Iterative design development

This design exercise will develop your iterative designing capability.

Iterative design development is the process of analysing, evaluating and modifying designs, then repeating the process until a suitable design is found.

You will start with an existing design and develop the design into something new, i.e. a pencil rack with an outline shape of a town or country.

A typical pencil rack is illustrated below. Your challenge is to design a pencil rack based on the shape of a town or country.

Pencil racks are typically rectangular but in this exercise you will be designing a pencil rack with an irregular shape.

Design a pencil rack based on the outline shape of a town or country.
Design Brief

Design a pencil rack based on the shape of a town or country.

Design specification

The pencil rack must:

- hold at least 6 pencils so that they do not wobble about but the pencils must be easy to remove from the pencil rack
- be made from solid wood (i.e. not a manufactured board)
- have a shape based on the shape of a town or country
- have holes that are all the same depth
- be stable and not fall over easily
- be smooth to touch
- have a "finish" applied to it, i.e. the pencil rack must be varnished, lacquered, painted or waxed etc.

Recording your ideas

Use notes and sketches to record your ideas as they develop. Each of your ideas and designs should be analysed and evaluated to check if an improvement can be found. Each improvement should be recorded, then analysed and evaluated again.

Your final design must be drawn to scale using orthographic projection.