Summer Term Overview Year 5 and 6 – Geography

Summer Term Book – Mortal Engines		
Topic – Fieldwork		**Guide Time = 7 lessons**
Assessment:	A number of assessment techniques will be applied: Answers from reading for productivity questions. 'Low-stakes' quizzes (e.g. for VIPs, AfL) In-depth discussion with children. Re-capping and reflecting on VIPs from previous lesson at the start of a new session. Scrutiny of work produced in curriculum books. Ability to put all knowledge together in final fieldwork exercise (plotting and following a route).	**Very Important Points (VIPs):** • A compass has four cardinal points. In order, these are North, East, South and West. • A compass also has four ordinal points (NE, SW, SE, SW). • A compass and a map are key navigation tools. A map can tell you the position you are in and a compass can tell you the direction you need to go. • Lines of latitude and longitude are invisible lines on a globe that people use to get around. • Lines of latitude go around. Lines of longitude go down. • Grid references are used to describe position on a map. They can be four or six figures long. • On a grid, eastings are the numbers that run from left to right and northings are the numbers that run from south to north. • Six figure grid references allow you to pinpoint a location in greater detail than four figure grid references. • Maps use symbols to label different features and landmarks. They include a key so you know what the different symbols are. • Plotting a route on a map means planning where you want to go. It is easier to follow a route if you have written directions as well. • A route is a way from a starting point to a destination. It can be plotted on a map and described using instructions, grid references and compass bearings. **<u>Fat Questions:</u>** What is the impact of mapping on our understanding of the world around us? How has navigation changed over time? In the modern world, is it possible to get lost? Explain your answer.
Links to prior learning (sequencing)	In LKS2, children begin to gain basic competence in collecting, analysing and communicating with a range of data gathered through experiences of fieldwork to deepen their understanding of geographical processes, interpreting a range of sources of geographical information, including maps, diagrams, globes, aerial photographs and Geographical Information Systems (GIS), and communicating information in a variety of ways, including through maps, numerical and quantitative skills and writing at length. They use maps and atlases, giving them a basis for work with OS maps, such as understanding of grids, cardinal points and symbols. Earlier in the Autumn term, children learned to identify the position and significance of latitude, longitude, Equator, Northern Hemisphere, Southern Hemisphere, the Tropics of Cancer and Capricorn and the Prime/Greenwich Meridian and times zones (including day and night.)	
Links to other learning (cross fertilisation)	Maths – use of degrees for compass bearings to give directions and co-ordinates to give grid references/latitudes and longitudes to give position. Science – diagrammatical representation using symbols. PSHE – working as a team to produce a route for someone else to follow and coach them to follow a route. PE – practical orienteering skills. English – writing directions.	
Links to future learning	In KS3, children will be expected to build on their knowledge of globes, maps and atlases and apply and develop this knowledge routinely in the classroom and in the field. They will interpret Ordnance Survey maps in the classroom and the field, including	

	using grid references and scale, topographical and other thematic mapping, and aerial and satellite photographs. They will use Geographical Information Systems (GIS) to view, analyse and interpret places and data. They will use fieldwork in contrasting locations to collect, analyse and draw conclusions from geographical data, using multiple sources of increasingly complex information. This unit lays foundations for practical geographical work which the children will use in KS3 and beyond.	
Character/Wider Development ('50 things', cultural capital, skills)	Being able to read a map and follow directions is a key life skill. It has uses which stretch across many different scenarios – from navigating your way around an unknown location, to following a GPS or Sat Nav. Maps provide a really significant way of learning about and engaging with the world around us and map work encouragese the development of lateral thinking and problem-solving skills.This unit of work is also particularly significant as a result of its promotion of core social skills such as team work. 50 things: one of the 50 things for LKS2 was to read maps and use a compass. This unit of work will help to build on and cement these skills, giving opportunities to use them in practical situations. Thematic Questions: The World Around Us: How can we use mapping to explore the world around us? How have navigation and exploration changed the way we think about the world around us? World Beyond Us: How would navigation be different in space? How could I plot a route through space? Culture: Do maps look different in different countries? How and why has mapping changed over time? Modern Britain: Are maps still useful in modern Britain? How and why has the way we use maps in this country changed? Technology in Action: How have developments in technology changed navigation? Have changes in technology rendered maps useless? Healthy Body and Healthy Mind: How can learning map skills support our mental and physical health?	

OVERVIEW OF TEACHING SEQUENCE

Key Facts/Learning	Learning Focus or Key Question	Learning Outcomes (NC)	Key Words/ Vocabulary	Greater Depth/SEND	Misconceptions	Activities and Resources
Week 1 A compass can tell you the direction you are heading in, or the direction you need to go to reach a particular location. A compass has 4 cardinal points (N, S, E, W) and four ordinal points (NE, NW, SE, SE).	LO: To recognise and use the eight points of the compass.	Use fieldwork to observe, measure, record and present the human and physical features in the local area using a range of methods, including sketch maps, plans and graphs, and digital technologies. 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.	map fieldwork compass points cardinal points ordinal points magnetic north direction position grid reference navigation route	GD: Children have an extension task where, using atlases, they can use compass directions to describe the positions of different UK cities in relation to one another. SEND: Differentiated worksheet is provided with compass image to support children to follow directions.	A compass always points north – you have to use that information to work out which way you are facing or need to face. There is a quarter turn (90º) between each of the compass points.	Reading for productivity is on compass points and direction. Recap of previous knowledge using 'interrupting the forgetting' questions. Watch a BBC bitesize video clip showing how to use a compass. Modelling how to recognise cardinal and ordinal points on a compass. Starter task: follow direction activity cards using compass points. Children practise giving directions from one point to another on a map. **Year 5:** Children follow directions around a map, noting the locations that the directions send them. **Deepen the moment:** Now everybody has Google Maps, there is no need for compasses anymore. Do you or agree or disagree? Justify your answer. **Year 6:** Children use compass points to write directions around a map to certain locations. **Deepen the moment:** Suggest why it might be difficult to use a compass to navigate near to the North Pole.

Week 2 Lines of latitude and longitude are invisible lines on a globe that people use to get around. Lines of latitude go around (horizontally). Lines of longitude go down (vertically).	LO: To use degrees of longitude and latitude to express position on the globe.	Use fieldwork to observe, measure, record and present the human and physical features in the local area using a range of methods, including sketch maps, plans and graphs, and digital technologies. 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.	map globe fieldwork longitude latitude equator prime meridian co-ordinates position degrees	GD: In starter activity, children are expected to use and include definitions for a range of high-level related terminology (e.g. equator, Prime Meridian, converge, parallel). In main task, children to use atlases/iPads to identify continents/countries and oceans where the points are located. SEND: In starter activity, sentence starters and word bank are provided. In main task, partial answers are given on the sheet, children are filling in gaps. Children may still benefit from extra modelling by teacher.	Lines of latitude, longitude (including the equator and prime meridian) are invisible lines. Lines of latitude go around. Lines of longitude go down. Lines of latitude are parallel, but lines of longitude converge at the poles.	Reading for productivity is on the history of navigation. Recap of previous knowledge using 'interrupting the forgetting' questions. Watch a BBC bitesize video clip showing how to use lines of latitude and longitude to express position. VIPs and starter activity to write a definition for lines of latitude and longitude. Modelling more detailed examples of how to use degrees of latitude and longitude, combined with a compass bearing to express position on the globe. **Year 5:** Complete differentiated worksheet labelling different points on a globe using lines of latitude and longitude. **Deepen the Moment:** Explain how latitude affect's the Earth's climate. Refer to the equator in your answer. **Year 6:** Complete differentiated worksheet labelling different points on a globe using lines of latitude and longitude. **Deepen the Moment:** Does the Earth's climate vary according to longitude? Justify your answer.
Week 3 Grid references are used to describe position on a map. They can be four or six figures long.	LO: To recap and use four-figure grid references.	Use fieldwork to observe, measure, record and present the human and physical features in the local area using a range of methods, including	Ordnance Survey (OS) map fieldwork northings eastings grid reference position	GD: Children write definitions for eastings and northings as part of starter task. For main task children have a	The grid reference gives you the bottom left corner of the square. Use 'along the corridor then up the stairs' to	Reading for productivity is on navigating by the stars. Information about OS maps and how they are divided into grids with eastings and northings. Modelling how to use four-figure grid references.

		sketch maps, plans and graphs, and digital technologies. 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.	navigation	more complex map to work with, including many different streets and landmarks. SEND: Children may need extra modelling to complete starter task and understand key. For main task, teacher modelling uses the same version of the map that children will be using.	ensure you are using the numbers in the correct order.	Starter task: children have to use a basic OS map to use grid references to find points and give grid references where points are located. Teacher models how to use grid references on a real OS map. **Year 5:** Complete differentiated codebreaking activity by finding street/place names using grid references. **Deepen the moment:** Choose two places on your map and write a list of directions from one to the other. You should include compass points, grid references and road names. **Year 6:** Complete differentiated codebreaking activity by finding street/place names using grid references. **Deepen the moment:** Plot a route around your map and write a list of directions for someone to follow. You should include compass points, grid references and road names.
Week 4 Grid references are used to describe position on a map. They can be four or six figures long.	LO: To use six figure grid references accurately.	Use fieldwork to observe, measure, record and present the human and physical features in the local area using a range of methods, including sketch maps, plans and graphs, and digital technologies. Use the eight points of a compass, four and six-figure grid references, symbols and key	Ordnance Survey (OS) map fieldwork northings eastings grid reference position navigation	GD: For starter task, children also have to write their own six-figure grid references for a number of points. Children can start Children have to create five questions of their own using six-figure grid references. SEND: Children have multiple choice worksheet to complete. Children can use tracing	You have to imagine the squares divided into ten to give a six-figure grid reference. Use 'along the corridor then up the stairs' to ensure you are using the numbers in the correct order.	Reading for productivity is on how to navigate from a plane. Interrupting the forgetting activity to remind children of last week's learning to build on, followed by recap of giving grid references for positions. Zoomed in look at one grid square, broken down into tenths. Model how to find different points within the square and how to write the corresponding six-figure grid references. Starter task: children have to use similar grid (one square zoomed in, broken into tenths) and find points at given six-figure references. Zooming out now, looking at numerous squares and considering them broken into tenths with

		(including the use of Ordnance Survey maps) to build their knowledge of the United Kingdom and the wider world.		paper to mark out where different points would be for six-figure grid references.		imaginary lines. Modelling how to write these/find points. **Year 5:** Complete differentiated worksheet locating and labelling six-figure grid references on an OS map. **Deepen the moment:** Can you think of an example when a six-figure grid reference might be more useful than a four-figure grid reference? Explain your answer. **Year 6:** Complete differentiated worksheet locating and labelling six-figure grid references on an OS map. **Deepen the moment:** Can you think of an example when a four-figure grid reference might be more useful than a six-figure grid reference? Explain your answer.
Week 5 Maps use symbols to label different features and landmarks. They include a key so you know what the different symbols are.	LO: To use symbols to represent key features on a map.	Use fieldwork to observe, measure, record and present the human and physical features in the local area using a range of methods, including sketch maps, plans and graphs, and digital technologies. 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	symbols key OS Map grid references pictorial representation contours contour lines	GD: In starter activity, children are expected to use and include definitions for a range of high-level related terminology (e.g. OS map, pictorial representation). In mapping activity, children draw their own map, from scratch, using google maps image as a guide. SEND: Children to focus on a limited number of simple maps throughout lesson.	Symbols may not look exactly the same as the landmark being represented. Symbols on the map must look exactly the same as symbols on the key. It is really important that symbols on the map are placed exactly, because otherwise people could get lost.	RESOURCES: teachers will need to provide google map views of their own school. Also, if possible introduce children to a range of different OS maps so they can see how different terrains and landmarks are represented. Reading for productivity is on contour lines on a map. Children to have a go identifying any symbols they can see on an OS map. Children watch video clip showing how maps use symbols to represent key features. Introduce children to a range of symbols used on OS maps. Children have a go at guessing what they could represent first. Starter task: Children to explain the purpose of using symbols on a map, then design symbols of their own to represent particular features.

		United Kingdom and the wider world.		In starter activity, sentence starters and word bank are provided. In mapping activity, children are provided with more detailed map to begin with.		Reinforce idea of contour lines (link to reading exercise). **Year 5:** Children to map defined outside area of school (try to include an area with some different features, e.g. trees, benches, playground), using image from google maps satellite views. **Deepen the moment:** Describe how contour lines can be positioned to show how steep a hill is. **Year 6:** Children to map defined outside area of school (try to include an area with some different features, e.g. trees, benches, playground), using basic image from google maps street view. **Deepen the moment:** It is not useful for a map to show contour lines. Do you agree? Fully justify your answer.
Week 6 A route is a way from a starting point to a destination. It can be plotted on a map and described using instructions, grid references and compass bearings. Plotting a route on a map means planning where you want to go.	LO: To plot a route on a map.	Use fieldwork to observe, measure, record and present the human and physical features in the local area using a range of methods, including sketch maps, plans and graphs, and digital technologies. Use the eight points of a compass, four and six-figure grid references, symbols and key (including the use of Ordnance Survey maps) to	map fieldwork compass cardinal points ordinal points route plotting directions position instructions symbols key landmark	GD: Children move straight to using six-figure grid references. Children write their directions out in full, including street names where possible. SEND: Fill in the first couple of rows of the template together. Stick to four-figure grid references where appropriate or use tracing paper grids to mark tenths within square to support.	A route is not chosen at random. It is carefully selected between a start and finish point, sometimes taking in stopping points along the way. It is essential to consider and include all previous mapping skills when plotting a route.	Reading for productivity is on navigating safely in the mountains. Recap different key features of a map. Quick challenge activity: teacher reads out directions (e.g. 2cm north) and children draw corresponding line on paper. Introduce concept of a route and remind children about how to use grid references. Model how to follow directions (including compass directions and grid references) to reach a particular location. Model how to write directions (including compass directions and grid references) to reach a particular location. Starter task: Write directions from one location to another. Include compass directions and grid references.

		build their knowledge of the United Kingdom and the wider world.				**Year 5:** Children plot a route around the map using compass directions and grid references with the template to support them. **Deepen the moment:** Use google maps to describe the route you take to school each day. **Year 6:** Children plot a route around the map using a combination of compass directions, grid references and written instructions. **Deepen the moment:** Find a map of Pontefract town centre. Choose 4 places you like to visit and describe the route you would take to get around them.
Week 7 A route is a way from a starting point to a destination. To follow a route, you need to recognise and know how to use compass directions, symbols and grid references.	LO: To follow a route.	Use fieldwork to observe, measure, record and present the human and physical features in the local area using a range of methods, including sketch maps, plans and graphs, and digital technologies. 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.	Map Fieldwork Compass Cardinal points Ordinal points Route Plotting Directions Position Instructions Symbols Key Landmark	GD: Children write out directions in full, using six-figure grid references. Children include their own symbols and details on the map, along with a key. SEND: Children may need extra guidance or reminders to complete the starter task. Image of compass is provided throughout work to support understanding of the different directions. Children can stick to using four-figure	It can be tricky to follow a route carefully, even if you recognise the terrain. It is important to follow directions precisely and make sure you line your map up with the landscape around you, noting key points as you go and continually checking your direction against north.	RESOURCES: teachers will need to provide google map views of their own school. Reading for productivity is on a children's expedition in India. Starter task recap – going back over how to plot a route and describe it using compass directions and grid references. Introduce main task: plotting a route around school (outside) for someone else to follow. **Year 5:** Plot the route using detailed satellite image. Describe route using support plan to include compass directions and grid references to locate key points. **Deepen the moment:** Do you think it would be harder to navigate around a city centre or a forest? Explain your answer. **Year 6:** Plot the route using basic outline of school. Children will need to include their own symbols (can use previous work as guide). Children write out directions for route in full, including key landmarks, compass directions and grid references to locate key points.

				grid references if more appropriate.		**Deepen the moment:** What kinds of terrain do you think would be particularly difficult to plot and follow a route around? Explain why and suggest how you could overcome these challenges.
Context (big picture learning): children will learn how their geographical knowledge of mapping, direction and position can be applied in a practical setting. They will get the opportunity to create maps and routes of their own and follow routes and directions using maps, compass directions, grid references and key features of the landscape. Being able to read a map and follow directions is a key life skill. It has uses which stretch across many different scenarios – from navigating your way around an unknown location, to following a GPS or Sat Nav. Maps provide a really significant way of learning about and engaging with the world around us and map work encouragese the development of lateral thinking and problem-solving skills.This unit of work is also particularly significant as a result of its promotion of core social skills such as team work						

Link to resources **Trust Shared > Primaries > Departments > KS2 > Year 5 & 6 Curriculum Planning > Cycle B > Summer – Mortal Engines > Geography**

Geography Knowledge Organiser

Key Vocabulary

Cardinal points – four main points of the compass (north, south, east, west).

Contour lines – a line on a map joining points of equal height above or below sea level.

Eastings – on a grid over a map, eastings are the numbers that run from left to right.

Fieldwork – practical geographical work.

Grid reference – used to express position on a map.

Latitude – lines of latitude run in an east-west direction across Earth.

Longitude – lines of longitude run in a north-south direction, crossing through the poles.

Map - diagrammatic representation showing key physical features of the landscape.

Navigation - the process of accurately determining one's position and planning and following a route.

Northings – on a grid over a map, northings are the numbers that run from south to north.

Ordinal points – four secondary points of the compass (NE, NW, SE, SW).

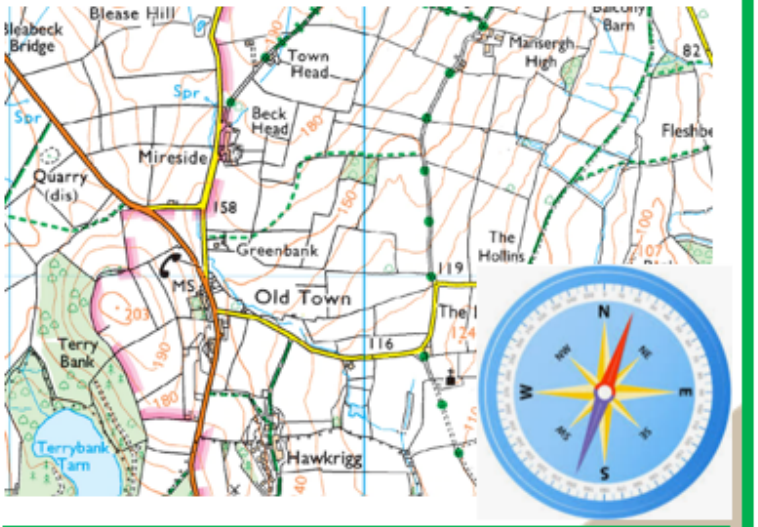
Ordnance Survey (OS) Map - a detailed map produced by the British or Irish government map-making organization.

Route - a way from a starting point to a destination.

Symbol – a picture used on a map to represent a landmark or features of the landscape.

Intent

To build knowledge of mapping skills, including using cardinal and ordinal points for direction, grid references for position and symbols to represent key features of the landscape, and applying these in a practical geographical setting to create and follow routes.



FAT Questions

What is a map?

What is the impact of mapping on our understanding of the world around us?

How has navigation changed?

In the modern world, is it possible to get lost? Explain your answer.

VIPs

- A compass has four cardinal points. In order, these are North, East, South and West (N, E, S, W – never eat shredded wheat).
- A compass also has four ordinal points (NE, SW, SE, SW).
- A compass and a map are key navigation tools. A map can tell you the position you are in and a compass can tell you the direction you need to go.
- Lines of latitude and longitude are invisible lines on a globe that people use to get around.
- Lines of latitude go around. Lines of longitude go down.
- Grid references are used to describe position on a map. They can be four or six figures long.
- On a grid, eastings are the numbers that run from left to right and northings are the numbers that run from south to north.
- Six figure grid references allow you to pinpoint a location in greater detail than four figure grid references.
- Maps use symbols to label different features and landmarks. They include a key so you know what the different symbols are.
- Plotting a route on a map means planning where you want to go. It is easier to follow a route if you have written directions as well.
- A route is a way from a starting point to a destination. It can be plotted on a map and described using instructions, grid references and compass bearings.