

# ASL-STEM Forum: A Bottom-Up Approach to Enabling American Sign Language to Grow in STEM Fields

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## Summary

Deaf and hard of hearing students studying advanced topics in Science, Technology, Engineering, and Mathematics (STEM) lack standard terminology to enable them to learn, discuss and contribute to their chosen fields. The ASL-STEM Forum enables the diverse, thinly-spread groups that are independently creating and using terminology to come together using a community-based, video-enabled web resource. A common vocabulary would provide interpreters with consistent terminology and enable deaf scientists to more easily converse from a common basis.

## Objectives

- Enable discussion of American Sign Language (ASL) among members of the Deaf community.
- Facilitate augmentation and convergence of advanced and technical ASL vocabulary.
- Reduce obstacles to deaf students' pursuit of advanced degrees in STEM fields.

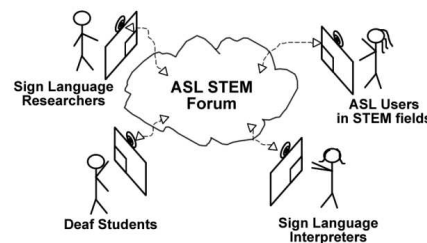
## Opportunities for New Research

- Provide a large and unique dataset to those researching the evolution of natural language.
- Carefully catalogue the development of ASL.

## The Forum

- a) Personalized information and options are given to registered users.
- b) Terms are organized by the community into a meaningful hierarchy
- c) The most highly ranked user-posted sign is displayed at the top, enabling the site to act as a reference.
- d) Signs are rated by the community.
- e) Other highly-ranked signs are displayed as alternatives.
- f) Users can discuss each term in both English text and ASL video.

## Community Involvement



All users will be able to:

- Post new signs for terms
- Discuss best ways to sign terms
- Rate signs by quality
- Use posted signs for reference

The ASL-STEM Forum can bring together students, teachers, interpreters, language specialists, and others. Video discussion will help build consensus on the most effective and conceptually correct methods for signing STEM concepts.

## American Sign Language

A common misconception is that ASL is merely a hand-sign encoding of the English language. ASL is in fact its own language with unique vocabulary and grammar. While many among the Deaf community can write and read English, it is often as a second, non-native, language.

Due to ASL's relative youth and geographic dispersion, standardization of signs for advanced technical vocabulary in ASL is on-going. Signs that have been created often differ tremendously from region to region, making communication hard between geographically separated groups.

## Research Opportunities

The ASL-STEM Forum will be extensively recording the evolution of a natural human language. This will provide a wealth of chronological data never before available and creates unique opportunities for analysis by:

- historical linguistics researchers
- sign language researchers
- social media researchers
- those interested in collaborative filtering of structured knowledge

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