

## The National Library of Virtual Manipulatives

nlvm.usu.edu

This is a very useful collection of virtual activities indexed to content areas and grade levels. The following description is quoted directly from the website:

The National Library of Virtual Manipulatives (NLVM) is an NSF supported project that began in 1999 to develop a library of uniquely interactive, web-based virtual manipulatives or concept tutorials, mostly in the form of Java applets, for mathematics instruction (K–12 emphasis). The project includes dissemination and extensive internal and external evaluation.

Learning and understanding mathematics, at every level, requires student engagement. Mathematics is not, as has been said, a spectator sport. Too much of current instruction fails to actively involve students. One way to address the problem is through the use of manipulatives, physical objects that help students visualize relationships and applications. We can now use computers to create virtual learning environments to address the same goals.

There is a need for good computer-based mathematical manipulatives and interactive learning tools at elementary and middle school levels. Our Utah State University team is building Java-based mathematical tools and editors that allow us to create exciting new approaches to interactive mathematical instruction. The use of Java as a programming language provides platform independence and web-based accessibility.

The NLVM is a resource from which teachers may freely draw to enrich their mathematics classrooms. The materials are also of importance for the mathematical training of both in-service and pre-service teachers. The library is actively being extended and refined through projects including the eNLVM, a project to develop interactive online learning units for mathematics.