

WS5 EASY JAVA SIMULATIONS (EJS)

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The premise of Easy Java Simulations (EJS) modeling is that when students are not actively involved in modeling they lose out on much of what can be learned from computer simulations. Although the modeling method can be used without computers, the use of computers allows students to study problems that are difficult and time consuming, to visualize their results, and to communicate their results with others. EJS is a free open-source Java application that simplifies the modeling process by breaking it into activities: (1) documentation, (2) modeling, and (3) interface design. The EJS program and examples of models will be available on CD. EJS models, documentation, and sample curricular material can also be downloaded from Open Source Physics collection in the compADRE NSF Digital Library <http://www.compadre.org/osp> and from the Easy Java Simulations <http://www.um.es/fem/Ejs> website.

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About Easy Java Simulations

Easy Java Simulations (EJS) is a modeling and authoring tool that helps science teachers and students create interactive simulations of scientific phenomena. These simulations can then be used in computer laboratories with students to better explain difficult concepts, to motivate them to study science, or to let students work with the simulations or (for more advanced students) even create their own ones. Both activities have proven to be very powerful didactical resources.

EJS has been specifically designed to be used by people with no advanced programming skills. Hence, it tries very hard to make all the technical tasks easy. Authors still need to define the model of the phenomenon studied and design the visualization and interface for the data of the simulation. This means authors need to learn how to program scientific algorithms into Java language. But the extensive help provided by EJS make this far easier than what is traditionally called "learning to program".

