STEMSiL – The visual STEM glossary in Sign Language

The STEMSiL project is transforming the way STEM (Science, Technology, Engineering, Mathematics) concepts are taught and understood by Deaf and Hard of Hearing (DHH) students. To reach this objective, the Consortium of the "STEMSiL: STEM Methodologies in Sign Languages" (2022-1-DE-03-KA2020-SCH-000087039) project finalized the **Visual STEM glossary in Sign Language**, that presents key scientific terms in short, clear video definitions—all in national Sign Languages across six European countries (Italy, Germany, France, Spain, Portugal and Greece).

The Visual STEM Glossary is a dedicated section within the STEMSiL platform that offers videos explaining STEM concepts in Sign Language. These videos are grouped into eight main categories:

- Physics
- Biology
- Informatics
- Technics
- Sciences Technic
- Geography
- Mathematics
- Chemistry

Each category covers carefully selected topics identified in the earlier stages of the project. The terms are not simply translated, they are rendered in national Sign Languages by experienced Deaf signers in each participating country. These renderings are based either on established terms already in use or on terms documented during studies conducted in Deaf schools, ensuring they are closely aligned with the educational context. This approach guarantees **cultural and linguistic accuracy**, avoiding arbitrary translations. The result is a multilingual, multimedia resource that makes abstract STEM concepts visually accessible for Deaf and Hard of Hearing learners.

By integrating a STEM glossary into national Sign Languages, STEMSiL is doing more than creating a resource—it's reshaping the way **STEM is taught, learned, and understood** in Deaf communities. Moreover, it sets a precedent for future initiatives: accessibility should be built into educational innovation from the ground up.

The impact of the STEMSiL glossary is enhanced in:

1. Comprehension and engagement

Deaf students often face barriers in understanding **complex scientific language** due to the lack of standardized terminology in Sign Language. The STEMSiL glossary tackles this challenge by offering visually clear, linguistically accurate video definitions.
This deeper comprehension leads to increased engagement, confidence, and motivation, laying the groundwork for more inclusive and effective science education.

2. Empowering educators and interpreters

For educators and SL interpreters, the glossary provides a practical, easy-to-use reference that enhances teaching strategies and classroom communication. It also supports **professional development** by equipping teachers and interpreters with accurate STEM signs, fostering consistency and confidence in teaching.

3. Fostering inclusion and community involvement

The impact of the glossary extends beyond the classroom. With stakeholders, including parents and Deaf community members, engaging with the platform, the glossary strengthens the ecosystem around DHH learners. It becomes a shared resource that builds bridges between students, families, and educators. Besides, the glossary promotes **linguistic equality and cultural visibility**, helping Deaf individuals see themselves reflected in scientific discourse by making STEM content available in national Sign Languages.

4. Long-term educational impact

The STEMSiL glossary is more than a temporary project—it's a **scalable model** for inclusive education. As it continues to expand and evolve, it offers a framework that can be adapted for other subjects and languages, making education more accessible for diverse learners across Europe and beyond.

Check the glossary at the following link: https://stemsil.eu/stemsil-platform/stem-glossary/

Be updated on the STEMSiL project progresses by following its Facebook, Instagram, X, TikTok channels and by visiting its website!

Tags: #inclusionthroughSTEM #STEMSiL #erasmusplus #STEMEurope #school #SL4STEM #STEM