Geographic Treasure Hunt

The activity

When? – Beginning of term ice-breaker activity

Where? – Wherever you want to do it – cities are good, but there’s no reason why this couldn’t also be done in a rural area...

How? –

1. Set a suitable end time and end location – we’ve usually gone for 4 to 4 ½ hours for the hunt and ended in a pub (for obvious reasons).
2. Put your class into teams (good idea is to hand out numbers so that you end up with teams of about 5 or 6).
3. Hand out a list of treasure hunt locations that the teams need to track down. Allocate points to these locations – the team at the end with the most points wins.
4. Verification that the team has found a location comes in the form of a tweeted group selfie, ideally allocate hastags to the hunt locations as well. Tweets can then be harvested (using open source software a bit like this the twitter archiver - https://chrome.google.com/webstore/detail/twitter-archiver/pkanpfekacajdncfgbjaedbbgbbphi?hl=en - to verify points and to award the winner:

5. Ensure each team also tracks their route using a mobile app that can export to KML – e.g.


6. Collect in the GPS traces from each of the groups at the end of the activity – they can then be used in future
Follow-Up Teaching Activities

1. Google Earth Fly Through

Activity: Load KML files of routes into Google Earth and use the Fly Through facility to interrogate the data.

Ideas and concepts for discussion:

- Geographic (and temporal) representation – how are space and time represented by this KML line representation? What is good or bad about this representation? How could space and time be better represented in digital form?
- Uncertainty and error – what is uncertain about this representation? Why might this be a problem? Where might error creep in? Why? Does it matter? In what kind of applications might error and uncertainty in this sort of data cause the biggest problems?
- Space-time analysis – in what fields of research might space and time analysis be particularly useful?

2. The Structure of Spatial Data

Activity: Interrogate the KML file itself or use online tools such as [http://geojson.io/](http://geojson.io/) to investigate how spatial data are stored digitally.
Ideas and concepts for discussion:

- Spatial representations – how are spatial data represented by computer / GIS systems?
- Coordinates and projections – how do we locate features on the earth’s surface?
- Accuracy and generalisation – how accurate are our data, how much detail do we need?
- Geometric properties – how do we measure properties such as distance, shape, area etc.

3. Intersecting Spatial Data

Activities – Could use Danny Dorling’s 32 Stops as an introduction. Investigation of how conditions may vary spatially along the route taken by the students

Ideas and concepts for discussion:

- How do social / economic / environmental conditions vary along the route?
- Introduce issues of sampling and representation – would these conditions be a representative sample?
- Physical geography equivalents?