

Beware: World maps can mislead

Did you know that many of the maps you see on television news programs, in school atlases and on the internet do not show the continents in their correct size relative to one another? They have oversized arctic and undersized tropical lands. School children see these maps – and assume they are ‘the truth’.

The Mercator Projection, which became the standard map projection for nautical purposes in 1569, can still be seen in schools today. On the Mercator Projection Canada, Greenland and Russia are far too big whilst highly populated countries in the Southern hemisphere appear smaller and, therefore, less significant.

On the Mercator Projection Greenland is larger than Africa, whereas in reality **Africa is 13 times as large**. In contrast, 20th century equal area projections, such as the Peters Projection shows areas of equal size on the globe as also equal size on the map.



Greenland and Africa in a Mercator map



Correct size proportion for Greenland and Africa

Which world maps are best?

The globe is the most accurate representation. There are various suitable map projections, and a simple test is to compare any map with the globe.

Look for equal area maps. There is some unavoidable distortion in 2D maps but equal-area maps, such as Mollweide; Sanson-Flamsteed; Hammer; Eckert IV offer the best alternatives. Eckert IV is used by the National Curriculum guidance.

Since a map is an instrument to convey information about other countries at a glance, it is important to display true area ratios.

Use this link to find out more about map projections:

<http://www.geography.org.uk/resources/mappingourglobe/choosingamap>

School action

- Get children to check relative sizes of places with the globe, and to make their own discoveries. Investigating maps can encourage children to be alert to misleading messages.
- Maps displayed can be 'graffittied' – 'TOO BIG' on the Arctic; 'TOO SMALL' on the Tropics
- Look at world maps in newspapers and television and write letters of complaint.
- Use equal-area maps with **unfamiliar centres** to create alternative world-views. A Pacific-centred world map will interest and surprise children. The United Nations flag shows a north-pole-centred map. A south-pole-centred map is amazing!

Facts to help you check maps

Africa (30 million sq km) **is much larger than North America** (19 million sq km)

India (3.3 sq km) **is three times the size of Scandinavia** (1.1million sq km)

China (9.5 million sq km) **is more than four times larger than Greenland.**