PLACE

Session 3

Maps, maps and more maps

(approx. 60 mins, age 10+)

This session invites discussion and questioning based on a variety of different maps. It can be used alone or as a follow on from sessions 1 and / or 2. It explores these questions:

What influences how we see the world?

How does this affect our view of earth?

How does this affect our views or other people's views of our homelands?

Background information

- Trying to represent a 3D object (sphere) in 2D on a piece of paper, means that distortion is inevitable. So, there is no completely accurate map of the world. Cartographers for centuries have had to make difficult choices when it comes to creating maps, and there will inevitably be some bias in those choices.
- Younger children may be confused when presented with a range of different world maps, however it is important to ask questions and recognise that the maps we look at are not fixed. They are representations that can influence the ways we see the world.

Resources

1. Powerpoint
2. For this session you will need to print a variety of maps which are provided – 1 for each group of 3 learners. There are 10 different world maps plus an infographic. They are provided on a powerpoint so you can display them on a whiteboard as well. You will need to decide whether to use them all, or print multiple copies of one or two, depending on the age and needs of your learners.
3. The question framework. Provide an A3 copy of this for each group.

The Session

1. Ask learners what challenges there might be in trying to reproduce a spherical globe onto a 2D map. You could demonstrate this using an orange. Draw a rough map of the world onto an orange and then carefully peel it in one piece. Try to flatten it!
2. Explain that cartographers have been trying to produce world maps for hundreds of years and have

https://x.com/infowetrust/status/968156317952065536
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always had to tackle the issue of distortion. This means that there is no one map that is entirely accurate. There are however world maps that have been used more than others, and which have become more familiar to us (Mercator projection for example).

3. Give each group of 3 learners one of the maps provided and a question framework. On this framework they will be able to record what they observe and what they think about the map.
4. You could ask each group to present back their maps, or groups can join and compare maps.
5. What does this exploration of maps tell us about how we know about and see the world?
6. Reflection: ask learners how they feel about the world as their homeland, based on their exploration of the maps.

   Do we need to know somewhere well to think of it as home?

   Does it matter if we don't know everything about our home?

Map descriptions

Map	About	Sourced from
1.Peter's Projection	The Peters World Map shows the world's land areas and oceans in their true proportions. All countries are correct in size in relation to each other.	https://www.developmenteducation.ie/media/documents/Trocaire_Peters_World_Maps.pdf
2. 'Upside Down?' Map	A south-up map of the world centred on the western Pacific Ocean and splitting the Atlantic Ocean	https://en.m.wikipedia.org/wiki/File:Reversed_Earth_map_1000x500.jpg
3. Mercator Map	This map, with its Mercator projection, was designed to help sailors navigate around the globe. They could use latitude and longitude lines to plot a straight route. Mercator's projection laid out the globe as a flattened version of a cylinder. All the latitude and longitude lines intersected at 90-degree angles. Because the projection was intended to be a reference for navigation and not land geography, the landmasses on the map are not necessarily proportional to their actual size; at higher latitudes, landmasses appear larger than their actual size.	https://www.worldatlas.com/geography/world-map-mercator-projection.html
4. Modern map of Pangea	This map by Massimo Pietrobon, is a look back to when all land on the planet was arranged into a supercontinent called Pangea. Pietrobon's map is unique in that it overlays the approximate borders of present-day countries to help us understand how Pangea broke apart to form the world that we know today.	https://www.visualcapitalist.com/incredible-map-of-pangea-with-modern-borders/

5.Mercator projection vs true size of countries	As the animated GIF (see link)—created by, Neil Kaye – demonstrates, northern nations such as Canada and Russia have been artificially "pumped up" in the minds of many people around the world. Greenland, which appears as a massive icy landmass in Mercator projection, shrinks way down. The continent of Africa takes a much more prominent position in this new, correctly-scaled map. The visualization also highlights how distorted neighbouring countries can look in Mercator projection. Scandinavian countries no longer loom imposingly over their European neighbours, and Canada deflates to a size similar to the United States.	https://www.visualcapitalist.com/mercator-map-true-size-of-countries/
6.Australian-centred map	Anywhere can be placed at the centre of a world map. This version helps us see the world differently	https://www.ebay.co.uk/itm/233301310416
7.Goode projection map	Developed by John Paul Goode in 1925 this projection regains the accuracy of country sizes by adding 'interruptions' into the ocean areas, much like an orange peel.	https://futuremaps.com/blogs/news/top-10-world-map-projections
8.Tripel Projection	This is, in essence, a globe that is projected onto a flat surface giving it curved lines of latitude and curved meridians. The projection, by Oswald Winkel in1921 was developed with the goal of minimizing the three kinds of distortion: area, direction and distance. Thus it became the Tripel Projection (German for triple). The projection is neither equal-area nor conformal, its main feature is that all of the parallels are curved except for the straight poles and equator. This gives a lovely spherical feeling to this two dimensional map	https://futuremaps.com/blogs/news/top-10-world-map-projections
9.NASA image	This spectacular "blue marble" image is the most detailed true-colour image of the entire Earth to date. Using a collection of satellite-based observations, scientists and visualizers stitched together months of observations of the land surface, oceans, sea ice, and clouds into a seamless, true-colour mosaic of every square kilometre (.386 square mile) of our planet.	https://visibleearth.nasa.gov/images/57752/blue-marble-land-surface-shallow-water-and-shaded-topography
10. Waterman Butterfly Projection	The Waterman "Butterfly" World Map is a map projection created by Steve Waterman. Waterman first published a map in this arrangement in 1996. The arrangement is an unfolding of a polyhedral globe with the shape of a truncated octahedron, evoking the butterfly map principle first developed by Bernard J.S. Cahill (1866–1944) in 1909.	https://map-projections.net/single-view/waterman
11.True size of Africa	This infographic comes from Kai Krause and it shows the true size of Africa, as revealed by the borders of the countries that can fit within the continent's shape. The African continent has a land area of 30.37 million sq km (11.7 million sq mi) — enough to fit in the U.S., China, India, Japan, Mexico, and many European nations, combined.	https://www.visualcapitalist.com/map-true-size-of-africa/

Extension Activity

A. Look at a map of Africa and notice the country borders. Some country borders are straight lines.

B. Ask learners why they think this may be?

C. Give some time for research to find out how these borders came to be.

Note: Most of the borders were drawn by European countries at the Berlin conference in 1884, sometimes using a ruler. Give an opportunity for thoughts, feelings and questions to be heard and discussed.

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