Curriculum Units READ ME

This document contains information necessary for using and installing the CPU Curriculum Units

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I. Installing the CPU Curriculum Units

The archive file *CPU_Curriculum_Units.zip* contains the seven CPU Curriculum Units:

- Current Electricity Unit
- Force and Motion Unit
- Light and Color Unit
- Nature of Matter Unit
- Static Electricity and Magnetism Unit
- Underpinnings Unit
- Waves and Sound Unit

To install the CPU Curriculum Units, simply expand (unzip) *CPU_Curriculum_Units.zip*. The folder "CPU Curriculum Units" contains all seven units. You may place this folder anywhere on your hard drive. We suggest that you keep either the folder or a shortcut/alias to the folder on the desktop for easy access.

To put CPU Curriculum Units on your computer, you should have at least 350 MB available on your hard drive (not including the downloaded ZIP archive).

II. Brief Description of the CPU Curriculum Units

All the materials for CPU Curriculum Units are contained within the folder that you have just installed.

Each of the unit folders (except Force and Motion Unit and Nature of Matter Unit) contains two folders with two versions of the unit.

One folder contains activities designed for teachers who intend to use the computer version of the CPU activities.This version is designed for classes with

one computer for every three or four students (that is, one computer per student team).

The other folder contains activities designed for teachers who intend to use the paper-and-pencil version of the CPU activities. This version is designed for classes with only one or two computers. The teacher can use the computers to run the simulators and Microcomputer-Based Laboratory (MBL) activities, or students can take turns using the computers. There are no paper-and-pencil versions of the Force and Motion Unit and the Nature of Matter Unit.

The paper and pencil version of the activities are contained in one document per cycle that should be printed out by the teacher and distributed to each student in the class. The computer version has one document for each activity that is intended to be used and edited on the computer by each group and then printed out as the group completes each activity.

Each of the Paper and Pencil and Computer version folders contain a Teacher's Guide folder for that particular version of the unit.

The teacher's guide for each cycle contains detailed information about each activity, including common student ideas, a list of materials, instructions for constructing experimental apparatus, information about the simulators, and target ideas for each cycle.

The Teacher's Guide Unit Overview contains detailed information about the file structure of the unit. You should review a unit's overview before using the unit.

We also suggest you take a look at the overviews. You can find all seven overviews in a folder on the CD called "CPU Unit Overviews." These overviews are IDENTICAL to the overviews included in the unit folders.

III. Required Software

The CPU-SDSU simulator software is available separately. This software is necessary for running the simulator setups that are included in (and linked to the computer version of) the activities contained on this disk. Find out how to download the CPU Simulators at the CPU home page (http://cpucips.sdsu.edu/web/cpu). You can also find online versions of the simulators, along with tutorials for how to use them, at http://cpucips.sdsu.edu/simulators.html.

The simulators require a web browser and Java. Compatible web browsers include Internet Explorer, Safari and Mozilla Firefox. Generally, the more recent the browser version, the better the simulators run. The simulators are compatible

with Java 5 and 6, as well as some earlier versions (e.g., Java 1.4.2). You can download the most recent version of Java from http://www.java.com.

The Logger Pro software is available separately from Vernier (http://www.vernier.com/) and is necessary to run the CMBL setup files that are included in (and linked to within the computer version of) the activities contained on this disk. The CMBL setup files are compatible with Logger Pro 3. Purchasing information is available on the Vernier website.

Updates of Logger Pro typically include updated CMBL setup files for CPU, so when installing Logger Pro, be sure to check the Release Notes to see if CPU files have been updated as well. If so, just replace the CMBL files included in this download. The CMBL files included in this update are those included with the Logger Pro 3.8.4 update in February 2011.

The CPU activities are Microsoft Word documents (Microsoft Word 1997-2004 file format), the word processing program that is part of the Microsoft Office suite. More recent versions of Microsoft Word should be backward compatible and have no trouble opening these files. You can find purchasing information for Microsoft Office at http://office.microsoft.com.

IV. Disclaimer

The CPU Curriculum Materials were designed and developed in 1995-2000. The content of the activities has not changed since then.

The simulation software have undergone some refinements since 2000 to be compatible with Sun Microsystem™ Java and with a variety of browsers (such as Mozilla Firefox and Safari, as well as Internet Explorer), but have not been updated since 2006. Notheless, the software are still compatible with Java 5 and Java 6 (the latest version of Java as of 2011). All simulator setup files included with the CPU Curriculum Units are compatible with the latest versions of the simulation software.

The Logger Pro (CMBL) files used in the Force and Motion Unit and the Waves and Sound Unit are compatible with Logger Pro 3.8.4, the latest (February 2011) version as of this writing.

CPU Curriculum Units and CPU/SDSU Simulation Software are distributed free of charge. There is no support provided for either the curriculum materials or the software, either at San Diego State University, the former publisher of CPU, or the web host for CPU Curriculum Units and CPU/SDSU Simulation Software.