**Lesson Five:**

**Managing Water in Sharqiya**

**Objectives**

* To understand the meaning of the term ‘water security’ in the context of the Sharqiya Sands region.
* To gain an appreciation of the complexity inherent with trying to manage water security in a sustainable way.
* To be able to analyse a number of different sources of information in many formats.

**Context and Rationale**

Water scarcity, security and climate change are common themes for students to examine with regards to the geographical futures of desert regions. This lesson assumes some prior study of the latter theme but introduces students to the concept of water security and why it is not a straightforward problem to manage. This is done through a series of tasks that in their whole create a decision-making exercise. Through its execution students will learn that there is no single ‘right’ answer to the problem and appreciate its complexity.

Water management at the Outward Bound Oman Desert Centre is equally complex and problematic. Students can explore a number of ways in which the Centre is reducing its water usage and making how it does use water more sustainable. Students will appreciate that from the outset, the Centre was designed with water management at its core and in many ways sets a precedent for future desert buildings to follow.

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

**Starter**

The lesson begins with an establishment of the definition of water security using *Water security definition presentation*. In groups, the class are given one sheet of *Water security resource pack* which contain information about the potential future problems facing the Sharqiya Sands region with regards to water security and climate change. Each group feeds information verbally to the class about the issue highlighted in their resource pack. Stronger groups of students can be pushed to find the geographical connections between the different issues and how, as interrelated problems, solutions or management of them will be inherently complex.

**Body**

At their own pace, students should work through *Decision making exercise* (please note that this resource has been designed to be printed as an A3 folded booklet). Some tasks lend themselves well to paired or group discussion before completion, while teachers might also like to consider the possibility of the DME being used as a common assessment task across a year group, with students working individually and to test conditions. The DME booklet is designed in such a way that teacher guidance for the completion of the task is minimal. With this in mind, *DME mark sheet* provides a crib sheet against which teachers can grade the task.

At the end of the DME tasks, students may feedback to their peers verbally with regards to their choice of a management plan and how they came to that conclusion.

**Plenary**

Students can be given the opportunity to reflect on their completion of the DME tasks. *DME AfL feedback prompt presentation* gives students a focus for completing *DME AfL feedback*. Such a written record can be used by the students to consider and plan ahead when they next complete a DME task.

**Homework or Extension / Enrichment Tasks**

Students should be shown *Oman DLC Water Management presentation* containing some contextual information about the Oman Desert Learning Centre and how it manages its water. Students should evaluate the management techniques in place and justify their choice over whether a well should be dug or not.