

Fostering mathematically gifted students within the framework of the Germany's federal-state initiative LemaS

General information about the LemaS project

Central idea

By recognising the strengths and needs of all students in regular lessons, we enable them to develop their learning in a way that is appropriate to their potential.

Project overview

In the first five-year phase, 300 schools of different school types from the primary and secondary sector are participating nationwide. They are being supervised on site by an interdisciplinary research network with 18 participating universities in 22 subprojects in various disciplines.

Concept

In cooperation with the schools, the researchers develop concepts and strategies enabling teachers to adjust their teaching in such a way that they can discover the potential of their pupils earlier and support it in a more specifically way in regular lessons.

Overarching goals

- Best possible learning opportunities for all children
- Recognising and valuing diversity
- Encourage the development of individual potential and performance

2018/2019

In-depth
Inventory

2020/2021

Joint testing of the developed concepts
at the cooperation schools

2022/2023

Preparation of
the transfer phase

2019/2020

Joint development of adaptive concepts
for mathematics teaching

2021/2022

Formative evaluation for joint optimisation
of the developed concepts

Insights into the main content areas of the mathematics-specific subprojects 3 and 8 in the LemaS project

Subproject 3

- Development of diagnostic and support concepts for an adapted transition from nursery to primary school as well as from primary school to secondary school for high-achieving and particularly gifted children
- (Further) development of the diagnostic and support competences as well as other general professional competences of the teachers involved in the subproject
- Development of a set of instruments for process-related diagnostics in transition
- Development of learning arrangements for use in transitional mathematics classes
- Preparation of handouts for the effective use of cooperation in the transition process

Subproject 8

- Development of concepts for adaptive formats of self-regulating and research-based learning, taking into account the general support of giftedness of all children, the individual learning potentials and needs as well as influencing factors that favour or inhibit learning
- (Further) development of general professional as well as diagnostic and support competencies of the teachers involved in the subproject
- Development of a set of instruments for process-related diagnostics of the mathematical potential of high-achieving and particularly gifted children
Development of tested learning arrangements for the use of open, substantial tasks in mathematics lessons
Development of subject-related differentiation formats for individual support in mathematics lessons

Benölken, R., Käpnick, F., Auhagen, W. & Schreiber, L. (2019). „LemaS“ - A Joint initiative of Germany's federal government and Germany's federal countries to foster high-achieving and potentially gifted pupils. In Nolte, M. (Ed.), Proceedings of the 11th International Conference on Mathematical Creativity and Giftedness (MCG 11). Hamburg: WTM, S. 109 - 116.

Weigand, G., Fischer, C., Käpnick, F., Perleth, C., Preckel, F., Vock, M., & Wollersheim, H.-W. (2020). Leistung macht Schule. Förderung leistungsstarker und besonders leistungsfähiger Schülerinnen und Schüler. Beltz.

www.lemas-forschung.de

www.leistung-macht-schule.de

	Schools involved	Federal states
Subproject 3	42	14
Subproject 8	47	13

Scientific monitoring:

Prof. Dr. F. Käpnick (WWU Münster, management, 3 & 8)

Prof. Dr. R. Bennölken (BU Wuppertal, management, 8)

Dr. Mandy Fuchs (WWU Münster, coordination, 3)

Wiebke Auhagen (BU Wuppertal, research assistant, 8)

Julia Kaiser (WWU Münster, research assistant, 3)

Philipp Girard (WWU Münster, research assistant, 3)

Yannick Ohmann (WWU Münster, research assistant, 3)

Lea Schreiber (WWU Münster, research assistant, 8)

GEFÖRDERT VOM