



Section or elevation drawing

This activity introduces children to the techniques of drawing an accurate plan. Archaeologists need to make detailed drawn plans of their discoveries because once they have dug up a site, the archaeology is destroyed. They need to make a record so that archaeologists in future can look at what they discovered and make their own interpretation. A “section drawing” is a plan made of the different layers of soil that you can see in the vertical side of an excavated trench as you dig down. An “elevation drawing” is a detailed plan of a wall or other vertical part of a building. Both of these drawings are done in the same way.

This activity fits in well with the ‘Surveying a Classroom’ activity in which children draw a horizontal, bird’s eye plan of their classroom.

You will need:

- Drawing boards or clipboards
- Tracing paper
- 1cm graph paper
- Sellotape
- Sharp pencil
- Nails
- String
- 30m Tape
- Hand tapes
- Line level: this is a spirit level that can be clipped onto string and can be bought at DIY stores
- Mock excavation box (optional, see below)

Activity:

You are going to create a vertical plan drawing of either a wall or a section of a mock archaeological dig.

Set up the drawing boards by fixing a layer of graph paper to the drawing boards with a layer of tracing paper over the top. In this way the children will be able to use the graph paper as a guideline without having the lines on their finished plan. You can choose to draw a brick or stone wall in your school grounds or you could create a mock section. To do this build up layers of different coloured soils and sands in a clear plastic box so

that the children can look at the different layers through the sides of the box and draw their section.

Section drawings are done by making accurate measurements from a fixed line. Start by creating this line using the 30m tape and a length of string stretched tightly together between two nail points on the wall (or on a smaller scale, a tape stretched between two edges of the mock section). The tape is for measurements and the string there is to make sure the line is level. To do this, clip the spirit level to the middle of the string and raise or lower the nails until the bubble shows the line is level. You should aim to have your level line half way up what you want to draw rather than at the base or top of the wall/section.

Most section drawings are drawn at a scale of 1:10, so work through with the children that for every 1cm on their page, there is 10cm in real life, i.e. every little 1mm square on their paper stands for 1cm. Begin by marking on the page the heights and distance apart of each nail; nails are shown on plans as a dot with a short line coming out at each of the four compass points. The children can then draw a dashed line between these dots to plot their drawing from.

To record the layers/bricks that they see the children will need to measure up or down from the level line to the point that they want to record. For example, to draw a rectangular brick situated above their string line, they will need to pick a corner of the brick to plot, measure from the corner down to the string line with the hand tape (making sure it meets the string line at a right angle) and record the two measurements: how far along the string line the point is and how far up from the string line it is. A brick corner that is 30cm along the string line and 45cm up from it will therefore be plotted onto their plan 3cm along and 4.5cm up from their dashed line. As with co-ordinates on a map, the horizontal measurement comes first, then the vertical. To draw the whole brick they will obviously need to plot the other three corners and then join the dots up. This may seem complicated but once they have plotted a few points the children tend to pick this up very quickly.

Useful questions:

- Why do archaeologists need to record what they see?
- What is a scale drawing?
- Why do we need a level line to take our measurements from?
- Why do we need to make sure we have a right angle from our level line to the point we are measuring?

Research Opportunities:

- Look at real elevation and section drawings and work out how big they would have been in real life.

Useful Websites:

<http://news.wessexarch.co.uk/wp-content/plugins/falbum/wp/album.php>
www.britarch.ac.uk/yac/index.html

Creative Minds Investigate! Archaeology

	National Curriculum	QCA Unit
KS 1	Geography: 2b, e Maths: Ma3 History: 4a	Numeracy strategy
KS 2	Geography: 1b; 2b, e Maths: Ma3 History: 4a, b	Numeracy strategy History: Unit 6

This activity was donated by the Young Archaeologists Club.

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Young Archaeologists' Club

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The Creative Minds project works with museums libraries and archives across the Yorkshire region, to provide young people with learning opportunities in Science, Technology, Engineering & Maths (S.T.E.M.). This ground-breaking project is the first of its kind in the country and is managed by MLA Yorkshire. This pack was developed by Creative Minds with funding from Yorkshire Forward.