

GEOMATECH - Learning is experience



Tamás KOVÁCS (Konkoly)

Márta KIS (BKF)



SZÉCHENYI 2020

HUNGARIAN GOVERNMENT
 NATIONAL RESEARCH, DEVELOPMENT AND INNOVATION FUND
 INVESTING IN YOUR FUTURE

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Motivation





What are our own kids like?

They prefer the rapid changing information

They get a dozen of information and select the unimportant things immediately.



Team work instead working alone



Multitasking - though for short time

Prompt feedback is desired

Past/Present

vs.

Present/Future

- Understanding in abstract way
- Analog equipments
- Adult teaches children
- Kids are passive participants
- Linear curricula
- Children learn by themselves
- Learning is an obligation
- They get knowledge

- Visualization
- ICT
- Kids discover the environment
- Kids are active explorers
- Customized learning processes
- Team-work support
- Learning is a game
- They get experience

What is



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?

- Interactive [GeoGebra based] digital problem portal and virtual classroom environment
- Matches the National Core Curriculum
- Easily navigable, Quality checked
- "Living" -- review and update system
- Platform free
- Free of charge

Funding: The New Széchenyi Plan Operational Programme TAMOP - 3.1.12-12/1-2013-0001

GeoGebra

Since 2001

Geometry + Algebra

Age : 6 -- 17+

Social Network

International GG Institute

GeoGebra Tube



GeoGebra for Tablets

GeoGebra for Desktops

GeoGebra for Phones

Coming soon!

Download from Windows Store

Download on the App Store

ANDROID APP ON Google play

Windows

Mac OS X

Linux

[Upload Material](#)

Featured Materials

Comparing Size by Cut and P...

GeoGebra Institute of Hong Ko

Escherized Tessellation

John Golden

Pythagorean Theorem Proof w...

Jed Butler

Water Triangle

EDC in Maine

Joukowski Transform

Michael Borcherds

hungry frog

sepideh mihanzadeh

Newest Materials

1.04 Geometry GG

July 28, 2015 - 3:08 AM

JacobWebb

0 0 0

Single Step Equations

July 28, 2015 - 2:54 AM

Matt

0 0 0

Properties of Triangles Wor...

July 28, 2015 - 1:23 AM

Haley Smart

0 0 0

Popular Worksheets

Tetrahedron and CubeOctahed

February 6, 2013 - 4:02 PM

uStas

15 0 3

Transformation octahedron i...

February 10, 2013 - 11:00 AM

uStas

16 0 3

Shapes of constant width

January 17, 2012 - 9:19 PM

Michael Borcherds

6 0 1

Popular Tags

- geometry
- pythagorean
- theorem
- triangle
- algebra
- equations
- angles
- area
- quadratic
- circle
- tessellation
- function
- angle
- functions
- of
- calculus
- linear
- trigonometry
- graph
- parabola

Material Types

- Worksheets
- GeoGebraBooks
- Tools
- Links
- Spreadsheet data files

The



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Portal

- Ordered
- Systematic
- Immediate use
- Teacher tailored -- fit to teaching style
- Student tailored -- adaptable

<http://geomatech.hu>



GEOMATECH
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- Software development
- Interactive problems
- Reach out
- Pilot study
- Teacher training

Research

Interactive Problems & Software

- IPs : 1200 Mathematics
- 600 Science (physics emphasis)
- Year : 1 -- 12
- Pedagogical assistance
- ~30 Developers, Editors, Proofreaders
- GeoGebra based interface and design
- Complex searching criteria, books, and course outlines

Teacher training & PILOT

- 800 schools all regions of Hungary
- 2400 teachers
- ~50 trainers -- 90-hours training

- Mathematics: 1600 students
- Physics : 800 students
- Based on real classroom situations, experiments

Outline of training

- Basics of GeoGebra
- Using GG in classroom
- Modern learning styles
- Experiments, simulations with GG
- WEB 2.0
- Electric devices and GeoGebra
- The GEOMATECH Portal
- Preparing for teacher-courses

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tions,

How to use it?

Basic features



The screenshot shows the Geomatech website interface. At the top, there is a navigation bar with the Geomatech logo and several logos including the Hungarian Government and the European Union. Below the navigation bar is a large orange banner with the text "ÜDVÖZÖLJÜK A GEOMATECH PORTÁLON!" and a search bar. The main content area features two tables. The first table shows the number of courses for each grade level (1-12) in Mathematics. The second table shows the number of courses for each grade level (1-4, 5-8, 9-12) in Natural Science.

ÉVFOLYAM/TANTÁRGY	1	2	3	4	5	6	7	8	9	10	11	12
Matematika	10	26	28	32	22	28	50	24	61	31	88	21

KOROSZTÁLY/TANTÁRGY	1-4	5-8	9-12
Természettudomány	6	58	90

AZ OLDAL FEJLESZTÉS ALATT.

ÜDVÖZÖLJÜK A GEOMATECH PROJEKT DIGITÁLIS TANANYAGAIT FELÖLELŐ ÉS RENDSZEREZŐ PORTÁLUNKON!

2014. januárjában, a BKF Kommunikációs Alapítvány, a Budapesti Kommunikációs és Üzleti Főiskola, valamint a GeoGebra Nonprofit Kft. kezdeményezésében, az Új Széchenyi Terv TÁMOP Programja keretében, 3.1.12-12/1-2013-0001 azonosító számmal indult útjára a GEOMATECH kiemelt közoktatás fejlesztési projekt. A projektünk során, a matematika és természettudományos tárgyak oktatására létrehozott, az oktatás hatékonyságát javító, az órák játékosságát és élményszerűségét növelő digitális tananyagegységeink célja, hogy hozzájáruljanak ahhoz, hogy a hazai diákok megszeressék e tantárgyakat, szívesen tanulják azokat, és a jövőben nemzetközi összehasonlításban is javuló teszteredményeket mutassanak

<http://geomatech-beta.geogebra.org/geomatech/index>

