

Why Use Multimedia in Science Education?

"The convergence of media and technology in a global culture is changing the way we learn about the world and challenging the very foundations of education. No longer is it enough to be able to read the printed word; children, youth and adults, too, need the ability to both critically interpret the powerful images of a multimedia culture and express themselves in multiple media forms. Media literacy education provides a framework and a pedagogy for the new literacy needed for living, working and citizenship in the 21st century. Moreover it paves the way to mastering the skills required for lifelong learning in a constantly changing world."

Elizabeth Thoman and Tessa Jolls

Media Literacy: A National Priority for a Changing World

American Behavioral Scientist, Vol. 48, No. 1, 18-29 (2004)

Full text available at http://www.medialiteracy.org/reading_room/article663.html

As science educators, we know how important critical thinking and new technology skills are in the scientific community. The ability to question and make sense of the world around us is a skill we value highly in the scientific world. We recognize that if our students are going to become the next scientific innovators and responsible citizens, they need, more than ever, skills to gather and evaluate data, make informed decisions, and communicate their ideas to others. As with scientific literacy, media literacy and other 21st century skills are grounded in inquiry, critical thinking, evaluation and communication. We also understand that our students are growing up in a world increasingly saturated with information and media messages. Our students will need to become media literate and well versed in the many modes of communication that surround them if they are to sort through this information. There is no better place to learn these skills than in the science classroom.

Although multimedia as a tool cannot replace hands-on learning, it can enhance and strengthen the impact of activities in the field and in the science classroom. We can use new information tools, such as podcasts, blogs, and streaming video and audio, to engage our students and effectively demonstrate science concepts as well as to reinforce media literacy technologies. We can also engage students with digital media tools, such as photo-sharing, video-publishing and map-making programs, to give them opportunities to demonstrate their mastery of a concept and simultaneously reinforce their literacy skills by having them create their own content.

The use of multimedia resources as part of a core science curriculum can:

- Visually demonstrate scientific ideas and concepts
- Instill a sense of wonder and excitement in students about the world around them
- Present local, relevant case studies
- Provide examples of real people practicing science
- Generate student interest in science careers
- Offer current research, theories and perspectives on a topic
- Connect students with faraway or inaccessible places
- Promote 21st century skills, including critical thinking, problem solving and communication skills
- Provide a common experience shared by all students

As we adapt our teaching strategies to better replicate the tools used by the scientific community, we enhance our students' ability to envision themselves within it and nurture the skills they will need to be active participants in their own lifelong learning.