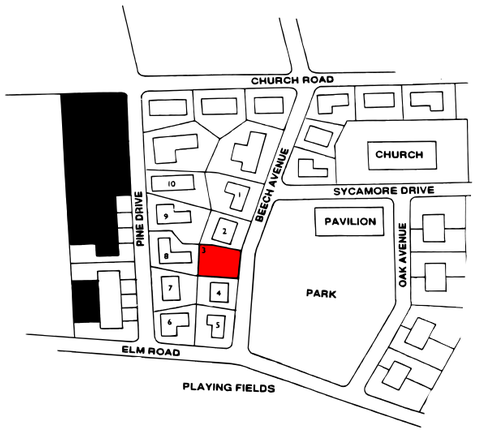
LOCATION DRAWINGS	GCC HOMES	NAME		N5	GH1

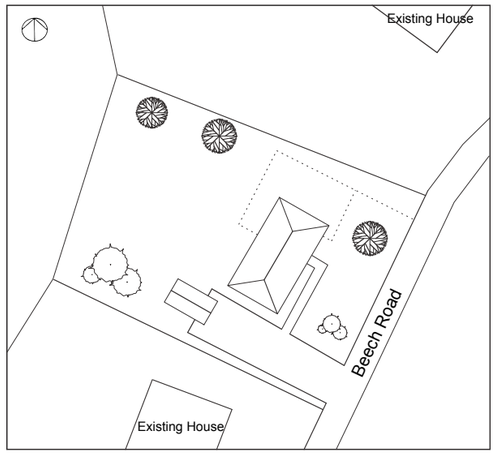
GCC homes (a building development company) are currently designing a new housing development near Glasgow. They have all the architect site & building plans ready and the development has begun construction. They are now looking for a trainee to help with the plans. They would like you to look at the plans and clarify certain aspects to help the home buyers understand them more easily.

Project: GCC homes

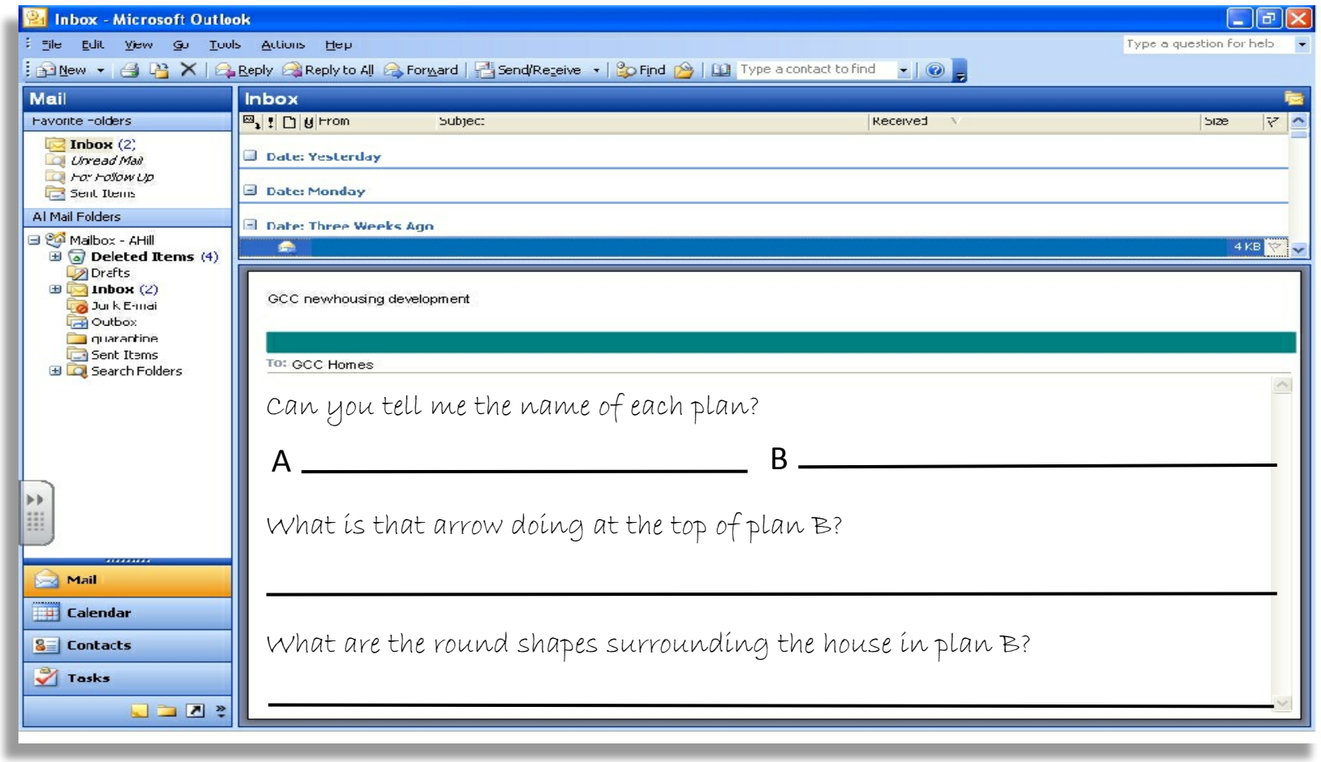
1 Shown below are 2 of the building plans downloaded from GCC homes website.. A potential buyer has emailed the following questions about the plans.



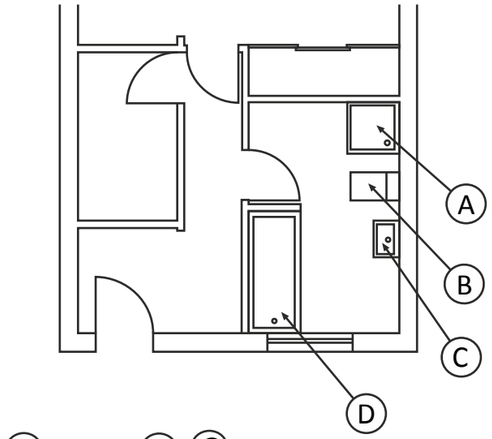
Plan A

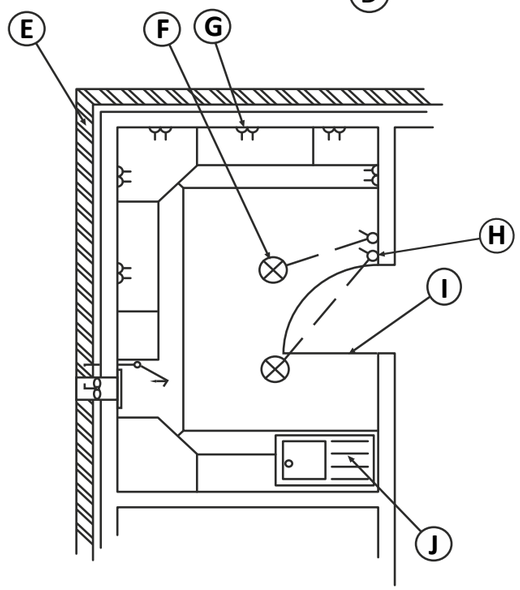


Plan B



2 GCC would like a ***key*** to be designed which will help buyers understand the floorplans for the bathroom and kitchen shown. Sketch each symbol and state the name of the item.

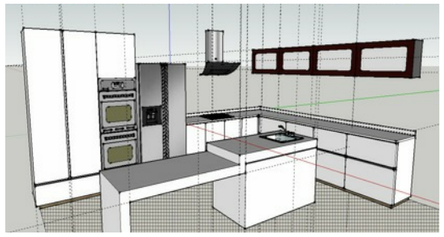




Symbol	Name of item
A	
B	
C	
D	
E	
F	
G	
H	
I	
J	

Top Tip - You may want to look at your BSI and location drawing notes.

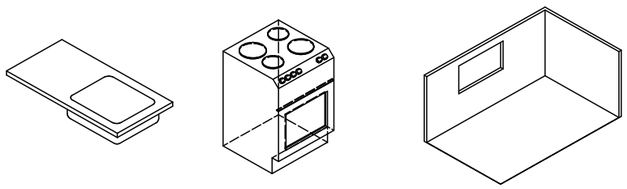
	KITCHEN LIBRARY	GCC HOMES	NAME		N5	GH2



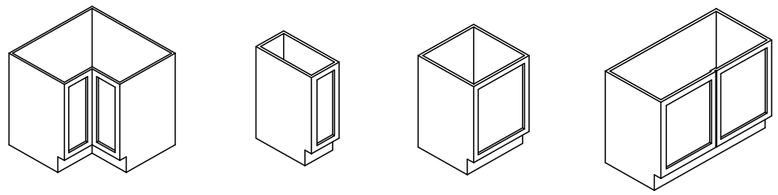
As part of the new home GCC homes design and fit the kitchen to the buyers specification. GCC would like you to use ***CAD software*** to design an example kitchen for promotional purposes.

1 Using the ***library*** of kitchen units and parts available design an exemplar kitchen and produce a CAD display like the example below.

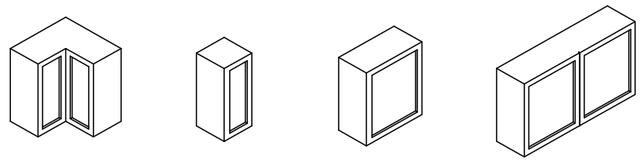
Basic Items



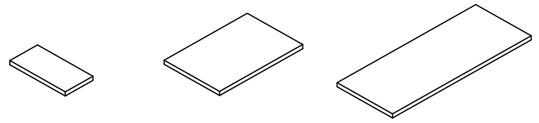
Base Units



Wall units



Worktops

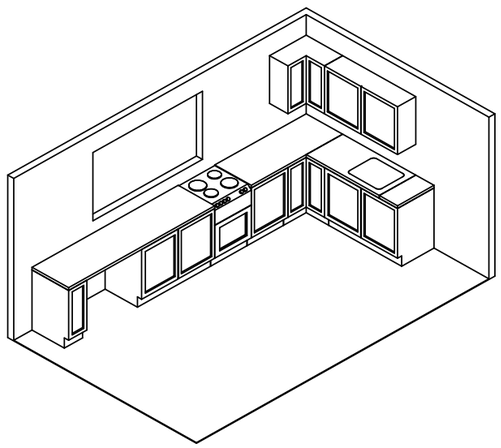


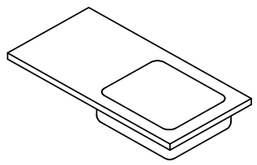
Things to consider!

Which library items will you use to construct your model?

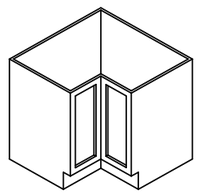
In the example shown the pupil used;

- The room, cooker, and sink..
- Corner and wall units.
- Corner and a variety of different sized base units..
- A variety of sizes of work top.

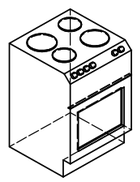




Sink top (1 : 15)



Corner base unit (1 : 20)

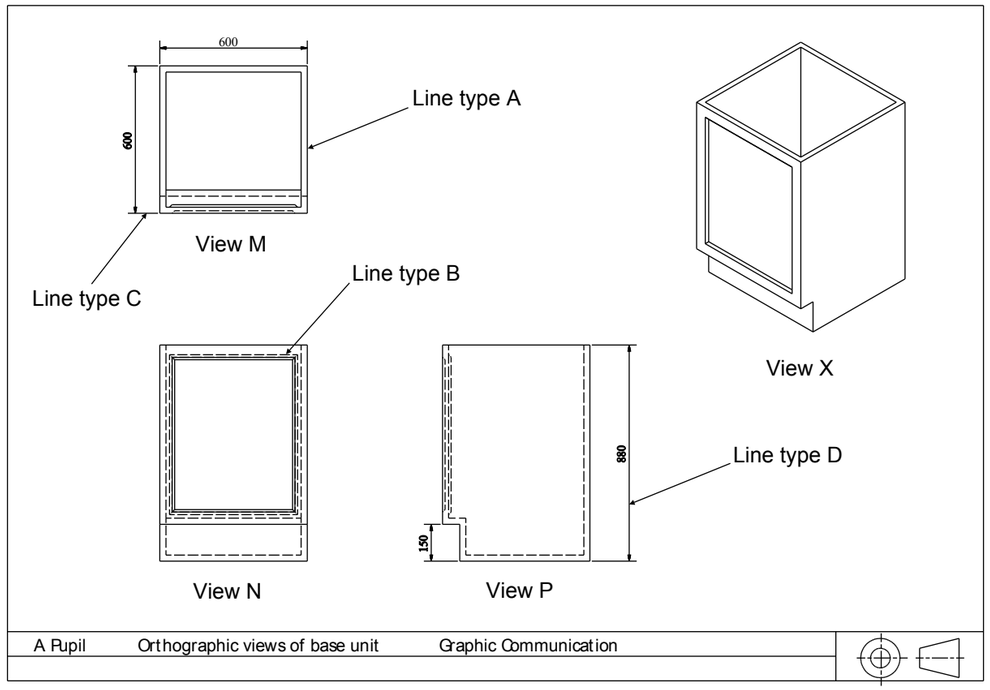


Cooker (1 : 20)

A Pupil	Kitchen Library	Graphic Communication	

	3D MODELLING	GCC HOMES	NAME		N5	GH3

items, including basic dimensions and hidden detail (like the example below).



To help the buyer understand the drawing please complete the ***key*** by stating the name of the BSI views and linetypes used.

View M _____ View N _____

View P _____ View X _____

Line type A _____ Line type B _____

Line type C _____ Line type D _____

Top Tip - You may want to look at your BSI and location drawing notes.

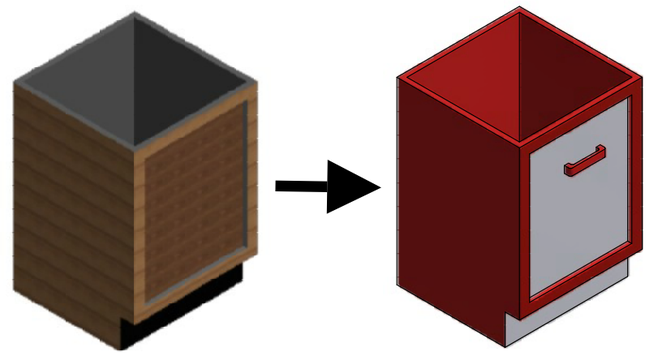
2a GCC homes would like to include an option where buyers can design their own units. This can be done by altering the colour scheme of a library item and/or altering the design by adding handles etc.

Things to consider!

Which library item(s) will you alter?

In the example shown the pupil;

- Changed the colour of the base units and wall units..
- Added handles to the base units and wall units.
- They even added a tap to the sink! (not shown)



2b Choose 4 of the following CAD sketching and 3D modelling commands you will use to create your own designs.

Arc, Circle, Line, Rectangle, Extend, Trim, Mirror, Pattern/Array, Fillet, Chamfer, Extrude(join), Extrude(cut), Revolve.

_____ _____

_____ _____

2c When ***assembling*** a model (like your kitchen) there are three separate types of 3D model which can make it easier to assemble the parts together or make them look more “real”.

Can you name the 3 types of 3D model?

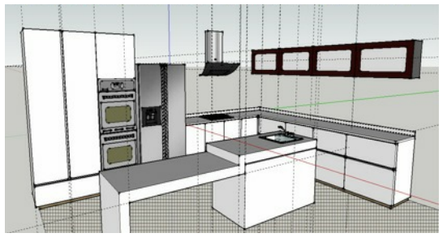
_____

_____

_____

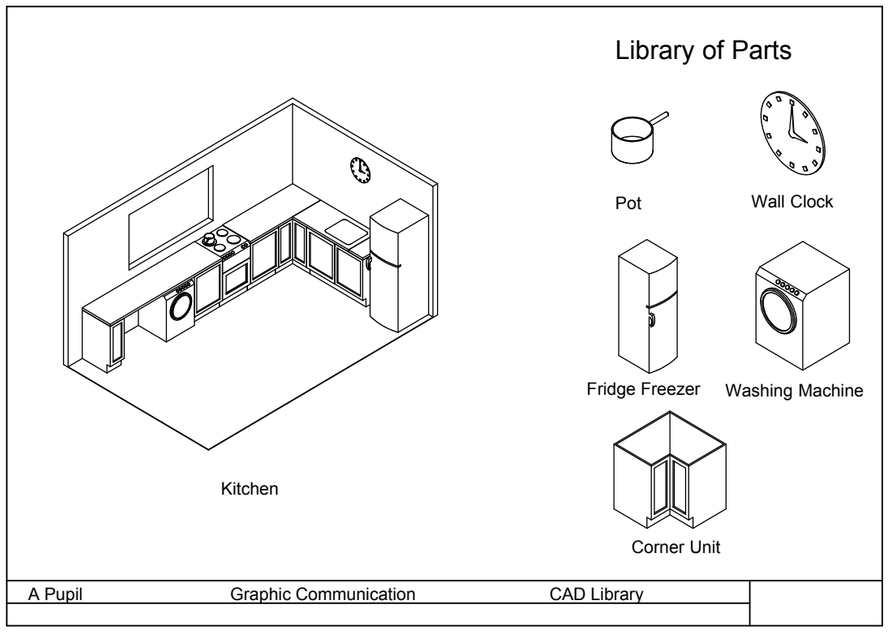
Top Tip - You may want to look at your Dimensioning and CAD/3D modelling notes.

	NEW LIBRARY ITEMS	GCC HOMES	NAME		N5	GH4



As well as re-designing the units GCC homes would like to include an design option where buyers can see other kitchen furnishings and equipment. GCC would like you to design other items to be included in the library of parts.

1 Design some kitchen furnishings and equipment that can be included in the library of parts, (such as; fridge freezer, washing machine, pots, toasters, wall clocks etc….). Produce a design sheet like the example below.



Things to consider!

How will you construct your model?

In the example shown on the other side of this page (a washing machine) the pupil used 3 separate parts to assemble the model.

- The base was ***extruded*** to shape, a corner was ***chamfered***, it was ***shelled*** to make it hollow, and finaly holes were ***cut (extrusion)*** to position buttons and the drum.
- The buttons were ***extruded*** to shape.
- The drum was ***extruded*** to shape, ***shelled***, the the front door added by extruding a shape and using ***chamfer*** to shape.

2 Produce a design sheet like the example below for at least one of your new library items.

Things to consider!

How will you present your model?

In the example shown (a washing machine) the pupil used 3 additional types of views to help explain how the model was constructed.

- Which view was used to show how the 3 components fit together?

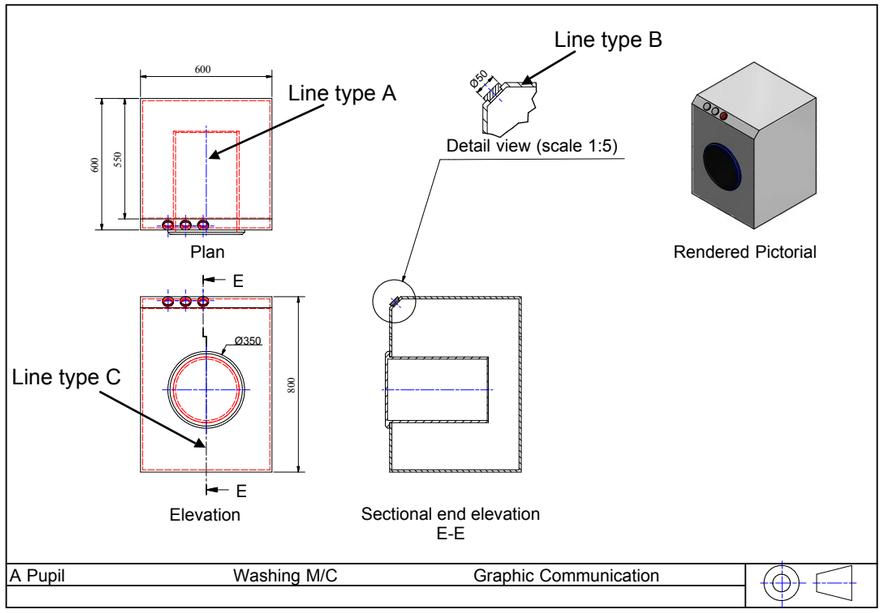
  _____

- Which view showed a scaled view of the button fitted in place?

  _____

- Which view was added to show how the washing machine would look “in the real world”?

  _____



State the name of the linetypes used at;

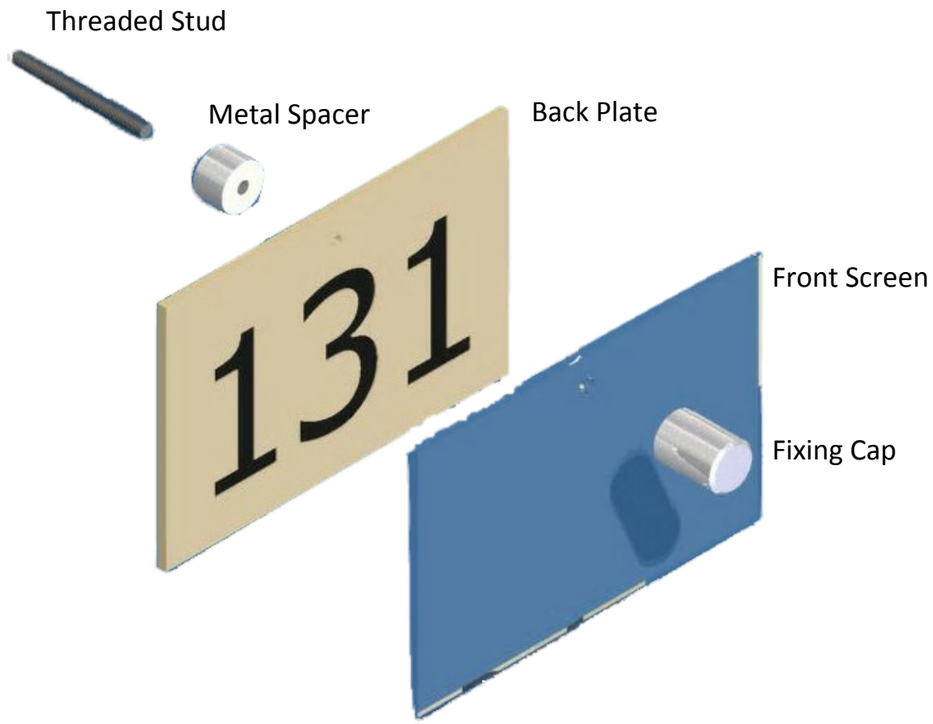
Line type A _____ Line type B _____

Line type C _____

Top Tip - You may want to look at your BSI and location drawing notes.

	NAMEPLATE	GCC HOMES	NAME		N5	GH5

1 A designer has produced an sketched idea for a nameplate to be used next to the front door of each of the house. GCC would like you to produce working drawings for the nameplate. The drawings should show orthographic views with necessary dimensions and linetypes (using correct BSI standards) and an assembly view.



Cutting List					
Part	**Quantity**	**Length**	**Breadth**	**Thickness**	**Notes**
Back Plate	1	120	80	3	You may choose the position of the hole for the threaded stud.
Plastic front screen	1	120	80	3	Position of the hole should be aligned with the back plate.
Fixing cap	1	20	Ø15	—-	Blind hole for fixing cap is 10mm deep. You may choose the size of chamfer on outer edge.
Threaded stud	1	45	Ø4	—-	Threaded studs to join all components and fix sign to wall (no need to show thread).
Metal spacer	1	10	Ø15	—-	Through hole for threaded stud.