

Whole School Developing Map Skills

Maps have long been a source of interest and intrigue. Early maps were largely pictorial and often inaccurate. Over the years, maps have become more and more accurate, with the use of satellite imagery. Although maps are now widely available online, paper maps are still highly valued. A secure understanding of maps underpins all areas of the geography curriculum. This documents teaches children the skills so that they can apply them in their geography programme of study.

The earlier units can be used by older pupils too, to ensure they have the baseline knowledge necessary for more advanced map reading activities. Opportunities for retrieval of knowledge from previous units at the start of each unit should be used.

- **Locational knowledge:**

KS1: Use maps to name and locate the world's seven continents and five oceans, focussing on the UK. Name, locate and identify characteristics of the four countries and capital cities of the UK and its surrounding seas.

KS2: Locate the world's countries using maps, concentrating on environmental regions, key physical and human characteristics, countries, and major cities. Name and locate countries and cities of the UK, geographical regions and key human and physical characteristics.

- **Place knowledge:**

KS1: Develop knowledge of place, focussing on local area.

KS2: Understand geographical similarities and differences through studying maps of the UK. Develop contextual knowledge of the location of globally significant places.

- **Human geography:**

Use geographical vocabulary to refer to features on a map or plan (city, town, village, factory, farm, house, port, harbour, shop.)

- **Physical geography:**

Use geographical vocabulary to refer to features on a map (beach, cliff, coast, forest, hill, mountain, sea, ocean, river, soil, valley, vegetation).

- **Geographical skills and fieldwork:** 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.

KS1: Use simple compass directions (North, South, East and West) and locational and directional language [for example, near and far; left and right], to describe the location of features on a map. Devise a simple map, and use and construct basic symbols in a key.

KS2: Name and locate counties and cities of the United Kingdom. Use the eight points of a compass, four and six-figure grid references, symbols and key (including the use of Ordnance Survey maps) to build their knowledge of the United Kingdom and the wider world.

An Introduction to Maps

Year 1

The unit begins with children looking at a variety of maps, including floor maps, globes and street maps. They will be allowed to feel and touch the maps as much as possible. They will be introduced to the idea of four compass points and taught to give directions. They will use photographs of the classroom to create their own 2-D plan of the classroom on paper.

Locational Knowledge

Interpret a range of sources of geographical information: including maps, diagrams, globes, aerial photographs.

Place Knowledge

Exploring the physical characteristics of the classroom as a place.

Human and Physical Geography

Communicate geographical information and use basic geographical vocabulary to refer to key physical and human features on maps and plans.

Geographical Skills and Fieldwork

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.

Key questions and ideas:

Learning Objective: Can I create a plan of the classroom?

Key Questions

- 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?

Key Ideas

- 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.



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

Notes for the teacher:

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.

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.

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.

Assessment:

- How well can pupils describe the maps? How familiar are they with maps and plans?
- Are pupils able to represent their classroom accurately on a plan and give clear directions?

The School Grounds

Year 2

This unit extends the idea of the map beyond the classroom to the whole school. Pupils select locations to photograph within the school grounds. They pass these photos to another group who need to find where the photos were taken and pupils use compass points to give directions to each place. Finally, they create a map of the school grounds with the photo locations as key landmarks.

Locational Knowledge	Place Knowledge	Human and Physical Geography	Geographical Skills and Fieldwork
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.	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.

Key questions and ideas:

Learning Objective: Can I create a map of the school using symbols and a map key?

Key Questions

- 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?

Key Ideas

- 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.

Notes for the teacher:

Pupils practice identifying small and large scale maps.

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.

Pupils create symbols and a map key. Pupils discuss symbols that could be used to represent their key locations in the school grounds.

Pupils volunteer to draw a symbol on the board and other groups attempt to guess the place in the school the symbol represents. View the school surroundings using Google Earth.

Assessment:

- 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)?

Additional Resources

Cameras

Getting to know the British Isles

Year 3

The unit starts by giving pupils a sense of where the school is located within the wider world. They use eight compass points to describe the location of capital cities within the British Isles. They learn the difference between the boundaries of Great Britain, the British Isles and the United Kingdom. Pupils develop knowledge of England, Scotland, Wales and Ireland through hands-on activities.

Locational Knowledge	Place Knowledge	Human and Physical Geography	Geographical Skills and Fieldwork
<ul style="list-style-type: none"> • Defining The British Isles • Great Britain • The United Kingdom and learning which countries make up the British Isles. • Locating capital cities on a map of the UK. 	<ul style="list-style-type: none"> • Capital Cities - London, Edinburgh, Cardiff, Belfast, Dublin 	<ul style="list-style-type: none"> • Human - cities and their location, directions, political boundaries. • Physical - mountains, rivers, seas 	<ul style="list-style-type: none"> • Using eight compass points to give directions. • Locating places on maps

Key questions and ideas:

Learning objective: Can I create a map of the British Isles?

Key Questions

- 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?

Key ideas

- 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

Additional Resources

Downloads:

- The British Isles (PPT)
- Lesson Plan PDF | MSWORD
- Outline map of BI (PDF)
- British Isles, United Kingdom or Great Britain? PDF | MS WORD

Notes for the teacher:

Play geography hangman to support pupils' geographical vocabulary.

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.

Play the online MapZone game to practice locating English counties in the correct place as a jigsaw.

Assessment:

- How well can children use compass points to give directions?
- How well can they transfer information to their own map?

This unit focuses on Ordnance Survey maps and basic map reading skills. After examining a map of the local area and discussing what they can see on it, pupils are taught to read four-figure grid references. Pupils are also introduced to the geographical concept of scale, and map symbols. They learn why maps require the use of symbols and a map key. The lesson ends with a game of bingo using map symbols maps.

Locational Knowledge	Place Knowledge	Human and Physical Geography	Geographical Skills and Fieldwork
Locate a range of places and landmarks on Ordnance Survey maps of the UK.	Learn about the geographical features of specific locations on maps.	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.

Key questions and ideas:

Learning objective: Can I learn why map symbols are used and to recognise the OS map symbols?

Key ideas

- 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.

Key Questions

- 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?

Additional Resources

Downloads:

- Ordnance survey maps (PPT)
- Lesson Plan PDF | MSWORD
- Bingo map symbols PDF | MSWORD
- Map Ability Compass Bearings (PDF)

Additional resources

A range of maps for different uses at a range of scales: bus, tube, road, rail etc.

Printed copies of the *Bingo map symbols* for one per pair (see downloadable resources)

Notes for the teacher:

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. 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. Review the symbols learned. Play map symbols snap on the BBC website (see web links).

Contour Lines

This unit builds on the previous unit, but it has a greater emphasis on physical geography. Pupils learn how hills and valleys are represented on OS maps, through the use of contour lines. Building a 3-D model from contour lines helps to develop their understanding of how physical features are represented on 2-dimensional maps.

Locational Knowledge	Place Knowledge	Human and Physical Geography	Geographical Skills and Fieldwork
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.	Human and Physical features on OS maps. Relief on maps and on the land.	Contour lines

Key questions and ideas:

Learning objective:

To create a 3D model using map contour lines.

Key Questions

- 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?

Key ideas

- 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.

Additional Resources

- 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

Notes for the teacher:

Pupils sort OS map symbol flashcards according to whether they are human or physical features.

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.

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.

Assessment: Are pupils able to match photos of landforms to contour line images?

Extending understanding of OS maps: Six-figure grid references

This unit, further develops pupils' use of OS maps. They learn to read six-figure grid references and practise locating the school, their house and significant buildings on a map of the local area through the use of hard-copy maps and digital maps. They will then use their acquired skills to complete a treasure map quiz. There is also an end of unit assessment.

Locational Knowledge	Place Knowledge	Human and Physical Geography	Geographical Skills and Fieldwork
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.	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.

Key questions and ideas:

Learning Objective: Can I use map skills to locate a range of places on an OS map?

Key Questions

- 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?

Key ideas

- 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.

Additional Resources

- 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

Notes for the teacher:

Open *Digimap* 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?

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. Pupils record any handy hints that have helped them with this lesson. This can then be turned into a leaflet to help others.

Assessment:

- How well can pupils apply their map skills to the main activity task?
- End of Unit Assessment