

What is the BrainTrax System?

The **BrainTrax** System is a learning tool that delivers high-quality math-related content through a web-browser. This information is displayed via a **visual index**. A visual index is a graphical means of showing how different concepts relate to each other. In the Algebra Brain, for example, we show all the different components of algebra that are related to the concept of Polynomial Functions.

The **BrainTrax** System contains features not found anywhere else on the internet. We include three levels of content, appropriate for eighth grade on up through college. We also include interactive examples, real-world example problems, and an Interactive Example and Testing System (IETS) so teachers can monitor the progress of their students.

Why do I care?

With technology quickly growing beyond all human comprehension, today's students need greater access to technology to improve their education. It is in the best interests of educators to meet the demands of tomorrow by introducing students to the technology of the future, i.e. the internet. The **BrainTrax** System is designed to be user-friendly to both students and teachers. Typical students will find that they retain the information more effectively than simply reading a textbook. We expect teachers will find that students who are actively engaged in learning from the **BrainTrax** System will be better prepared for college-level courses when they graduate from high school.

Can I use this?

Nearly anyone can use the **BrainTrax** system. It is open to the public and available free of charge at this time in most schools. The **BrainTrax** System is not available to students and instructors of four-year colleges and universities (with the exception of UMR). Several middle and high school teachers are helping us develop tools that will allow other instructors to integrate the **BrainTrax** System into the classroom environment. The **BrainTrax** System uses a very intuitive interface and requires a short period of adjustment. Students exposed to the **BrainTrax** System become expert users with a couple of days or even a few hours.

Teachers can also extend the system by incorporating their own tests and examples through the IETS.

Is it expensive to implement?

As we already stated, it is FREE at this time, except for other colleges and universities. Teachers who would like more information about how they can get involved should contact Mark Bookout (contact information below). Teachers may want to attend workshops, for a nominal fee, in order to get the training they need to implement the **BrainTrax** System in the classroom, but this is by no means a requirement for using the System.

How do I view the BrainTrax System?

All you need to see the visual index is a good browser. Microsoft Internet Explorer 5.0 or higher seems to be the best one on the market for viewing our indexes. Currently, IE5.0+ is the only browser we officially support. Netscape Navigator is not officially supported, as it doesn't handle portions of the **BrainTrax** System very well. We do not in any way, shape or form, support the **BrainTrax** System on a Macintosh.

How is the BrainTrax Algebra System any different than a hundred other websites?

No other site that we know of offers the sheer comprehensive knowledge base that we are offering. The BrainTrax Algebra Brain alone contains nearly 400 pages of information, with detailed explanations, clear illustrations of concepts, and examples. In addition, we have feedback mechanisms to guide students in solving problems interactively. We include an Interactive Example and Testing System so that students can take a test for a grade. It also has feedback mechanisms to guide students.

The Visual Index itself is a feature unique to the BrainTrax System. It shows students how the different concepts are related to each other. By navigating the Visual Index, students reinforce the connections between concepts.

Why should I go to all that trouble of implementing the BrainTrax System?

The BrainTrax System has numerous benefits. First and foremost, student success rate should increase as they become accustomed to its intuitive interface. We have already seen marked results from students who have used the Calculus I Brain. By increasing student success rate at the junior high and high school level, we will hopefully also be increasing their chances at succeeding in college, where the work becomes much, much more difficult.

What can I use the BrainTrax System for?

Currently the BrainTrax System is designed as a mathematical learning tool, supporting algebra, trig, even calculus. However, there are numerous other applications. One model is a classroom database containing all the information about a class, such as test scores, syllabi, projects, and more. Although we use it for math, there is no reason why a similar index could not be built around a science class, such as physics or chemistry. All of the features included in the Algebra Brain can be adapted to fit the needs of almost any subject. It is mostly a matter of developing the content.

How can I learn more about the BrainTrax System?

The University of Missouri – Rolla has successfully implemented the technology at a basic level in the classroom and has plans for more developed implementation in the future. UMR has also provided access to the BrainTrax System to junior high schools, high schools and grade schools for use in the classroom.

For more information about the BrainTrax System contact:

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