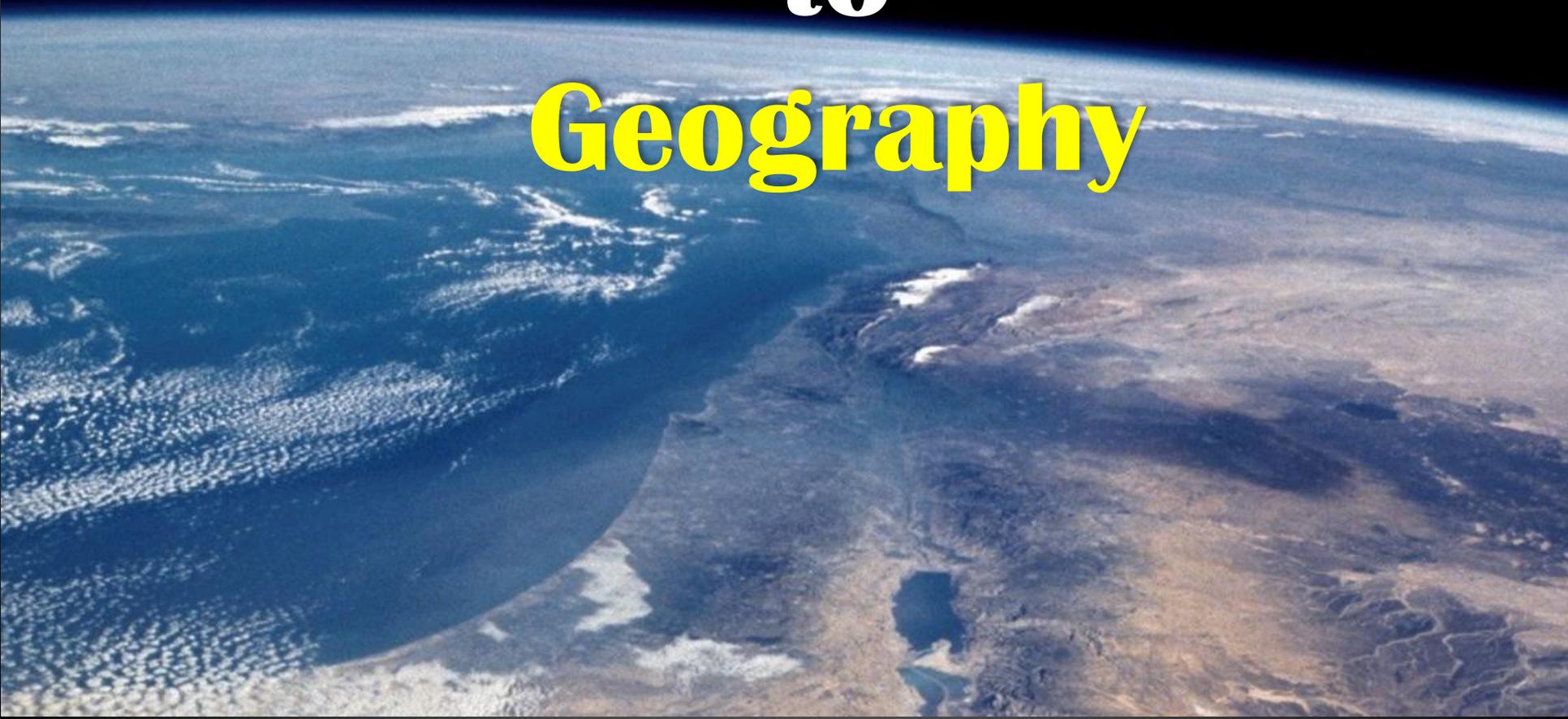


# Introduction to

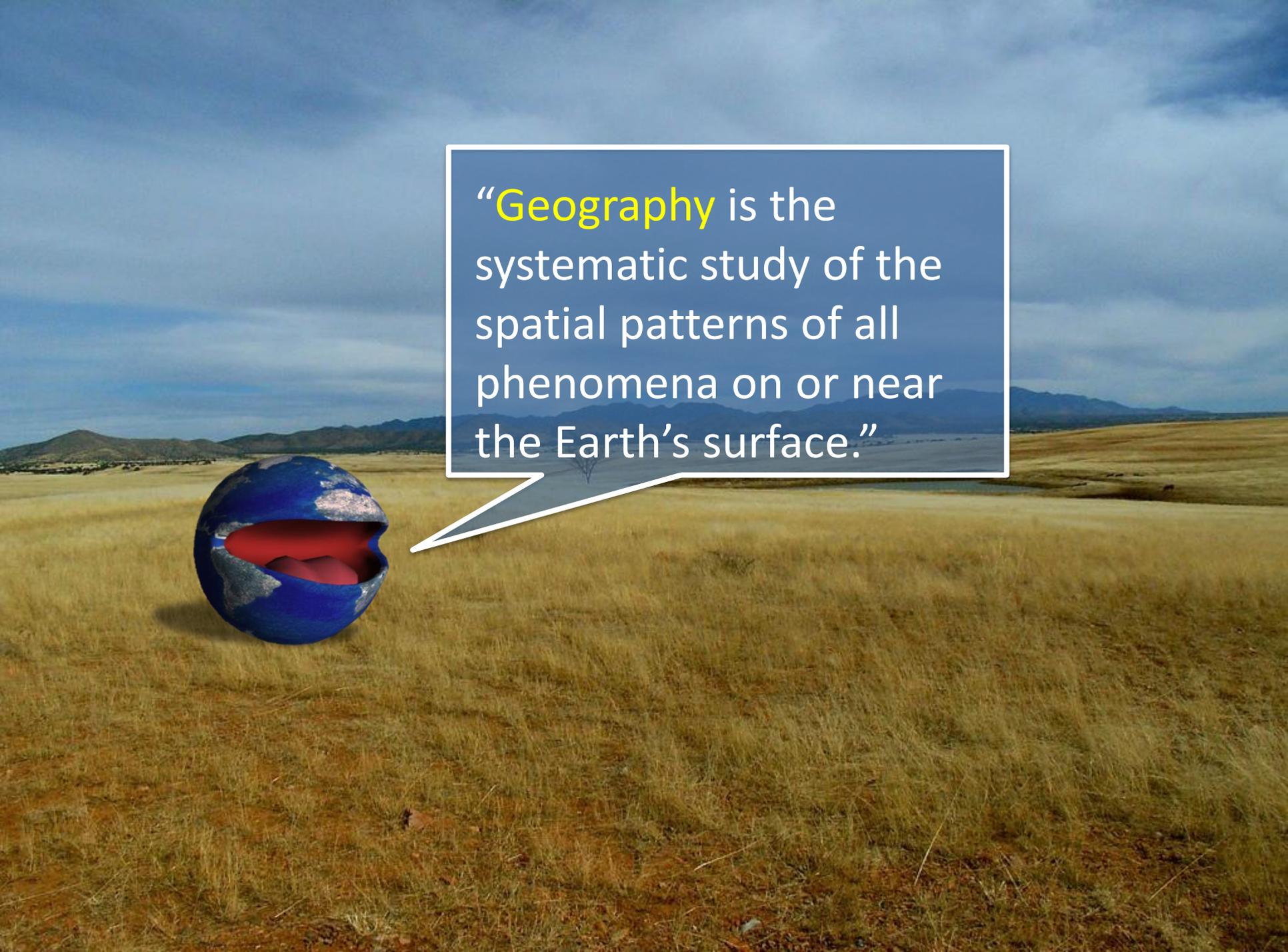
# Geography





**What is a geography?**





“**Geography** is the systematic study of the spatial patterns of all phenomena on or near the Earth’s surface.”

Geography is:



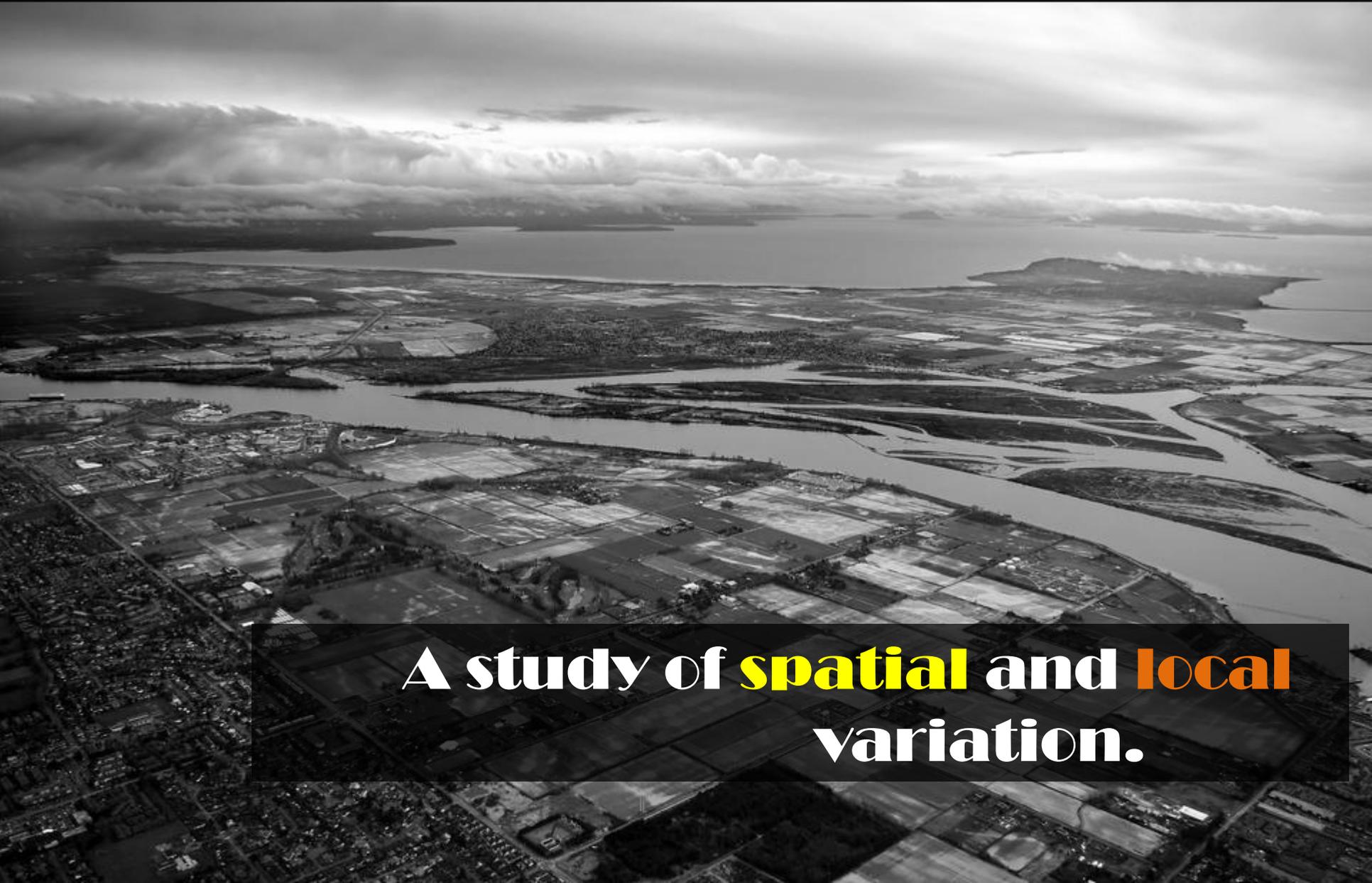
**A scientific and descriptive study of the Earth's surface.**

Geography is:

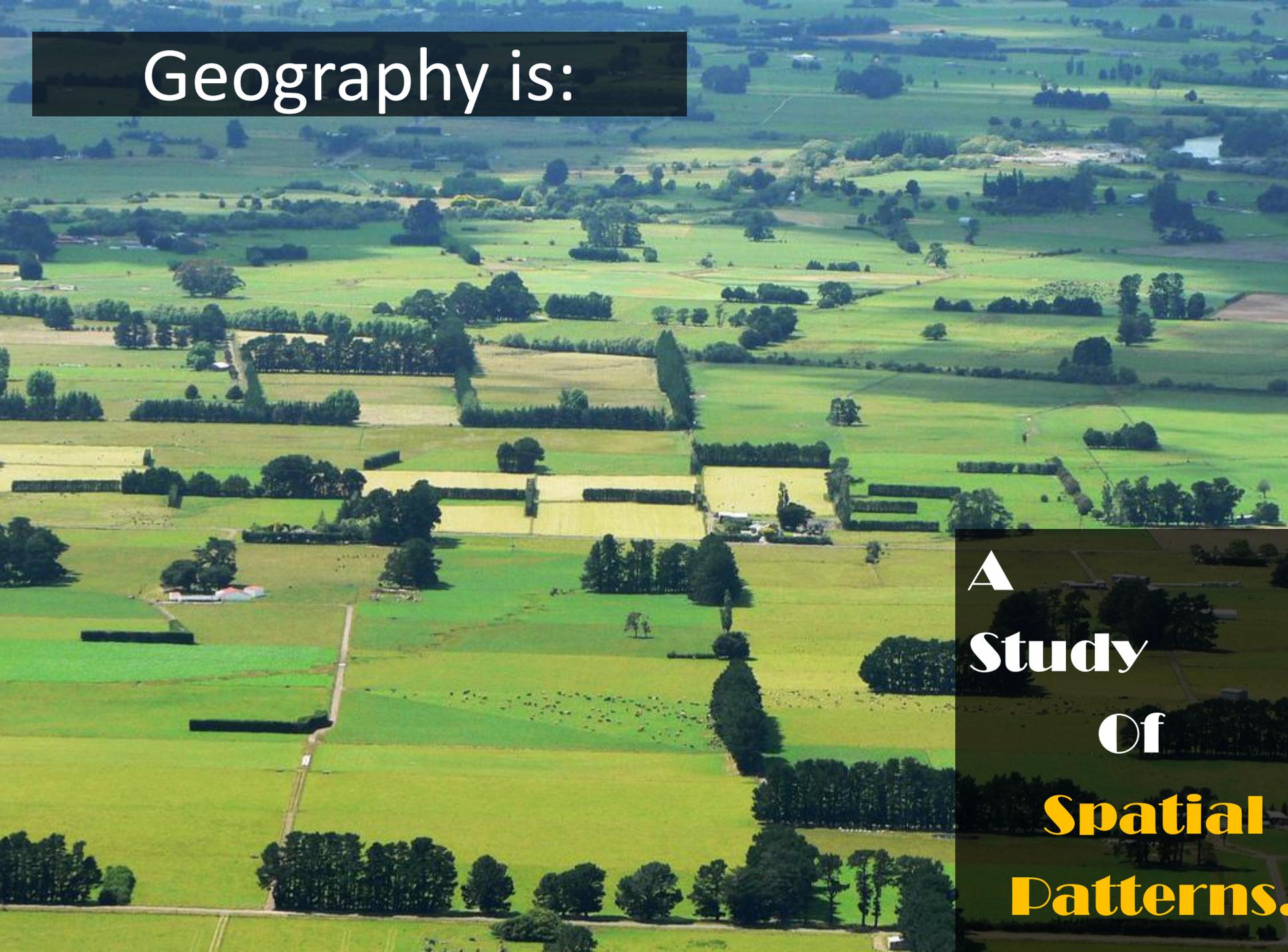


**Interactions between people and  
their environment**

# Geography is:

An aerial, black and white photograph of a coastal landscape. In the foreground, there is a dense urban area on the left and a large, flat agricultural area with a grid of fields on the right. A wide river or estuary flows through the middle ground, branching into smaller channels. In the background, there is a large body of water, possibly a bay or ocean, with a distant island or headland visible under a cloudy sky.

**A study of **spatial** and **local** variation.**

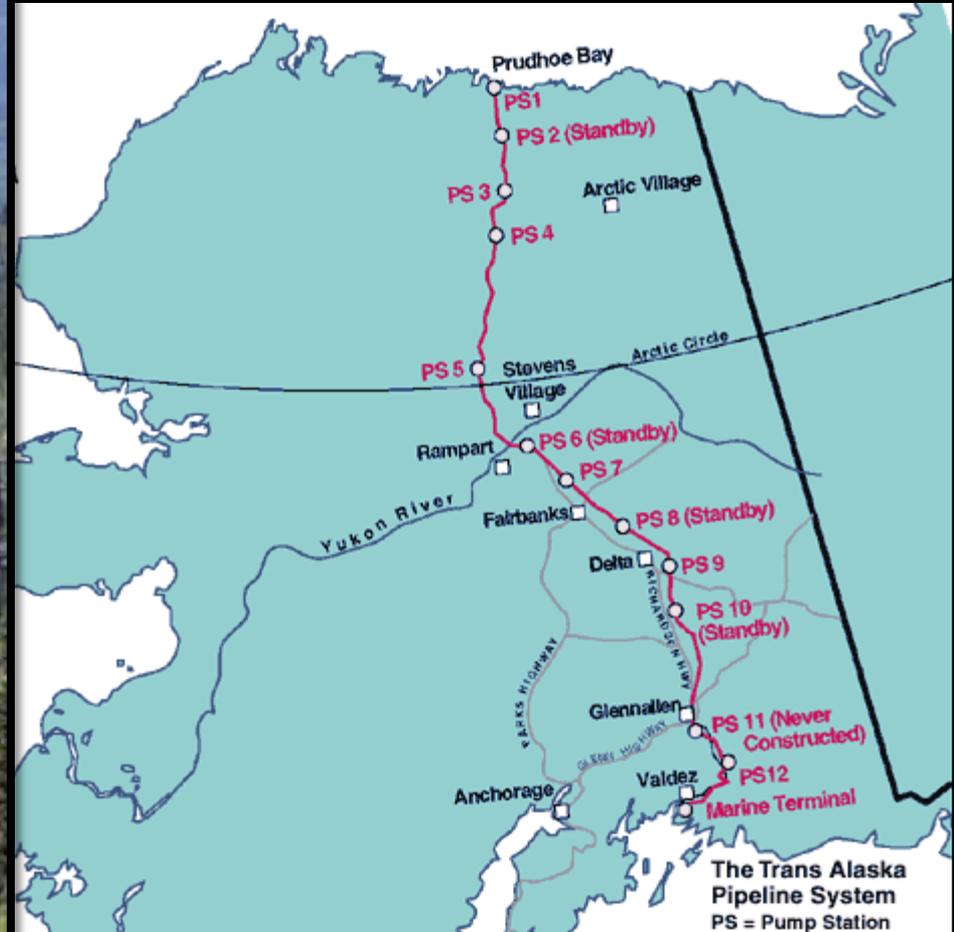
An aerial photograph of a rural landscape. The scene is dominated by vibrant green fields, likely pastures or young crops, interspersed with clusters of trees and hedgerows. A dirt road or path winds through the lower-left portion of the image. In the distance, a small cluster of buildings and a pond are visible. The overall impression is one of a well-maintained, agricultural countryside.

Geography is:

A  
Study  
Of  
Spatial  
Patterns.



**What** is the  
**why**  
Of **where?**



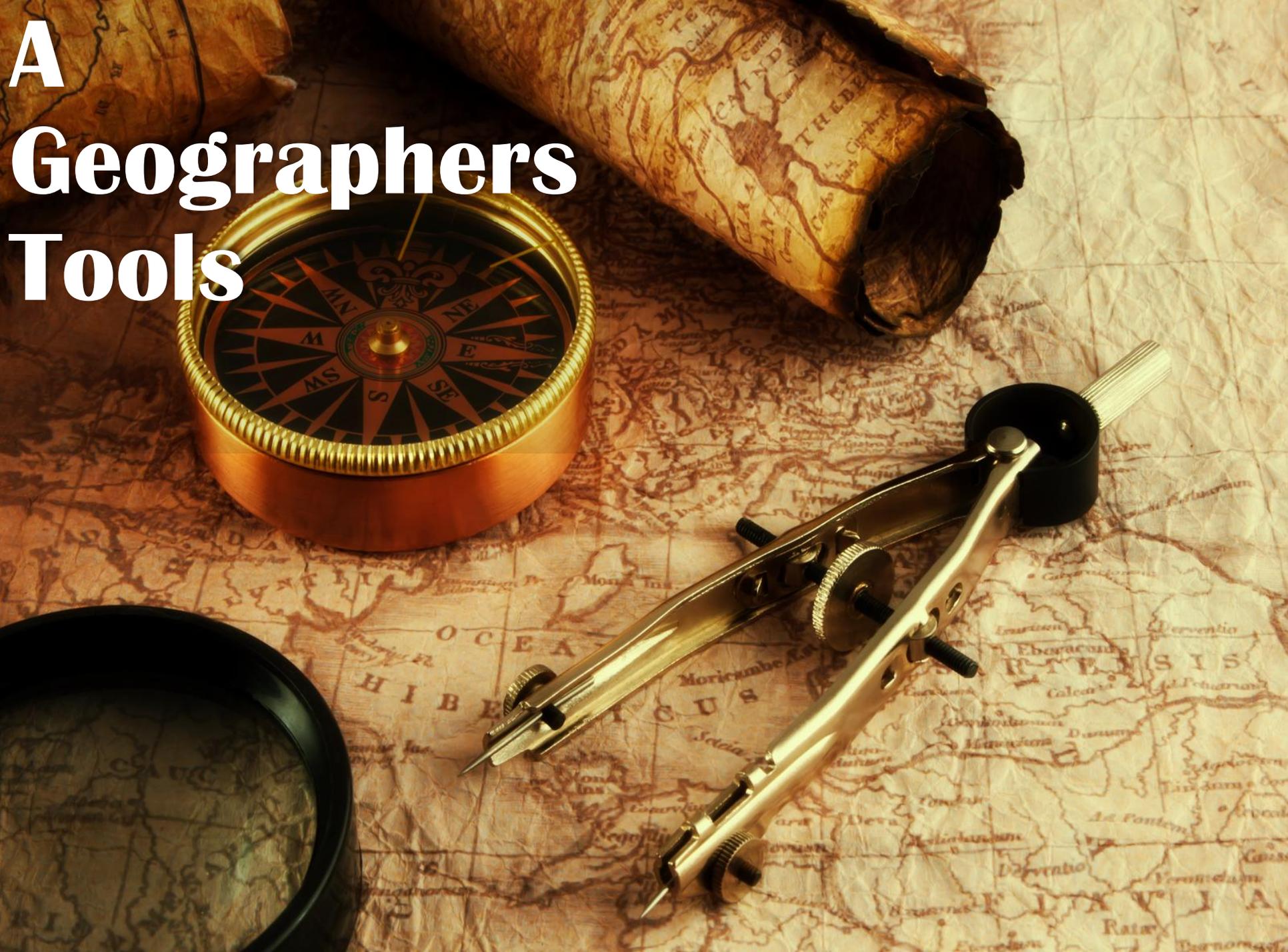
**What is the above a picture of? Why might it have been built the way that it was?**

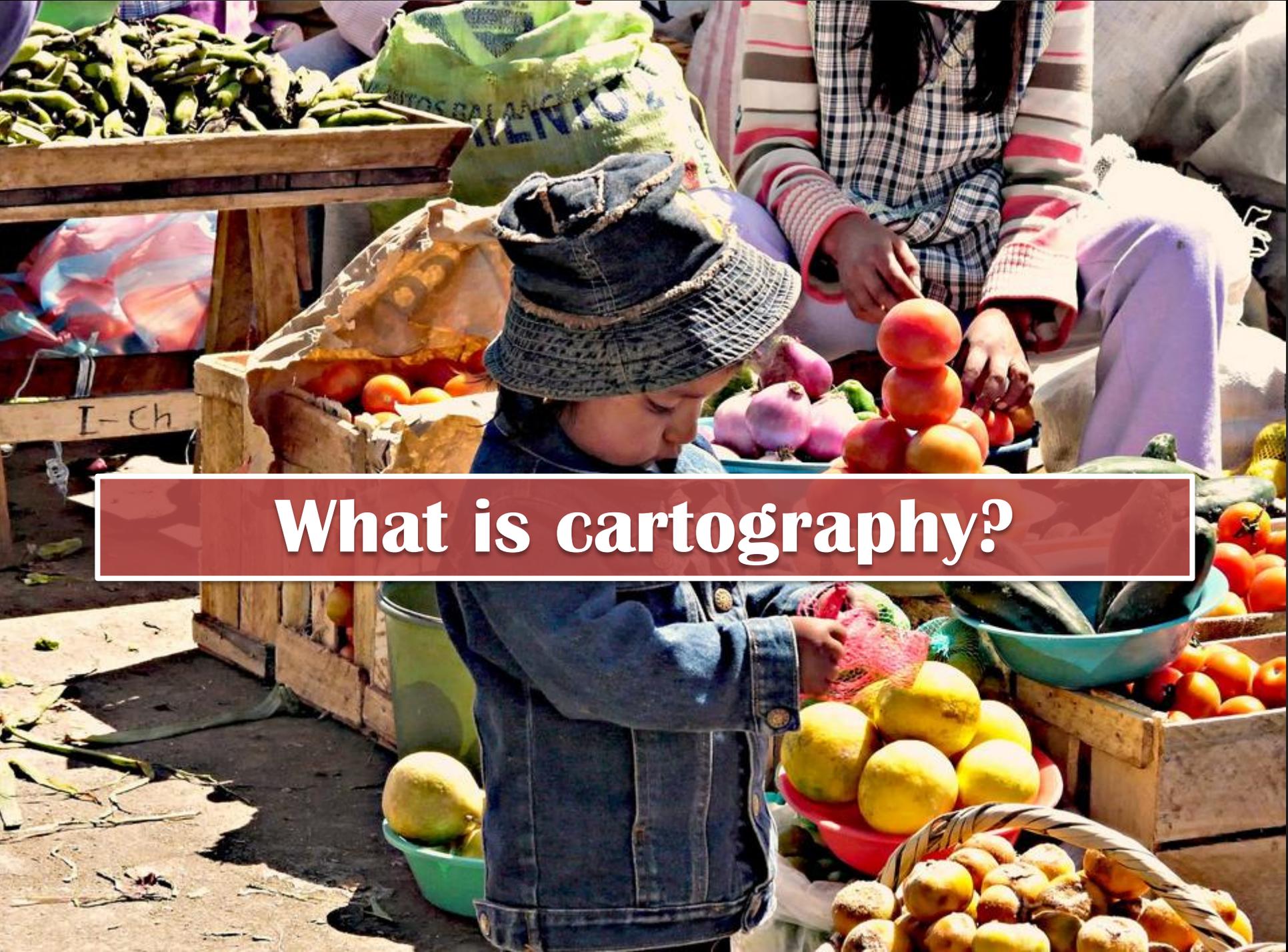


In this **night picture** of the earth, why are some areas **brighter** than others? How would it have looked **200 years ago**?

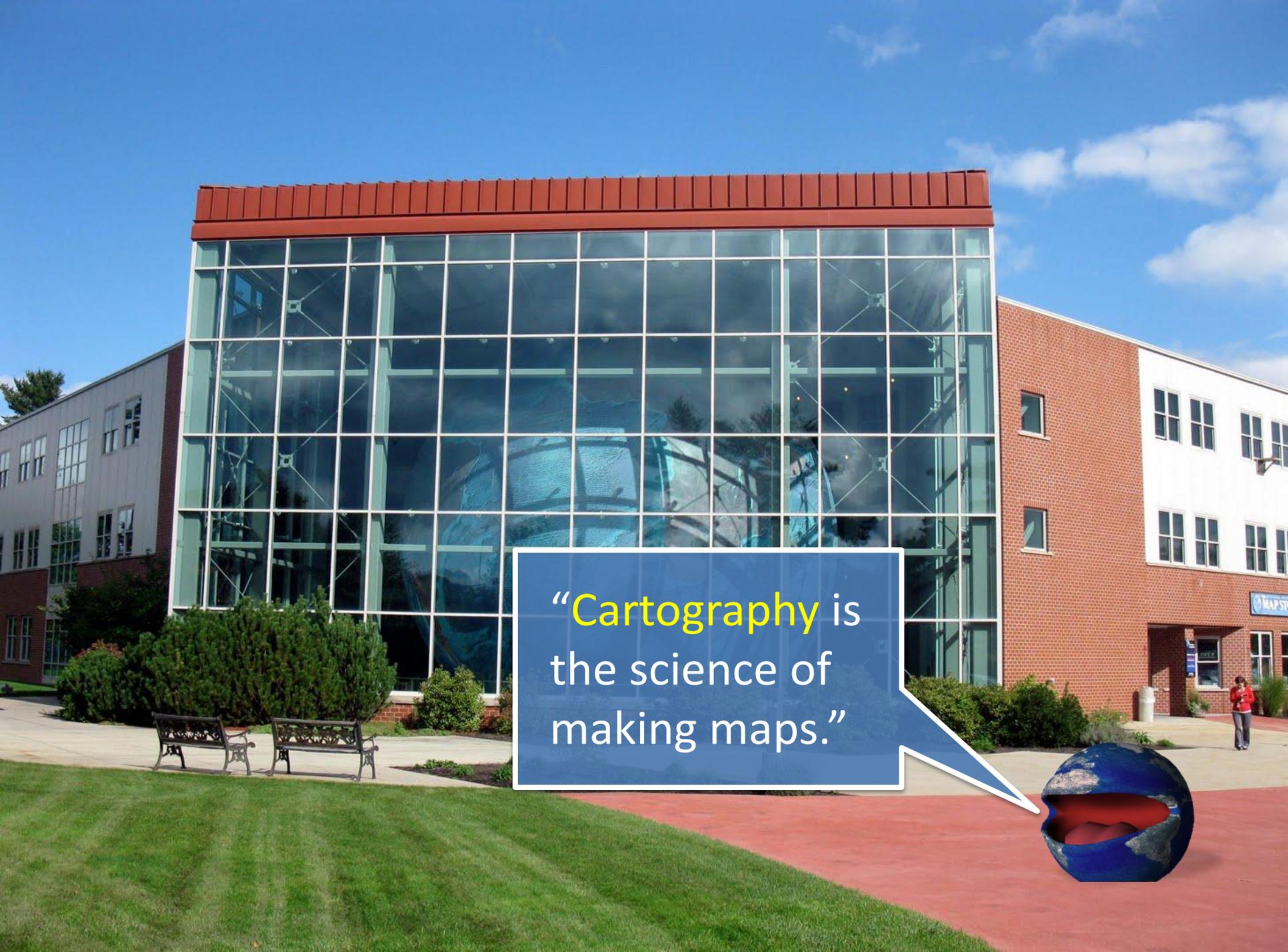
A

# Geographers Tools



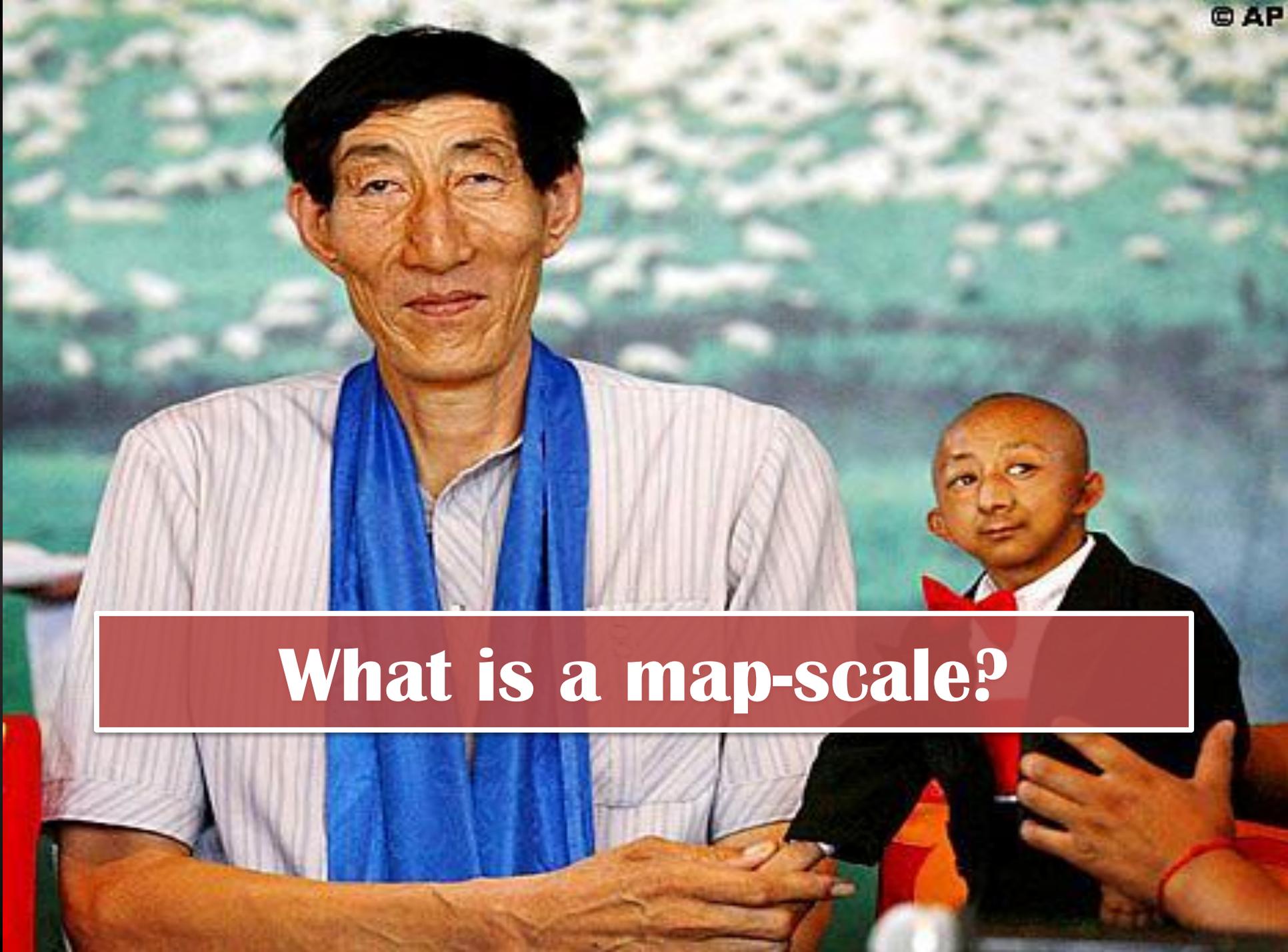


**What is cartography?**



“Cartography is the science of making maps.”





**What is a map-scale?**



“A **map-scale** shows the relationship of a feature’s size on a map to its actual size on Earth.”

1:24,000

Ratio or Fraction

1/100

Map Scale

Graphic Scale

Written scale

0 |-----| 100km

1 inch equals one mile

A photograph of a desert landscape with large, rounded rock formations in the foreground and a clear blue sky. A red rectangular box with a white border is overlaid on the center of the image, containing the text "What is projection?".

**What is projection?**

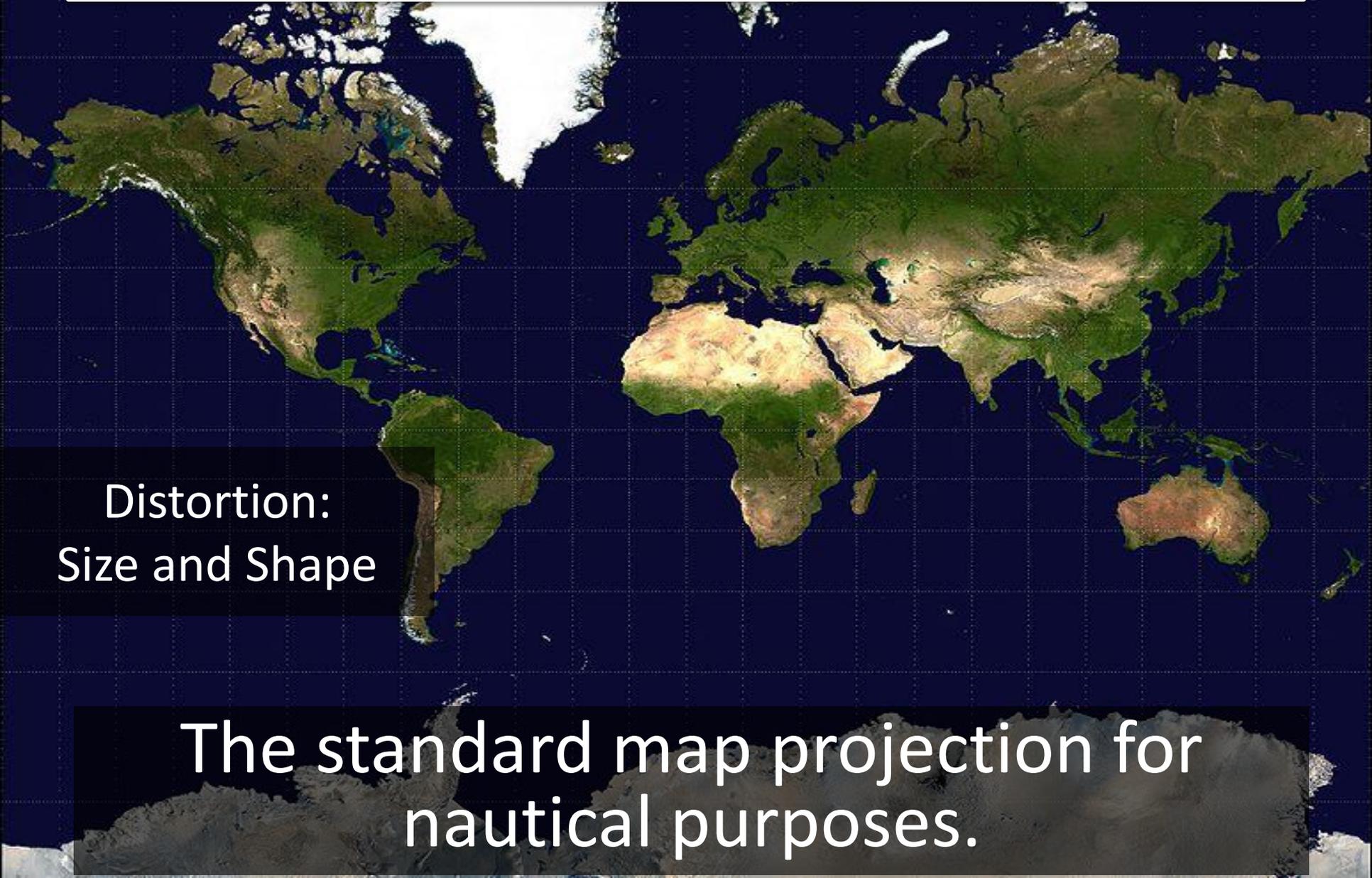
“**Projection** is the scientific method of transferring location on Earth’s surface to a flat map.”



# Mercator Projection

**Distortion:  
Size and Shape**

**The standard map projection for  
nautical purposes.**



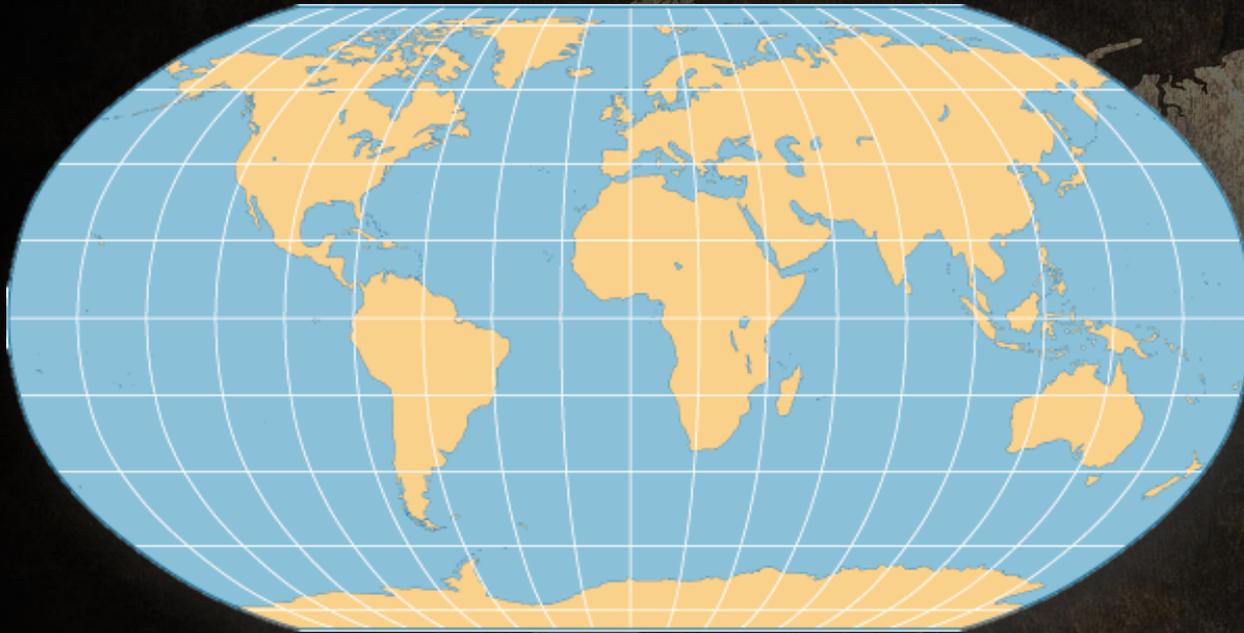
# Mollweide Projection



**Distortion:  
Shape and Angle**

Primarily used where accurate representation  
of area takes precedence over shape

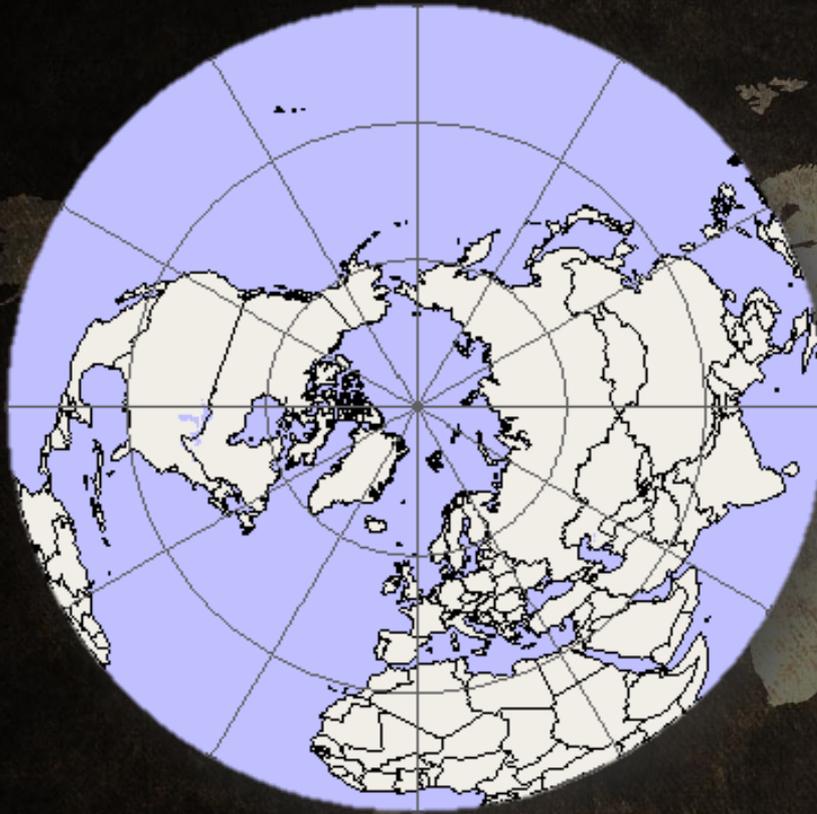
# Robinson Projection



Distortion:  
**Everything**  
in small  
amounts.

Primarily used to create visually appealing maps of the entire world.

# Azimuthal Equidistant Projection



Distortion:  
**Shape** and **distance**  
as one gets farther  
from the center.

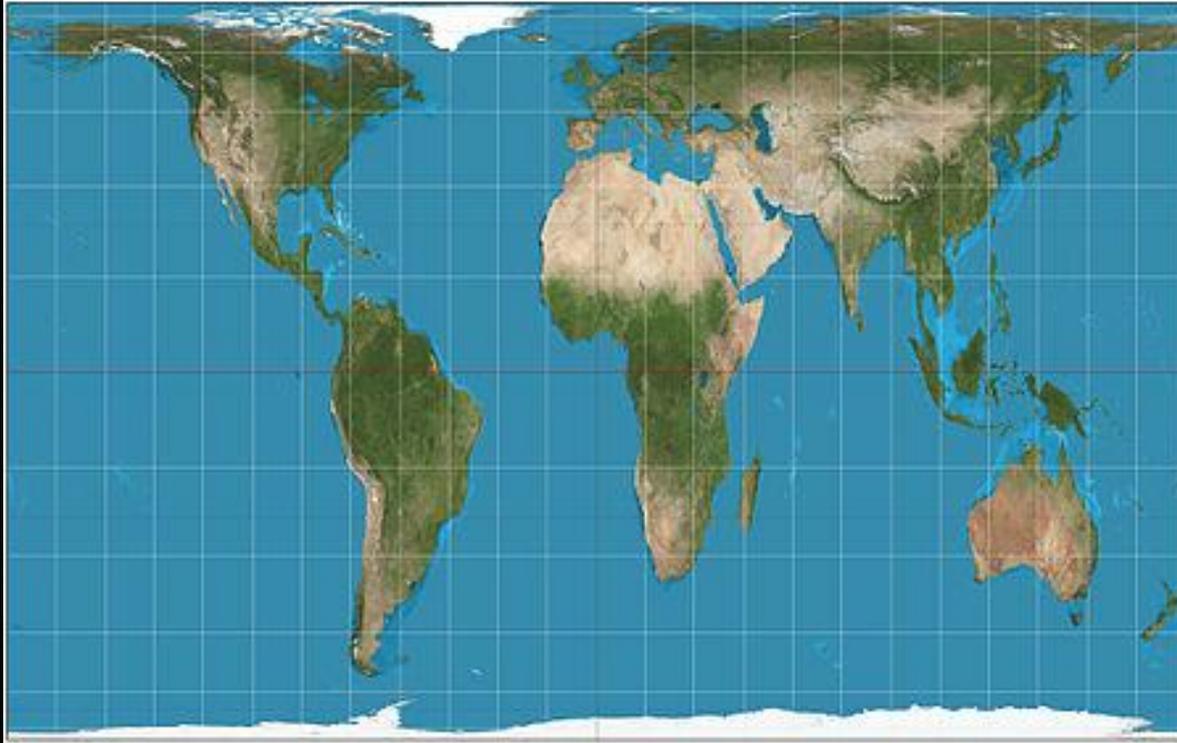
Used when drawing Polar maps.

# Fuller Projection



Distortion:  
Maintains the  
**accurate shape**  
and size but  
**rearranges**  
**direction.**

# Peters Projection



Distortion:  
Retains the **accurate size** of landmasses but **sacrifices shape**.

Often seen as a politically driven map.

A photograph of St. Paul's Cathedral in London, featuring its iconic dome and classical portico. A red banner with white text is overlaid across the center of the image. In the foreground, a statue stands on a pedestal in the middle of a green lawn.

# Longitude vs. Latitude

# Longitude



0° Longitude runs through Greenwich, England and is known as the Prime Meridian

# Latitude



0° Latitude is the equator.

90° north latitude is the north pole.

90° south latitude is the south pole.