Analysing changes in features and landscapes:

This activity will guide you through the process of map regression in an urban area. Map regression is the study of a sequence of maps to reveal changes in individual features and the landscapes you can find them in. It’s a useful way for archaeologists to study changes in the landscape – maps can act as a historical record and can help provide information on potential archaeological sites.

Maps not only show these landscape changes and potentially when these changes happened, they can also show what features are important to map makers at that time. For example, Thomson’s 1832 map focuses on the main features and places of importance of an area, whereas the Ordnance Survey maps give a lot of detail on individual field boundaries. Both of these aspects of the maps are associated with historical events at that time.

One thing you need to try and remember is who created the map. A map maker will have a purpose for producing that particular map and it’s important that you understand why the map is being made and who the main audience was.

Sometimes a map maker will not show a feature because it’s not important to the map’s purpose. For example, if a map is being made to show safe harbour areas, upland agricultural areas are not relevant. However, even though the upland agricultural areas aren’t shown on the map doesn’t mean they didn’t exist!

In this activity, you will also learn how to choose the right information from historic maps which are relevant to what you’re researching and how to record and present your findings. To guide you through the process of map regression there are three case studies:

- rural (online)
- urban (PDF)
- industrial (PDF)

Work through the urban case study on the following pages.
Before you start looking at historical maps, it’s a good idea to identify what information you need to find out. You should start by asking these questions:

Why are you looking at these maps? What question is it that you want to answer? Starting with a question will help you stay focused while looking at a series of historic maps and it will help you identify what aspects of the map you need to pay attention to. Your question could be ‘when did Dundee Bleachworks go out of use?’ or perhaps you even want to start with a more general question, like ‘how has this landscape changed within the last 200 years?’

Case Study - Dundee Bleachworks

A local history group have been researching the former bleachworks industry along the Dighty River in Dundee. They are particularly interested in one site called Dundee Bleachworks as they believe parts of it still survives. They want to find out more about the Bleachworks and the development of the general area. The group would like to answer

- How has the site of Dundee Bleachworks developed?
- What features might still survive today?
Step 2: Choose the limits of your study area?

Although it might be interesting to find out as much as possible about your local area, it will be easier to answer your main question by setting a study area boundary.

Your study area boundary should include the features you are interested in and some useful landmark points such as buildings prominent natural features or place names. Although we have used a historical map here, you might find it easier starting with a modern map on which you can trace your study area boundary.

Case Study - Dundee Bleachworks

For their study area, the group have chosen to include the bleachworks together with some associated features like the drying grounds and bleaching green. By including these features, the group believe it will answer their main questions. The study area will also help them work out what maps they need.
Step 3: Identify your landscape reference points?

Identify two to three fixed landscape reference points which will help pinpoint your location as you make your way through the historical maps. Be careful not to pick obvious reference points though! For example, a supermarket from the 1990s is not going to be found on the same spot in the 1850s!

It’s also important to have consistent reference points because maps can be so different that sometimes it’s easy to get lost within one map sheet! Historical maps can often show different scales or use different symbols to show the same feature so using a place name or a burn can sometimes help you accurately identify your study area. Choose reference points that have not changed very much over time.

Case Study - Dundee Bleachworks

The group have chosen two reference points which they believe have been consistent over the last two hundred years. They have included as one reference point a placename which they believe will help them look for the general area on earlier maps. They also know that the road was once the Kings Road and therefore will appear on earlier maps. Therefore, as their fixed reference points, the group has chosen the road and the placename Longhaugh.
Step 4: Select the maps which will tell you what you need to know?

Go back to your original question and think about which map sources will help you. Consider the scale of the map (is it detailed enough?), the date of the map (will the features appear on an early map?) why are they producing the map? And finally the source of the map (will a naval chart tell you about a land-based limekiln?)

Look at every map here which shows your study area – not all of them are going to be useful. You might want to narrow down your list of maps to those that will be the most help in answering your original question.

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Case Study - Dundee Bleachworks

The group are keen to understand how the Bleachworks have progressed over time.

- Map 1 – Thomson 1832 - doesn’t show the Dundee Bleachworks, but it does give further information on the surrounding area.
- Map 2 – Ordnance Survey 1st Edition map – one of the first detailed maps available of the area
- Map 3 – Ordnance Survey 1903 edition map – which shows the development of the site
- Map 4 – Ordnance Survey 1957 – this map the start of the change in land use within the later 20th century
Step 5: Start your map regression

Now that you have selected your maps, you can look at them one by one and start identifying any landscape changes. Think about the skills you learned in other areas of this step-by-step guide and use them here to help you. What changes can you identify between the different maps and how can they answer your original question? What features are shown, what features are no longer shown? Why might a feature no longer be there? Was it built-over by another feature or was it no longer important?

Case Study - Dundee Bleachworks

<table>
<thead>
<tr>
<th>Site</th>
<th>Map 1 Thomson 1832</th>
<th>Map 2 Ordnance Survey 1st map 1865</th>
<th>Map3 Ordnance Survey 1903</th>
<th>Map 4 Ordnance Survey 1957</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dundee Bleach-works</td>
<td>While the Dundee Bleachworks is not shown, the Longhaugh Estate is annotated and other mills are shown in the general area.</td>
<td>A collection of buildings are named as Dundee Bleachworks. A Bleaching green and a drying area, as well as a Gasmeter are also depicted.</td>
<td>The collection of buildings shown on the previous map has now been combined into one big building. A row of terraced housing has been built to the south. The drying ground and the bleaching green have extended to the south.</td>
<td>While this is a different scale to the other maps, it shows that the main building relating to the bleachworks is still upstanding. The map also shows that the area is beginning to be re-developed as housing.</td>
</tr>
</tbody>
</table>
Step 6: Recording your map regression and gathering your results

To continue your understanding of map regression, it’s important that you make a thorough and accurate record of your work. This will save you time later on! You might find it helpful to create a gazetteer, or list of the changes you have seen for each feature on the map you are interested in. Remember to always keep a detailed record of the map reference so you can refer back to it at any point. Important things to record include:

- The title of map
- The author of the map
- Scale of the map
- The date the map was surveyed
- The date of publication

Here are some suggested ways to reference your map

*John Thomson, Northern Part of Argyllshire, 2¾ inches to the mile, ca. 1:170,000, published 1824.*

*Ordnance Survey, Argyllshire XV, 6 inch to the mile (1:10,560), surveyed 1782, published 1875.*

You might just be looking at your study area for fun so you may not be looking to produce a report of your map regression, but if you are, think about how you might reference the maps within your text.

It’s important to be consistent in your descriptions, to be accurate with dates and provide detailed but clear descriptions of the landscape changes. Think about how someone who might read your research at a later stage will interpret your work.
Case Study - Dundee Bleachworks

The group have now finished their map regression exercise and found that there was good map coverage of their study area. They believe that the site was built sometime in the early 19th century. Thomson’s 1832 map does not depict the bleachworks, however the Ordnance Survey 1865 map does.

The expansion of the site (depicted on 1903 map) suggests that production had increased in later part of the 19th century. The 1957 map shows how Dundee is beginning to develop post-war with large expansion of housing. Although the group could not find out what features are still upstanding, they now have a better idea of where to look for surviving features.

The group will now look at further information (such as aerial photography and historical records) to enhance the data they have collected from the map regression. See the ‘go further’ section for links to some of the resources the group went on to look at.