RAND McNALLY

About the ROBINSON PROJECTION

There's a conundrum involved in making maps of the world: how do you depict the earth's spherical surface on a flat sheet?

The truth is, there is no perfect way to do so. Only a globe can accurately show the earth. Making flat maps requires cartographers to stretch, enlarge, shrink, and otherwise distort land and water areas.

Cartographers and mathematicians have developed hundreds of projections — a term that refers to systems for "projecting" the earth's surface onto a flat sheet. Each projection has its own advantages and disadvantages, and all of them produce distortion in at least one of four categories:

- the shapes of land and water areas
- the relative sizes of land and water areas
- distances between places
- angles of direction between places

One of the most famous projections was developed in 1569 by a Flemish mapmaker named Gerardus Mercator. Designed specifically for navigational use, the Mercator Projection presents lines of latitude, or parallels, and lines of longitude, or meridians, as straight lines intersecting at right angles. It allows navigators to plot a straight-line course between two points.

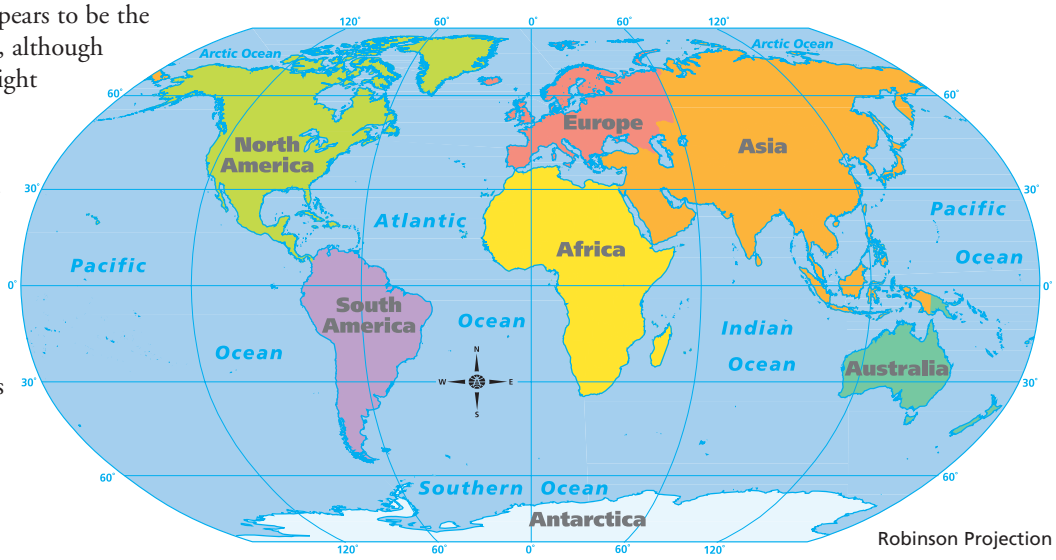
The projection's main drawback is that sizes of land and water areas are only accurate along the Equator; moving toward the poles, sizes became increasingly exaggerated. Greenland, for example, appears to be the same size as South America, although South America is actually eight times larger.

Despite its shortcomings and the narrow purpose for which it was intended, the Mercator Projection was the most widely used projection for world maps until well into the 20th century. By then, numerous other projections had been developed for world maps.

In 1961, Rand McNally commissioned a noted cartographer named Arthur H. Robinson to develop a new world map projection that would have limited distortion and an uninterrupted graticule — that is, a network of lines of latitude and longitude that is not split up — and that would be "pleasing to the eye of general viewers." Two years later, Robinson delivered the projection that today bears his name.

The Robinson Projection (see example below) produces attractive maps with rounded left- and right-hand edges and relatively low distortion of size and shape over most of the map area. Size exaggeration is greatest near the poles, but even there it is far less dramatic than on the Mercator Projection.

The Robinson Projection is Rand McNally's projection of choice for world maps in educational products because of its visual appeal and its accurate portrayal of the relative sizes of the world's landmasses. Educators and Rand McNally cartographers alike appreciate the Robinson Projection's balanced presentation of the world.



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Rand McNally Education • P.O. Box 1906 • Skokie, IL 60076-9714 • PHONE 1-800-678-RAND (-7263) • FAX 1-800-934-3479