

Lesson Description

Subject: Teaching Geography through the use of IT

Topic: The use of Geographic Information Systems (GIS)

Number of Lessons: 2 (ca. 80 minutes duration)

Since my class uses Confluence at a *First Use Level*, followed by Technical Reasoning and Sequence as a *Use as Needed Level* and Precision falling under *Avoid*, I will try to provide my students with hands-on opportunities at using a normal atlas and the Google Earth software in order to locate different areas in the Mediterranean.

1.0 Goals

The lesson aims at enhancing student spatial knowledge through the use of IT (a medium) they strongly associate themselves with. The lesson will also demonstrate to students how to make use of specific tools incorporated within the Goggle Earth software such as:

- a) locating places;
- b) getting an idea of how these places look like through the use of the *Street View* feature;
- c) measuring distance using the Geographic Information System tools incorporated within the Google Earth software.

It will be made known to the students that a familiarity with Google Earth software will also serve as an introduction to using Global Positioning Systems (GPS) hardware and software.

2.0 Objectives

It is the objective of this lesson to primarily target the students' Cognitive and Psychomotor abilities. Knowledge, conceptualisation, comprehension, application and evaluation are all Cognitive skills to be used during the lesson. Students already possess some knowledge using Google Earth software. Apart from being a consolidation lesson, students will also be taught new IT skills when it comes to the use of Google Earth.

The class is composed of six students. These will be paired up into three different groups and assigned a work station. A step-by-step hand out will be given to each student listing in a simple and logical manner the different steps which need to be accomplished by each group during in the lesson.

Students will demonstrate that they learnt and understood the objectives of the lesson by means of a brief write-up through which students will explain the processes involved in completing the required tasks.

The lesson assessment criteria will involve going through the students work at the end of the lesson in order to determine the student level of understanding

Keeping in mind that on average, students have poor Sequential Processing and Precision Processing skills, every effort will be made to try and encourage them to make use of these mainly through their Confluence and Technical Processing use first skills.

At the completion of this lesson, students should be able to recall information when using Google Earth software. Students will also have the ability to locate a given country/city/town/village they would want to look up. Students will be also capable of measuring spatial distances through the use of Google Earth software interface.

2.1 Objective Analysis

- a. Students will access the Google Earth Software (Technical)
- b. Students will find the location of a number of given countries (Technical, Confluence, Precision)
- c. Students will measure a number of distances in kilometres of a given number of points (Technical, Confluence, Precision).
- d. Students have to produce a step-by-step write up of all the process through which these results were achieved (Sequence, Precision)

3.0 Prerequisites

Students must have a basic knowledge of IT concepts. The students are also expected to have some basic knowledge in using Google Earth software.

Taking into consideration the students' Sequential, Precision, Technical and Confluence skills, students will be paired as follows:

Group A: Izakk Briffa & Michael Cutajar

Group B: Warren Tonna & Gianluca

Group C: Karl Martin & Daniel Busuttil

This way, the varying degree of student skills will be more or less complemented. Care was taken to strike a balance between all different four skill types.

4.0 Materials

The use of the computer lab is necessary. Three work stations on which there is installed Google Earth software will be used. I will also be making use of my personal laptop through which I will be showing students how each specific set of different tasks is to be completed. No textbooks will be used by the students, but they are to provide and make use of foolscaps and writing material.

5.0 Lesson Procedure

The lesson will be carried out in the following manner:

Introduction

The importance of map making and the increasing importance of digital maps in the modern world will to be emphasised. Reference is to be made to GPS software and GPS systems. The Google Earth platform is to be compared to the smaller handheld GPS units that we use in our cars.

In order to capture the students' interest it will be emphasised that one of the lesson outcomes would be better technical knowhow of how to use a GPS system.

Students will be paired up as stated in point 3.0 above. Each group is to be assigned a work station. Each group will be given a hand-out containing a series of tasks which have to be completed by the end of the lesson. It will be made clear that every procedure will be explained to the students and that the members of each group are encouraged to help each other.

Let Me Learn language is to be used throughout the lesson. To start with, the lesson objectives shall be made known to the students. Even though every effort will be made to enhance the use of sequential and precision skills, make this aim known to the students might be counterproductive and might be responsible for a lack of interest in the lesson.

Main Activity:

The location of the following countries/islands:

Malta, Libya, Tunisia, Sicily, Algeria, Sardinia, Corsica, Crete, Syria, Spain

Students are to work on the following tasks:

- a) To describe the location of each country/island listed above.
- b) To distinguish if the areas being researched are an Island or a Country?
- c) Using the Google Earth software, the length and width of each area/country is to be calculated.
- d) The **Street View** feature is to be re-explained to the students. Students will be directed at having a look at photographs of Sampieri (Sicily) and Catania (Sicily). and in writing compare and contrast the two different locations.

Written activity:

Students are to:

- a) Specify if the area being researched is an island or a country
- b) Through the use of Google Earth software, the length and width of each country is to be calculated
- c) Countries are to be listed according to their size (largest to smallest)

- d) Islands are to be listed according to their size (largest to smallest)
- e) Through the use of the Street View feature, students will be directed at having a look at photographs of Sampieri and Catania. In writing they will have to compare and contrast these two different localities.

The above (especially point e), will be carried out keeping in mind the students' low sequential and precision skills and to encourage them to make use of skills they are prone to avoid.

6.0 Lesson Conclusions

I will go through the students' written work and help enforce/correct accordingly. Students will also be encouraged to continue making use of the Google Earth software at home in order to get to know more about other world localities they might be interested in.

The aim of the written content (i.e. that of enhancing the students' sequential and processing skills) will be made use of the students at this stage.