## Maps: Geography's Most Basic Tool

Map: a two-dimensional representation of the earth's features drawn on a flat surface.

- Maps help us visualize the shape of land masses and locate important global features.
- Using different types of maps, we can make connections between several concepts.

**Cartography**: the study and practice of making maps.

### **Map Projections**

Map Projection: When features of the globe are transferred onto a flat surface

- -It is very difficult to project the globe on a flat surface every projection will have distortions
- -When looking at a map projection, there are **4** key factors to compare:
  - 1. Size (Area)- the areas represented on the map are proportional to their area on the earth
  - 2. Shape the shapes of places are accurate
  - 3. <u>Distance</u> measured distances are accurate
  - 4. <u>Direction</u> angles of direction are portrayed accurately

### **Types of Map Projections**

**Mercator Projection:** map projection that uses a grid to assist in nautical navigation

- developed in 1569 by Geradus Mercator
- was widely used on wall maps, atlases, books, etc. until the 1990's
- It is a poor projection because of distortions of distances, areas, landmasses and oceans
- Google Maps uses this projection

**Gall-Peters Projection:** an equal-area map, where all areas have correct sizes relative to each other

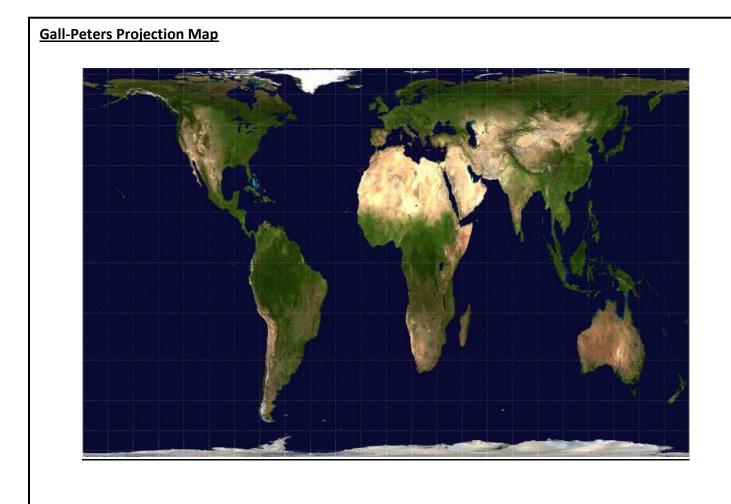
- Developed in 1885 by James Gall and Arno Peters

**Winkel Tripel Projection**: best map projection for providing a balance between size, shape, distance and direction

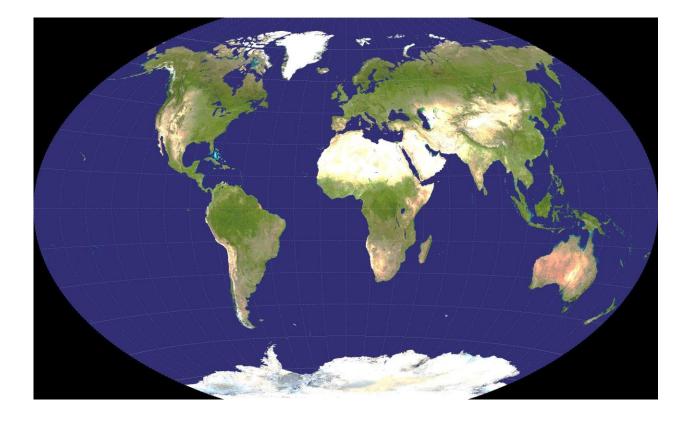
- Developed by Oswald Winkel in 1921
- the most widely used projection in the world



# Mercator Projection Map



# **Winkel Tripel Map Projection**



| It is impossible to display the world on a flat surface. Every world map will have distortions. More importantly, distortions on a map can greatly distort a person's view or perception about the world. |
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| - If we perceive the world to 'appear' in a specific way, we will believe what we see. This can greatly alter, or skew, how accurately we view the world.                                                 |
| List and describe three ways in which a distorted map can change how someone views the world?                                                                                                             |
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