Archaeology Detectives –
D. Surveying Your Site

Activity plan

This lesson is in two parts, a classroom based session investigating what archaeological site plans are, and a practical session developing measuring and drawing skills.

Learning Intention

- To know why and how archaeologists carry out accurate measured surveys of sites, monuments and buildings
- To be able to record and map a structure using the tape and offset method

This lesson will introduce / reinforce key mapping skills:

- Taking accurate measurements
- Representing objects in the real world on a two dimensional drawing
- Recording shape
- Drawing at scale
- Creating a plan of a site

Curriculum Links

To extend my mental map and sense of place, I can interpret information from different types of maps and am beginning to locate key features within Scotland, UK, Europe or the wider world.
SOC 2-14a
I can draw 2D shapes and make representations of 3D objects using an appropriate range of methods and efficient use of resources.
MTH 2-16c

Heritage Hero Award

Engage Activity

Resource List

For classroom activity

- Digital / paper copies of measured drawings to review (you will need to prepare)
- Starter activity (in **Learning Resource D**)
- Set of questions to answer (in **Learning Resource D**)

For Measuring Activity

- Measuring tapes as needed - 5m / 30m / 50m
- Graph paper
- Clipboards
- Rulers
- Pencils
- Erasers
- Pencil sharpeners

Research needed before session

Allow **1 hour** for preparation time.
There are 3 items to prepare before this session.

1. Identify and duplicate measured plans of your site (if possible) or another site.

Site plans are accurate measured drawings of a site, monument or building. They are an example of mapping a place in order to record what it looks like – its measurements, its key features, its orientation, and even the condition of the walls (whether they are solid, or if they have fallen for example).

Site plans can be drawn at a number of different scales depending on the level of detail archaeologists want to show. A hillside with several historic farmsteads might be recorded at a small scale (eg 1:10,000), while an individual farmstead might be recorded at a scale of 1:100). The smaller the scale, the less detail can be shown. Drawing conventions are used to show detail within the drawing, and these change depending on the scale used.

A thorough, but easily understood introduction to measured drawing techniques and drawing conventions can be found in the **Scotland's Rural Past** publication '**A Practical Guide to Recording Archaeological Sites'**. There is also a handy video '**Measured Survey using Tape and Offset'** which explains how to do tape and offset drawings. Both are accessible through the **Scotland's Rural Past** website, a link to which can be found on our links page.

You can look at different measured drawings to investigate how archaeologists record different types of site. If your organisation has paid and subscribed to it, you may want to look for images on **SCRAN** – find the link on our links page.

For this activity we are going to suggest using the Historic Environment Scotland's online archive **Canmore** – find the link on our links page. Historic Environment Scotland keep records of all archaeological work undertaken in Scotland. You may find that your site has already been recorded and planned, and the plan digitised and made available online. However, if not, there are still many thousands of interesting site plans you can use to illustrate the usefulness and practicality of measuring and drawing.

There are many ways of searching for archaeological site plans on **Canmore**. Here is a quick guide to the easiest way to find site plans:

I. Type in the place name in the Search box on the top right. You could also try the search term PLAN.
II. Select Images in the drop down box, and click on the blue search button (it has a picture of a magnifying glass on it).
III. The results of your search will be displayed. It may be easier to find useful images if you chose to show 96 images per page.
IV. The results will show any archaeological site plans, alongside other images.
V. If you filter these images you can reduce the number of results to browse through, while ensuring a high number of good quality plans are shown. In the Filter box at the left hand side of the screen select Rcahms in the Collection drop down box. This will filter out many of the non-archaeological plans.
VI. Click on any image to view it.
VII. Copy the image by clicking on Download beneath the photograph.
VIII. This takes you to a page with licensing information. **Canmore** license images for educational purposes – the correct attribution and licensing information is shown above each enlarged photograph. The larger 800px images are for educational use.
IX. Click on Download to save the image.
X. You can add any of your own images to the Powerpoint Learning Resource.

2. Preparing a suitable set of questions about your site

Learning Resource D has a generic list of questions relevant to investigating archaeological site plans of a large number of different sites and monuments. Not all of them will be relevant to your site, its time period or its location. We recommend you select the relevant questions and delete the others to avoid confusion. You are encouraged to add any questions of your own!

3. General overview of resources

We suggest you always review our resources and amend as necessary before running the session.

Timings

Activity	Summary	Time
Starter – identifying key features	Using **Learning Resource D** ask the group to look at the images of archaeological site plans. Look at the questions, and think about the answers (possible answers included in Learning Resource).	**30 mins**
Introduction	Explain to the group that you will be using this information to help them create their own detailed and accurate measured drawing. A practice session in the classroom or around the school will be useful experience for measuring a site on a field trip or site visit.	**5 mins**
Main activity	Using the guidance from **Scotland's Rural Past**, create your own measured drawing of the classroom, the school grounds, or some other familiar feature using the tape and offset method. The link can be found in our links page. Use what was learned about measured drawings in the Learner Resource as inspiration for the groups own drawings.	**1 hour**
Plenary	Group share of information. What did the group find challenging? How might the group apply what they know to a real archaeological site?	**15mins**

Extra Activities/ suggestions on scaling up and down

If you want to discover more advanced methods of measured survey you may like to attempt triangulation using a measuring tape pegged parallel to your site as a baseline. Using two fixed points (e.g. 10m and 30m) measure with tapes to points on your site. These can be recorded on graph paper at a scale of 1:100 or any other suitable scale as follows:

- Set out a baseline parallel to your site, using a tape secured to the ground.
- Mark the positions of two fixed points on your tape, point A (10m), and point B (20m). These will be the positions from where you will take your measurements.
- On graph paper draw the baseline at the bottom of the page.
- Using an appropriate scale mark on the baseline on your graph paper the positions of point A and Point B (in our example, at a scale of 1:100, these would be at 10cm and at 30cm).
- Using a tape, measure from point A to the feature you want to record (call this point C). Record the measurement AC, then do the same again, measuring from point B to point C. Record the measurement BC.
- Using a set of compasses you can draw two arcs. Set the compass to the scaled measurement AC and draw an arc from point A.
- Do the same for the scaled measurement BC.
- Where the two arcs intersect is the scaled and accurate position of point C.

- By continuing to take measurements of other points on your site (D,E,F etc.) you can plot the principal features of your site.
- By joining together these points, like a dot-to-dot picture you will accurately record the outline of your site.

A mapping activity can be simplified by asking the group to translate 3D features of buildings into 2D shapes at appropriate sizes relative to one another. These can be colour coded and labelled with a key, and measurements added.