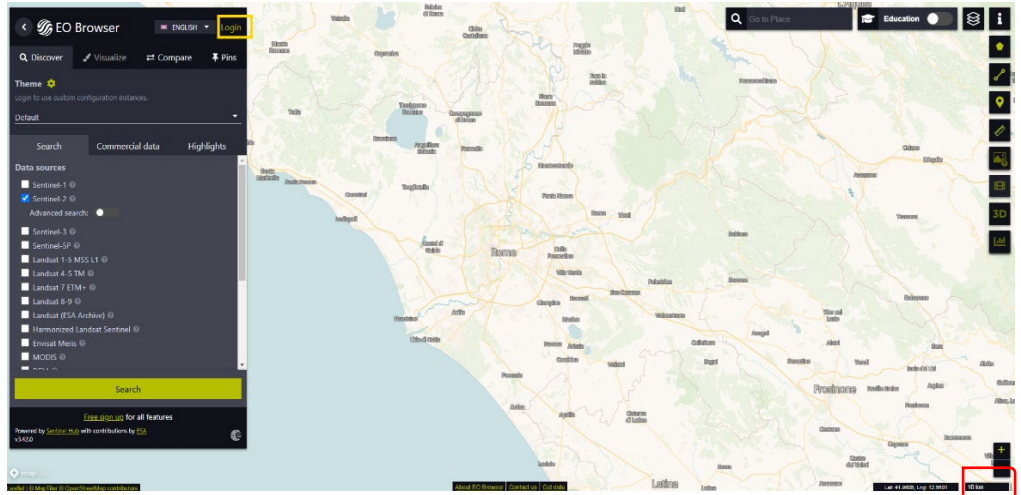


HOW TO USE EO BROWSER TO FIND SATELLITE IMAGES FOR YOUR CLASSROOM

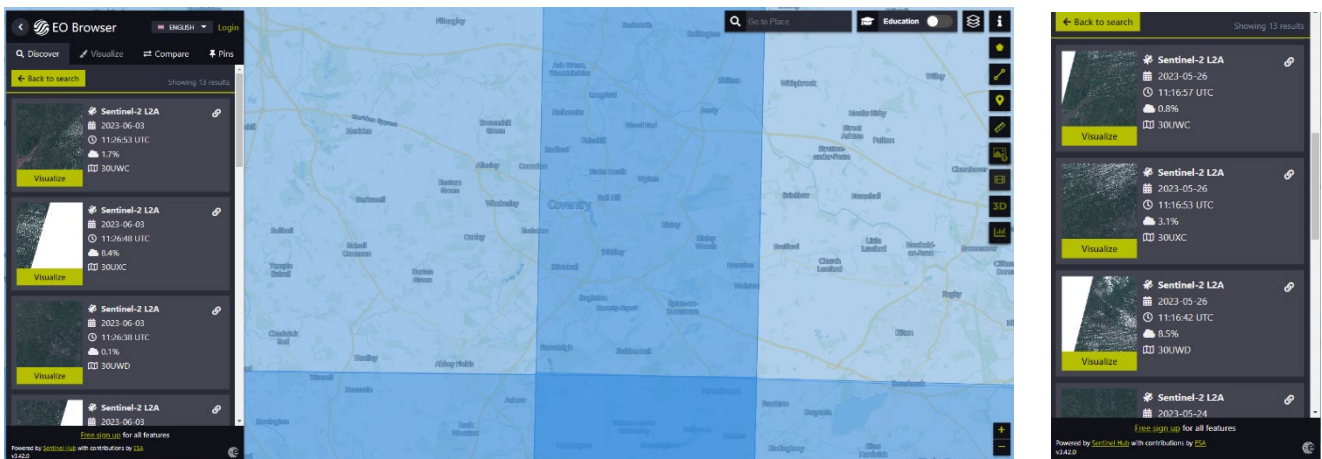
The EO Browser website gives you access to data from Landsats, Sentinels and some other satellites. These have a resolution (in visible wavelengths) of 10–30 m per pixel so, while you won't be able to pick out individual houses or vehicles, as you can with commercial imagery, you will be able to identify natural and human features in the images you create.

1. Go to <https://apps.sentinel-hub.com/eo-browser/>
2. Log in or create an account. (I've put a yellow box round the button for doing either of these.) You can explore and download captioned images anyway but an account allows you to use more options and costs nothing.

3. Search for the place you want using the box at the top of the window, or scroll and zoom on the map to find the area you're interested in. You're likely to get reasonable results if the scale bar at the bottom right (red box) shows no more than 5 km and no less than 500 m.

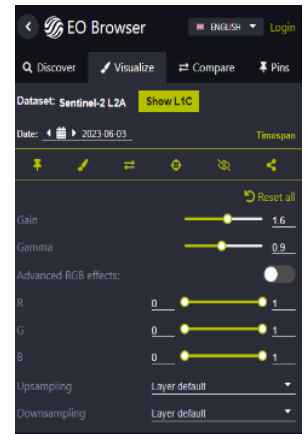
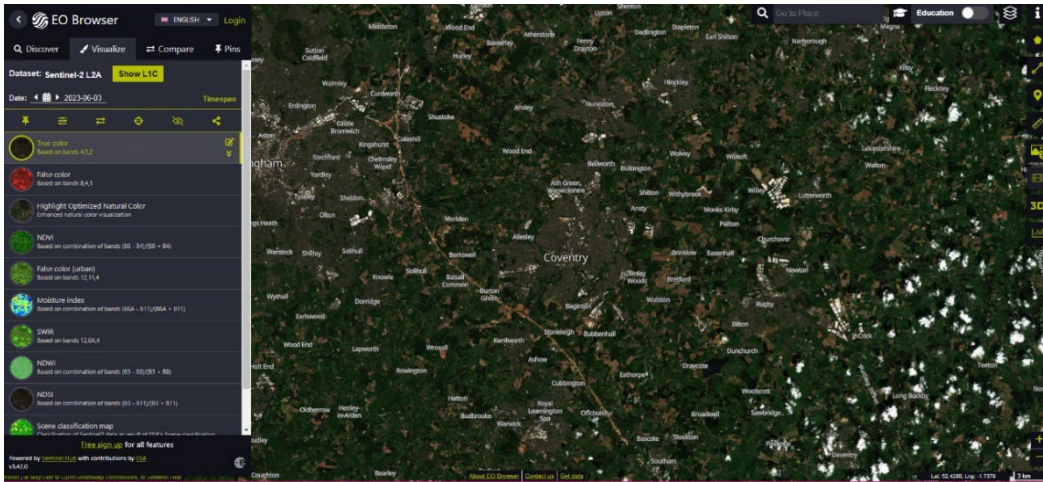


4. For now, leave most settings as they are. However, if you're looking for a UK location, it is a good idea to slide the **Advanced search** button to the right and adjust the **Max. cloud coverage** to about 20%.
5. When you hit the big green search button, the window changes to show all relevant results from the last month. In this example, you can see that the first few listed images are all from the same date a few seconds apart. The blue areas on the main map show the area each tile covers (you can think of a tile as an individual photograph from a strip). If you hover over an item in the list, the area of the map the tile covers turns green. It may be just a tiny area of your window in a corner of the screen!



6. Scrolling down the list using the slider gives similar results from another couple of dates – however, it looks like there is more cloud on the images from the 26 May, so I'm going to stick with 3 June. (See below for what to do if you're not so lucky and there's nothing suitable from the last month.)
7. Once you've found a date where there might be a good image, click **Visualize**. The screen shows the tile you have selected and offers you several different ways of viewing it. For now, stick to **True colour**.

- The image EO Browser produces is often quite dark. Click the second button in the row above all the circles – the one showing three sliders. This opens a new window that allows you to tweak the brightness and colours. It doesn't offer the range of option or degree of control of an image-processing programme such as Photoshop, but it is often enough to improve the appearance of the picture.



- The download image button is half way down the list of icons on the right of the window.
 - The **Basic** tab produces jpg or png that has the same resolution as on your screen and allows you to choose whether or not to show caption (that is, the title) and the map overlay (that is, the names of places).
 - You don't get the option of keeping place names on a **High-res print** – just captions – but you can get a much larger image (in this instance, about 9900×4600 pixels – so it prints out at high quality at 84×38 cm). Remember that the larger image you download the bigger print you can make but the more storage it takes up.

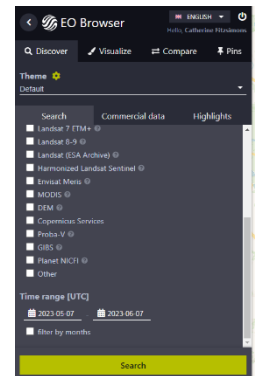


WHAT TO DO IF

YOUR SEARCH RETURNS NO RESULTS

Use the bar on the right to scroll down to the bottom of the search box. You then have the option to change the date range. Searching over a longer period, or in a week when you know skies were clear, or in a different season should give you something!

Another option is to up the % of cloud cover you're willing to accept. A scene or/and individual tile might be half covered with cloud but the bit you want could be OK.



THE PICTURE CUTS OFF PART WAY OVER THE AREA YOU WANT

This can happen if the place you want is on the border between two different strips of satellite images – information from one half of the area is collected on one pass, and from the other half on a different pass, maybe a couple of days later. When you search, EO Browser looks for any tile that covers part of the screen and meets the criteria you have set. In this case, all tiles that covered Milton Keynes were cloudy.



- Your first option is to increase the amount of cloud cover you're willing to accept or/and the date range.
- If that doesn't work, you could try using Landsat 8/9. This has larger tiles (because the resolution is lower) often with different borders.
- If you are planning to use the image for educational or charitable purposes, then, if all else fails, contact EODetective@nceo.ac.uk and we may be able to help (although we can't promise to always have an answer)!