



DEVELOPING DIGITAL DATA LITERACY

Activity 3.1.2: How do we interact through geodata?

Expert Level

D3 - A project to integrate open data, digital skills & democratic engagement in schools



open data charter

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How do we interact through geodata?

Tools, data & Resources needed:

Internet, mobile phone/computer

Time required:

30 minutes: Create your map

60 minutes: Maps analysis for disease control and prevention

20-30 minutes: GeoInquiries



D3 - A project to integrate open data, digital skills & democratic engagement in schools





Geodata

- allow people to communicate and connect, linking to a specific location
- can be collected through different telematic devices, such as GPS (Global Positioning Systems), geospatial satellite imagery, IoT (Internet of Things)
- May relate to a wide variety of areas, as socioeconomic (demographics, economy, crime); transportation (roads, railways, airports); environmental (agriculture, soils, climate).

What is a GIS?

- Computer-based system, using a digital geodata software to collect, store and examine geospatial data, and to create maps for the analysis of environmental and socioeconomic trends.
- Watch the [video](#)





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GIS in the classroom

- Simpler data analysis by adding a graphic representation, e.g. map/chart/table.
- Enhanced students' interest, critical thinking, problem solving and spatial data analysis skills.
- Why should you use GIS in your teaching? Watch the [video](#)





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**If you are new to the use of maps
and GIS simply start by making
yours!**





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ArcGIS Online

- Access to many different maps and data.
- Introductory guide to ArcGIS:
<https://doc.arcgis.com/it/arcgis-online/get-started/get-started-with-maps-mv.htm>
- Esri Map Book shows the potential of digital geography for the communication of new, deeper meanings: <https://www.esri.com/en-us/esri-map-book/maps#/list>





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Why don't you try this activity with your students?



Adapted from: <https://www.nationalgeographic.org/activity/analyzing-disease-outbreaks/>





Map analysis for disease control and prevention

Choose one of the following maps:

- [Flu](#)
- [Lyme](#)
- [COVID-19](#)
- [COVID-19 \(b\)](#)



Make them examine data on the map through a four-level analysis:

- Level I: What are you looking at? Where and when is this?
- Level II: What patterns can you identify?
- Level III: How can you explain these patterns on the map?
- Level IV: Why is this important?



Map analysis for disease control and prevention

Now, **discuss**:

- Is it easy to understand the spread of the disease over time?
- Do the colours facilitate your understanding?
- Does this map help you predict anything about future trends in the virus spread?

Divide them in pairs: they will discuss differences in their analysis (if the map is the same) or in the maps (if the maps are different).



How to use maps in your teaching?

Here is another suggested activity...





GeoInquiries

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- 15-min activities, based on common inquiry instructional models to facilitate the explanation of contents through maps
- Made of three parts: teacher guide in PDF, interactive web map and an optional student worksheet.
- [Example](#): 8-Migration, On the Move: evaluate migration at the global, regional and local levels, through the use of ArcGIS Online.