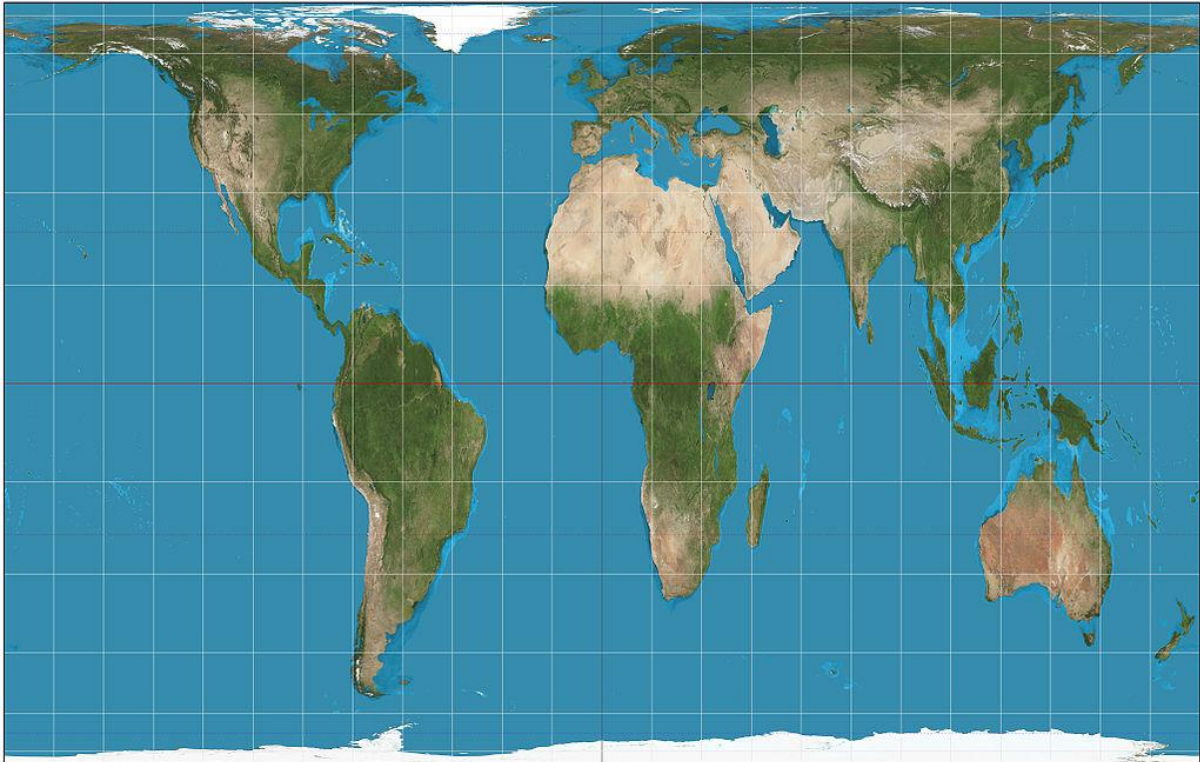




Themes, projections and world regions

Resource number 10



Emma Espley and Simon Catling

KS2



Digimap for Schools





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Introduction

This resource aims to develop pupils' locational knowledge. By accessing and using Digimap for Schools, it is hoped that pupils will have the opportunity to investigate thematic maps, map projections and different world regions.

<p><i>What's the theme?</i> What different types of maps exist?</p>	<p><i>What are we exploring?</i></p> <ul style="list-style-type: none">• There is no single definitive map of the world.• Over time, cartographers have represented the world in many different ways.• One of the biggest issues is how to produce a flat map of a spherical Earth. Mapmakers have attempted to overcome the distortion of shapes by developing different map projections. Pupils will mostly encounter equal area projections in the atlases that they use as this format aims to show the regions of the world as accurately as possible.• Thematic maps present information about a particular aspect, e.g. the distribution of volcanoes and earthquakes; population density; world biomes.
<p><i>What's the learning objective?</i> To understand that many different types of maps exist.</p>	<p><i>What will pupils know, understand and be able to do after completing this?</i></p> <p><i>All pupils will...</i></p> <ul style="list-style-type: none">• be able to identify three different regions of the world.• be able to locate three different regions on a world map and add an annotation next to each one, explaining what the term implies.• be able to explain what a biome is and give an example of one.• be able to briefly describe the global distribution of a particular biome.• be able to explain how most world maps are printed.• be able to provide an example of an alternative world map view.• be able to give examples of who might use different map views. <p><i>Most pupils will, in addition...</i></p> <ul style="list-style-type: none">• be able to identify four different regions of the world.• be able to locate four different regions on a world map and add an annotation next to each one, explaining what the term implies.• be able to explain what a biome is and list three examples.• be able to describe the global distribution of a particular biome.





	<ul style="list-style-type: none"> • be able to explain how most world maps are printed. • be able to provide two examples of alternative world map views. • be able to give examples of who might use different map views. <p><i>Some pupils will, in addition...</i></p> <ul style="list-style-type: none"> • be able to identify five or more different regions of the world. • be able to locate five or more different regions on a world map and add an annotation next to each one, explaining what the term implies. • be able to explain what a biome is and list five examples. • be able to describe the global distribution of a particular biome. • be able to explain why biomes are important for life around the world. • be able to explain how most world maps are printed. • be able to provide at least three examples of alternative world map views. • be able to give examples of who might use different map views. • be able to explain how people might respond to a particular map view differently.
<i>NC Programme of Study for Geography (England)</i>	<ul style="list-style-type: none"> • Pupils should extend their knowledge and understanding beyond the local area to include the United Kingdom and Europe, North and South America. This will include the location and characteristics of a range of the world’s most significant human and physical features. They should develop their use of geographical knowledge, understanding and skills to enhance their locational and place knowledge.
<i>The World Around us (Northern Ireland)</i>	<ul style="list-style-type: none"> • [The curriculum implies that pupils will build their knowledge of places, their location and characteristics, at different scales, locally, nationally and around the world, and that they will develop their skills and knowledge through using large scale maps, globes, world maps and atlases. This will occur through studies that meet the curriculum requirements.]
<i>Curriculum for Excellence (Scotland)</i>	<p>Social Studies:</p> <ul style="list-style-type: none"> • 2-14a - To extend my mental map and sense of place, I can interpret information from different types of maps and am beginning to locate key features within Scotland, United Kingdom, Europe or the wider world.





Curriculum for Wales

Humanities:

- I can recognise the distinct physical features of places, environments and landscapes in my locality and in Wales, as well as in the wider world.

How might I assess learning?

- Can pupils provide examples of different regions of the world?
- Can pupils locate the different regions on a world map and add an annotation next to each one, explaining what the term implies?
- Can pupils explain what a biome is and give an example/s of one/some?
- Can pupils describe the global distribution of a particular biome?
- Can pupils explain why biomes are important for life around the world?
- Are pupils able to explain how most world maps are printed?
- Are pupils able to provide an example/s of alternative world map views, e.g. a map centred on the Pacific Ocean; the Australia 'upside-down' map; circum-polar maps?
- Can pupils give examples of who might use different map views?
- Can pupils explain how people might respond to a particular map view differently?

What could we do next?

- See the [Taking it Further section](#), below.




Which key words are relevant here?

atlas; world; world map; globe; Equator; Prime Meridian; International Date Line (IDL); thematic; physical; political; population; biome; environment; climate; temperate; tundra; Mercator; Peters; continent; Northern Hemisphere; Southern Hemisphere; Far East; Near East; South Asia; north; east; south; west.





Teaching and learning activities

	<i>Activity</i>	<i>What's involved?</i>	<i>What do I need?</i>
<i>To start</i>	<p><i>Name the region</i></p> 	<ul style="list-style-type: none"> • Read the handout about regions together. • Elicit the names of regions from pupils. • Prompt with different region types, e.g. hemispheres; biomes; political regions. 	<ul style="list-style-type: none"> • Printed copies of the handout 'What's in a name - World information sheet', provided courtesy of the Geographical Association. • Digimap for Schools login details. • White board and marker pens.
<i>Main activity</i>	<p><i>Mapping regions</i></p> 	<ul style="list-style-type: none"> • Pupils use the list of regions from the starter activity to annotate a world map. • Introduce biomes. Ask pupils to identify the biome(s) found on a particular continent and describe the global distribution of a particular biome. 	<ul style="list-style-type: none"> • Digimap for Schools login details. • Printed copies of the world biome handout, provided courtesy of internetgeography.net. • Access to 1 tablet or PC for every 2 pupils. • Internet access.
<i>To finish</i>	<p><i>Map projections</i></p> 	<ul style="list-style-type: none"> • Share some of the alternative map projection views with pupils. • Discuss what surprises pupils and why maps conventionally have north at the top. 	<ul style="list-style-type: none"> • Digimap for Schools login details. • Display on screen or prints of the alternative world map images found in this resource.

Acknowledgements:

The Everyday Guide to Primary Geography: Locational Knowledge by Simon Catling, p. 30-31.





Starter Activity: Name the region

1. Read the world information sheet, 'What's in a name?' together.
2. Ask pupils: "How many different regions of the world can you identify?". Explain that regions are usually not countries, but rather areas that have something in common. The following prompts might be useful:
 - a. Hemispheres e.g. Northern, Eastern, Western and Southern.
 - b. Biome or climate regions, e.g. the Tropics, the Arctic, the Prairies.
 - c. Regions based on a physical feature, e.g. the Himalayas, the Rockies, the Amazon basin, the Amazon rainforest.
 - d. Political regions, e.g. the Middle East, Sub-Saharan Africa.
3. Record their answers onto a white board.





Main activity: Mapping regions

1. Ask pupils to log in to Digimap for Schools.
2. Go to: <https://digimapforschools.edina.ac.uk>.
3. Select Login in the top right corner.
4. Enter username and password. The username and password are provided by Digimap for Schools when you subscribe. Everyone in your school can use the same login details.

Username

Password

LOG IN

Display latitude and longitude

5. Pupils will need to customise their screen so that they are displaying lines of latitude and longitude.
6. **Open the Overlays menu.**
 - a. Check the box next to **Latitude/Longitude Grid**.

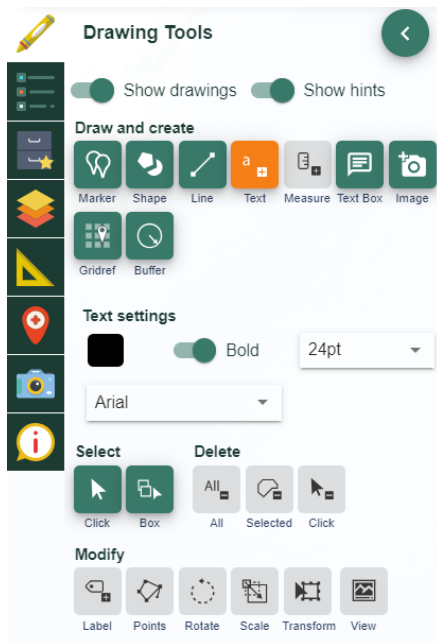
Research and identify regions

7. Challenge pupils to access the Internet to try and find out what particular region names mean. You might ask groups to tackle different types of regions, e.g. one group could tackle political regions, one hemispheres and so on.
8. Once pupils have done this, they should attempt to:
 - a. Locate the different regions on a world map.
 - b. Use the Drawing tools to add a marker and/or label next to each one, explaining what the term implies.

Adding drawings

9. **Open the Drawing Tools.**
 - a. To add a label, select the text tool (highlighted in the image below), select your location, then type your text.
 - b. To add a marker, select the marker from the menu and select your location on the map.





World biome map

10. Project or distribute copies of the supplied 'World biomes' handout.

11. Explain to pupils what a biome is. Perhaps, use 'tundra' as an example? Have a read of internetgeography.net's useful blog post: <https://www.internetgeography.net/topics/what-is-a-biome/>.

12. Ask pupils: What biome(s) is(are) found on, for example:

- a. Asia?
- b. Africa?
- c. South America?
- d. North America?

13. Ask pupils: Can you describe the global distribution of, for example:

- a. Tropical rainforest?
- b. Tundra?
- c. Taiga?

14. Ask pupils: Why are biomes important for life around the world?





Finish activity: Map projections

A map projection is the method of translating the 3D spherical Earth into a 2D map. There are many ways to do this and all have strengths and weaknesses. To learn more, see:

<https://gisgeography.com/map-projections/>.

Explain that most world maps are printed with north at the top and are Atlantic-centred, but alternatives exist. Some examples are shown on the following pages. Show these to pupils and ask:

1. What surprises you about this map view?
2. Who might use this map view?
3. Do you think people might respond to it differently?
4. Why do you think maps are often centred on the Atlantic Ocean/Europe with north at the top?

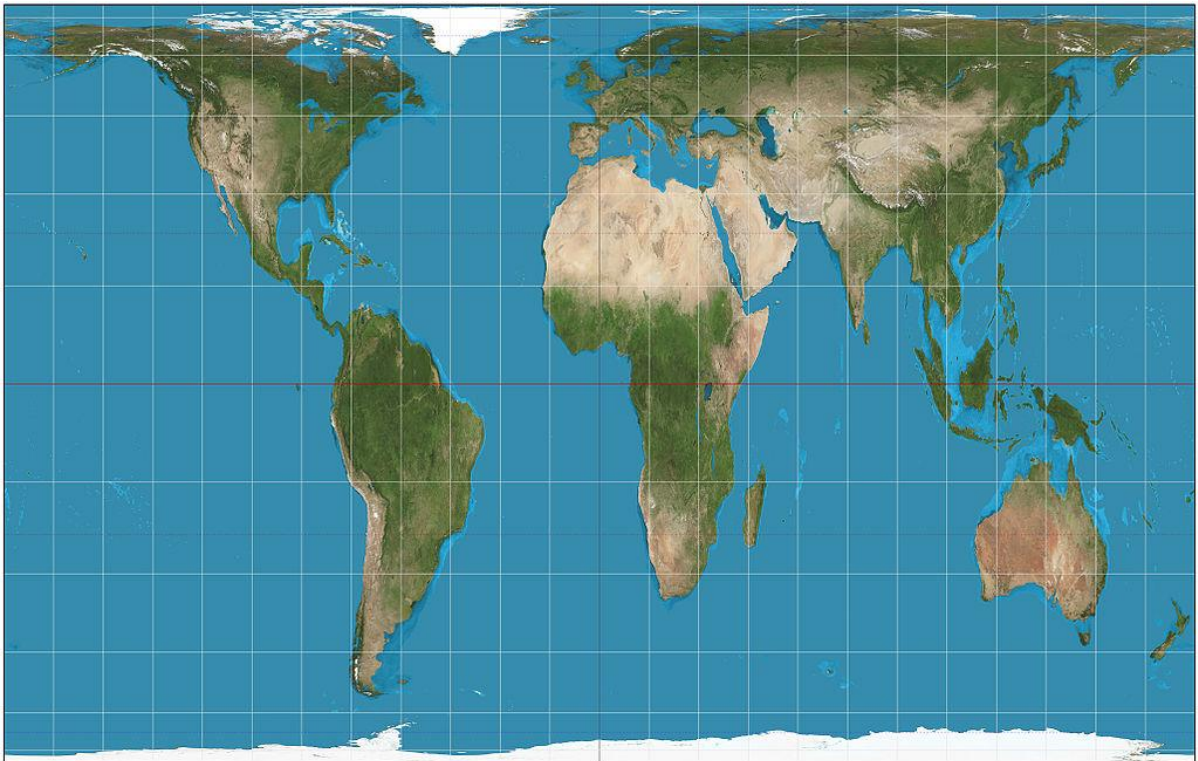




Resource: Examples of different projections

Peters projection

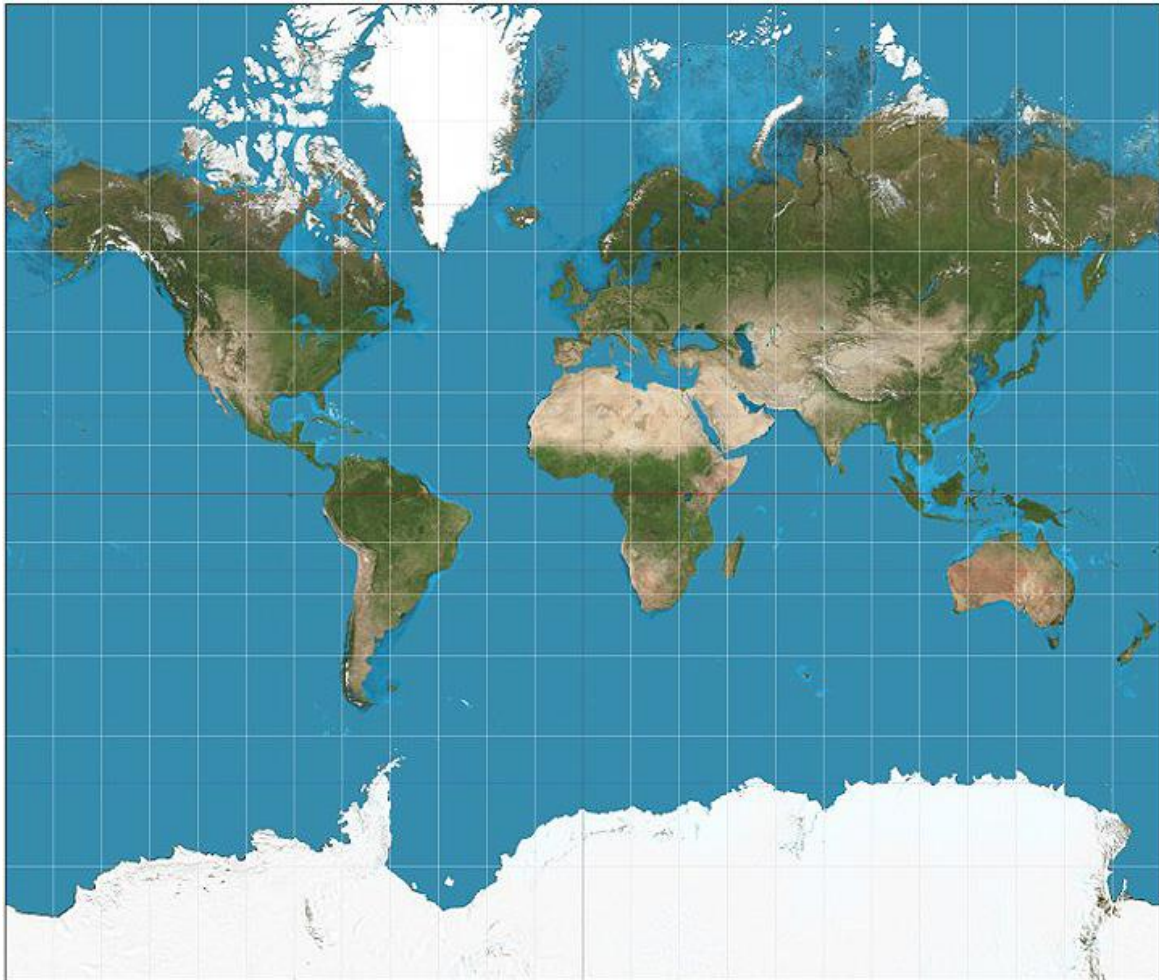
The Peters projection accurately shows different countries' relative sizes. It distorts the shape of countries, but it avoids exaggerating the size of higher-income countries in Europe and North America and reducing the size of lower-income countries in Asia, Africa and South America.





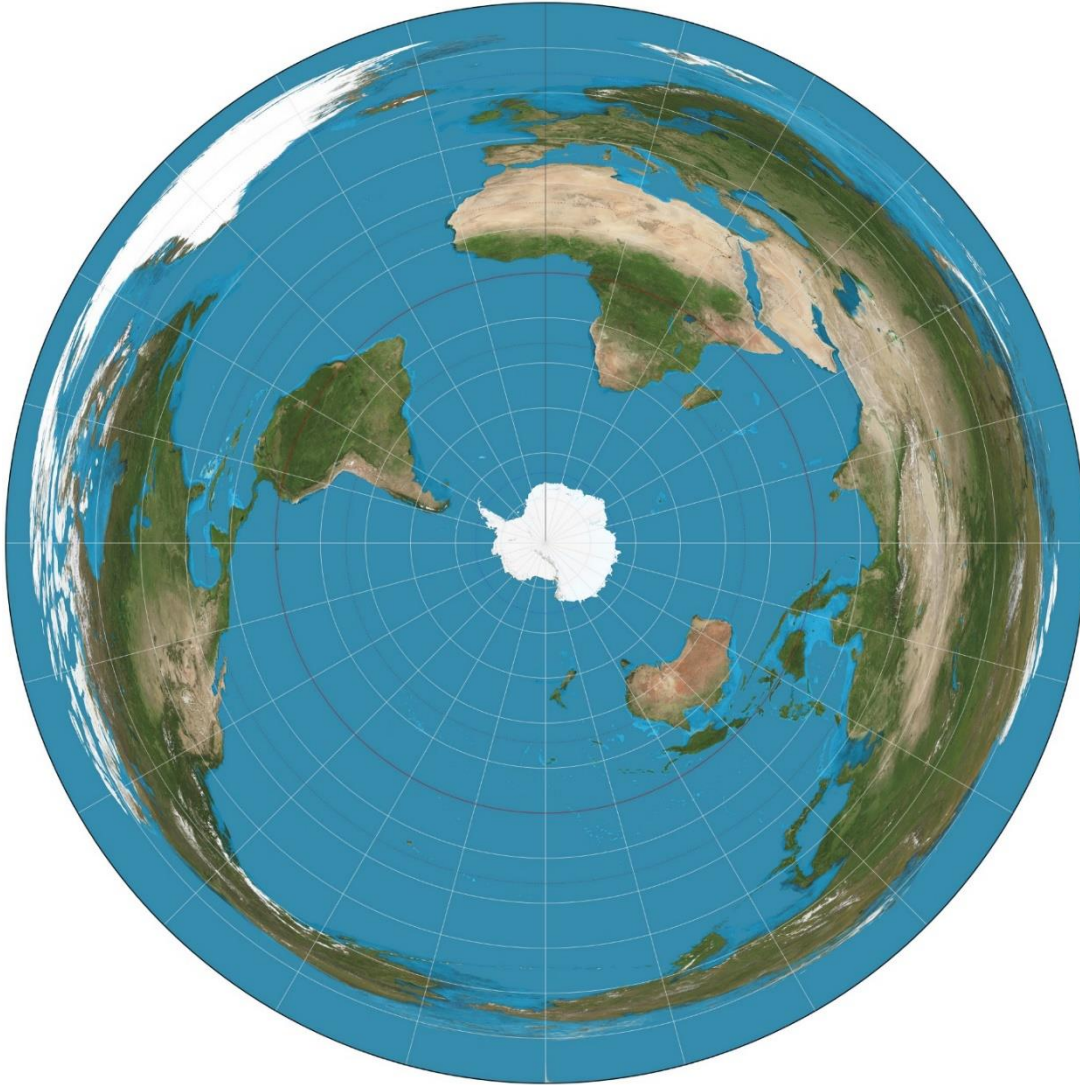
Mercator Projection

This projection was developed by Gerardus Mercator in 1569 for navigational purposes. It was the perfect map for sailing the sea but the projection grossly distorts countries sizes. This is at its worst the closer you are to the poles. Greenland is too big. It should fit into Africa 14 times!





South-pole centred map





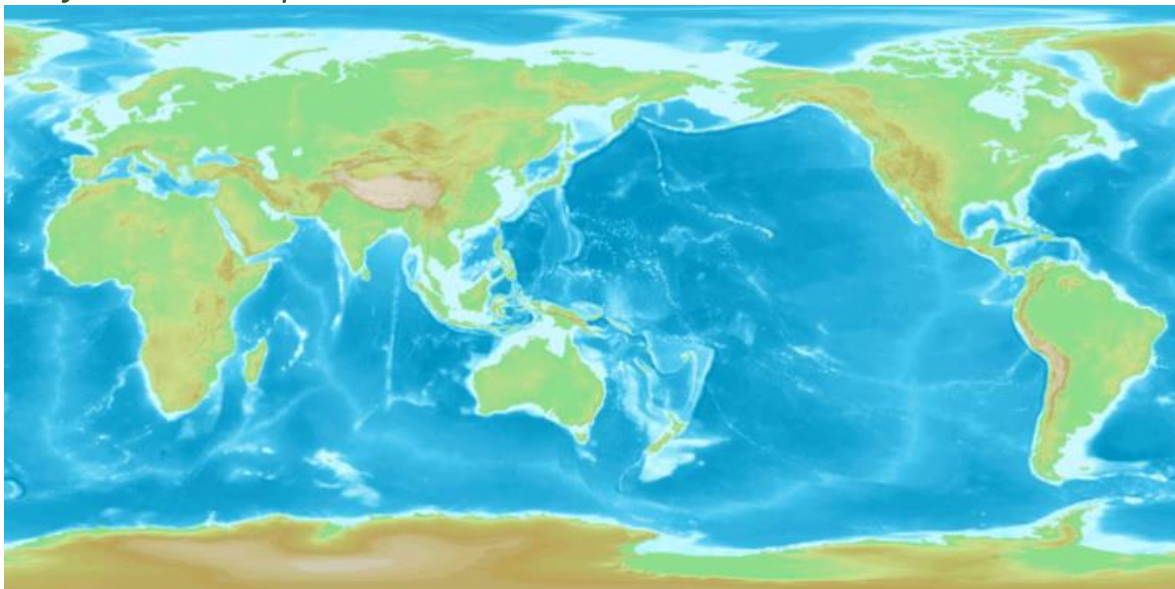
Australia upside-down map

This map has Australia at the top. Why is north usually at the top?



Source: <http://www.transpacificproject.com/wp-content/uploads/2011/06/SouthUpMapr.jpg>

Pacific-centred map





Taking it further

Geography

Thematic worlds

Get pupils to work in small groups to create a thematic map either showing the distribution of physical (natural) or human (made by people) features, e.g. out-of-town retail outlets or an aspect in the wider world, e.g. production of coffee.

Ask pupils to justify their chosen theme and identify any patterns on their map, e.g. physical (natural) features are important to many people ...

As many electronic/online games are concerned with constructing 'worlds', pupils may even decide to use some gaming ideas to present their findings!

Satellite views

Briefly display a satellite image of a continent. This website may be useful:

<https://earthexplorer.usgs.gov/>.

Ask pupils to access Digimap for Schools/atlas and see if they can find the continent and name it as quickly as possible.

Next, get pupils to compare the satellite image with the digital/atlas map, identifying what the map shows, but the satellite image does not, and vice versa.

Different scale, different detail

Explain to pupils that they actually encounter maps at different scales every day.

Provide them with a range of maps. Ask them to compare different maps and identify what is included and excluded in relation to the map scales.

For example, study maps of a continent and a country and compare them with what (if any) detail a world map shows of that continent/country.

Groups/pairs could justify to the rest of the class why a particular map scale is useful and what its limitations are.





Acknowledgements

Internetgeography.net

With thanks to [internetgeography](https://www.internetgeography.net) for allowing us to share their excellent world biomes map. Read their blog post on biomes here: <https://www.internetgeography.net/topics/what-is-a-biome/>.

Geographical Association



With thanks to the Geographical Association for allowing us to use excerpts from [*The Everyday Guide to Primary Geography: Locational Knowledge*](#), by Simon Catling.

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