Lesson Series:

1. .Latitude and Longitude-Comprehension Text
2. .The Arctic and Antarctic Circles-Text-Fact Hunt Cards
3. .Time Zones
4. .Map Projection
5. .Maps of the World
6. .Assessment-Extended Writing-Use of maps to show that development is uneven across the world

Year 6 Geography *Spatial Sense*

National Curriculum Coverage:

- identify the position and significance of latitude, longitude, Equator, Northern Hemisphere, Southern Hemisphere, the Tropics of Cancer and Capricorn, Arctic and Antarctic Circle, the Prime/Greenwich Meridian and time zones (including day and night)

Value Links – Justice & Wisdom
Developing an understanding that wealth is unevenly distributed around the world

What you need to know:

- *Geographers use latitude to divide the earth into bands that run parallel to the equator.*
- *These bands tell us a lot about the climate of the regions. The further from the equator in either direction, the colder the climate tends to be.*
- *At around 67 degrees North latitude, there is an imaginary boundary called the Arctic Circle. Above 67 degrees there will be at least one day in the summer when the sun does not set and one day in winter when it does not rise. The closer to the pole, the more such days there will be.*
- *In the Southern Hemisphere there is another imaginary circle called the Antarctic Circle located about 67 degrees latitude. The Antarctic climate is even colder than the Arctic climate and most of Antarctica is buried under a permanent ice cap.*
- *23 degrees from the equator are the tropics. The Tropic of Cancer is in the northern hemisphere and the Tropic of Capricorn is in the south. Between the tropics the sun can pass directly overhead at midday.*
- *Lines of latitude are connected to the time of day. As the earth rotates on its axis, different parts of the earth point towards the sun, only half of Earth faces the sun at any given time, the other half is experiencing night time. When it is noon at the Prime Meridian, it is midnight at the 180 degrees meridian on the other side of Earth.*
- *Using the Prime Meridian, we can divide the world into 24 time zones to match the 24-hour cycle of Earth's rotation on its axis. Some countries change their clocks forwards or backwards to get lighter mornings in the winter, or longer evenings in the summer.*
- *Map projection is the stretching of the globe to fit a flat page.*
- *If you compare a globe and a flat map, you may notice countries are different sizes. On some maps, the country of Iceland looks very large, larger than Italy, but Italy is three times the size of Iceland.*
- *Gerhardus Mercator was a Flemish cartographer who first projected the Earth's surface onto a flat map in the 1500s. Generally his map projection is accurate between the tropics of Cancer and Capricorn, however the landmasses nearer the poles look larger than they are. Greenland looks larger than Australia when it is not the case.*

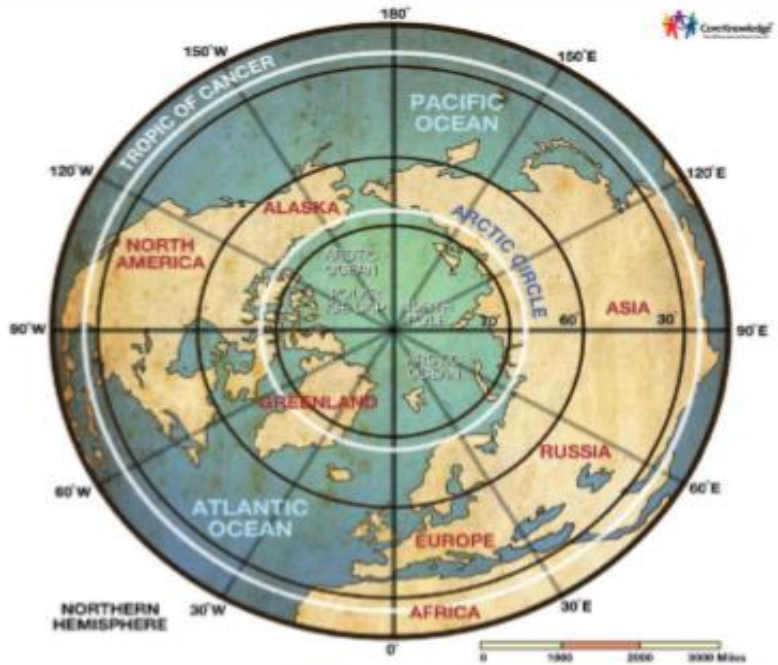
Think like a geographer by

Naming and locating an extensive range of places in the world including globally and topically significant features and events.
Recognising patterns in human and physical features and understanding some of the conditions, processes or changes which influence these patterns.
Explaining some links and interactions between people, places and environments.
Interpreting a wider range of geographical information and maps including scale, projections, thematic, and digital maps.
Use a range of numerical and quantitative skills to analyse, interpret and present data collected from fieldwork observations, measurements and recordings.
Communicating geographical information using a wide range of methods including writing at increasing length.
Making predictions and test simple hypotheses about people, places and geographical issues.
Developing their views and attitudes to critically evaluate responses to local geographical issues or global issues and events.

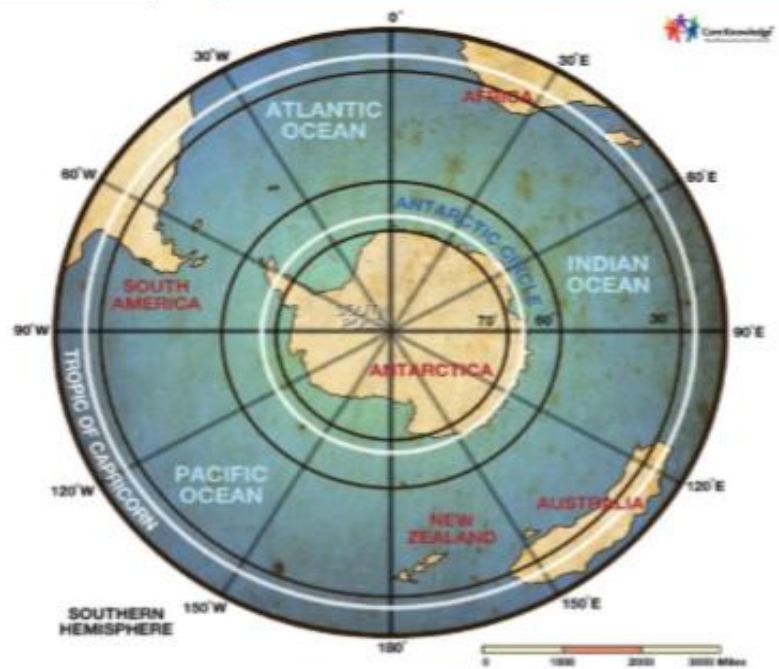
Knowledge Organiser- Spatial Sense (Geography- Year 6)

Key Vocabulary	Definition
Longitude	Imaginary lines parallel to the prime meridian line that help map makers locate places with accuracy. (Vertical lines)
Latitude	Imaginary lines parallel to the equator that help map makers to locate places with accuracy. (Horizontal lines)
Axis	An imaginary line around which the Earth rotates.
The Poles	The two locations on the surface of the Earth that are at the Northern and Southern ends of the axis of rotation.
Tropic of Cancer	The line of latitude 23° north of the equator.
Tropic of Capricorn	The line of latitude 23°south of the equator.
Prime Meridian	The line of longitude at 0°.
Time Zone	A range of longitude that shares a common time.
Map Projection	A method that represents the Earth on a flat surface.

Gerhardus Mercator
Flemish Cartographer
Projected the Earth onto a flat surface in the 1500s.



THE ARCTIC CIRCLE



THE ANTARCTIC CIRCLE