

6) Provide rich multimedia resources

Multimedia is typically defined as an electronic document that can include text, sound, graphics, animation, video, and interaction. National standards require students to exhibit substantial multimedia literacy skills by grade eight. Even elementary students are expected to author in multimedia. For example the ISTE National Technology Standards expect students completing second grade to “create developmentally appropriate multimedia products with support from teachers, family members, or student partners.” Students completing fifth grade are expected to “use technology tools (e.g., multimedia authoring, presentation, web tools, digital cameras, scanners) for individual and collaborative writing, communication, and publishing activities to create knowledge products for audiences inside and outside the classroom.” These national standards may seem high, but they reflect the important educational outcomes that multimedia authoring produces.



“Students learn best by teaching each other.”

*Bonnie Milligan
Florida Teacher*

As any educator quickly discovers, the surest way to learn something yourself is to teach it to others. Students, who produce multimedia projects designed to teach something to others, have worked through the content at a much higher level and will retain much more than those who have been simply taught the content. The higher level of understanding and retention is a result of having interacted with the same content from four different perspectives:

- **as researchers**, students must locate and select the information and resources necessary to understand the concept
- **as authors**, students must consider the intended audience and decide what type and amount of information is necessary to teach the concept to their intended audience
- **as designers**, students must select the most appropriate media to share their content and decide how to structure their material to communicate it effectively
- **as producers**, students must think carefully about how they can use the media’s capabilities and features to represent their content and then they must interact extensively with the material as they build the final product

Additional benefits flow from such project based learning. Not only have students mastered the content, they have also practiced 21st century skills such as communication, self-direction, and problem-solving. Many students are also highly motivated because they are creating something for a wider audience than the audience-of-one-teacher a traditional term paper is written for.

To create effective multimedia projects, students and teachers will need access to a rich storehouse of information and multimedia elements. The Internet can provide much of what is needed. State agencies and other institutions can also contribute by building repositories of copyright-free artifacts and other learning objects that can be freely used by students and teachers alike.

❑ **Guiding principle:** Students and teachers must have access to rich multimedia resources to:

- extend their world and life experiences
- engage their senses
- incorporate into their own multimedia projects
- provide building blocks of instruction