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**Teaching and learning mathematics along fundamental mathematical ideas from**  
**kindergarten to the matura**

**Abstract:**

Mathematical knowledge has been and is developing in the process of research. Therefore it is only natural that mathematics is taught and learned also in process. This structural-genetic approach can be best supported by systematically pursuing fundamental mathematical ideas over the grades. This will be exemplified in the paper by means of three "learning trajectories" on linear equations, composing and decomposing figures, and operative proofs.