

# Universal Design for Learning @ BLC08



*“Applying universal design to learning materials and activities can increase access for learners with wide disparities in their abilities to see, hear, speak, move, read, write, understand English, attend, organize, focus, engage, and remember.”*

— David Rose and Anne Meyer at CAST  
*David Rose is on the Concord Consortium Advisory Board*

The Concord Consortium has created science activities developed with Universal Design for Learning principles for students in inclusive classrooms for grades 3-4 and grades 5-6:

What’s electricity? Build circuits and test them with a voltmeter.  
What do plants eat? Travel around inside a tree.  
What if there were no friction? Visit a world with no friction.  
Why are there clouds? Take a trip through the water cycle.

The activities provide a range of alternatives for classroom use:

- Alternative Representations
- Alternative Communications
- Alternative Instructional Strategies
- Alternative Assessments
- Additional Alternatives

Scaffolding — Five levels of scaffolding are available for assistance with formative questions that occur throughout the materials.

Smart Models and Smart Graphs — The software will be able to describe features of any graph – for instance, maximum, minimum, slope, time between two measurements, difference of two measurements, or the average y-value of a segment of the graph – and use these descriptions to interact with the student. A molecular dynamics model will communicate important features of the display, including number and kind of atoms and molecules, average potential and kinetic energy, or the states of matter – liquid, solid and gas – that are present.

Snapshots — When working with online models, graphs, and their own computer-based drawings, students are able to take snapshots of the screen and save them in a portfolio. Students have access to these snapshots in their lab book and can access them in the summative wrapping up activity, which requires students to demonstrate what they have learned.

The activities are currently being tested in upper elementary classrooms in Fresno, CA, Anchorage, AK, Maryville, MO, and Acton, MA.

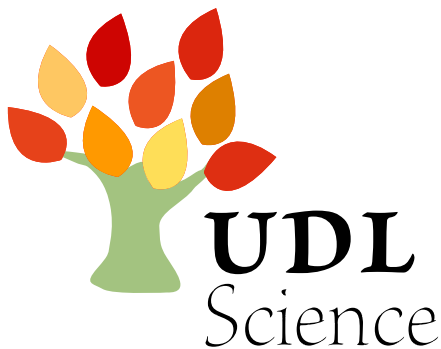


This project is supported by the National Science Foundation under Grant No. 0628242.

<http://UDL.concord.org>  
Every student approaches learning in unique ways.



The Concord Consortium is a nonprofit educational research and development organization.



UDL activities run on Windows, Macintosh and Linux computers with Java 5 (1.5) or later installed.

If you are using Java 1.5 on MacOS 10.4 or later, you will almost certainly need to fix a Java Web Start bug:  
<http://confluence.concord.org/display/CCTR/How+to+fix+the+WebStart+bug>

When I run an activity for the first time, it takes a long time to start. Why?

The activity is run on your computer, so it needs to download several files before it can start up. These files contain the Java code to run all the interactive models in the activity. There are several large models used in UDL so the initial download is large. UDL uses Java Web Start to handle the downloading of these files in order to make this download as efficient as possible.

What is Java Web Start?

Java Web Start is a program created by Sun Microsystems, the creators of Java. It is included in all standard installations of Java. Java Web Start is used to download and launch Java applications from web pages. Java Web Start downloads the files needed to run Java applications in a compressed format. It caches these files, so later start-up times are fast. When a file is updated on the web site, Java Web Start only downloads the changes.

What exactly gets downloaded to my computer?

A Java application is downloaded to your computer. After this application is downloaded, it is automatically launched. This application then displays the content for the particular activity you clicked on. The application's files are saved in the Java Web Start cache. This application is not installed in Program Files (Windows) or in Applications (Mac). The Java application will not interfere with your other applications.

Do I have to register in the portal to run activities?

No. You can run activities from the portal without registering. Go to: <http://UDL.portal.concord.org>

Is student work saved?

Yes! Student work is automatically saved when a student quits an activity. She/he does not need to click a special "save" button. Teachers can see student work through the portal by setting up a class and registering students in that class.



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