



Further Information

Experiences

I used such approach last year in my classes. I introduced the logarithmic function as a purely mathematical concept first, but later on we discovered the applicability of it. Students were more active than in ordinary math lessons. They solved the tasks and they enjoyed the work.

Nika: "It was great. I could not imagine that we can learn math outside the classroom."

Klemen: "Now I know why to learn logarithms."

Spela: "It was amusing. I would like more such math's lessons."

Students can also find some other examples where it can be used the logarithmic function (e.g. comparing weights of different animals – from an ant to an elephant). That means that they understood the topic. Understanding something is a matter of being able to carry out a variety of "performances" concerning the topic.¹

Next year we will revise all the mathematical concepts that the students have learned in secondary school for the final (university qualifying) exams (the *matura*). At that time I will check if my students have truly constructed a knowledge network and if they now know better the concept of the logarithm.

Literature

Beckmann, A. & Michelsen, C. & Sriraman, B., 2005, Research considerations for interdisciplinary work on mathematics and its connections to the arts and sciences. In: Beckmann, A. & Michelsen, C., Sriraman, B. (ed.): Proceedings of the First Int. Symp. of Math and its Connections to the Arts and Sciences. Hildesheim, Berlin (Franzbecker), S. 1-6

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¹ Teaching for understanding (Perkins, 1993)

The **ScienceMaths** project: **Logarithmic function**
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Links

<http://bcn.boulder.co.us/basin/data/COBWQ/info/pH.html>

<http://earthquake.usgs.gov/eqcenter/eqarchives/significant/>

<http://oakroadsystems.com/math/loglaws.htm#WhatIs>

<http://psych.fullerton.edu/navarick/c-l.doc>

<http://staff.jccc.net/PDECELL/chemistry/phscale.html>

http://www.800mainstreet.com/acid_base/definitions-ph.html

http://www.aace.org/conf/site/pt3/paper_3008_403.pdf

<http://www.adm.uwaterloo.ca/infocs/study/curve.html>

<http://www.med-ed-online.org/t0000007.htm>

<http://www.phys.unsw.edu.au/jw/dB.html#log>

<http://www.purchon.com/chemistry/ph.htm>

<http://www.seismo.unr.edu/ftp/pub/louie/class/100/magnitude.html>

<http://www.sos112.si/slo/tdocs/ujma/2006/tasic.pdf>

<http://www.tufts.edu/~gdallal/logs.htm>

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