Focus on 21st Century Skills

The importance of mastering 21st century skills—including organizing and interpreting information and data, thinking critically, problem-solving, and communicating—is emerging as a critical teaching goal for K-12 institutions. As the nature of employment continues to change, many educators, business executives and policy makers feel that classroom instruction must evolve in order to adequately prepare young people for the workforce.

To meaningfully integrate these 21st century skills into their existing lessons, many teachers use Kidspiration®, Inspiration® and InspireData® software. With Kidspiration for grades K-5 and Inspiration for grades 6 to adult, students use graphic organizers to visually represent information and ideas. Using graphic organizers is a proven strategy for gathering ideas, analyzing information, thinking critically and organizing communications—all key 21st century skills. Kidspiration 3 also includes visual math tools to support conceptual understanding in mathematics. With InspireData, students grades 4–12 organize, manipulate and interpret data with dynamic graphs and plots.

► Develop essential 21st century skills, including:

• Gathering and organizing information

Whether students are brainstorming, researching on the Internet or gathering facts, organizing information is a critical first step to understanding it. Visual organizers help students to prioritize information. Younger students use Kidspiration’s SuperGrouper® tool to learn the skills of sorting and showing relationships. Using Inspiration’s RapidFire® tool, older students start projects by brainstorming and visually organizing their ideas. With one click, this information is instantly transformed from a diagram into an outline, allowing students to expand their visual ideas in a textual format.

One of the key challenges 21st century students face is making connections between information.

Dr. David Thornburg, Director of the Thornburg Center and Senior Fellow of the Congressional Institute for the Future, believes that with the overflow of available resource material, the use of graphic organizers is a powerful way to help students organize information and see relationships. In a history lesson about the U.S. landing a man on the moon, Thornburg explains how students can start from that specific event as an endpoint and use Inspiration to create a cause-and-effect diagram that works backwards through history. By learning about Sputnik, the Kennedy Presidency and other events that led up to the moon landing, the exercise facilitates a richer understanding of the dynamics and interdependencies of history. “Kidspiration and Inspiration are requirements for me,” says Thornburg. “The ability to flexibly map content, concepts and causes makes these tools essential as learners of any age organize and make sense of the 21st century’s abundance of data.”

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• **Analyzing, evaluating and thinking critically**

With the abundance of available information, the ability to critically analyze has become a vital 21st century skill. As students create graphic organizers in Kidspiration and Inspiration, they learn to manage, sort and prioritize information. These graphic organizers help students focus on the most relevant information to be visually compared, contrasted and interconnected. This process makes information comprehensible by revealing patterns and relationships. As these patterns emerge, students extend their understanding by integrating new ideas into their existing body of knowledge.

• **Communicating clearly**

Communication can take many forms. In mathematics, K-5 learners can use Kidspiration’s visual math tools to communicate their understanding of concepts by combining powerful models with text, numbers and math symbols. With InspireData, students in math, science and social studies communicate their understanding of complex data with graphs and notes.

Using Kidspiration and Inspiration leads to clearer writing because students can view and manipulate their ideas in a visual format before writing. In Kidspiration’s Writing View and Inspiration’s Outline View, students organize the flow of information to structure their written work. In Inspiration’s Presentation Manager, students use the content they’ve developed in Diagram, Map and Outline View to expand their work into organized and polished presentations. When preparing their final work, students can hyperlink from Inspiration to specific web resources, graphics and other documents. This helps students develop the ability to critically analyze a variety of source materials and integrate only the most relevant information into their final project.

• **Evaluating data**

21st century students must have the skills to manage and interpret complex data in any subject area. InspireData supports students’ development of data literacy while bringing data to life. Students can begin with one of InspireData’s built-in databases, create a new database, or import data from other sources. InspireData’s e-Survey tool allows students to quickly collect data and instantly download results to jumpstart data analysis. Students can use a variety of plot types and statistical measures to interpret the data, and use notes and slides to communicate their findings.

• **Using technology**

Inspiration Software tools give students valuable hands-on experience using technology as a part of authentic learning. By integrating the use of technology into a practice of evaluation and organization, students develop a set of tools and strategies vital for the 21st century. Kidspiration, Inspiration and InspireData offer an intuitive, flexible interface that is easy for younger students to use while providing powerful support for older, more advanced students. Kidspiration, Inspiration and InspireData can also be used with interactive electronic whiteboards.

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Background on 21st century skills

Several research studies conducted over the last few years offer clear recommendations for the focus of educator’s efforts to teach 21st century skills. The Partnership for 21st Century Skills (www.p21.org)—a respected organization of leaders in public and private business and education—issued a report titled Learning for the 21st Century. This report outlines key elements for fostering 21st century learning. Their findings highlight three critical recommendations:

• The focus of education should continue to be on core subjects. 21st century skills should not be taught as a discreet subject, but rather integrated into curriculum and taught side-by-side with core content.

• Educators should emphasize learning skills such as thinking and problem-solving. These skills help students think critically about the source of information and see connections between events.

• Students should be comfortable using technology. Only through using 21st century tools can students develop 21st century learning skills.

This report complements an earlier study issued by Educational Testing Services, titled Digital Transformation: A Framework for ICT Literacy, (www.ets.org/Media/Tests/Information_and_Comunication_Technology_Literacy/ictreport.pdf). Based on the recommendations of an international panel of thought leaders, this study highlights the need for a framework for assessing student achievement in technology literacy and the critical thinking skills necessary to successfully function in a knowledge-based society. At the core of this framework is the notion that 21st century skills are not simply a measure of hands-on technical skills, but also of cognitive problem-solving skills.

Getting Started

Use these resources to get started using Kidspiration and Inspiration to empower your students with 21st century skills:

• www.inspiration.com/Educators/Trainer-Resources provides multimedia professional development demonstrations and complimentary workshop materials.

• www.inspiration.com/Examples demonstrates meaningful ways to integrate Kidspiration and Inspiration into your classroom across all grades and subject areas.

• Templates and activities included in Kidspiration and Inspiration offer a framework for gathering information, organizing research and analyzing ideas. Educators can use these templates as models for classroom discussion or modify them to meet specific curriculum goals or student needs. Templates cover common assignments across the curriculum—including language arts, social studies, science, math, thinking skills and planning.