

## Appendix B. Articulated Literacies from ISTE and Partnership for 21<sup>st</sup> Century Skills

### *21<sup>st</sup> Century Skills and ICT Literacy* (referenced on page 11 in Section 2)

The Learning for the 21<sup>st</sup> Century Report published by the Partnership for 21<sup>st</sup> Century Skills ([www.21stcenturyskills.org](http://www.21stcenturyskills.org)) presents six **Key Elements of a 21<sup>st</sup> Century Education** that help define the requirements for 21<sup>st</sup> century learning environments.

1. Emphasize **core subjects**.
2. Emphasize **learning skills**.
3. Use **21<sup>st</sup> century tools** to develop learning skills.
4. Teach and learn in a **21<sup>st</sup> century context**.
5. Teach and learn **21<sup>st</sup> century content**.
6. Use **21<sup>st</sup> century assessments** that measure 21<sup>st</sup> century skills.

These six key elements are described in the information that follows:

1) **Core subjects**, as defined by the No Child Left Behind Act, include:

- English, Reading, or Language Arts
- Mathematics
- Science
- World Languages
- Civics and government
- Economics
- Arts
- History
- Geography

2) **Learning skills** are cognitive skills that enable students to transfer knowledge and skills. Although the following list was outlined in the SCANS (US Secretary of Labor's Commission on Achieving Necessary Skills) report titled *What Work Requires of Schools* back in 1991, these "knowing how to learn" skills provide flexibility in today's constantly changing world:

- Information and communication skills
- Thinking and problem solving skills
- Interpersonal and self-directed skills

3) **21<sup>st</sup> century tools**, available in the workplace, home and community, need to be introduced as early as the elementary level and include:

- Computing devices
- Networking and other technologies

- Audio, video, and other media
- Multimedia tools

The knowledge of how to use 21<sup>st</sup> century tools to perform learning skills results in what has been defined as critical Information and Communication Technology Literacy (ICT) skills where students:

- Use ICT skills to manage complexity, solve problems, and think critically, creatively, and systematically
- Use ICT skills to access, manage, integrate, evaluate, create, and communicate information
- Use ICT skills to enhance productivity and personal development

**4) Teaching and learning in a 21<sup>st</sup> century context** involves creating learning environments that help students connect skills to content by:

- Making content relevant to students' lives.
- Bringing the world into the classroom.
- Taking students out into the world.
- Creating opportunities for students to interact with each other, with teachers, and with other knowledgeable adults in authentic learning experiences.

5) The following 21<sup>st</sup> century themes provide a context for **teaching and learning 21<sup>st</sup> century content** at higher levels.

- Global Awareness
- Financial, Economic, and Business Literacy
- Civic Literacy
- Health Literacy

6) Ultimately, educators must use **21<sup>st</sup> century assessments to measure 21<sup>st</sup> century skills**. The Partnership for 21<sup>st</sup> Century Skills makes three important points in their guide regarding assessments and accountability:

- Standardized tests must measure both core subjects *and* 21<sup>st</sup> century skills. We must measure what we value — or it will not be taught.
- Standardized tests must be balanced appropriately with classroom assessment to measure the full range of the student's skills in a timely way.
- Classroom assessments must be strengthened and integrated with the instructional process to reinforce and help students learn core subjects and 21<sup>st</sup> century skills.

To ensure that students of the 21<sup>st</sup> century master the content knowledge and ICT literacy skills required for successful participation in a global economic society as productive and content citizens, our learning environments must evolve to reflect and interact with the global community, rich with authentic, appropriate, and guided learning experiences.

## ***NETS•S ~ National Educational Technology Standards for Students (Second Edition 2007)*** (referenced on page 11 in Section 2)

The second edition of the NETS•S standards ([www.iste.org/nets](http://www.iste.org/nets)) was released in the summer of 2007. The newly released standards place greater emphasis on skills and expertise and less focus on the technology tools themselves.

These standards address six foundation areas:

- Creativity and Innovation
- Communication and Collaboration
- Research and Information Fluency
- Critical Thinking, Problem-Solving, and Decision-Making
- Digital Citizenship
- Technology Operations and Concepts

NETS•S also identifies the necessary conditions to effectively leverage technology for learning, listed as the Essential Conditions:

- Shared Vision
- Implementation Planning
- Consistent and Adequate Funding
- Equitable Access
- Skilled Personnel
- Ongoing Professional Development
- Technical Support
- Curriculum Framework
- Student-Centered Learning
- Assessment and Evaluation
- Engaged Communities
- Support Policies
- Supportive External Context

These Essential Conditions validate the Critical Success Factors listed in Section 1 - IV that were identified in earlier stages of the revision process for this Facilities Guide.