

# 保良局屬下小學 德國STEM教育考察團

P.L.K. GRUNDSCHULEN STEM BILDUNGSDELEGATION IN DEUTSCHLAND







# MINISTRY OF EDUCATION, YOUTH AND SPORT

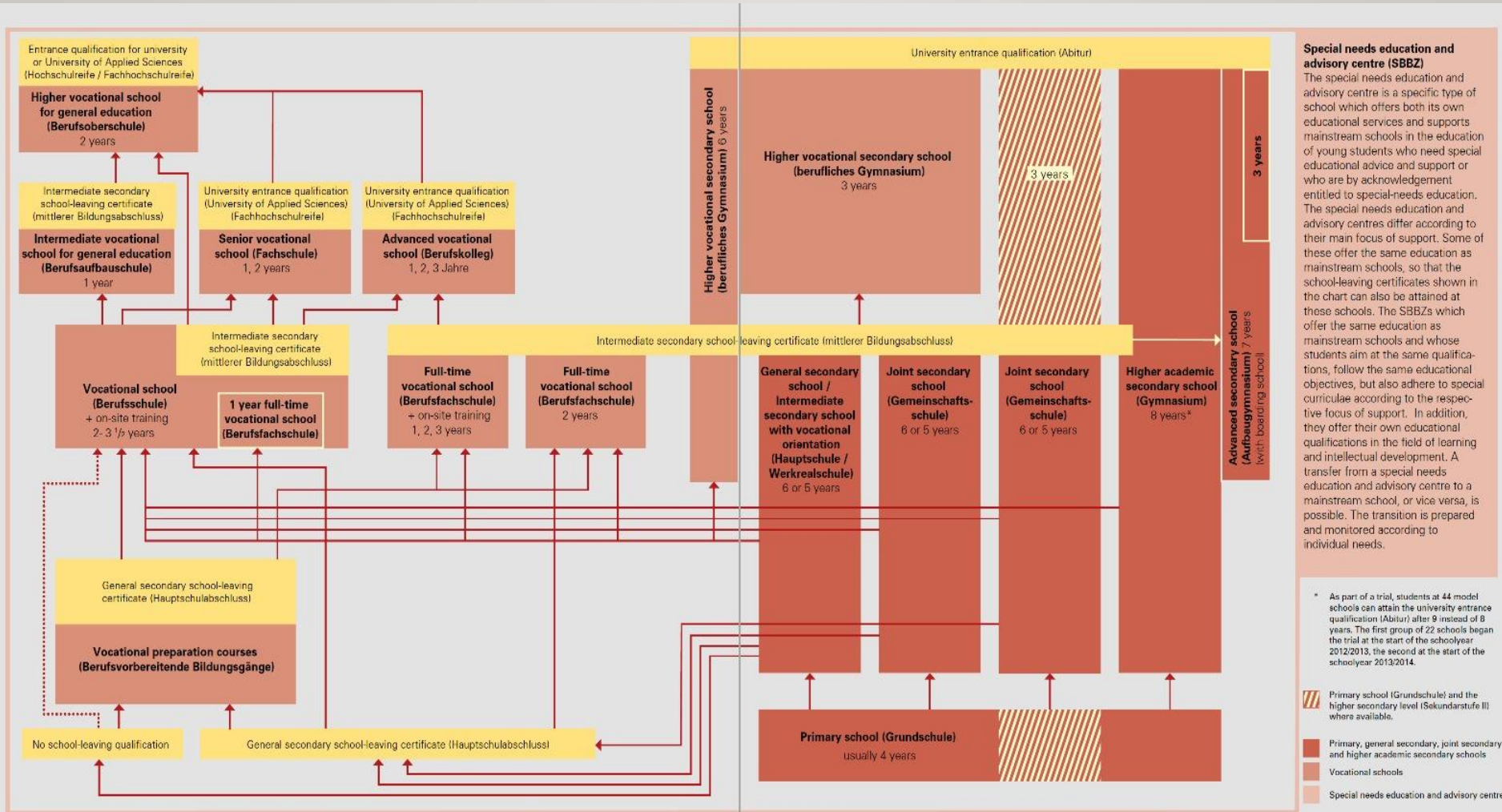


## Germany Education System

- No centralized curriculum and examination for any key stages, even for the entry of universities. Free education for all stages.
- Assessment with result in 6 Grade: **Very Poor, Poor, Adequate, Satisfactory, Good, Very Good.**
- Teachers suggest students to choose which kind of secondary school at the age of ten based on their assessments, projects, performance and the willingness of students and their parents.
- Different types of secondary schools for students to choose:  
**General secondary school, Intermediate secondary school, Joint secondary school, higher academic secondary school.**
- Can change to other stream by re-studying a lower level in order to fulfill the requirement.



# BADEN-WUERTTEMBERG EDUCATIONAL PATHWAYS



Please note: For some connecting schools additional qualifications are required. For reasons of simplification, these have not been included in the chart.

\* As part of a trial, students at 44 model schools can attain the university entrance qualification (Abitur) after 9 instead of 8 years. The first group of 22 schools began the trial at the start of the schoolyear 2012/2013, the second at the start of the schoolyear 2013/2014.

# MINISTRY OF EDUCATION, YOUTH AND SPORT



## Dual System in VET

70% Company Based Training

30% at Vocational School

3.5 days per week work experience

1.5 days per week theory



33 weeks per year



14 weeks per year

# ADVANTAGES OF DUAL SYSTEM

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Baden-Württemberg  
MINISTERIUM FÜR KULTUS, JUGEND UND SPORT

- Training in the Dual System is open to all school leavers.
- The Dual System is free of charge for all the students. Students even get an apprenticeship pay.
- It provides basic and specialized professional training and broadens their general education.
- Practically-oriented training combined with theory.
- Maximum exposure to job reality.
- It generates the specialists for the needs of the economy.
- Match supply and demand of highly qualified skilled professionals.
- Low rate of youth unemployment

# CURRENT KEY ISSUES

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- Education in a digital world.
- Inclusive education for children with special needs.
- National education standard – Comparability.
- Improving and strengthening of pre-school education.
- Integration of migrants.
- Rapid growth of all-day school.
- Individual support.
- Promotion of gifted students.
- Internationalisation.
- Quality development.



# 1<sup>ST</sup> SCHOOL VISIT (TEAM A)

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- School name: Fuchsrainschule
- School type: Government Aided Primary





# LESSON OBSERVATION

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- Preparation before lesson



# LESSON OBSERVATION

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- Activities – making a boat
- 2 students per group, test in within own group



# LESSON OBSERVATION

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- Testing together and observe others' work

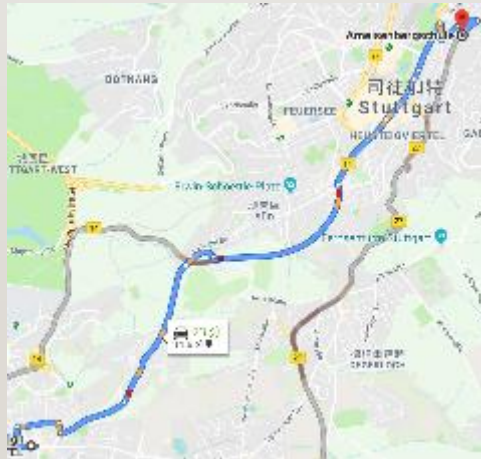




# 1<sup>ST</sup> SCHOOL VISIT (TEAM B)

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- School name: Ameisenbergschule
- School type: Government Aided Primary School
- No. of students: 280
- With international class



# OTHER INFORMATION

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- Computer room – for entertainment
- Newly renovated library – 1 hour reading lesson per week
- Work room (Not all schools have) – Similar to D&T room in Hong Kong
- 3 playgrounds and several gardens for planting
- Exclude E-learning – Let children learn self-disciplined and concentration
- Half day lesson, free time or join extra-curricular activities hold by parents / training teachers/ volunteers in the afternoon

# LIBRARY

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# COMPUTER ROOM

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# CLASSROOM SETTINGS

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# WORK ROOM

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# PLAYGROUND

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# GARDEN

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# LESSON OBSERVATION – GRADE 2 MATHS

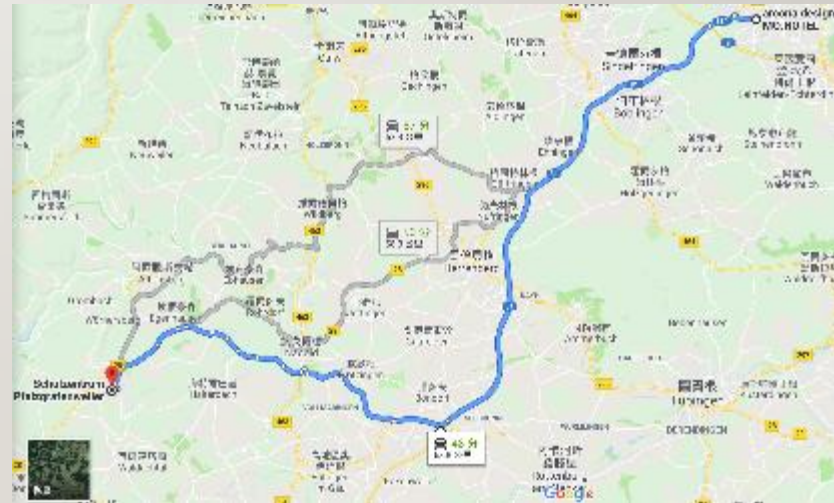
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# 2<sup>ND</sup> SCHOOL VISIT

- School name: Schulzentrum Pfalzgrafenweiler
- School type: Primary and secondary school
- No. of students: Nearly 800



# STEM EDUCATION

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- Co-operation with commercial company- Fishchertechnik
- Vocational training for engineer, etc.
- Provide wide variety of STEM education
- Project learning
- Free to choose their own topic for projects



# STEM ROOM

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# STEM ROOM

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# STEM ROOM

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# STEM ROOM

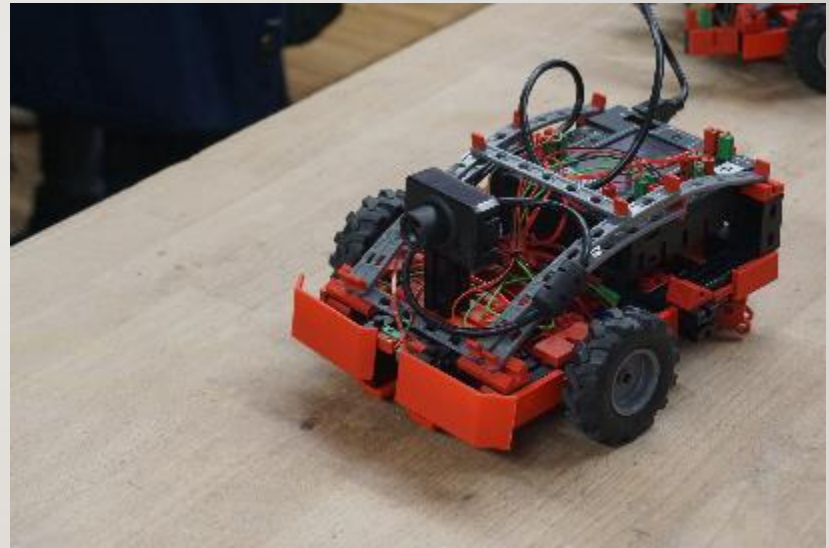
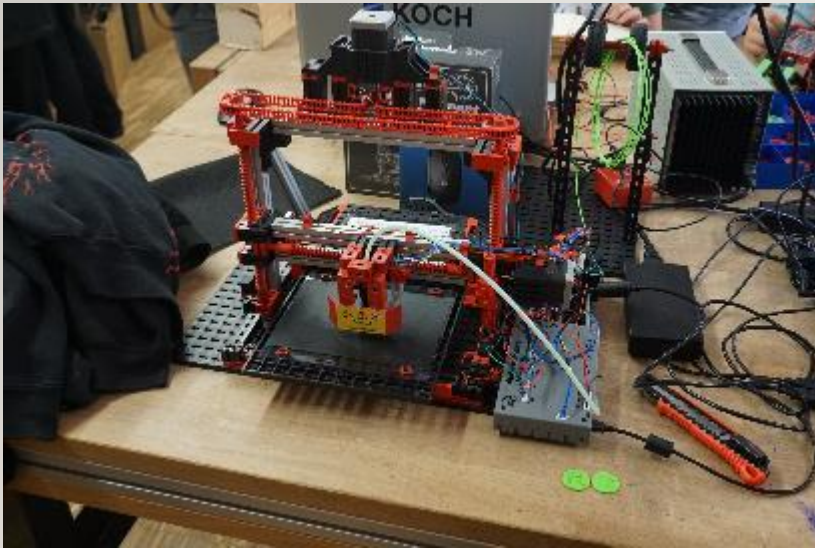
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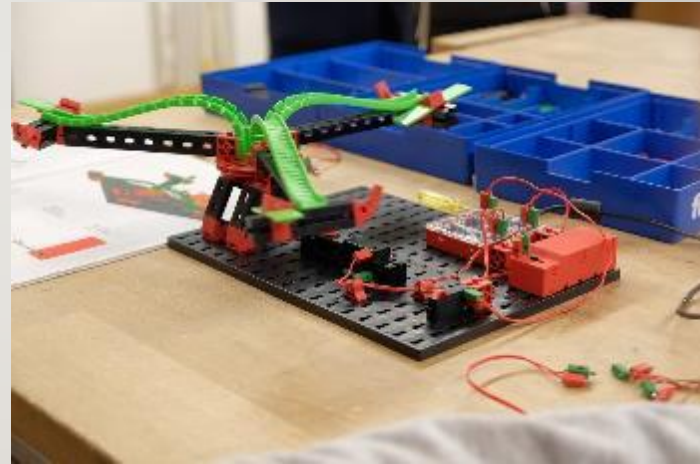
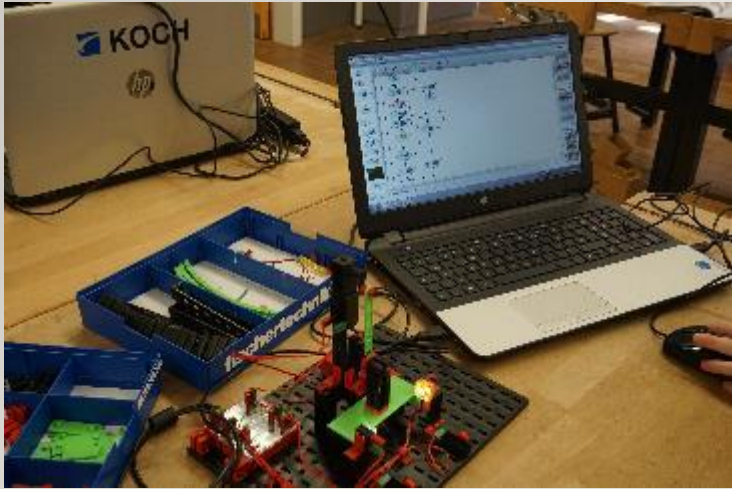




# PROJECTS

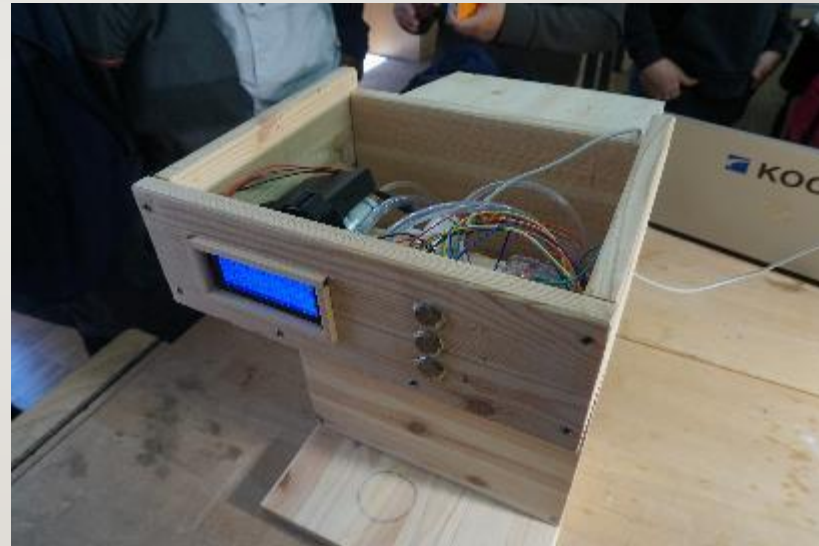
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# SOFT DRINK MACHINE

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# 3<sup>RD</sup> SCHOOL VISIT



- School name: Galileo Primary School (Whole-Day)
- School type: Private Primary School
- No. of students: Around 200



# SCHOOL EDUCATION OBJECTIVES



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- Encourage value and participation.
  - Emphasis acquisition of basic skills.
  - Research –development learning.
  - English is taught at the beginning.
  - All-day concept with extra-curricular activities.
  - Integrate reality of everyday life.
  - Individual promotion of pupils and social learning.
  - Learning for the future- creative media projects.

# MINT EDUCATION (STEM)

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# MINT EDUCATION (STEM) -- ROBO WUNDERKIND

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# MINT EDUCATION (STEM) -- ROBO WUNDERKIND

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# MINT EDUCATION (STEM) -- ROBO WUNDERKIND

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# CAMPUS

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# 1<sup>ST</sup> COMPANY VISIT -- DUYSMA

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- 100- years-old leading Germany Educational toys and aids for all ages, especially kindergarten and lower primary schools.





# WORKSHOP

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# WORKSHOP

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# 2<sup>ND</sup> COMPANY VISIT - FISCHERTECHNIK

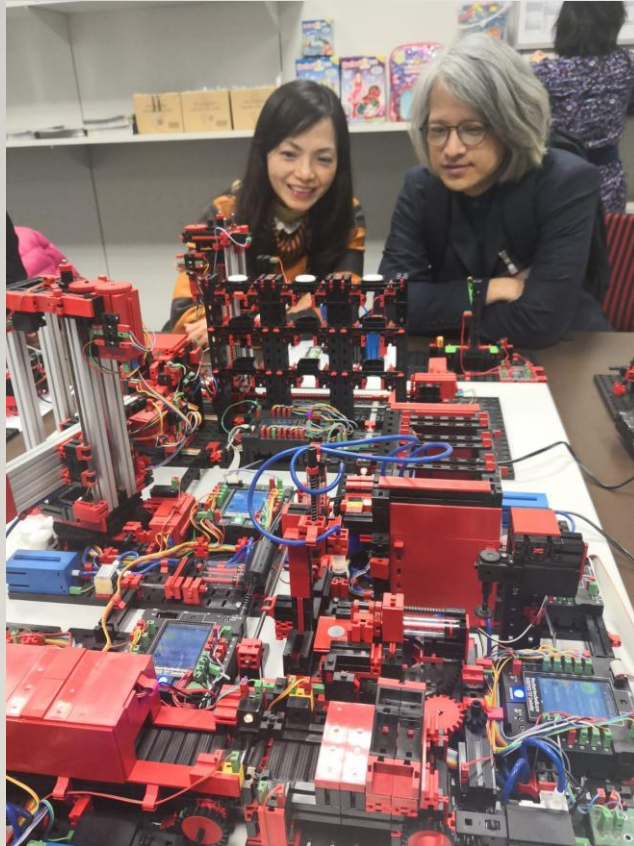
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- Recommended STEM product company



# FISHCHERTECHNIK FACTORY

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# FISHCHERTECHNIK FACTORY

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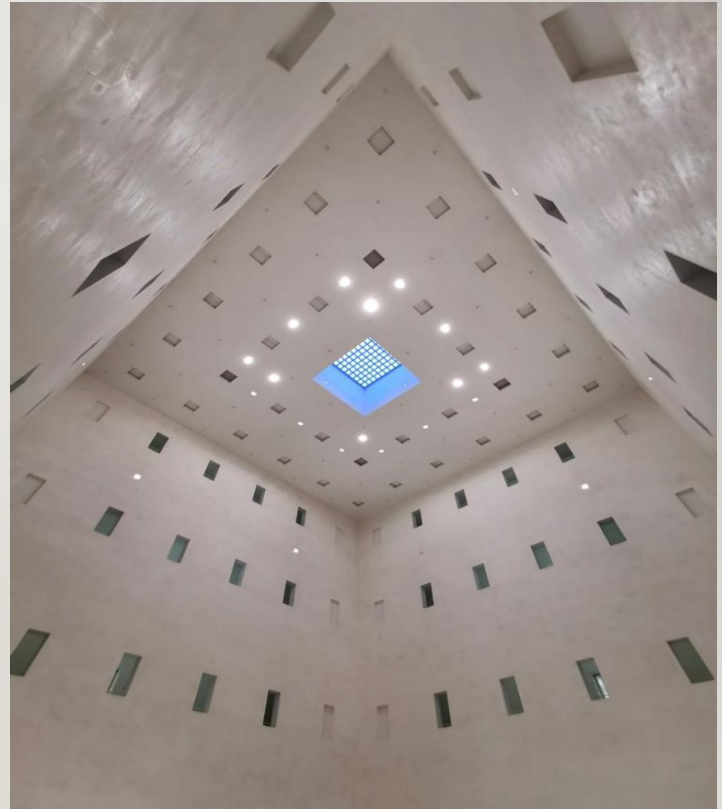
# FISHCHERTECHNIK MUSEUM

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# STUTTGART SPECIAL BUILDING

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# STUTTGART CITY LIBRARY

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**THANK YOU!**