

# Making a Globe Become a Map

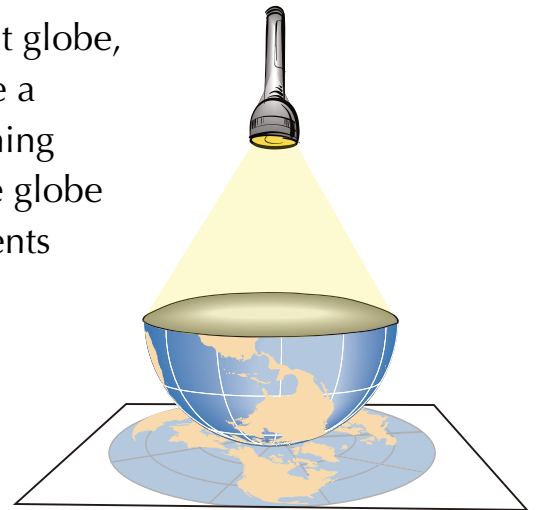
How do you make something round become flat?

1. A globe is the best model of the Earth because it is round like the Earth. But it isn't easy to carry with us.
2. Cartographers have to find a way to make the round Earth flat so we can carry it around.
3. Once we flatten the round globe out, it stretches and changes shapes and sizes of the continents.



**What is a Map Projection?** A map projection is how cartographers portray the round Earth onto a flat sheet of paper.

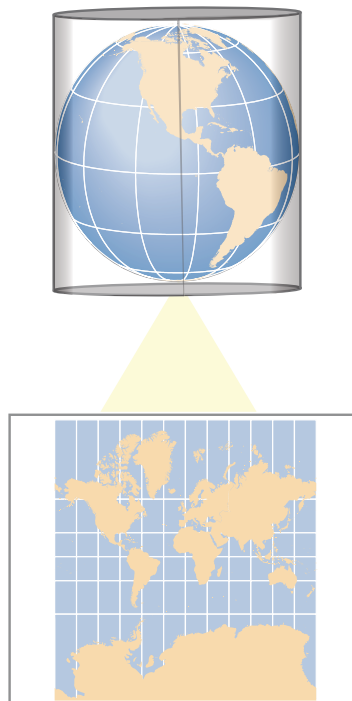
If you had a transparent globe, you could approximate a map projection by shining a flashlight through the globe and tracing the continents onto a piece of paper.



## Types of Map Projections

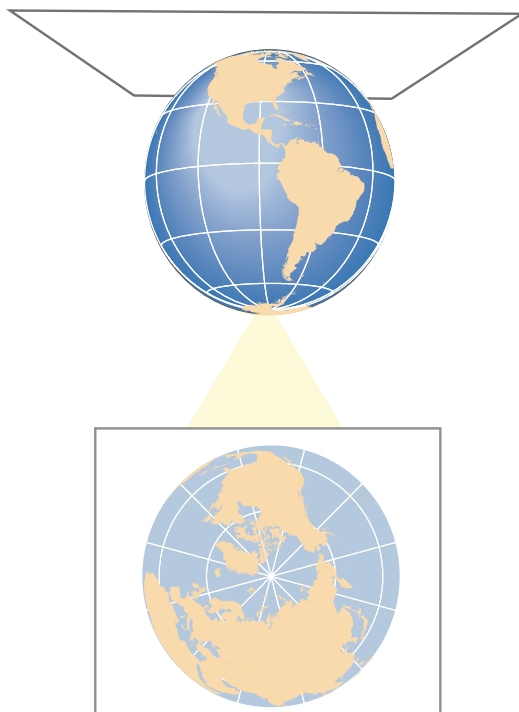
### Cylindrical

Wrap a piece of paper around the globe to form a cylinder that touches the equator all the way around the globe. Shine a light from the center of the globe, then trace the image that is projected onto the paper. Take the paper off for a cylindrical projection.



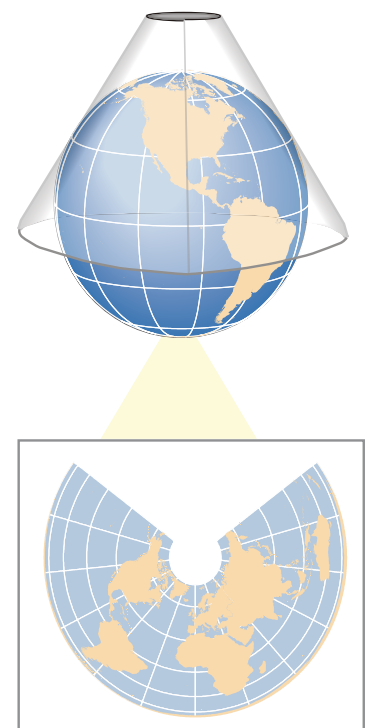
### Planar/Azimuthal

Place a piece of paper so it is touching a single point on the globe. Then shine a light from the center of the globe, trace the image that is projected onto the paper, and take the paper off for a planar or azimuthal projection.



### Conical

Wrap a piece of paper into the shape of a cone and place it around the globe so that it is touching the globe along one line of latitude. Shine a light from the center of the globe, trace the image that is projected onto the paper, and then take the paper off for a conical projection.



In each case, the projection is most accurate at the point where the paper touched the Earth.