



Treasure Map 2015

A treasure map game before the ...exams!
at *TEE & EPAL Eidikis Agogis (Serres)*

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*I was on land, but the land didn't belong
to earth any more, was allowed to rest
in floating patches here and there.*

Joe Shapcott «La Serenissima»

Treasure Map 2015

An outdoor activity integrating ICTs and m-learning.

THE ACTIVITY

The present inquiry based [¹] didactic approach presented here, aims to motivate our students – at TEE & EPAL Eidikis Agogis (Serres) – participating in an outdoor activity [²] integrating the use of Google Maps, QR codes & m-learning [³], Red-cyan 3D glasses, Compass. The activity is supported by a GoLab's ILS and a worksheet. You can see the "Treasure Map 2015" ILS here: <http://goo.gl/A0Okik> and the relative post here: <http://wp.me/p4jO5C-12>, where you can find also the link to geothnk-international-scenario-contest community. The prize is happiness & laughs – just before the exams! This proposal is created in the context of the 2015's GEOTHNK International Scenario Contest.

The whole activity is organized, monitored and guided by the teachers. Students must complete eight (8) tasks, working as teams* will be challenged to find specific places using Google Maps, to write down coordinates, to solve simple equations, to read QR codes, to use red-cyan 3D glasses [⁴], to present, to argue etc. The teacher(s) will presents the means and their uses giving instructions and *mostly* telling the students *where* and *how* they can find help/instructions. Moreover, teacher(s) will ask the students how many of them think that is a "difficult task" [⁵]. Finally, students have to answer *for the scientist they "discover" what can they tell what was his/hers contribution on scientific thinking on "space" & "time" ?* [⁶].

¹ Levy P., Lamas P., McKinney P., Ford N. (2011), PATHWAY, D2.1 The Features of Inquiry Learning: theory, research and practice , <http://www.pathwayuk.org.uk/what-is-ibse.html>.

² Braund N M., Reiss M. (Edt.), (2004). Learning Science Outside the Classroom, RoutledgeFalme, ISBN 0-203-47629-8

³ Nikou S., (2014). Mobile Learning: Go for it!, 2nd Scientix Conference presentation, 24 – 26 October 2014, Brussels, Belgium.

⁴ <http://sundaysingersonger.blogspot.gr/> and <http://www.district196.org/avhs/dept/science/physics/physicsweb04/AVHSPhysics/color-notes.html>

⁵ Karably K., Zabrocky K.M., (2009). Children's metamemory: A review of the literature and implications for the classroom, International Electronic Journal of Elementary Education, Vol. 2, Issue 1, October, 2009.

⁶ Harlen W. – Edit. (2010). Principles and big ideas of science education, ISBN 978-0-86357-4-313, ([link](#))

EDUCATIONAL OBJECTIVES

Here you can see the educational objectives using the revised Bloom taxonomy [⁷] (*knowledge dimension: factual, conceptual, procedural, metacognitive & cognitive process dimension in the blue parenthesis: remember, understand, apply, analyze, evaluate, create*) with also the use of the proposed verbs (underlined) from GEOTHNK resources [⁸].

Factual

- Respond to (frequently) asked questions. (apply)
- Collect & List data. (evaluate)
- Use specific “simple” scientific instruments. (apply)
- Use a PC, a smartphone/tablet. (apply)
- Relate data. (evaluate)

Conceptual

- Describe using the scientific vocabulary . (understand)

Procedural

- Recall knowledge. (remember)
- Recall how & Solve equations. (remember)
- Check coordinating. (evaluate)
- Present your results .
- Present/Defend your arguments.
- Predict/Judge the easy of a task. (evaluate)
- Draw a map. (procedural)
- Cooperate with your team.

⁷ Heer Rex (2012). A Model of Learning Objectives based on ‘A Taxonomy for Learning, Teaching, and Assessing: A Revision of Bloom’s Taxonomy of Educational Objectives’, Iowa State University, Center for Excellence in Learning and Teaching, (*link*).

⁸ http://portal.opendiscoveryspace.eu/sites/default/files/educational_objectives_verbs_geothnk_en.pdf.

- Discuss with your team.
- Complete the tasks.

Metacognitive

- *Comment on the conclusions.* (evaluate)
- *Reflect on your personal work.* (evaluate)
- *Reflect on your team's work.* (evaluate)

CLOSURE

Our project combines self-motivated team-working students, exploring as researchers, describing as scientists, inquiring and explaining, peer to peer education [⁹], integrating ICTs and m-learning, with better relationship between teachers & students, positive self-esteem of the students and happiness as educational outcomes. The project's approach is not a typical/common didactic approach to Hellenic Schools. As a teacher I saw my students acting, asking questions to trying and trying again and being happy. I succeed to integrate the emotion component in learning, cooperation and consistency & continuity to teaching. All the above are objectives through to an effort for an inclusive education [^{10,11}].

⁹ Πιερράτος Θ. (2013), Μελέτη διδακτικών δράσεων για τη διδακτική της Φυσικής μέσω καταγραφής και αποτίμησης, Διδακτορική Διατριβή, (*link*). Η αλληλοδιδασκτική μέθοδος συνοδεύεται με το μεγαλύτερο ποσοστό μετάδοσης και διατήρησης της γνώσης από τις υπόλοιπες διδακτικές μεθόδους <http://momataalks.tumblr.com/post/42355933278>, & <http://www.cehd.umn.edu/crdeul/pdf/monograph/5-a.pdf>

¹⁰ <https://4myfiles.files.wordpress.com/2015/04/pdfgreek.pdf>

¹¹ <http://wp.me/p4jO5C-z>

APPENDIX I – The worksheet

