Summary and questions

Part 2 of 3

- You learned these essential design skills: first angle orthographic projection, the concept of drawing three different views, different line types.
- You progressed to more advanced design skills, more complex 3D objects drawn in orthographic projection with instruments. A design problem: a flight of stairs and a wheelchair ramp; a design brief: included specifications, sketches and a plan.
- You learned the following about structures: forces can be static or dynamic; loads can be even or uneven; the strength of materials under the action of forces; tension, compression and bending of beams; properties of various construction materials.
- Investigation skills: you read a scenario, identified a problem, investigated solutions and learned about bidding for a tender.
- Design skills: you sketched, evaluated and adapted your ideas, wrote a design brief and drew a flow chart.
- Making skills: you did working drawings.
- Costing: you drew up a real-life budget.
- Making skills: you made a model of a viable solution to the problem.
- Evaluation skills: you created an evaluation instrument and used it to evaluate other teams' work.
- Communication skills: you presented a tender bid.

Figure for Question 30 on page 59

7 Explain all the rules for a good design brief.

8 Specify all the information needed on a complete working drawing.

9 For safety reasons, you need to consider the properties of the material choices in structures very well. Name a few reasons.

10 Give two reasons why it is important to use the right line type when doing drawings.

11 Give two reasons why it is important to use drawing instruments.

12 Give three reasons why it is important to include specifications when solving a problem.

13 Briefly explain the need for a design brief.

ANSWERS

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