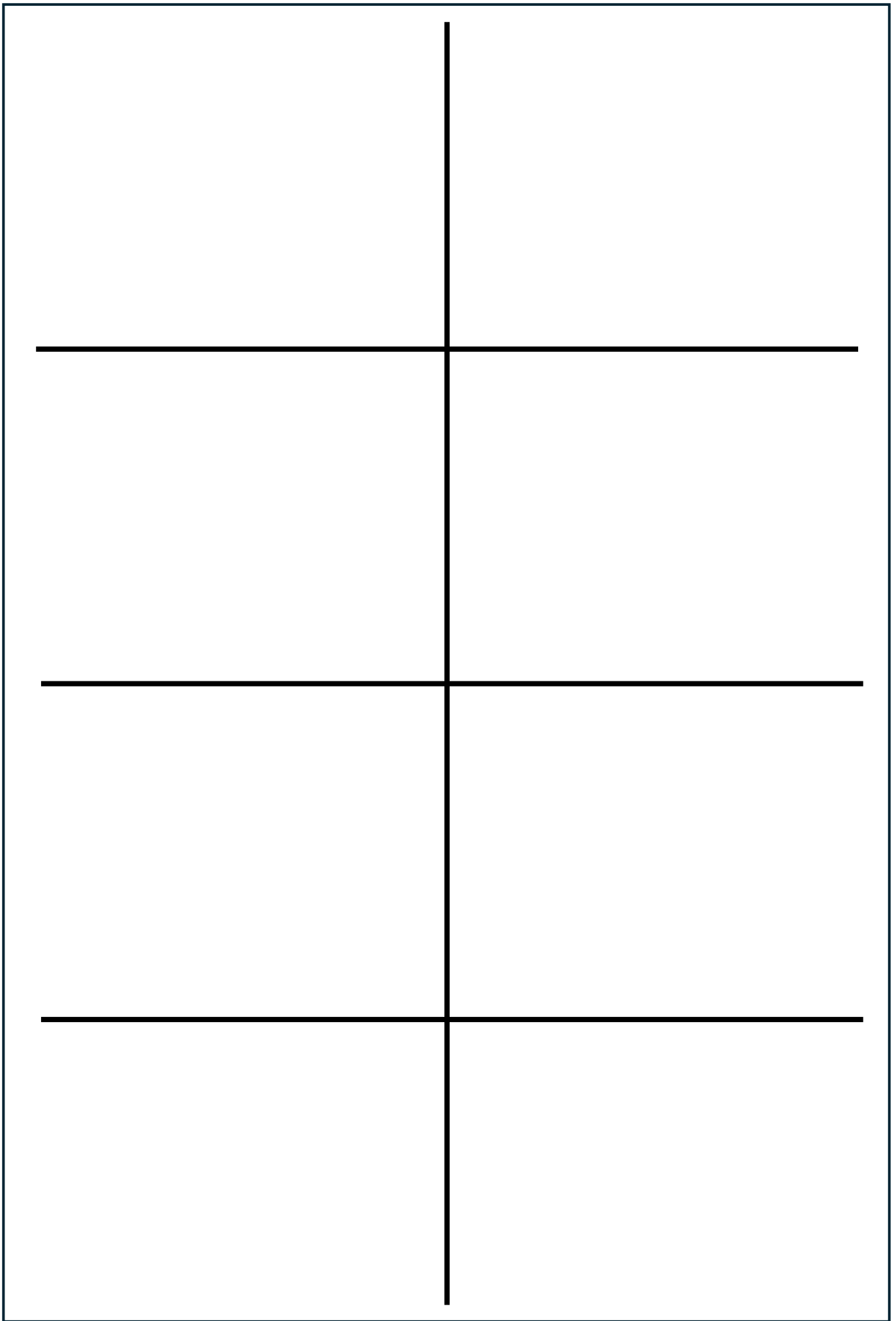


Label the sections of the diagram below



Manufacture Plan

Plan your project to a reasonable timescale- allow for errors and changes with enough time to complete your build by the end of the project



Glue
Purple
Page 1
HERE

Glue
Purple
Page 2
HERE