

Map Skills

Lesson One: An Introduction to Maps (Year one)

Locational Knowledge	Place Knowledge	Key questions and ideas	Teaching and learning activities	Resources
Interpret a range of sources of geographical information: including maps, diagrams, globes, aerial photographs.	Exploring the physical characteristics of the classroom as a place.	<p>Learning Objective To create a plan of the classroom.</p> <p>Key Questions</p> <ul style="list-style-type: none"> • What is a map? • What is a plan? • Where would we find them? • What are compass points? • How can we use them to give directions? <p>Key Ideas</p> <ul style="list-style-type: none"> • Maps and plans are views from above or a 'bird's eye view' of a place and use symbols. • Maps and plans show the distance between places or objects accurately, through using a map scale. • They can be drawn at different levels of detail: from the positions of objects in a room (a plan) to the location of countries, continents and oceans in the world (a world map). • There are four main compass points which help people to navigate direction: North, South, East and West. 	<p>STARTER: Show the class a variety of maps and globes. Let them look at them, handle and discuss what they show. Pupils discuss their purpose, whether they have seen them before and whether they are flat or 3-D.</p> <p>MAIN ACTIVITY: Use photos of the classroom to make a large plan on the carpet as a whole class. Pupils then create their own classroom plan. Introduce compass points and ask pupils to give simple directions. Pupils can add compass points to their own maps.</p> <p>PLENARY: Play 'Toy Detectives' A member of the class leaves the room, whilst a volunteer hides a class toy and another pupil marks its location on the classroom plan. The child then returns and uses the map to find the hidden toy.</p>	<p>Downloads: Map Skills Year One (PPT) Lesson Plan MSWORD PDF</p> <p>Additional Resources -A range of maps on pupils' desks (tube, OS, road atlas, bus map, cycle route map etc.) -Camera/prepared photos of the classroom -Rope to create a large outline of the classroom -Compass -Class toy -Paper and pens for drawing plans</p>
Human and Physical Geography	Geographical Skills and Fieldwork			Assessment opportunities
Communicate geographical information and use basic geographical vocabulary to refer to key physical and human features on maps and plans.	Use simple compass directions (North, South, East, West) and locational and directional language to describe the location of features on a map. Devise a simple map, and use and construct basic symbols in a key.			<p>Formative assessment to determine map skills:</p> <p>How well can pupils describe the maps?</p> <p>How familiar are they with maps and plans?</p> <p>Are pupils able to represent their classroom accurately on a plan and give clear directions?</p>

Web links: Go to the RGS-IBG website to view a subject knowledge animation on primary map skills

<http://www.rgs.org/OurWork/Schools/Teaching+resources/Key+Stage+1-2+resources/Subject+knowledge+animation+Map+skills.htm>

Map Skills

Lesson Two - The School Grounds (Year Two)

Locational Knowledge	Place Knowledge	Key questions and ideas	Teaching and learning activities	Resources
Locate places and physical features on maps and aerial photographs of the local area.	Consider the physical and human features of the local area and school grounds.	<p>Learning Objective</p> <p>To create a map of the school using symbols and a map key.</p> <p>Key questions</p> <ul style="list-style-type: none"> • How can we find out where places are located? • What is a map? • What is a plan? • How can give directions? • How are places represented on maps and plans? <p>Key Ideas</p> <ul style="list-style-type: none"> • A map of the school grounds is a 'smaller scale' map than the map of the classroom as it represents a larger space at a lower level of detail. • Map symbols are pictures to represent human (man-made) and physical (natural) features of the landscape. • Symbols are useful as they prevent maps from being covered in too many word labels. • An aerial photo is a photograph from above. Photos from above help people draw maps accurately. 	<p>STARTER:</p> <p>Pupils practice identifying small and large scale maps.</p> <p>MAIN ACTIVITY:</p> <p>Pupils will work in small groups to take photos of different locations in the school and playground. They then give the photos to another group who find the locations and give directions. Finally, the pupils come back together and make a map of the school with their photos as key landmarks.</p> <p>Extension:</p> <p>Pupils create symbols and a map key.</p> <p>PLENARY:</p> <p>Pupils discuss symbols that could be used to represent their key locations in the school grounds.</p> <p>Pupils volunteer to draw a symbol on the board and other groups attempt to guess the place in the school the symbol represents.</p> <p>View the school surroundings using Google Earth.</p>	<p>Downloads:</p> <p>The School Grounds (PPT) Lesson Plan MSWORD PDF</p> <p>Additional resources:</p> <p>Cameras</p>
				Assessment opportunities
				<p>Formative assessment through questioning and observation:</p> <p>How well can children give directions? How well can children follow directions? Do they understand the concept of an aerial plan (bird's eye view)?</p>
Human and Physical Geography	Geographical Skills and Fieldwork			
Use basic geographical vocabulary to refer to key physical and human features of the local area.	Interpret a range of sources of geographical information, including maps, diagrams, globes, aerial photographs. Communicate geographical information in a variety of ways, including through maps. Devise a simple map; and use and construct basic symbols in a key.			

Web links:

To download google maps/ earth, go to <https://www.google.co.uk/maps> / https://www.google.co.uk/intl/en_uk/earth/

To download the Digimap for Schools software go to <http://digimapforschools.edina.ac.uk/>

Map Skills

Lesson Three - Getting to know the British Isles

Locational Knowledge	Place Knowledge	Key questions and ideas	Teaching and learning activities	Resources
<p>Defining The British Isles Great Britain The United Kingdom and learning which countries make up the British Isles.</p> <p>Locating capital cities on a map of the UK.</p>	<p>Capital Cities - London, Edinburgh, Cardiff, Belfast, Dublin</p>	<p>Learning objective To create a map of the British Isles</p> <p>Key Questions</p> <ul style="list-style-type: none"> How can we use maps to develop our knowledge of the British Isles? Which countries make up the British Isles? What are their capital cities and where are these located? How can we describe the location of different parts of the British Isles? <p>Key ideas</p> <ul style="list-style-type: none"> Great Britain, the United Kingdom and the British Isles cannot be used interchangeably, as they include different land masses. The UK's capital cities are: England (London), Scotland (Edinburgh), Wales (Cardiff) and Northern Ireland (Belfast). England, Scotland, Wales and Northern Ireland are the countries within the United Kingdom. 	<p>STARTER: Play geography hangman to support pupils' geographical vocabulary.</p> <p>MAIN ACTIVITY: Using a large sized map of the British Isles, the pupils label the different countries and their capital cities. They then use eight compass points to describe the location of each of these cities. Pupils then transfer this information to their own blank maps of the British Isles.</p> <p>PLENARY: Play the online MapZone game to practice locating English counties in the correct place as a jigsaw.</p>	<p>Downloads: The British Isles (PPT) Lesson Plan PDF MSWORD Outline map of BI (PDF) British Isles, United Kingdom or Great Britain? PDF MSWORD</p>
<p>Human and Physical Geography</p> <p>Human - cities and their location, directions, political boundaries.</p> <p>Physical - mountains, rivers, seas</p>	<p>Geographical Skills and Fieldwork</p> <p>Using eight compass points to give directions. Locating places on maps.</p>			<p>Assessment opportunities</p> <p>How well can children use compass points to give directions? How well can they transfer information to their own map?</p>

Web links: Large map of the British Isles: <http://www.maximap.net/>

Download Digimap for Schools: <http://digimapforschools.edina.ac.uk/>

Plenary: <http://mapzone.ordnancesurvey.co.uk/mapzone/gamespages/EnglandGame.htm>

For more detail regarding the difference between the UK, British Isles and Great Britain go to

<http://www.ordnancesurvey.co.uk/blog/2011/08/whats-the-difference-between-uk-britain-and-british-isles/>

Map Skills

Lesson Four – Ordnance Survey maps (Year four)

Locational Knowledge	Place Knowledge	Key questions and ideas	Teaching and learning activities	Resources
Locate a range of places and landmarks on Ordnance Survey maps of the UK.	Learn about the geographical features of specific locations on maps.	<p>Learning objective: To learn why map symbols are used and to recognise the OS map symbols.</p> <p>Key ideas</p> <ul style="list-style-type: none"> Ordnance Survey is Britain's mapping agency. OS create up to date and accurate maps depicting the landscape's human and physical features. All OS maps use the same symbols, which are included in a key so people using the map know what each symbol represents. The symbols represent both human features and physical features. <p>Key Questions</p> <ul style="list-style-type: none"> How can we use maps to find out about the local area? What is an Ordnance Survey map? How are places, human and physical features represented on OS maps? What symbols are used on OS maps? How can we find places on OS maps? 	<p>STARTER: Pupils look at a range of maps and discuss which is the most useful for a range of purposes. Consider human and physical features and sort the maps accordingly.</p> <p>MAIN ACTIVITY: Pupils find the school and their homes on OS maps. They use four-figure grid references to locate places on an OS map. Pupils then play a game of map symbols bingo, to develop their knowledge of OS map symbols.</p> <p>PLENARY: Review the symbols learned. Play map symbols snap on the BBC website (see web links).</p>	<p>Downloads: Ordnance survey maps (PPT) Lesson Plan PDF MSWORD Bingo map symbols PDF MSWORD Map Ability Compass Bearings (PDF)</p> <p>Additional resources A range of maps for different uses at a range of scales: bus, tube, road, rail etc. Printed copies of the <i>Bingo map symbols</i> for one per pair (see downloadable resources)</p>
Human and Physical Geography	Geographical Skills and Fieldwork			Assessment opportunities
Human and physical geography: locate human and physical features on OS maps and consider the symbols for these features in the map key.	KS2: Interpret maps and aerial photographs. Communicate geographical information through maps. Use the eight points of a compass, four and six-figure grid references, symbols and key to build their knowledge of the United Kingdom.			

Web links: Download *Digimap for Schools* at <http://digimapforschools.edina.ac.uk/>

Go to Google Maps to explore the local area at <https://www.google.co.uk/maps>

Go to the Ordnance Survey website to learn how to use a compass <http://www.ordnancesurvey.co.uk/mapzone/map-skills/compass-bearings>

For the plenary, play map symbols snap on the BBC website <http://www.bbc.co.uk/schools/barnabybear/games/map.shtml>.

Map Skills

Lesson Five - Contour Lines

Locational Knowledge	Place Knowledge	Key questions and ideas	Teaching and learning activities	Resources
Using an OS map to locate a range of human and physical features.	Considering how the features and characteristics of place are represented on maps.	<p>Learning objective: To create a 3D model using map contour lines.</p> <p>Key Questions</p> <ul style="list-style-type: none"> • What are the definitions of: 'human feature' and 'physical feature'? • How are these represented on an Ordnance Survey map? • How is land height shown on Ordnance Survey maps? • What is a contour line? <p>Key ideas</p> <ul style="list-style-type: none"> • A human feature is built and man-made, whereas a physical feature is natural. • Physical and human features are represented using symbols on maps, and also a map key. • Land height is shown on OS maps using contour lines. The closer together contour lines are, the steeper the slope of the land. 	<p>STARTER: Pupils sort OS map symbol flashcards according to whether they are human or physical features.</p> <p>MAIN ACTIVITY: Pupils find contour lines and learn what they are used for and how they show us about relief. The main activity is to build a 3-D model from contour patterns showing particular physical landscape features.</p> <p>PLENARY: Pupils have to look at photos of different physical features, such as river valleys and mountains. They have to draw what the feature would look like on an OS map using contour lines.</p>	<p>Downloads: Contour Lines (PPT) OS map symbols flash cards PDF OS Relief and contour lines PDF MSWORD Map extract with contour lines PDF MS Word Lesson plan PDF MSWORD Instructions 3D Model PDF MSWORD</p>
				Assessment opportunities
<p>Human and Physical Geography</p> <p>Human and Physical features on OS maps. Relief on maps and on the land.</p>	<p>Geographical Skills and Fieldwork</p> <p>Contour lines</p>			Are pupils able to match photos of landforms to contour line images?

Web links:

Relief and contours information sheet <http://www.ordnancesurvey.co.uk/mapzone/assets/doc/map-skills/Relief-and-Contours-en.pdf>

Download *Digimap for Schools* at <http://digimapforschools.edina.ac.uk/>

Map Skills

Lesson Six - Extending understanding of OS maps: Six-figure grid references

Locational Knowledge	Place Knowledge	Key questions and ideas	Teaching and learning activities	Resources
Name and locate counties and cities of the United Kingdom and discover how to locate specific landmarks and places through the use of grid references.	Learn about how features of places can be represented through symbols on maps in 2-dimensions.	<p>Learning Objective To use map skills to locate a range of places on an OS map.</p> <p>Key Questions</p> <ul style="list-style-type: none"> How can we locate places on Ordnance Survey maps? What is a six-figure grid reference? How can we read them? How is distance represented on a map? <p>Key ideas</p> <ul style="list-style-type: none"> Landscape features and places can be located on an OS map through the use of grid references. The 'Eastings' and 'Northings' are the numbers around the edge of an OS map. To pinpoint a place you take the Eastings number first, then the Northings. Six-figure grid references enable more accurate readings, as two more figures give the exact location within the grid square. 	<p>STARTER: Open <i>Digimap</i> and locate the school. Pose the questions: How can we pinpoint places on an Ordnance Survey map? How could you describe to a friend where to find the school on an Ordnance Survey map?</p> <p>MAIN ACTIVITY: Pupils learn how to use six-figure grid references to pinpoint places on a map. They find the school and their home, plus any other local places of interest. They then develop their understanding of scale and use this to find actual distances between places. Finally pupils put together these two skills to carry out a Treasure Hunt.</p> <p>PLENARY: Pupils record any handy hints that have helped them with this lesson. This can then be turned into a leaflet to help others.</p>	<p>Lesson plan PDF MS WORD Six-Figure Grid References (PPT) Treasure Hunt resources sheet PDF MSWORD Answers to Treasure Hunt PDF MSWORD Digimap for Schools Treasure Hunt example answers (PDF) Measuring Distance Factsheet PDF MSWORD End of Unit Assessment PDF MSWORD End of Unit Assessment Answers PDF MSWORD</p> <p>Additional resources: OS map extracts TQ2978/ 2983/ 3678/ 3682 of London for end of unit assessment</p>
Human and Physical Geography	Geographical Skills and Fieldwork			Assessment opportunities
Use OS map symbols and the map key to name physical and human features.	Interpret maps and aerial photographs. Use the eight points of a compass and six-figure grid references.			How well can pupils apply their map skills to the main activity task? End of Unit assessment.

Web links:

The *Measuring distance factsheet* can be accessed online at <http://www.ordnancesurvey.co.uk/mapzone/assets/doc/map-skills/Measuring-Distance-en.pdf>

Watch the Map Skills subject knowledge animation from the RGS-IBG at <http://www.rgs.org/OurWork/Schools/Teaching+resources/Key+Stage+1-2+resources/Subject+knowledge+animation+Map+skills.htm>

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