



Geography Curriculum Units

with examples of teaching activities

Form 2 0 . . .



Directorate for Quality and Standards in Education
Curriculum Management and eLearning Department
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Geography Curriculum - Form 2

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GEOGRAPHY CURRICULUM UNITS - FORM 2

GEO 8.1 Restless Mediterranean

GEO 8.2 Water, Water Everywhere

GEO 8.3 Life in the Sahara

Subject: Geography

Form 2

Unit code and title: GEO 8.1 The Restless Mediterranean

Strand: The Environment – Physical and Human

Unit Duration: 9 sessions of 40 minutes (6 hours)

Objectives at attainment Level 5, 6, 7 and 8

The teacher will:

1. help students understand the internal structure of the earth and geological development of the Mediterranean Sea;
2. provide resources for the students to explore the volcanic activity around the Mediterranean Region;
3. help students locate areas of frequent seismic activity and correlate the intensity with possible effects of earthquakes in the Mediterranean region;
4. encourage students to explore the reasons why people live in such areas at risk and to investigate contingency plans taken for emergencies.

Objectives at attainment levels 1, 2, 3, 4

The teacher will:

- 1.1 support students to gain a rudimentary knowledge of the internal structure of the earth;
- 1.2 enable students to become familiar with the fact that the surface of the land is not static;
- 2.1 support students to gain some knowledge about volcanic activity;
- 3.1 become familiar with the different intensity of earthquakes;
- 3.2 encourage students to think about the effects of earthquakes;
- 4.1 help students become aware of the risk of living in a volcanic area and will participate in earthquake drill.

Key Words	Points to Note	Resources
crust, mantle, core, volcano, lava, magma, eruption, crater, tsunamis	<p>Geography stimulates an interest in and a sense of wonder about places and this can be achieved through an enquiry approach to learning which centres more on student activities. The use of group work is encouraged.</p> <p>It may be possible to spend more time on some lessons/objectives rather than on others as they may prove to be more difficult or abstract for the students who are at levels 1 - 2 to understand.</p> <p>It is very important for the teacher to allow time for the students to respond. This response can take the form of unaided and/or aided means of communication and the teacher needs to provide adequate scaffolding techniques to enable the students to respond affectively or intentionally.</p>	<p>Google Earth, volcanic rock samples, Geography Interactive Form 2 DVD, 3 D model of inner structure of earth</p> <p>http://www.youtube.com/watch?v=BbTFkPxwhTM&feature=related</p> <p>eruption of Etna volcano December 2006</p> <p>http://www.youtube.com/watch?v=ilODcWH12Gg</p> <p>residents fleeing ash-spewing volcano in the central Philippines</p>

Teaching Objective	Examples of teaching experiences and activities	Indicators of Learning outcomes
<p>The teacher will:</p> <p>1.1 support students to gain a rudimentary knowledge of the internal structure of the earth.</p> <p>1.2 enable students become familiar with the fact that the surface of the land is not static.</p>	<p>Using the analogy of a hard-boiled egg, the teacher can scaffold learning about the different layers of the earth. Using a three dimensional model of the layers of the earth or animations or pictures, teacher shows them that the earth too is made up of layers. Example s/he shows them that if you remove the egg white of an egg using an egg white separator, you have the yolk/ or hard boiled egg yolk. Teacher compares this to the inner core.</p> <p>Using different coloured play dough, teacher shows them how the earth is made up of different layers, starting from the core and covering it with another coloured layer to form the mantle. Teacher cuts the model in half to show them the different layers. Students make their own model of the internal structure of the earth with different coloured play dough or papier mache.</p> <p>Teacher introduces students to the concept of continental movement and plate tectonics by asking them to look carefully at the outline of continents on a large wall map of the World. Teacher provides them with a big map of the world and with continents cut-outs (jigsaw puzzle). Teacher helps them to place these cut-outs on the map, and then asks them to reconstruct Pangaea the super continent that existed some 250 million years ago.</p> <p>Teacher provides a big glass bowl filled three quarters with play dough, the surface of which is covered with very hard jelly/ or similar substance. Continental cut-outs are placed to form Pangaea, then the teacher supports them to discover how these were able to move as the lower layer was not stable.</p> <p>Teacher shows them an aerial picture of a mountain range. Teacher shows them close-up photos of folded mountains and exposed cross-sections on the interactive whiteboard. Then using big towels, the students push from both sides to explain what happens. Then by placing dough within two pieces of wood they mimic the way colliding continental plates managed to fold and crumple rock strata.</p>	<p>Students will carry out the activities/ experiments and so start to associate movement with the earth's surface. (Level 4)</p> <p>Students will become aware that we live on the crust of the earth and that the earth is made up of different layers. (Level 3)</p> <p>Students will become aware that the earth is made up of different features such as mountains and volcanoes. (Level 2)</p> <p>Students will engage with objects and people during activities that provide sensory (tactile) experience of play dough and the towels. (Level 1)</p>
<p>2.1 support students to gain some knowledge about</p>	<p>Teacher shows video clip from a film showing an eruption of a volcano and people running away. Through discussion, teacher finds out what the students know about volcanoes. Teacher shows video clip of Mt. Etna and neighbouring cities. Some</p>	<p>Students will be able to locate Mt Etna on the Mediterranean map. (Level 4)</p>

<p>volcanic activity.</p>	<p>students may have visited Etna and they can talk about their visit. Then the teacher shows a video clip of Etna erupting. They can also be shown different video clips showing just smoke coming from the crater. This will enable students to understand that volcanoes do not always cause destruction. Students will be supported to build their own paper volcano models or build a volcano model with a simulation of an eruption using the step by step instructions available at http://www.how-things-work-science-projects.com/make-a-volcano.html.</p> <p>Students are supported to fill a simple handout by labelling a cross-section of a volcano; e.g. lava, magma, crater, etc. Teacher can show different volcanic rocks and students comment on their appearance, colour, weight etc.</p>	<p>Students will become familiar with the main characteristics of volcanic activity namely the emission of smoke and the flow of lava during an eruption. (Level 3)</p> <p>Students will develop a better understanding of volcanoes by working together to make a model. (Level 2)</p> <p>Students will tolerate/touch the play dough that simulates lava flow. (Level 1)</p>
<p>3.1 become familiar with the different intensity of earthquakes. 3.2 encourage students to think about the effects of earthquakes.</p>	<p>Teacher shows a video clip of an earthquake. Students comment about what they have seen in the video clip.</p> <p>Teacher asks students to label a picture showing destruction after an earthquake. On the same picture other students will draw a ring over the property that was destroyed.</p> <p>Other possible activities: Students are shown video clips of the tsunami after the Japanese earthquake; Pictures of what the different forces of the Richter scale are equivalent to.</p> <p>Students will act out some of these. E.g. Force 4.5-4.9 things that are not attached are shaken and fall. Force 6.0-6.4 chimney falls (toy models are used).</p>	<p>Students will describe the effects of earthquakes in simple sentences. (Level 4)</p> <p>Students will sort out pictures according to intensity of earthquakes. (Level 3)</p> <p>Students will demonstrate earthquake activity through drama. (Level 2)</p> <p>Students will show interest for a short period of time while viewing video clip. (Level 1)</p>
<p>4.1 help students become aware of the risk of living in a volcanic area and will participate in earthquake drill.</p>	<p>Teacher shows pictures of villagers fleeing from an erupting volcano as well as pictures of farmers working on the side of a volcano and of the agricultural products produced.</p> <p>Students are encouraged to comment on the differences between the pictures.</p> <p>Students discuss what they would do if they feel the building is shaking and things start to fall. (As a support, teacher may show video clip). They take part in earthquake drill.</p>	<p>Students will list the main risks of living near a volcano. (Level 4)</p> <p>Students will sort pictures of advantages and disadvantages of living near a volcano. (level 3)</p> <p>Students will sort pictures of erupting and dormant volcanoes. (Level 2)</p> <p>Students will engage with people during the earthquake drill. (Level1)</p>

Subject: Geography

Form 2

Unit Code and title: GEO 8.2 Water, Water Everywhere

Strand 1: The Environment – Physical and Human

Strand 2: Management, Conservation and Sustainability

Unit Duration: 9 sessions of 40 minutes (6 hours)

Objectives

The teacher will:

1. help students enquire about the components and links within the hydrological cycle;
2. help students distinguish and explain the three types of rainfall;
3. encourage students trace the supply and the distribution of water for different daily uses;
4. explore with the students the use and misuse of water and devise ways for its proper management and conservation.

Objectives at attainment levels 1, 2, 3, 4

The teacher will:

- 1.1 support students to become familiar with the water cycle;
- 2.1 support students to become familiar with different kinds of rainfall such as drizzle, normal rain, heavy downpour and thunderstorm;
- 2.2 support students to become familiar with at least one type of rainfall process, e.g. convectional rainfall;
- 3.1 encourage students to become familiar with the supply and the distribution of water for different daily uses;
- 4.1 explore with the students the use and misuse of water and become aware that there are ways of managing and conserving water.

Key Words	Points to Note	Resources
evaporation, condensation, precipitation, water table, reverse osmosis, sewage, rainfall, convectional rainfall, river, sea, waterfall	<p>Geography stimulates an interest in and a sense of wonder about places and this can be achieved through an enquiry approach to learning which centres more on pupil activities. Students should be active in the learning process through fieldwork or through resources such as maps, photographs, items from the internet and statistics. The use of group work helps to facilitate the active characteristics of much enquiry work.</p> <ul style="list-style-type: none">• Teachers are encouraged to take students on a visit to either a pumping station such as <i>Ta' Kandja</i> or to a <i>reverse osmosis desalination plant</i>. During such visits teachers are recommended to provide constructive learning experiences where students can gain an understanding about the limited sources of water available and the increasing need to protect them.	<p>http://www.youtube.com/watch?v=RayAm2Ujgdc&feature=endscreen water cycle movie</p> <p>http://www.youtube.com/watch?v=dv-bgVT01Og&feature=related Learn about Water Cycle for kids at www.gudli.com</p> <p>http://www.youtube.com/watch?v=xdQdP6eZTUs&feature=fwrel Water Cycle 3D Animation</p> <p>http://www.youtube.com/watch?v=FAnDIYRycqs&feature=related The life of Water. Water which gives life- Water Project H2Ooooh!</p> <p>http://www.youtube.com/watch?v=kOgsduLrfS U sounds of rain and thunder on a river</p>

Teaching Objective	Examples of teaching experiences and activities	Indicators of Learning outcomes
<p>Strand 1</p> <p>The teacher will:</p> <p>support students to become familiar with the water cycle.</p>	<p>The students will take part in the introductory activity. Students watch one of the videos about the water cycle. (refer to links in Resources section).</p> <p>Students comment on what they are seeing.</p> <p>Other students fill in a simple labelled diagram or place symbols on a diagram.</p> <p>Students who are at Level 1 can experience water in a sensorial manner by putting hands in a large bowl of water, feeling water as it is poured on their hands and/or as it is sprayed lightly on their face, and/or putting hand in bowl of water. They hear a sound track of heavy rainfall and springs, waterfalls and the river. While they hear the sounds they can watch pictures of the river, waterfall, etc. or a PPT. They watch a video clip in which they can see rain, waterfalls, rivers, etc.</p>	<p>Students will become familiar with the three main components of the water cycle, namely, evaporation, condensation and precipitation. (Level 4)</p> <p>Students will describe the difference between clean and dirty water and between fresh water and salty water. (Level 3)</p> <p>Students will associate dark clouds with rainfall. (Level 2)</p> <p>Students may use vocals with intent such as make a noise when sprayed lightly with water or when their hands come in contact with water. (Level 1)</p>
<p>Strand 1</p> <p>support students to become familiar with different kinds of rainfall such as drizzle, normal rain, heavy downpour and thunderstorm;</p> <p>support students to become familiar with at least one type of rainfall process, e.g. convectional rainfall.</p>	<p>Students watch video footage of heavy rainfall in an area. Students will participate with the other students in the rain making process activity. They can be asked to hold or to hand some of the materials. Then the students can watch again the step by step procedure in the DVD. Or they can watch animation of one type of rainfall; e.g. convectional rainfall. Teacher and/or LSA support the students to understand the animations.</p> <p>http://www.youtube.com/watch?v=uM680paK_Wo convectional rainfall animation</p> <p>http://www.youtube.com/watch?v=C5OYH2IDNgU&feature=endscreen weather and climate 4 of 5.</p> <p>Students who are at Level 1 can watch videos of various kinds of rainfall such as drizzle, normal rain, heavy downpour and thunderstorm They listen to the sound of the various kinds of rainfall.</p>	<p>Students will be able to describe the rain making process in simple sentences. (Level 4)</p> <p>Students will become familiar with the process of rainfall. (Level 3)</p> <p>Students will become familiar and realise the difference between drizzle, normal rain, heavy downpour and thunderstorm. (Level 2)</p> <p>Students will respond to sounds of heavy rainfall in video. (Level 1)</p>
<p>Strand 1 and 2</p>	<p>Teacher shows students a glass filled with water and encourages the students to discuss from where we get water. Alternatively the teacher can show different pictures and students choose those in</p>	<p>With the help of images students will realise that there are different sources of water. (Level 4)</p>

<p>encourage students to become familiar with the supply and the distribution of water for different daily uses.</p>	<p>which they can see water. The students are encouraged to identify salty water (sea and oceans) and fresh water (rivers, waterfalls, ponds and lakes). Students can participate in the experiment about boreholes together with the other students.</p> <p>Students are given trays with sand, soil, mud, pebbles etc. and they drop water in each tray and they record the activity on video.</p> <p>Students are shown a glass of clean water and a glass of dirty water. They are encouraged to discuss ways or find pictures from the internet which show polluted water. Students list/draw ways in which we use water: drinking, washing, watering etc.</p> <p>They also list or draw pictures of the dirty water and other materials such as soap, toilet paper, dirty washing water etc. that is flushed away in the toilets. Students are supported to become aware that these finally end up in the sea.</p> <p>Students who are at Level 1 can experience water, mud, wet sand in a sensorial way.</p>	<p>Students will become more familiar with the way water is being polluted and how it ends up in the sea. (Level 3)</p> <p>Students will become aware of the difference between fresh clean water and polluted water. (Level 2)</p> <p>Students will respond differently when touching different stimuli such as when touching mud, wet sand, water. Some students might be resistant to a sensory stimulus they find unpleasant; move hands away when touching mud. (Level 1)</p>
<p>Strand 1 and 2</p> <p>explore with the students the use and misuse of water and become aware that there are ways of managing and conserving water .</p>	<p>Students can take part in the activity to sort the list of water usage into categories – home, farm, industry, leisure and others. In groups they find ways of conserving water.</p> <p>Students will look up videos and pictures from the internet about good use and bad use of water. They will become familiar with water pollution.</p> <p>In a group with other students they make a PPT about water pollution and water conservation.</p> <p>They show the class or to a group of students a video or pictures that they have found. They make a chart about water pollution and conservation.</p>	<p>Students will become aware that water is a vital resource and that it has various uses and will be able to comment about them in simple sentences. (Level 4)</p> <p>Students will be able to choose between good and bad use of water by sorting pictures. (Level 3)</p> <p>Students will become aware of how water is being polluted and through role play demonstrate simple domestic water saving measures. (Level 2)</p> <p>Students will pay attention when watching a video for short periods of time and might make reactions to sound or light. (Level 1)</p>

Subject: Geography

Form 2

Unit code and title: GEO 8.3 Life in the Sahara

Strand 1: The Environment – Physical and Human

Unit Duration: 9 sessions of 40 minutes (6 hours)

Objectives

The teacher will:

1. provide maps and resources for the students to identify and locate deserts around the world using latitude and longitude;
2. help students explore the climatic and geomorphic features of the Sahara Desert;
3. encourage students to focus on life in the desert and around oasis;
4. help students explore the economic activities of the Sahara region.

Objectives at attainment levels 1, 2, 3, 4

The teacher will:

- 1.1 support students in identifying and locate deserts around the world in the northern and southern hemisphere by providing a globe and pictorial atlas;
- 2.1 support students in learning about the climate and landscapes of the Sahara Desert;
- 3.1 encourage students to focus on life in the desert and around oasis;
- 4.1 support students to become aware that water and oil can be found in the desert;
- 4.2 support students to understand that the desert is a tourist attraction.

Key Words	Points to Note	Resources
globe, Arctic Circle, Antarctic Circle, North Pole, South Pole, Northern Hemisphere, Southern Hemisphere, sand , oasis, Nomads, Tuareg, heat, lack of rainfall, little or no vegetation, sand, dry valleys, oasis, dates, palm trees	<p>Geography stimulates an interest in and a sense of wonder about places and this can be achieved through an enquiry approach to learning which centres more on pupil activities. Students should be active in the learning process through fieldwork or through resources such as globes, atlas, photographs, and items from the internet. The use of group work helps to facilitate the active characteristics of much enquiry work.</p> <ul style="list-style-type: none">• Knowing about the varied landscapes and features of the desert is important as most students have a simplistic perception of a desert. The desert environment is one which holds both natural and human wonders that geographers should find interesting to explore.	inflatable globes, globes, wall and outline maps of the world, atlases, sand and small pieces of rock to create a miniature desert, a small sized fan to create a sand dune in the miniature desert. For hyperlinks about <i>creating a sand dune and the Tuareg Culture</i> , look at the resource list in the unit above http://www.youtube.com/watch?v=c37AQojh2pl&feature=related desert features

Teaching Objective	Examples of teaching experiences and activities	Indicators of Learning outcomes
<p>The teacher will: support students in identifying and locate deserts around the world in the northern and southern hemisphere by providing a globe and pictorial atlas.</p>	<p>Teacher provides students with a globe and supports the students to become familiar with main lines of longitude and latitude and to know the difference between the Northern and Southern Hemispheres are; the North and South Pole and to point out the location of some deserts. Emphasis is made on the Sahara Desert.</p> <p>The teacher provides the students with a pictorial atlas and the students have to find the world map which shows the various deserts. Students list the larger countries of the Sahara.</p> <p>Students who are at level 1 will take part in sensory activities related to deserts: heat (hair blower/drier); sand; tasting dates.</p>	<p>Students will learn what the globe and atlas represent and the difference between the Northern and Southern Hemisphere. (Level 4)</p> <p>Students will become familiar with the representation of the Earth by the globe. (Level 3)</p> <p>Students will participate in activities using atlases and globes. (Level 2)</p> <p>Students will take part in sensory activities such as tasting dates. (Level 1)</p>
<p>support students in learning about the climate and landscapes of the Sahara Desert.</p>	<p>Students will watch videos about deserts and life in a desert. In small groups they discuss what it must be like to live in a desert: heat; lack of rainfall, little or no vegetation, sand, dry valleys, oasis, dates, palm trees, etc.</p> <p>Teacher asks each group of students to bring a box, sand and small pieces of rocks to create a miniature desert. Using a hair drier to mimic a dust storm students can observe how sand dunes are created. Refer to website http://www.ehow.com/info_7900492_desert-school-projects.html</p> <p>Teacher projects on interactive whiteboard photos of desert features http://www.youtube.com/watch?v=lcdeBxkjqLg and the students identify such features as sand dunes. Using flashcards or interactive games available on the DVD students are asked to link sketches of desert features to their related terms as a reinforcement activity.</p>	<p>Students will learn that climate is responsible for the formation of deserts. (Level 4)</p> <p>Students will learn about deserts and some desert features. (Level 3)</p> <p>Students will become familiar with deserts and desert features. (Level 2)</p> <p>Students will take part in sensory activities such as touching sand and small pieces of rock. (Level 1)</p>
<p>encourage students to focus on life in the desert and around oasis.</p>	<p>The teacher provides some websites and discusses the presence of various tribes living in desert regions. The students are encouraged to list and find photos from the internet on the following tribes, nomads, Fulani, Tuareg, the Tibu and the people of the oasis. They join groups to put an act about these people's daily life through the use of various props.</p> <p>http://tuaregcultureandnews.blogspot.com/2008/07/who-are-tuareg-people.html</p> <p>The teacher projects clips about the nomads and oasis people of the Sahara.</p>	<p>Students will learn that different tribes live in deserts and that tribes have different cultures and ways of living. (Level 4)</p> <p>Students will learn about some of the different tribes that live in deserts. (Level 3)</p> <p>Students will become familiar with one</p>

	<p>Working in pairs they have to list the advantages and disadvantages of both ways of life, using pictures, symbols or just single words.</p> <p>Project on the IWB a number of images depicting various aspects of life around an oasis. Ask students to list or draw some of the things found here and not found elsewhere in the desert (e.g. water, date-palms, cultivated areas, irrigation channels, fig trees, permanent mud or stone houses etc.). Using their responses define the word oasis. The teacher or LSA supports the students to use Google Earth to locate some important oasis in the Sahara such as Tafilalet, Farafra, Tozeur, Kufra, Ghadames, Siwa and Tuat. Use a cross-section diagram across the Sahara Desert to let them discover how an oasis is formed. Use the rub and reveal method on the IWB to help students understand how water manages to reach the surface of the desert naturally from underground rivers or artesian aquifers. Discuss with students why in certain areas wells must be sunk to obtain underground water. Students will draw a simple picture of an oasis/ or find an image from the internet and label it.</p> <p>Teacher provides students with different pictures/images such as <i>saguaro cactus, prickly pear cactus, camel, gerenuk antelope, snakes, lizards and scorpions</i>. Students will find similar images of plants and animals that live in the desert.</p>	<p>particular desert tribe. (Level 2)</p> <p>Students will take part in sensory activities such as touching leaves from date palms, fig trees, and tasting figs and dates. (Level 1)</p>
<p>support students to become aware that water and oil can be found in the desert.</p> <p>support students to understand that the desert is a tourist attraction.</p>	<p>The teacher provides a pictorial economic map of the Sahara for each group of students. The students have to elicit the resources of this desert namely the Nile and Niger Rivers; huge oil and gas deposits in Algeria and Libya, underground deposits of water, iron ore deposits of Fort Gouraud area of Mauritania, salt at Taoudenni Mali and at Bilma Niger.</p> <p>The teacher may invite any such Maltese worker to class in order to relate about the processes involved in his/her work. Students will ask questions related how they live and work in the desert.</p> <p>The teacher projects a video clip or images of an oil well in the Sahara Desert. Students sort given pictures to show the story of oil.</p> <p>The teacher projects various clips about the desert related to tourist attractions such as <i>jeep safari in the desert, camel market, visits to historical/archaeological places (e.g. El Djem, Siwa oasis), traditional dances by the Tuareg</i>. Students will draw the attractions that they like best.</p>	<p>Students will know that water and oil can be found under certain places in the desert. Students list/find images of a few tourist attractions of the desert. (Level 4)</p> <p>Students will become familiar with the idea that people live and work in deserts. (Level 3)</p> <p>Students will sort pictures under heading <i>oil in desert</i> and <i>Safari in the desert</i>. (Level 2)</p> <p>Students will show interest for short periods of time in the video clip. (Level 1)</p>

