

Suggested Exercises for Computer Aided Design

Exercise One

Possible activity for session plan one in the suggested scheme of work

Use a brainstorming session to gather examples of the types of use there might be for Computer Aided Design. Split into groups of five or six. Write down all the ideas, so that they are not forgotten. None of the ideas should be rejected. There should not be any discussion at this point.

When your group has finished, go through the notes, and draw up a list of people who might use CAD in their work and the type of drawings created.

Exercise Two

Try to arrange a visit to a company that uses CAD in their work (e.g. an Architects Office, a Design company, an Engineering company).

Exercise Three

Possible activity for session plan four in the suggested scheme of work

You work for a design company that produces kitchen products. Your project is to design a new teapot.

Using your CAD program:

- create a suitable grid
- draw the front elevation of your design, showing necessary dimension lines
- include a title block on your drawing, including:
 - the scale
 - the title
 - the dimension units
 - your name, and today's date
- print a copy of this drawing
- draw an end elevation, showing the dimensions
- add a title block, and print this drawing
- generate an isometric view from your two-dimensional drawing
- add a title block, save and print this drawing

Exercise Four

Possible activity for session plan three in the suggested scheme of work

You work for an engineering company that produces hard packaging. Your new project is to produce a design for an enamelled box to be used as a cover for a tissue box. There should be a slit in the top to allow for removal of the tissues. Using your CAD program:

- create a suitable grid
- draw the front elevation of your design, showing necessary dimension lines
- include a title block on your drawing, including:
 - the scale
 - the title
 - the dimension units
 - your name, and today's date
- print a copy of this drawing
- draw an end elevation, showing the dimensions
- add a title block, and print this drawing
- generate an isometric view from your two-dimensional drawing

- add a title block, save and print this drawing

Exercise Five

Possible activity for session plan five in the suggested scheme of work

You work for a company of architects. Your new project is to produce a design for a brick built summerhouse for a garden. Using your CAD program:

- create a suitable grid
- draw the front elevation of your design, showing necessary dimension lines
- include a title block on your drawing, including:
 - the scale
 - the title
 - the dimension units
 - your name, and today's date
- print a copy of this drawing
- draw an end elevation, showing the dimensions
- add a title block, and print this drawing
- generate an isometric view from your two-dimensional drawing
- add a title block, save and print this drawing

Exercise Six

Possible activity for session plan one in the suggested scheme of work

You work for a plastics company. You have been asked to design a pencil box to be given to schools in your area.

- create a suitable grid
- draw the front elevation of your design, showing necessary dimension lines
- include a title block on your drawing, including:
 - the scale
 - the title
 - the dimension units
 - your name, and today's date
- print a copy of this drawing
- draw an end elevation, showing the dimensions
- add a title block, and print this drawing
- generate an isometric view from your two-dimensional drawing
- add a title block, save and print this drawing

Exercise Seven

Possible activity for session plan six in the suggested scheme of work

You work for a furniture designer. You have been asked to design an outdoor bench with no back to be placed in local parks.

- create a suitable grid
- draw the front elevation of your design, showing necessary dimension lines
- include a title block on your drawing, including:
 - the scale
 - the title
 - the dimension units
 - your name, and today's date
- print a copy of this drawing
- draw an end elevation, showing the dimensions
- add a title block, and print this drawing

- generate an isometric view from your two-dimensional drawing
- add a title block, save and print this drawing.

Exercise Eight

Possible activity for session plan six in the suggested scheme of work

You work for a furniture designer. You have been asked to design a handle for a cupboard. See example below:



- create a suitable grid
- draw the front elevation of your design, showing necessary dimension lines
- include a title block on your drawing, including:
 - the scale
 - the title
 - the dimension units
 - your name, and today's date
- print a copy of this drawing
- draw an end elevation, showing the dimensions
- add a title block, and print this drawing
- generate an isometric view from your two-dimensional drawing
- add a title block, save and print this drawing

Other Exercises

Look at everyday items and visualise how they were drawn in a CAD package prior to production.

Design a CD holder that will be both easy to carry and holds four CDs.

Design a rest for a mobile telephone – this should be able to hold the telephone ensuring it can be easily removed to answer.