Planning a day visit to the Wales Coast Path

Time needed for activity — You could work on this over several sessions

Location — Indoors or outdoors

Context

This activity plan challenges learners to research, plan and organise a day visit to complete a section of the Wales Coast Path.

Natural Resources Wales' purpose is to pursue sustainable management of natural resources in all of its work. This means looking after air, land, water, wildlife, plants and soil to improve Wales' well-being, and provide a better future for everyone.

Background - What is the Wales Coast Path?

The Wales Coast Path is an 870-mile-long continuous coastal footpath which stretches along the entire length of the Welsh coastline. The path uses existing rights of way as well permissive rights of way and is marked on Ordnance Survey map products. The path winds its way through towns and villages, across cliff tops and sandy beaches, sometimes darting inland before emerging once again at a sheltered cove. The whole path is accessible to walkers, with some sections suitable for cyclists, families with pushchairs, people with restricted mobility, and horse riders.

Natural Resources Wales works in close partnership with 16 local coastal authorities and 2 national parks on the coordination, Welsh Government grant distribution, monitoring, development and marketing of the Path. It is waymarked with the distinctive yellow and blue 'dragon-shell' logo and is managed on the ground by the 16 local authorities and Snowdonia and Pembrokeshire National Park Authorities.

Curriculum for Wales

Mathematics and Numeracy	Health and Well-being	Humanities
• **What matters** – The number system is used to represent and compare relationships between numbers and quantities.	• **What matters** – Developing physical health and well-being has lifelong benefits.	• **What matters** – Our natural world is diverse and dynamic, influenced by processes and human actions.
• **What matters** – Geometry focuses on relationships involving shape, space and position, and measurement focuses on quantifying phenomena in the physical world.	• **What matters** – Our decision-making impacts on the quality of our lives and the lives of others.	

Digital Competency Framework

Completing this activity provides opportunities to meet the following strands of the Digital Competency Framework.

Interacting and collaborating	Producing	Data and computational thinking
• Collaboration.	• Sourcing, searching and planning digital content. • Creating digital content. • Evaluating and improving digital content.	• Problem-solving and modelling. • Data and information literacy.

Objectives

Learners will be able to:

- locate a section of Wales Coast Path on a map.
- calculate an achievable distance for their group to walk in a day.
- plan and consider the logistics of taking a group on a day visit to the Wales Coast Path.
- write an itinerary for a day visit to the Wales Coast Path.

Resources and equipment

- **PowerPoint - Plan a day visit along the Wales Coast Path**
- **Worksheet - What's your distance?**
- **Worksheet - Writing a Wales Coast Path walk itinerary: an example**
- Clipboards
- Pencils and paper
- Tape measure/trundle wheel
- Calculators
- Map of Wales or online access
- Quoits, cones or chalk to mark out 100 metres
- Access to the internet
- Access to packages such as Google Sheets or Microsoft Excel

What to do

1. Introduce the activity to your learners using the **PowerPoint - Plan a day visit along the Wales Coast Path**. Explain that as seasoned Wales Coast Path users, they have been asked to plan a visit/a walk along a section of the Wales Coast Path for their fellow learners, who have never walked a section of the Path before. They will need to:
   i. Investigate what is an achievable distance for their group to walk in a day.
   ii. Consider the logistics of taking a group on a visit to the Wales Coast Path.
   iii. Write an itinerary for the day with detailed timings as to what will happen, when and where.
2. Using the **Wales Coast Path interactive map**, your learners can choose a start and finish point, find out the distance between these two points and see any temporary path diversions. There are help icons to the left of the map to help them make the most of the information.
3. How far will they walk? Split your learners into groups of 3-4 and ask them to go outside to complete the **Worksheet – What's your distance?** using the resources listed above. There are 7 steps on the worksheet, not all are suitable for all learners. Make sure you specify how many steps you want your learners to complete.

Once your learners have worked out their pace as individuals and/or as a group and the possible distance they could walk in a day, ask them to consider and decide which pace they should plan their walk to? Ask them to consider if the average walking speed for the whole group realistic. For some group members this will be slightly faster than their individual average pace. For others it will be slower than their individual average pace. Which pace should they plan their walk to? Good practice is that you always walk to the slowest pace. What steps can they come up with to ensure that some group members don't press too far ahead whilst others are left trudging behind?

4. Will the group be able to walk at a consistent pace for 2 hours? Ask your learners to list the things that could affect their walking speed and the time it will take them to complete the walk, for example, stopping to look at things, uneven ground, uphill/downhill sections. After considering these points, do they need to revisit the possible distance they can cover during their walk?
5. What time can they aim to leave their setting? What time will they need to return for?
6. Which section of the Wales Coast Path will they visit? Working in small groups (suggested maximum of 4 learners per group), ask your learners which section of the Wales Coast Path they wish to visit. They can use a paper map, or the **interactive Wales Coast Path Map**. Your learners can search for a location in the search box or navigate to their chosen location by moving the map and zooming in using the +/- icons.
7. Using the directions tool on **Google Maps** or **AA Route planner**, how many miles or kilometres are they from their starting point if they travel there by road? Alternatively if your setting is on the coast, your learners may want to use the **Wales Coast Path distance tables** - these tables give distances between over 200 locations along the Wales Coast Path. Will your learners travel by public transport? Ask your learners to plan their walk using the tools available on the **Traveline Cymru** webpage.
8. How long will it take them to travel from their setting to the starting point of their walk? Google Maps or AA Route planner or Traveline Cymru can provide them with this information. If they leave their setting at xxxx, ask your learners to calculate what time they will arrive at their starting location.
9. If travelling by coach, the group will need to identify a suitable and safe place to start and end their walk, for example, somewhere the bus can get to ideally with facilities nearby. The Wales Coast Path interactive map shows car parks.
10. Having calculated how far their group can realistically walk during their visit using the **Worksheet – What's your distance?**, ask your learners to use the interactive Wales Coast Path Map on the **Wales Coast Path** webpage to find out where the end point of their walk will be along the Path. For example, if they have calculated that realistically their group can only walk 2.5 miles during the time available for their visit, there's no point planning on walking from Amroth to Tenby (6.32 miles) if Amroth to Saundersfoot is more realistic (2.4 miles).
11. To measure the distance between two points along the Wales Coast Path, your learners should click on the pen icon once they are in the right location.

    Drawing a straight line

    Learners should click at their start point, move the mouse along and click, adding additional points with extra clicks until they reach their end point. Once they've finished, they should double click to complete the drawing. The total distance between the two points will be displayed on the right-hand side of the screen in both kilometres and miles.

    Drawing a curved line

    Learners should click and hold, while moving the mouse to draw a curved line. Once they've finished, they should double click to complete the drawing. The total distance between the two points will be displayed on the right-hand side of the screen in both kilometres and miles.

12. Understanding the terrain and features along the Wales Coast Path

Ask your learners to study their chosen section of Wales Coast Path closely. Is there anything on the map which tells them more about the terrain or features that exist along the section they plan on walking? An understanding of the terrain is crucial when planning a walk: having to walk across sand or uphill will mean the group walks more slowly and will tire more quickly. More time to walk a section or additional breaks may need to be factored in.

Explain to your learners that maps show features in 2d and from a bird's eye view. It's impossible to label every single feature in words on a map, therefore, to save them from becoming cluttered, map symbols are used. Every map is accompanied by a legend or key. The legend is essential because it explains what each symbol on the map stands for. Symbols may be coloured areas, drawings, letters, lines or shortened words. They include roads, paths, boundaries, railways, historical and archaeological information, tourist and leisure information along with information about the land type. To ensure they are understood by visitors from around the world, most map symbols are generic.

Can your learners guess what the symbols on the map tell them about their specific section of the Wales Coast Path? For further information and for a full list of map symbols, ask your learners to visit the **Ordnance Survey's** map symbols webpage.

 **Caravan site**

 **Garden**

 **Golf course or links**

Now they are aware of what the symbols on their chosen section of the Wales Coast Path mean, are there any causes of concern? For example, if the section of path they have chosen crosses a busy A-road, extra care may be required. Or if their walk will involve crossing a golf course, do they need to contact the golf course as a courtesy to notify them of their planned visit? Perhaps their walk will involve passing some interesting historical features like a lighthouse or marina. Do they need to read up on this feature so they can explain more to their group and add value to their walk?

13. Map scales

Explain to your learners that map scale refers to the relationship (or ratio) between the distance on a map and the corresponding distance on the ground. All maps are modelled depictions of the real world, therefore, to make things manageable, features are reduced in size when mapped. Maps come in various scales, and the detail of the map will change depending on the scale. Map scales provide readers with a sense of size and can help work out distance between locations, and therefore how long it will take to get there, when interpreting maps.

- Large scale maps show a small geographic area with a greater amount of detail. A large-scale map has a smaller number to the right of the colon. For example, a useful scale for a large-scale walking map is 1:25,000, which means that every 1cm on the map represents 25,000 cm on the ground or 250 metres.
- Small scale maps show a larger geographic area but have less detail on them. Small scale maps are used to show the extent of an entire region or country. The scale of a small-scale map has a much larger number to the right of the colon such as 1:1000000.

Usually, the map scale used on a particular map is stated on the map, itself. What scale of map are your learners using? **Please note, the Wales Coast Path interactive map does not provide the map scale.**

- On paper maps, the scale is usually given on the front of the map.
- If using DataMapWales, the scale is provided in the bottom right of the screen and changes as learners zoom in or out on a given area. The scale can be changed from a far out view of 1:10000000 to an in-depth close up at 1:250.

Ask your learners, are they using a map with the correct scale to plan their walk? Ask them why, in their opinion, are map scales important?

14. Grid references for their walk

Grid references tell your learners where on a map they are located. Understanding how to give a grid reference can be useful for making it easier to scan for locations, sharing locations, for example, great café at xxxxxxx, and also to help others pinpoint your learners' location in the event of an emergency.

The horizontal lines are called eastings as they increase as your learners move eastwards. The vertical lines are called northings as they increase as your learners move northwards. When taking a grid reference, learners should give the eastings first and then the northings. In practical terms, this means reading left to right along the bottom or top of the map first and then bottom to top along the side of the map. An easy saying for your learners to remember this is 'along the corridor and up the stairs'. For information on grid references and how to find out a four and six figure grid reference for a given location we advise checking out the Ordnance Survey **webpage**.

Can your learners obtain grid references for the start and end points of their walk? How about providing grid references for key points along their walk, for example, toilets?

To obtain grid references for given locations your learners could:

- Work out the grid references manually using the guidance from Ordnance Survey.
- Check out **OS Maps** website. They simply need to search on a location or zoom in on the location they want a grid reference for and press the right-hand mouse button to drop a pin and generate a grid reference.
- Visit the **UK Grid Reference Finder** website. They can search for a location or zoom in on the location they want a grid reference for and press the right-hand mouse button to drop a pin and generate a grid reference.

15. Gradient and elevation of their walk

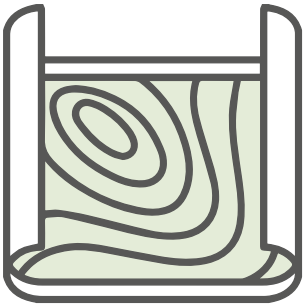
For information:

- Gradient is a measure of how steep a slope is. The greater the gradient the steeper a slope is.
- Elevation is a measurement of distance above sea level.

It's important that your learners understand the gradient of their walk.

The landscape along the Welsh coast constantly changes, which means the gradient also changes. Will your learners walk be a casual stroll along a flat area of coast, or will it involve an incline that will challenge muscles and boost walkers heart rates? Gradient affects progress. From a tiresome slog uphill to even walking downhill, regardless of how fit the group members are, dealing with gradient can be tiring for walkers. Investigating the gradient of their walk beforehand will help ensure there won't be a steep surprise for walkers on the day and will help your learners ensure their walk is suitable for everybody.

Your learners can get an indication of the elevation of their walk by studying the contour lines on their map. Contour lines are pictorial depictions of the topography of the land and show the shape of the terrain and its elevation (height of the land). Contour lines are the faint red-brown lines drawn on a map with numbers on them. The number tells your learners the height above sea level of that line. A contour line is drawn between points of the same height, so any single contour line will be at the same height all the way along its length. The interval between contours is usually ten meters. The closer together contour lines appear, the steeper the slope is. Contour lines increase in ascending order – the higher the number the higher the slope! By quickly checking the contour lines on the section of Wales Coast Path your learners intend to walk, they can quickly tell if the terrain is mountainous or flat. For further information on contour lines your learners may wish to visit the **Ordnance Survey** website.



From studying the contour lines on their map, can your learners identify the highest point of elevation on their walk? What's the lowest point of elevation? Can your learners describe their walk in terms of elevation? For example, "We started at 50m above sea level but at one point were 130m above that at 180m. We ended our walk 30m metres lower than we started at 20m above sea level."

Can your learners plot the elevation of their walk on a map and provide a visual guide for walkers? Some websites such as **OS Maps** will allow your learners to plot a route and will provide them with a summary of the elevation between their start and end points.

- To start, learners need to search on a location or zoom in on the location they want to investigate.
- Once in position, they should select 'create route' from the top menu.
- A submenu appears – to plot their points they simply need to left mouse click along the section of Wales Coast Path they want to find the elevation of. If they make a mistake they can select 'undo'.
- Once they have plotted their route, they should select the 'elevation' drop down menu on the left-hand side of the screen to get the elevation reading for their route.

Alternatively, points can be plotted digitally on a map to find the elevation of a given location by using websites such as **Elevation Finder**.

Can your learners calculate the gradient of an incline along their walk? Gradient can be calculated by dividing the vertical height by the horizontal distance.

Considering the trail surface, gradient and level of fitness needed, can your learners come up with a trail grade to give walkers an indication of its difficulty? For examples of how trails are graded your learners could visit the **Natural Resources Wales walking trails guide** webpage.

Will your learners need to advise group members to wear something more substantial than trainers? Will trekking poles be required? Should extra water and chocolate be carried to hydrate and replenish energy levels?

16. Factoring in how long they have estimated it will take them to walk their section of the Wales Coast Path, what time will their bus need to pick them up at the end of their walk? Or what time will they need to make sure they are at the bus or train station to travel back? If their setting is a quite far away from the Wales Coast Path, to allow time to complete their walk, do they have to consider factoring in an overnight stay?

17. Ask your learners to discuss what things need to taken into account when planning their trip? Somewhere to buy lunch or will they ask their group to bring sandwiches? How long will they stop for? Stopping for someone to be sick? Will group members want to stop off and buy a souvenir? Will this involve a detour? Will they need to factor some extra time in?

Planning toilet breaks

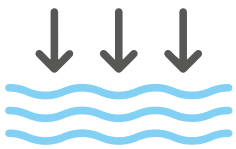
There are other mapping tools which can provide features over and above what is available on the Wales Coast Path map that can be very useful in providing information for a walk, for example toilet stops! Using the spatial data layers feature on **DataMapWales**, learners can view the location of public toilets on a map.

- Learners should select 'map viewer' from the DataMapWales homepage to upload the interactive map.
- They can study the map, find, and locate their chosen area by zooming in until they are at a comfortable view.
- Alternatively, they can type in the name of the location they want to view in the 'search by location name' field.
- To view the data layers available, learners should click on the 'add layer' icon and select and search on 'toilets' to bring up the spatial data layer.

Stopping to refill water bottles

Walking is thirsty work. It's important for your learners' group to stay hydrated along their journey. They can refill their water bottles along the way which is great for the environment as it cuts down on the amount of single use plastic water bottles. **Refill** is a UK wide scheme where cafes, hotels, and takeaway outlets allow people to walk in and ask for their water bottle to be topped up with fresh tap water - all for free. If appropriate, your learners can download the app to find out if there are any free refill stations or public water fountains along their section of the Wales Coast Path.

Tide times



Being aware of the tide times while walking on the Wales Coast Path is very important as parts of the Path can become inaccessible during very high tides. We recommend that your learners check the local tide times before setting off to make sure they are prepared. The **Met Office website** provides the most up to date details of tide times across the United Kingdom.

18. Ask your learners to discuss, is it better to be early or late to meet the coach for the return journey? It's best to arrive early. Things could slow them down so having a little extra time built in will be useful. If they do get to the pick-up point early, is there something to see or do at that location? Can they think of any activities to keep everyone occupied while they wait for the coach?

19. If your learners are doing a linear walk, what will the distance and travel time back to their setting be? They should use Google Maps or RAC/AA Route planner to find out if travelling by road or consult Traveline Cymru.

    Alternatively, you could pose a question for them to calculate the answer. For example, a school from Llanrwst start their walk in Conwy and end in Penmaenmawr. How long will it take them to return to their setting if the distance from Penmaenmawr by road is 17.5 miles and the coach does an average speed of 50 mph?

20. Will your learners planned visit mean arriving back late at their setting? Do parents and guardians need to be told to pick them up slightly later than normal?

21. Now that your learners have given some consideration to these essential details they can turn their attention to writing an itinerary for their trip using the **Worksheet - Writing a walk itinerary** or can they make their own using Google Sheets or Microsoft Excel. Ask your learners to consider approximately what time they would like to stop for breaks and lunch, and how long they would like for those breaks. Once they have decided on rest breaks, they can calculate and decide their walking time blocks. An example itinerary has been provided as a reference point.

    Please note, your learners will need to work in hours or minutes – for ease, it's best to work in one or the other.

    How to convert hours to minutes

    To convert hours to minutes the number of hours must be multiplied by 60.
    Number of hours x 60 minutes = total minutes
    For example - 5 hours x 60 minutes = 300 minutes

    How to convert minutes to hours

    To convert minutes to hours the number of minutes should be divided by 60.
    Number of minutes ÷ 60 = total minutes
    For example - 300 minutes ÷ 60 = 5 hours

22. Once complete, their itinerary will help your learners ensure that their timings work, that the walk they have planned is achievable in the time available and it will give them something to share with their group members, giving them an idea of what the day will involve.

23. Once they have sorted their route, walking speed and itinerary, learners should move on to plan the travel arrangements for their walk. How many people in total will be coming on their walk? They should include teachers/group leaders in their total. How many buses will they need to transport everyone? Have they got sufficient budget to buy train tickets for everyone? You could either give them a theoretical quote or ask them to contact local bus companies or carry out some research online to get their own quotes and prices. Once they have this information, they should proceed to work out the price per head for travel costs. Is there a cheaper, alternative mode of travel available?

Suggested key questions

- How will your learners know if they've planned their walk well?
- What variables that are out of your learners' control may affect the walk?
- Who should they notify of their intended walk?
- What should they advise everyone to bring with them on the walk?
- One of the group leaders going on the walk forgot and turns up in high heels. What will you do?

Adapting for different needs/abilities

More support

- Go through the worksheets with your learners' step by step using the examples
- Provide them with the example itinerary as an aid
- Give them the start and finish points
- Give them the bus quote
- Give them a walking speed
- Don't ask them to complete the cumulative totals
- Give them pre-written and formulated Excel spreadsheets or Google Sheets

More challenge

- Learners work through worksheets independently
- Ask them to complete the worksheets without calculators
- Ask them to create their own Excel spreadsheets or Google Sheets and write their own formulas

Follow up activity/extension

Try out our:

- Can your learners run a social media campaign to interact with potential visitors, post information and encourage people to visit the Wales Coast Path? Our **Activity plan - Campaigning for nature** can be used as a guide.
- Perhaps your learners are regular visitors to the Wales Coast Path? Would they like to be influencers? They could try their hand at vlogging for the Wales Coast Path and share seasonal changes using our **Activity plan – Create and enviro-vlog**.
- What are your learners' graphic design skills like? Can they plan, design and create a promotional poster to encourage people to visit the Wales Coast Path? **Activity plan - Step it up – Marketing the Wales Coast Path: Designing a promotional poster**.

Other resources

From information about the background and history of the trail, to information on things to see and do, the **Wales Coast Path website** has a wealth of information available to help your learners.

Looking for more learning resources, information and data?

Please contact: **education@naturalresourceswales.gov.uk** or go to **https://naturalresources.wales/learning**

Alternative format; large print or another language, please contact: **enquiries@naturalresourceswales.gov.uk 0300 065 3000**