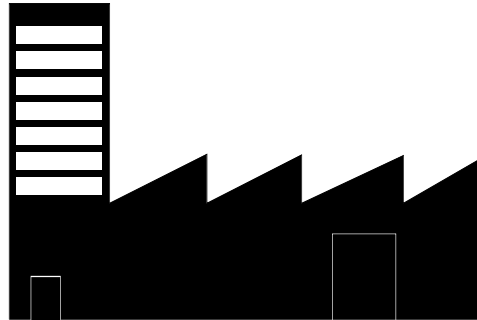


Cable Educational's  
Design Technology

# HOMWORK BANK

## Industry K/S4



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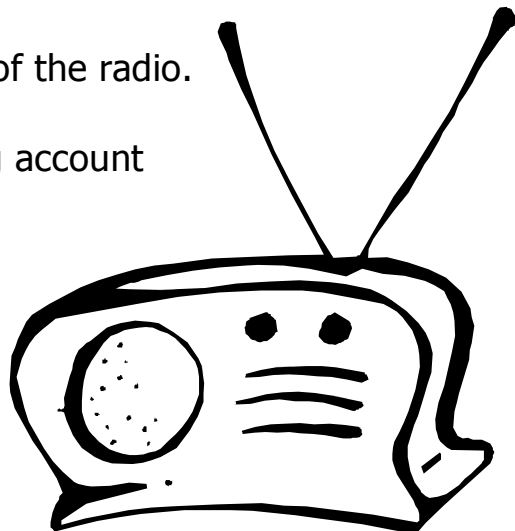


## BAYGEN RADIO

Find out all you can about the Baygen wind up clockwork radio.

1. Who was the inventor of the clockwork radio?
2. Why did he want to invent it?
3. What is the source of power that the radio uses and how is this power converted?
4. Is the radio still being manufactured today?
5. Find a picture of the radio.

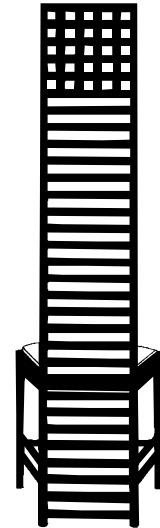
Write an interesting account of all your findings.



## FURNITURE JOINTS

Select an item of furniture such as a coffee table or a dining chair and study carefully how any two of its parts have been joined together.

- 1) Write down a description of how these parts have been assembled. Give details of any special screws or brackets used. Say whether the joint can be disassembled (taken apart) or not.



- 2) Now think about what special procedures would be needed to make the parts in bulk quantity in a factory. Would special machines be used? In what form would the material be bought? Would assembly jigs be used?

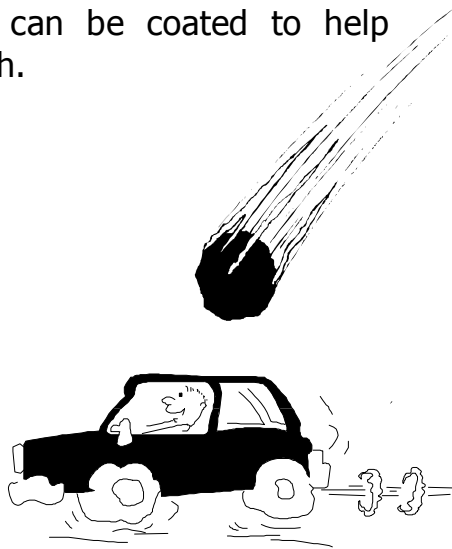




## METAL PLATING

Most objects made from metal will suffer from varying degrees of corrosion if the surface of the object is exposed to the air. To prevent oxygen from coming into contact with the metal surface it is usual to coat the metal object in some way. The list below names some of the more common ways in which metal objects can be coated to help preserve the surface finish.

- Plastic coating
- Painting
- Anodising
- Chromium plating
- E.P.N.S.
- Galvanising

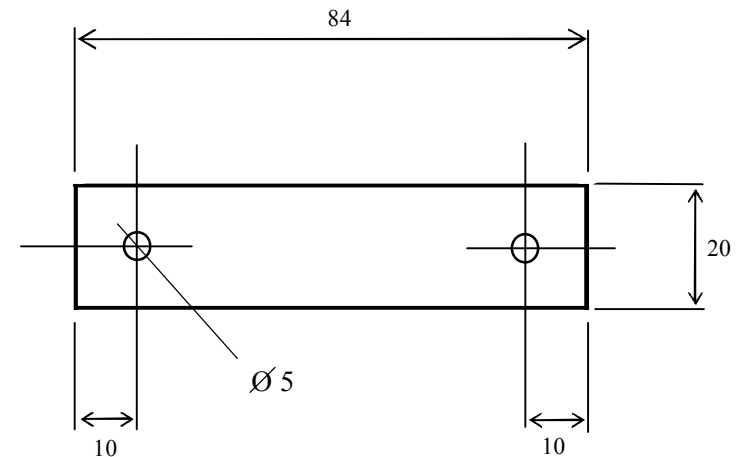


For each of the six methods in the above list, give a brief description of what the process is, name the material that is used for the protective coating and say which metal or metals are usually protected in this way. State also an everyday object that is usually given this method of surface protection.



## DRILLING JIG

The steel component shown below is to be produced in large quantities in a school workshop. The component is manufactured from steel strips of the correct width and thickness. One hundred pieces have already been cut to length and now need to be drilled.



Produce sketches of a design for a simple drilling jig that can be used on an ordinary pillar drilling machine.

Your design should have explanatory notes giving information about materials and jointing methods etc. Your diagrams should include all important dimensions. Use 3D sketches or orthographic views as appropriate.





## PRODUCTION METHODS

In connection with how goods are made in factories, find out all you can about :-

Economic Batch Size	Batch Production
One off Production	Mass Production

Answer the questions below:

- 1) What is 'mass production'?
- 2) Why should mass produced items be very carefully designed?
- 3) What is meant by the term 'batch production'?
- 4) Thinking about a technology project you have done, suggest one component from your project and describe how mass producing it might be done differently from the way you produced it. Would assembly jigs be used?



## NOTES

