**Lesson Two:**

**The Sharqiya Climate**

**Objectives**

* To know a number of features relating to the Sharqiya climate.
* To be able to present climate data in ways other than through a climate graph.
* To understand how land and sea breezes work and the effect they have on the eastern Omani coast.

**Context and Rationale**

The past shaping of the Sharqiya landscape and its future development are much connected to the climate of the region. Giving students opportunities to explore the desert climate allows them to draw comparisons with the UK climate as well as other ecosystems they may have studied. The lesson will test their ability to read simple data as well as present such information in new and interesting ways. Studying the effect of land and sea breezes will develop students’ understanding of settlement patterns on the eastern Omani coast.

The Outward Bound Oman Desert Centre has its own weather station which provides real time and archived data to students wishing to study this aspect of the region’s challenging environment whilst at the Centre. Temperatures can regularly exceed 50°C and monitoring the desert climate allows visitors to plan their field studies and expeditions in ways that take these challenges into account.

The location of the Centre also offers some climatic surprises for visitors unaware of the contrasts that can be found in a desert. Sea fog regularly rolls in as far as the Centre resulting in a thick morning dew forming on the surrounding area and night time temperatures at the Centre are low enough for visitors to still require a sleeping bag if spending the night outdoors.

*This lesson is also presented as a walk-through PowerPoint presentation (Lesson Two Walkthrough).*

**Starter**

Students can be shown *UK climate graph presentation* and given some data from it via *UK climate data*. Students then have to work out how to read a climate graph and then attempt to explain this to the person next to them. One set of students can be picked to present to the class their step-by-step guide to reading a climate graph. Given *Sharqiya climate graph* and presented with *Sharqiya climate data presentation*, students should aim to complete the climate graph accurately.

**Body**

Using *GMDA analysis framework presentation* students should then be able to describe the climate of the Sharqiya Sands region. Verbally or in written form, students might also be able to suggest some key differences between this desert climate and that of the UK (or to another ecosystem, such as that of rainforests they may have already studied). It is important for teachers to emphasise that the defining feature of a desert is its dryness (fewer than 250mm of precipitation a year) rather than its temperature.

Students can then be shown *Sample Sharqiya wind data*. They can complete a ‘think, pair, share’ exercise about how they could present this data in an interesting way. After two minutes of discussion time, students are introduced to *Data presentation hints presentation* and asked how they might use them to present data. Teachers should have graph paper, *Wind rose template* and *Oman map template* on hand and see what methods they are able to execute with minimal teacher influence or guidance. Students can then give feedback to the class and justify the data presentation method they have chosen.

**Plenary**

Briefly introduce students to the key understanding of land and sea breezes using *Explaining land and sea breezes presentation*. Students should then hypothesise the effect these breezes would have on the east coast of Oman. They can do this by annotating *Comparing two settlements* which shows data for Al Ashkharah on the coast and Nizwa further inland.

**Homework or Extension / Enrichment Tasks**

Students should watch *Oman DLC Introduction video*. Using *Oman DLC Annotations*, students can then annotate the photographs with ways in which the Oman Desert Learning Centre is architecturally designed to help visitors cope with the challenging climate of the Sharqiya Sands.