FORM 2 WEATHER AND CLIMATE

	Objective(s)	Resources	Skills	Suggested activities	Suggested differentiated activities	Homework	Learning Outcomes
1	To understand the expectations in geography and how work is marked To understand the difference between weather and climate To understand the importance of weather in daily lives.	PowerPoint on expectations Departmental marking policy handout and Topic list Facebook blank template handout	Brainstorming Asking questions Note-taking	Starter – introductions, rules of dep artment and expectations, marking policy etc. Main – Brainstorm slides of different types of weather – what are the similarities/differences? Who do they matter to? How does weather affect us etc.? Could use the e globes to make an animation if why sun's' rays at the equator are strong and weak at the poles. Plenary – Introduce homework task – a blank Facebook page about themselves. With some weather definitions on the 'wall'.	Fill in the gaps dept. rules (for the very weak). Mainly teacher led – differentiation by outcome in the H/W	Facebook page- about yourself. On the 'wall' has definitions of weather and climate.	Introductions, setting the tone, expectations made clear etc.
2	To understand the characteristics of weather To understand the major characteristics of the British climate	PowerPoint Blank UK map UK isotherm map	Cartographic Skills	Starter – recap differences between weather and climate. Opportunity to go outside and experience the characteristics of weather first hand in a brainstorming exercise. Main – go through PowerPoint, question, brainstorm etc. Pupils shade in an annotate their blank UK maps and stick in. Chropleth maps of summer and winter temperatures. Plenary – collect in homeworks. Complete definitions exercise at the end of the PowerPoint	Weaker pupils could be given outline UK maps, others not. Possible differentiation at the end of the lesson – final task may be too difficult for some. Weaker pupils could attempt Qs 1 and 2 on p 19 in Foundations.		The main characteristics of the British climate and reasons for these.
3	To reinforce major characteristics of the British climate To understand the three major	Starter wordsearch Realtimeboard	Drawing diagrams, note-taking	Starter – recap major characteristics of weather (ask pupils to come up to smart board and act as weather presenters) Main – recap last lesson's work by going through the PowerPoint. Introduce rainfall and the reasons for it etc. Introduce 'precipitation' as an important term.	Weaker pupils could be given pre-drawn diagrams that they then label as opposed to drawing rainfall	Foundations Qs 1-4 p. 25	The main types of rainfall.

	methods of rainfall formation			Plenary – set homework etc.	formation diagrams from scratch		
4	To understand the relationship between altitude and rainfall	Realtimeboard Starter Graph paper	Graph drawing, numeracy	Starter – recap major types of rainfall. Show UK map climate maps and brainstorm. Main – explain the concept of a scatter graph – shows link between two variables. Explain necessary elements of a good graph. Distribute graph paper and get pupils to plot relationship between altitude and rainfall. Annotate graph and discuss. Plenary – look forward to the next lesson and starting depressions – relate to graph and work done thus far on rainfall. https://www.youtube.com/watch?v=kBfaAN_tWW4 An excellent way of getting the pupils to understand the weather instruments used.	Weaker pupils given pre-drawn axes. Stronger pupils asked to related each point to places on a map and explain anomalies		To gain a deeper understanding of orographic rainfall and rainfall patterns across the UK
5	To understand the formation and characteristics of a depression	PowerPoint Starter exercise Sheet for a You Tube clip of a depression	Cross-section drawing	Starter – recap relationship between altitude and rainfall. Look at BBC weather site if current conditions show the passage of a depression and discuss. Main – go through PowerPoint and draw diagrams of the formation and passage of a depression. Many pupils find this difficult so making a 'pop out' diagram sometimes helps. Plenary – a 'messy' lesson. Will need to collect in glues, cut-offs etc. at the end before a recap.	Weaker pupils may need to be helped with the cutting of their pop-outs. Good idea to show the class one you have made first	Foundations Qs 1-4 p. 29	To gain an understanding of the concept of low pressure and weather fronts
6	To understand the formation and characteristics of an anticyclone	Presentation - which is the odd one out? Features of an anticyclone Recap sheet could be used this lesson (need RealtimeBoard images for the dingbats exercise)	Plan view drawing	Starter – recap and finish off loose ends from previous lesson, esp. symbols used for warm and cold fronts. Make sure pupils have these in their books. This starter exercise may be useful – click here. Main – introduce anticyclones Abba song.and the concept of high-pressure (draw this out from the pictures in the PowerPoint. Explain the differences between summer and winter anticyclones and get pupils to complete the comparison table exercise in their books. Plenary – show real weather satellite pictures to illustrate the differences between anticyclones and depressions. Ask the pupils to explain what they see and predict what the weather will be like on the ground in each case.	Weaker pupils may be helped by being given a pre-printed table, with the first few filled in as an example. Stronger pupils might try some of the qs on p. 27 in Foundations.		An understanding of high pressure and associated weather.
7	To understand the factors affecting local	PowerPoint Data collection	Fieldwork preparation	Starter – recap. Brainstorm factors affecting climate on a small scale. Notes in books.	Weaker pupils will need a writing frame to help them	Introductions and methodology to	An understanding of the factors affecting

	microclimate	sheet		Main – introduce fieldwork exercise and planning. Try to get pupils to suggest method. Begin writing up the plan (to be completed for prep). Use RealtimeBoard to plan. Plenary – look forward to next lesson, when they will need to arrive equipped for going outside.	complete the introduction and methodology.	be completed for prep.	microclimate.
8	To understand the mechanics of a small-scale fieldwork study	Data collection sheet, weather instruments (borrowed from the FSC, though the department now owns some).	Data collection and the use of weather instruments	Starter – explain the nature of the fieldwork (recapped from previous lesson), give out equipment etc. Main – pupils split into groups and head off (under supervision) to the Maes-y-Llan to carry out their measurements at different sites. Plenary – back in classroom: collect in instruments, explain the next phase of the write up (results and analysis) is to be completed for prep.			A understanding of the importance of fieldwork in meteorology.
9	To understand the factors that affect local microclimate and be able to explain them in a short report	Everything needed on this post	Fieldwork write up, tabulating results, drawing g graphs etc.	This lesson to be spent writing up results in the form of a short report. The class shares their results to given them more data. Results are tabulated, a colour view of the Maes-y-Llan is annotated etc.	Writing frame will be needed for the weaker pupils. Or at least a checklist of things they must have done. Look for in-depth analysis from the stronger pupils.	Finish off write up.	A completed mini-project and a good understanding of how to conduct, design and complete and enquiry of this type.
10	Test	Socrative end of unit test. Room name is TJJ.	Test	Test	N/A		To get a realistic idea of how their learning has sunk in to date.

Notes: Some of these lessons may well overrun – half a term is dedicated to this section of work (normally 6 weeks × 2 lessons a week = 12 lessons, so there are 'spare' periods to allow you to do this, don't worry!

Extra resources: Foundations is useful here as a back-up or for prep the relevant pages are pp. 18-33, all pupils are issued with this book at the start of the year. Also useful are:

1. Odd one out lesson starter and sheet that goes with this
2. Frontal starter PowerPoint
3. World map of errors
4. Wordsearch