What are the benefits of concept-mapping software?

A reader wrote in with this question: "In a recent column, you mentioned using concept-mapping software to create story maps and flowcharts. Can you tell me more about this software and what I can do with it?" Graphic organizers are excellent learning tools that can help students (or anyone!) put together their thoughts into easy-to-follow diagrams. Various types of graphic organizers include concept maps, storyboards, webs, and idea maps. (To keep things simple, we will use the term "concept map" throughout this article.) Many teachers currently draw concept maps on chalkboards, flip charts, and overhead projectors as they teach. While these methods work, it is often difficult to keep the maps organized and legible as you add to them. Some teachers have found the perfect solution -- concept-mapping software.

Student-friendly options

While there are a few different software programs that can help you build concept maps, the most appropriate one for classroom use is Inspiration from Inspiration Software. In fact, I used it to make the site map on my Web site! Teachers can create concept maps with Inspiration as students tell them what to include, or they can have older students (grades 4 and up) use the software on their own.

In January 2001, Inspiration Software released Kidspiration for students in grades K-3. The Kidspiration software has a special audio feature which allows it to "speak" the tool bars, symbols, and text aloud to students. This is especially helpful for children who have difficulty reading.

Benefits of software

Creating concept maps with software has many advantages over using a chalkboard or flip chart.
Focus on ideas  Using software to create concept maps allows students to concentrate on their ideas rather than on drawing the diagrams.

Templates  Software templates get you started quickly.

Editing the map  Once you type your ideas into the software, you can easily move, rearrange, link, and even discard them without starting all over again.
**Linking to the Web** With hyperlinks, you can connect directly to resources on the Internet from within the map with a click of a mouse.

**Neatness** The software will ensure that everything is legible and fits into the map.

**Spell check** No matter how you use the program, it makes sure that everything is spelled correctly!

**Adding pictures** You can add clip art that's included in the software, scanned pictures, digital photos, or images from the Internet to quickly create graphically appealing diagrams. The software also comes with many animated symbols. However, if you find this movement distracting to students, you can turn off the animation.

**Changing the format** You can view projects and work on them in the concept-map layout or in traditional outline form. Simply click on an icon to instantly change between the different formats.

**Multiple copies** After you've created a concept map on the computer, you can print it out for each student. You can't do that with a flip chart!

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**Lots More Lessons**

Some specific uses of graphic organizers and concept-mapping software include:

- Compare and contrast two artists, authors, or scientists
- Show relationships between book characters
- Classify hierarchies in the U.S. government
- Sequence the steps in a lab experiment
- Outline the plot of a play
- Create pro/con lists of issues for debates
- Illustrate the water cycle
- Show the computer process with a flowchart
- Show the relationship of factors of numbers using a Venn diagram

Display the concept map during each lesson of the unit. Ask students to add (in blue) new information that they have learned each day. If they have answered a question they had at the start of the unit, they can replace the question with the newly learned information. As the unit progresses, the color-coding on the concept map will guide students to notice which areas need to be researched more thoroughly.

After completing the unit and the concept map, print out a copy for each student to use as a review, or study guide, or a cover sheet for a booklet about the unit. To conclude the unit, you can use the concept map as a basis for a test. Distribute blank maps and ask students to fill in specific information. Using the concept-mapping format throughout the unit and as part of the unit test will help students organize their thoughts and see how all of the concepts connect.

**Resources**


Log on to learn about the concept-mapping software, *Inspiration* and *Kidspiration*, and to view sample lessons.
Classroom uses

Concept maps can be used for projects in every subject. The following example shows some ways you can use the software to create a concept map that guides you and your students through a science unit on plants (but it can be adapted to almost any topic). (Use a scan converter or LCD projector to project the computer images on a television or a large screen so that the entire class can see.)

Start by creating a concept map with the word "plants" and an appropriate image in the center. Reactivate students' prior knowledge by asking them what they already know about plants. Add this information to the concept map in one color, say green, so that when you add information in other colors as the unit progresses, students will see how much they knew prior to the unit and how much they have learned. Next, ask students what they want to learn about plants, and add these questions to the map in another color, such as red.

MEETING THE STANDARDS

This month's Tech Quest addresses ISTE standard 3.D: Manage student learning activities in a technology-enhanced environment.