

SPATIAL TECHNOLOGIES: NEW TOOLS

My top geospatial tools of 2022

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Every year there are more and more great geospatial tools available to teachers to help them build their students' geospatial skills. Every year I choose a list of my favourite tools of the year in a masterclass. You can find a QR code at the end of this article that will take you to this year's video if you would like more detail on the tools that I discuss.

To make the list the criteria is simple, the selected tools will:

- have caught my attention this year,
- relate to the content of the Australian Curriculum,
- be easy to use and implement in the classroom, and
- strongly engage students' interest in geographical issues.

This year I've selected five tools that I feel have met these criteria and I present a short summary of each below.

1. Google Earth Projects

Google Earth has recently moved to a browser-based version that has some useful features, data and tools. One of the best additions has been Google Earth Projects which allow you to create and save tours, or virtual field trips, when you are signed in with a free Google Account. Of course, as you are using Google

Earth, your Projects will sit on top of the 3D world of Google Earth that is so familiar to students now.

Each project is made up of Features. Features can be points, lines or shapes of varying colours, shapes and sizes. You can build images and video into each feature and organise them into a specific order for your tour.

The projects are very easy to create and can be shared as a URL or presented on a large screen.

You can use Google Earth Projects to create resources for your students that contain text, questions, lists and links to other online resources. Or alternatively, your students could use Google Earth Projects to report back to you on in-class investigations or fieldwork they have undertaken.

Google Earth Projects are part of the Google Earth suite of tools by Google.

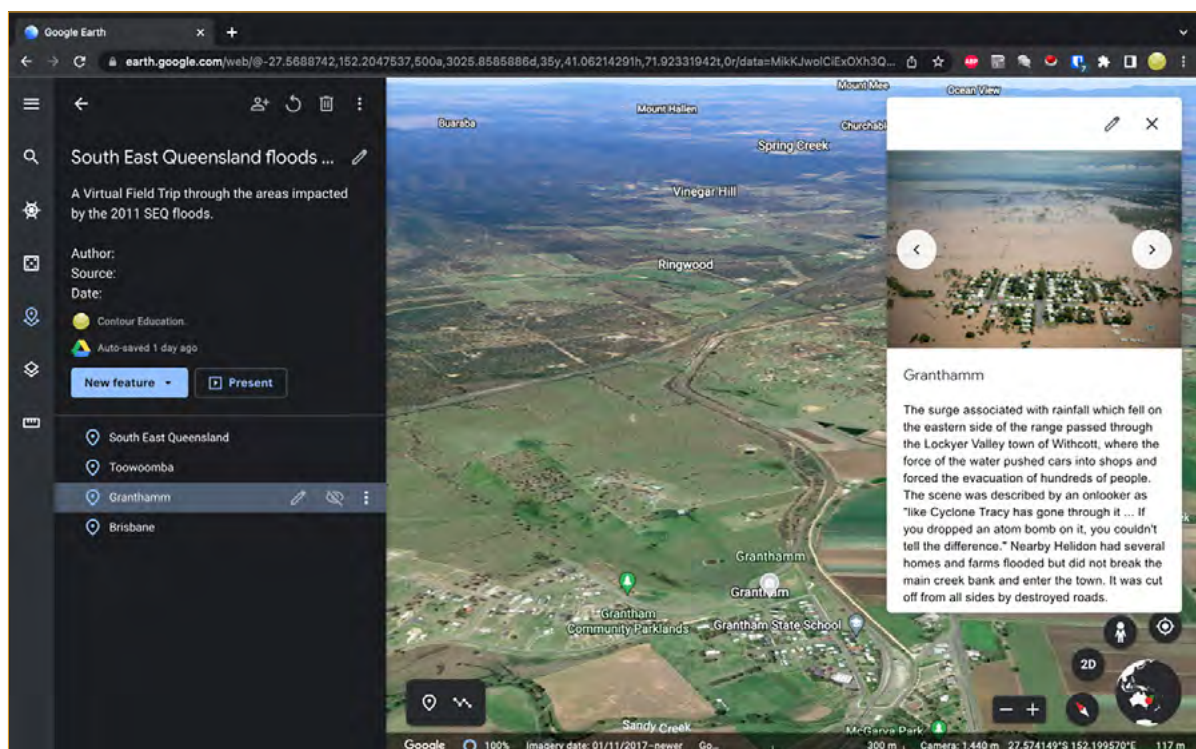


Figure 1: An example of a Google Earth Project

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2. Scribblemaps

Scribblemaps offers a simple, online map interface that allows you to draw on the map. It has a few other useful features though that make it a standout among geospatial tools.

You can choose from a range of map backgrounds and draw points, lines or shapes on a map. You can draw, freehand on the map as well as overlaying images such as historical imagery or old survey plans. Text, images and video can all be embedded into your point, line and

shape features. There is a neat legend tool that helps you make your legend as you are working and you can save your maps to work on later with a simple, free registration.

Use Scribblemaps to trace out the journey of a product like a coffee from the ground to your local coffee shop, quickly draw out a land use map over your local area using different coloured shapes or propose sustainable development on a vacant block of land.

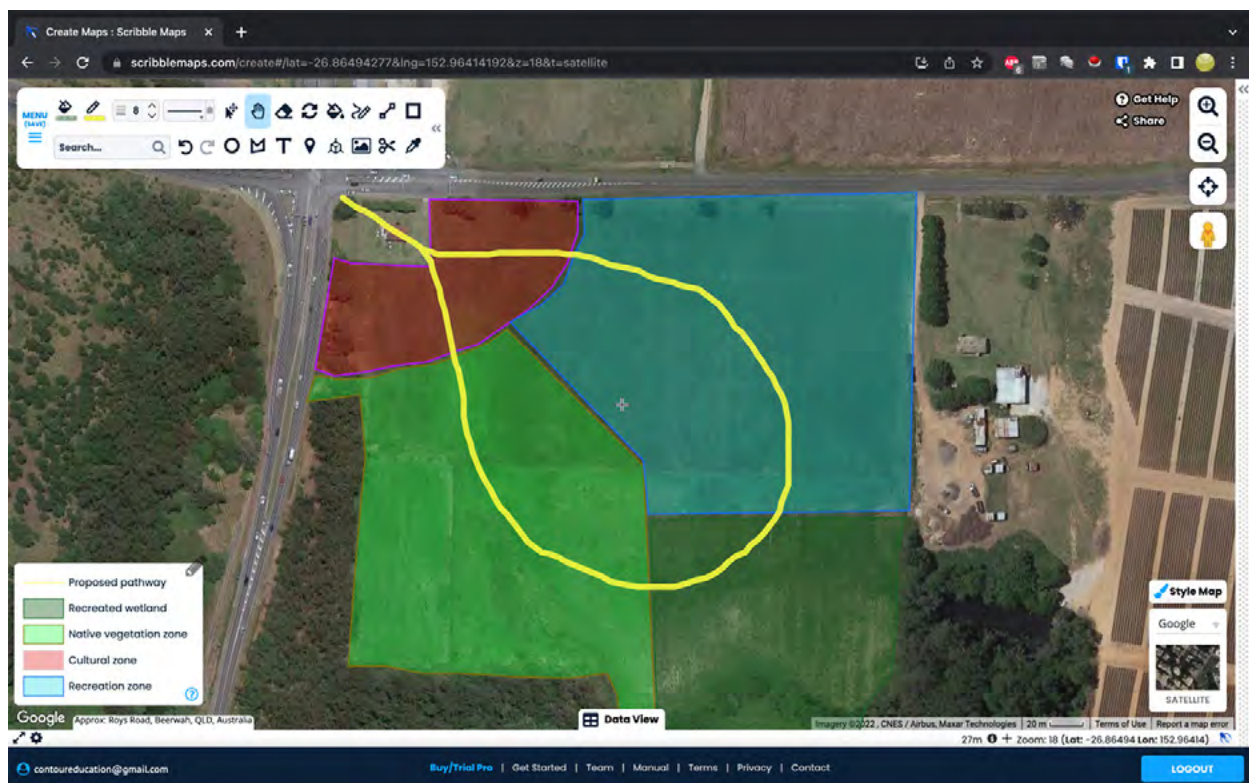


Figure 2: An example of a Scribblemap

3. Our World in Data

Not strictly a geospatial tool, Our World in Data makes the cut thanks to its overwhelming amount of comprehensive, well-presented and thorough global data on almost every geographic topic covered in the curriculum.

If you search for a geographic topic such as urbanisation, energy or water security you will be taken to a page that collects almost every piece of data on that topic in the form of text, tables, graphs and maps. There are plenty of great choropleth maps that are

available in the reports. All of the data is available in all forms and can be downloaded as a spreadsheet for use in class if you want to interrogate the raw numbers.

This site could be used in almost every single unit of work in the Australian Curriculum Geography. It is a must-have for geography teachers!

Our World in Data is put together by the Global Change Data Lab which is a non-profit created and operated by academics in the UK.

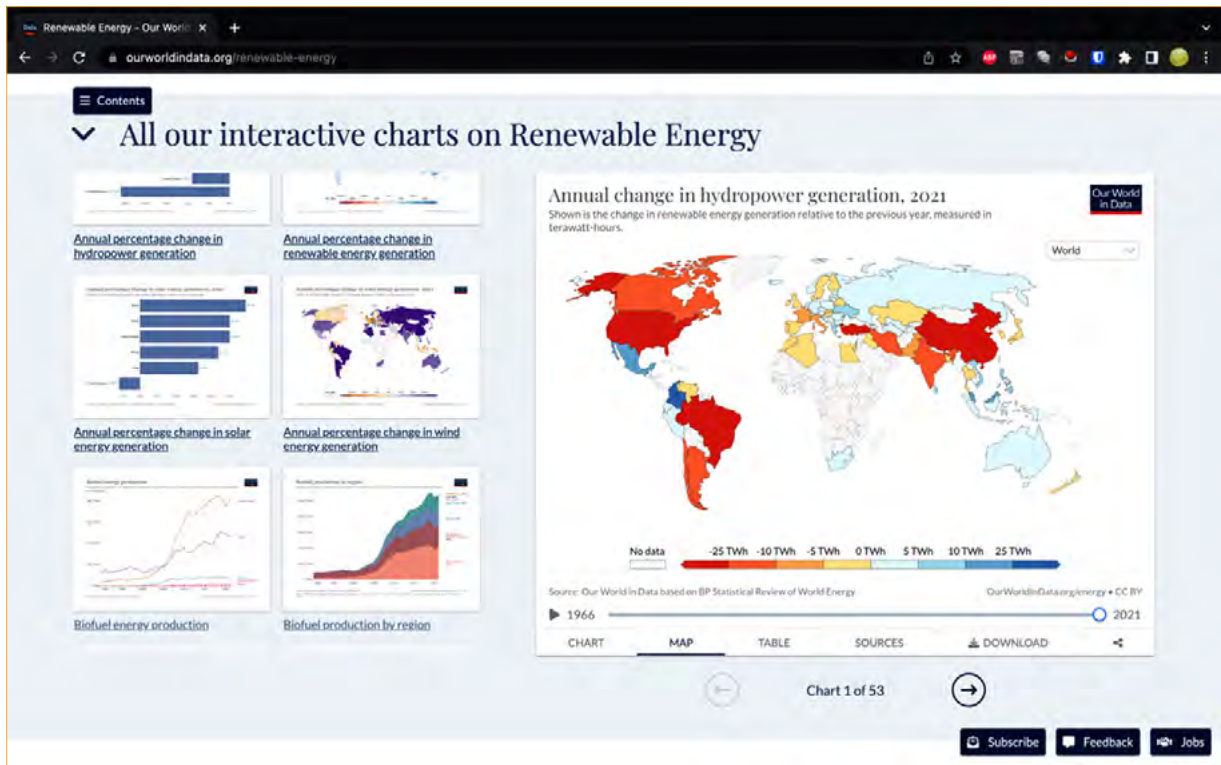


Figure 3: Some of the data available in Our World in Data

4. Maps3D

Maps3D is a very simple tool that has great power. Once in the site you select a rectangular area of anywhere on earth at any scale. You can then generate a 3D model of that area that you can navigate around from within the site. You can zoom in and out as well as rotate your model around.

The model is made up of satellite-derived elevation data with a satellite image draped over the top. At a suburb-level it looks very detailed and easy to interpret. The user can also change the elevation exaggeration, annotate the model and download a file (for a small fee) to 3D print the model which looks very exciting if you have those tools available to you.

Maps3D looks great for examining topography at a range of scales, particularly in Year 8's Landforms and landscapes unit.

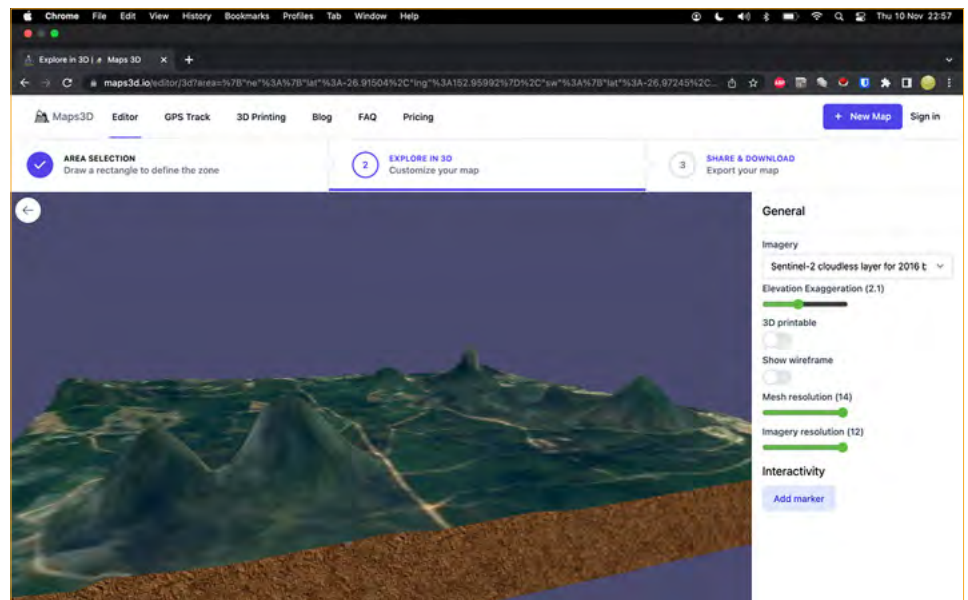


Figure 4: A 3D model made in Maps3D

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5. National Geographic Mapmaker

Finally, I have nominated the National Geographic Mapmaker tool that has actually been around for a while but has recently had a revamp that has made it much more user-friendly.

You can create maps and select from a range of backgrounds. There are dozens and dozens of layers of data that you can select to overlay on your maps. These include layers like global precipitation, global temperature, human influence, volcanoes, earthquakes, plate boundaries, GDP and much, much more.

You can also annotate your maps, save them and export your maps as images for use in presentations or reports.

The National Geographic Mapmaker is a tool that could be used in almost every unit of the secondary Australian Curriculum due to the range of data. It is well worth spending time reviewing the data to see if you can include it in your work program.

National Geographic's Mapmaker has been created by National Geographic.

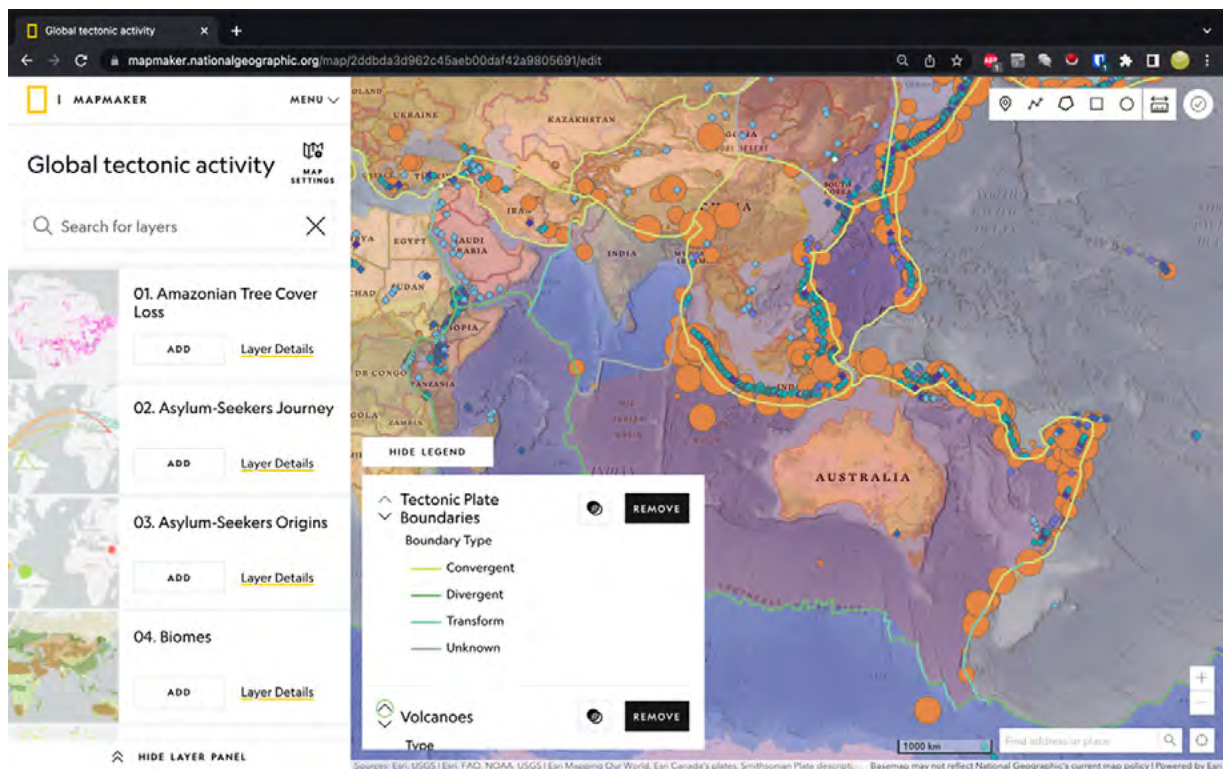


Figure 5: A map made in Mapmaker showing tectonic activity

I recently ran a masterclass where I reviewed all of these tools and gave a short demonstration of each. You are welcome to view the presentation for this masterclass using the QR code below. A link to the Youtube video of the masterclass is in the presentation.



Figure 6: QR code for Top geospatial tools of 2022 masterclass presentation