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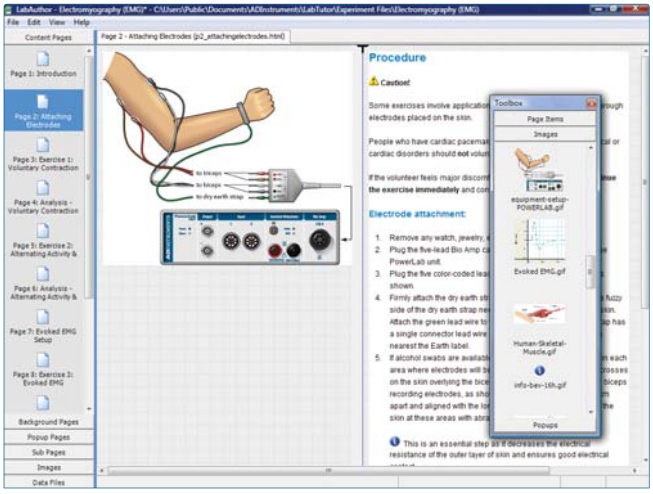
making science easier

LabAuthor® Software

Create and Edit LabTutor Teaching Experiments to Suit Any Course

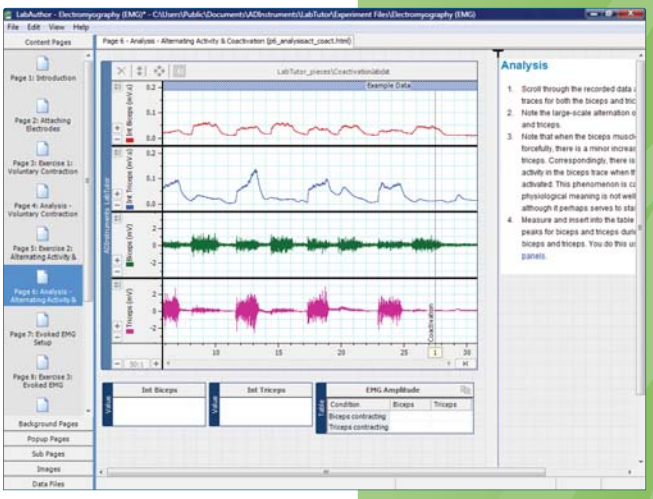
ADInstruments LabTutor® and PowerLab® systems have changed the way universities, medical schools and colleges teach and run physiology, pharmacology, biology and biochemistry laboratories. Now, LabAuthor, supplied with the LabTutor 4 Teaching Suite, enables educators to tailor LabTutor experiments to their laboratory classes and specific curriculum requirements.

The software provides total control over the contents of a LabTutor experiment including the introduction, experiment protocols, background information, hints, real-time data acquisition, analysis and the report sections. LabAuthor's easy-to-use interface with object drag-and-drop functionality enables fast editing and creation of experiments. Best of all, it can be used without any programming or HTML skills.



Above: Editing of protocols for the Electromyography experiment.

Below: Composition of the analysis section with real data, interactive tables and analysis tasks.



Features & Benefits

- Total flexibility for laboratory teaching
- Includes an extensive set of ready-to-use LabTutor experiments
- Experiment templates feature protocols, background information, data acquisition, analysis and reporting
- Easy-to-use text editors and drag-and-drop functionality for quick editing or creation of new experiments
- No programming or HTML skills required
- Supplied with PowerLab Teaching Systems as part of the LabTutor 4 Teaching Suite

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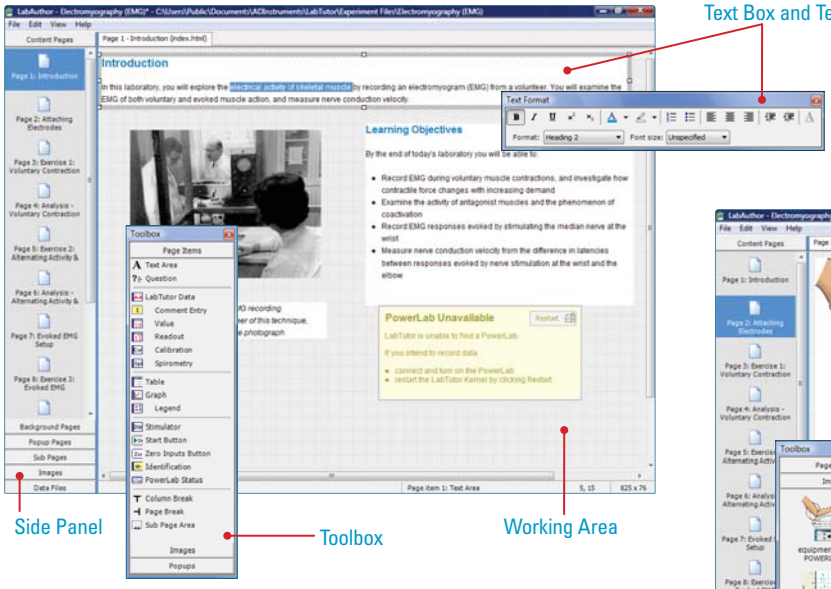
Creating or Customizing an Experiment

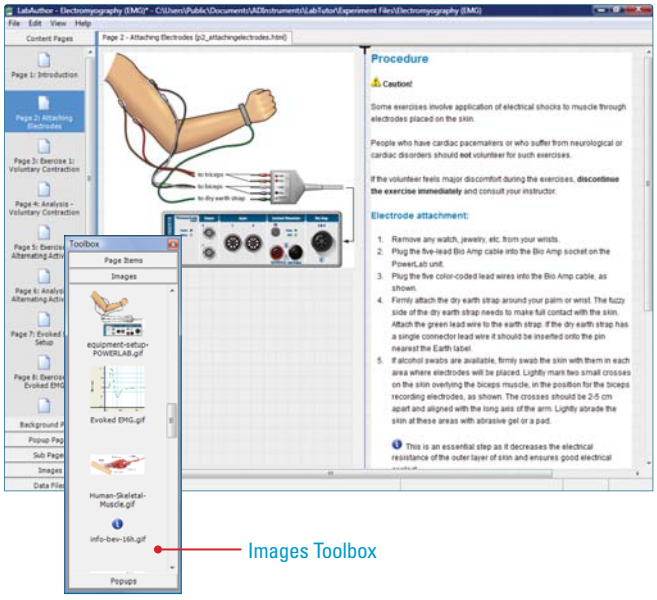
With LabAuthor you decide on the content of your experiment. You can begin with an empty template and design the experiment from start to finish, or use one of our existing experiments and customize it. The information below outlines a typical LabTutor teaching experiment, and illustrates how LabAuthor allows the user to create or customize content. For a live demonstration please contact your nearest ADInstruments office or representative.

Introduction & Setup Sections

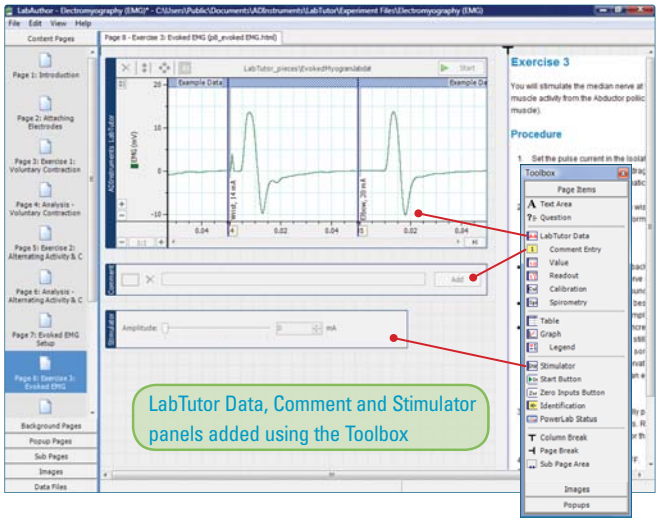


Above: LabAuthor Work Area displaying elements laid out in the Introduction of an experiment. When selected each element brings up the appropriate tool. In the above example of the text box selection, the Text Format panel is made live. The LabAuthor Toolbox provides drag-and-drop functionality for adding static and interactive objects to the experiment pages. The Side Panel provides a means for navigating, ordering experiment pages and working within experiment sections.

Below: An example of adding an image alongside the experiment procedure in the Setup section. Again, pre-loaded images are dragged and placed onto the experiment pages directly from the Toolbox.

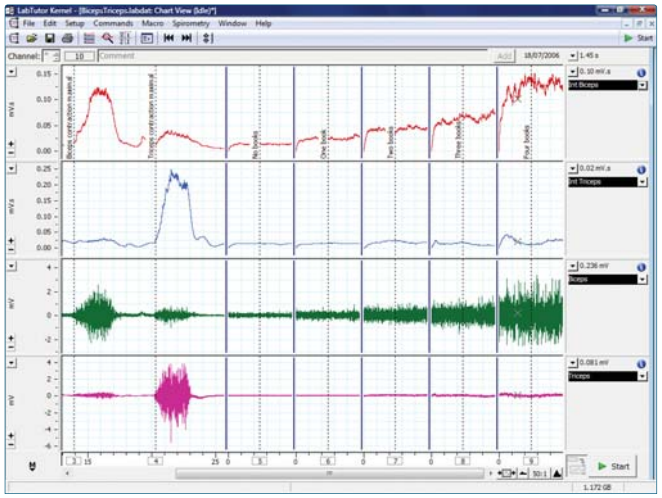


Data Acquisition Section



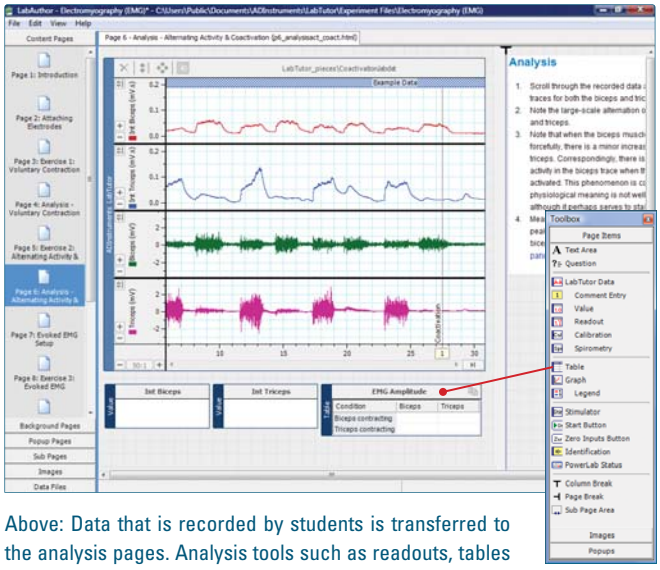
Above: LabAuthor, and the complete LabTutor experiment, incorporates real-time data recording from PowerLab data acquisition and analysis systems. Students can record data from virtually any transducer, electrode or instrument that outputs an analog signal. The data acquisition elements are selected from the Toolbox and experiment acquisition settings are easily selected within the LabTutor Kernel (right) and then saved within the experiment.

Below: The LabChart Kernel (data acquisition software within LabAuthor and LabTutor) displaying an EMG recording. Example data files can be easily imported into LabAuthor and displayed in LabTutor experiments.



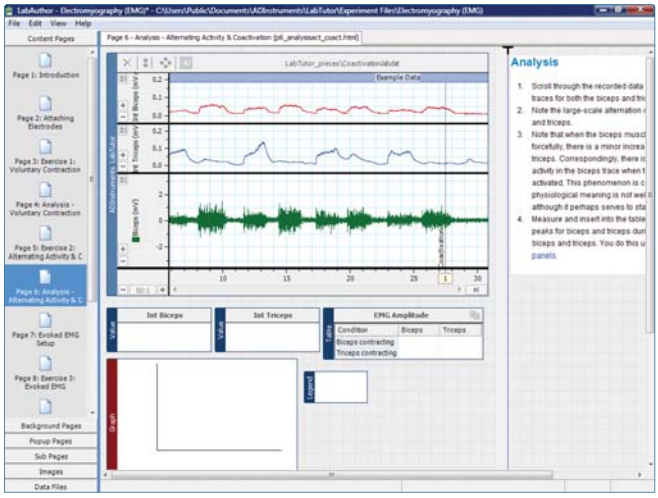
Creating or Customizing an Experiment

Analysis Section

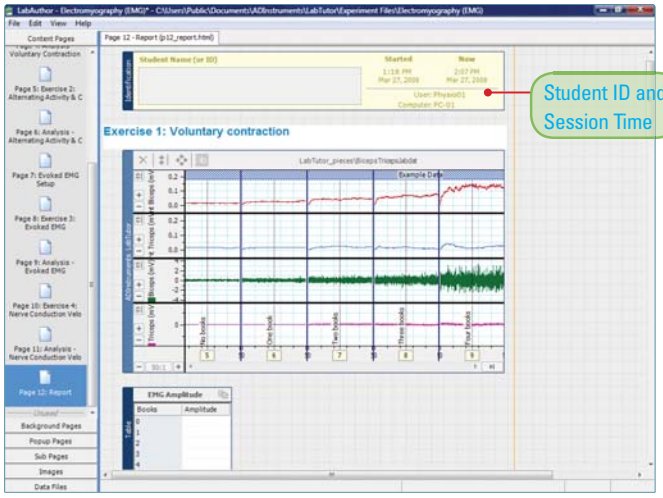


Above: Data that is recorded by students is transferred to the analysis pages. Analysis tools such as readouts, tables and graphs are easily added to the experiment page and linked to the data as well as report questions.

Below: Addition of graph and legend to the analysis page. You can set up the experiment to automatically generate a graph after students extract the values from the data trace.

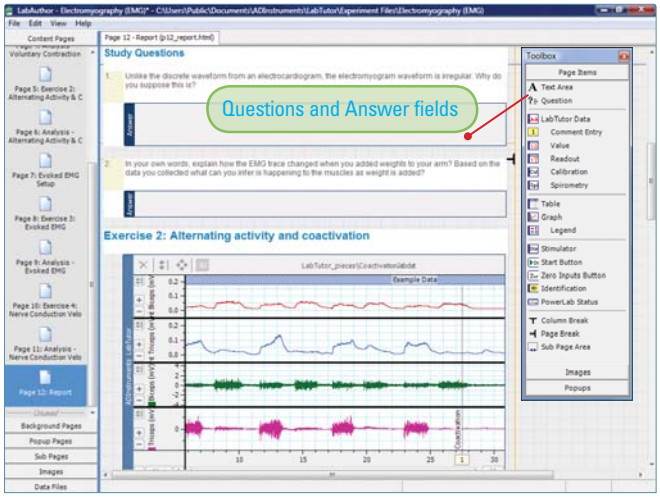


Reporting Section



Above: The Report section includes a Student Name panel for identification purposes. Data analysis screens are again automatically transferred near the relevant question and answer fields.

Below: The report section can be printed out, saved on the computer or network, or emailed to a specified address. The completed experiment can also be accessed by the educator or student at a later stage. The content of the report section is easily customized to suit the exact course needs.



LabTutor and LabAuthor Background

LabTutor and LabAuthor are part of the LabTutor 4 Teaching Suite which additionally includes LabTutor Server for centralized course management. Optional LabTutor Online licenses are also available for off-site access to experiments via any popular Internet browser.

LabTutor was developed specifically for higher education institutions such as colleges (two or four year courses), universities and other education institutions performing life science laboratory experiments. The software, together with a PowerLab data acquisition system, increases lab productivity by minimizing setup time, reduces supervision levels and enhances the student learning experience. LabAuthor compliments LabTutor and provides educators with the power to customize existing and create new teaching experiments, and hence match exact curriculum requirements. With LabTutor and LabAuthor educators get the best of both worlds: ready-to-use experiments and the ability to modify or create new ones.

LabAuthor, LabTutor & Teaching Systems

LabTutor Software & Experiments

LabTutor software makes teaching and learning more effective by integrating scientific information, experiment protocols, real-time data acquisition, analysis and reporting into one easy-to-use software interface. The latest LabTutor software and experiments can be downloaded free of charge by PowerLab users from www.adinstruments.com/education.

LabTutor Experiment Collections

Each LabTutor Experiment Collection consists of numerous stand alone experiments. The collections include:

- Human Physiology
- Pharmacology
- Exercise Physiology
- Nursing
- Animal Physiology
- General Biology
- Problem Based Learning
- Psychophysiology

ADInstruments Teaching Systems

ADInstruments Teaching Systems provide all the equipment required for life science experiments at college and university levels. They include PowerLab data acquisition hardware, LabTutor and/or LabChart software, as well as the required signal conditioners and transducers to carry out sets of chosen experiments.

You can select from a wide range of configured teaching systems, each designed for a specific set of experiment groups, or customize your own system by selecting the hardware and software to match your exact education needs. For more information please see:
www.adinstruments.com/products/teaching-systems/education

System Requirements

LabAuthor 4 and LabTutor 4 require Windows XP SP2 or later, Windows Vista SP2 or later or Windows 7, Microsoft .NET Framework v2.0 SP2 or v3.5 SP1, or later, Microsoft Internet Explorer 7.0, or later, as the default browser as well as network access to the LabTutor Server .

Ordering Information

MLS401 LabAuthor 4 (Classroom License). LabAuthor 4 is available as part of MLS400 LabTutor 4 Teaching Suite available with PowerLab Teaching Systems.

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