**GeoGebra in the Classroom: in Math Lessons**

We have commonly collected examples of maths lessons in which GeoGebra helps to deepen understanding, creates situations of discovering basic concepts by the students themselves or lead to motivating tasks that have to do with real life.

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| **Topic** | **Impact of working with GeoGebra** |
| sum of interior and exterior angles in a triangle, quadrilateral, … polygon | each student finds out the rule, formula on his/her own, construction al parallel helps to do the proof |
| theorem of thales and inversion of the theorem | finding out, finding out the inversion by a using the locus function to trace the point C so that the Thales circle is visible |
| Lines in triangles like perpendicular through the midpoint of each side, angle bisectors, … | To find out properties and range of them related to the form of the triangle by motivating applications from real life |
| theorem of Pythagore and some visual proofs | finding out the theorem, proofs by constructions that have been prepared before |
| linear functions | exploring the meaning of m and b in y=ax+b |
| quadratic functions | Exploring the meaning of parameters a, b and c in f(x)=ax²+bx+c |
| trigonometric functions | exploring differences, meaning and effect of parameters |
| Polynomial like f(x)=axn | Exploring the effect on changing n |
| transformations | exploring properties of reflection, rotation, … |
| Intercept theorems | exploring characteristics, formula |
| golden ratio | exploring characteristics, formula |
| Approximating curves in real life by lines, parabolas, exponential functions, ellipses, … | possible without calculating the term of the function |
| construction of gothic elements | real life maths/geometry |
| tessellations à la Escher | drag mode for change of the basic form until it “fits”, using reflections, rotations for tessellation |
| treasure hunt | basic constructions of circles, lines and angles by importing a picture form a treasure card |
| Euclid’s GCD Algorithm see file on [GeoGebraTube](https://www.geogebra.org/material/show/id/124361) | Discovering by geometric visualisation |