



# MILE GUIDE *for* 21ST CENTURY SKILLS



MILESTONES *for*  
IMPROVING LEARNING  
*and* EDUCATION



PARTNERSHIP FOR  
21ST CENTURY SKILLS

# THE 21ST CENTURY SKILLS MILE GUIDE

## *Creating a new model of learning*

The 21st Century Skills MILE Guide can help any state, district or school answer some critical questions about how they are preparing students to meet the challenges of the new millennium:

- What are the changes necessary in our current model of education to best prepare students for the 21st century?
- Is your local system of education incorporating 21st century skills into learning?
- What criteria should be used to measure your progress?

The 21st Century Skills MILE Guide was created by the Partnership for 21st Century Skills to allow educators and administrators to measure the progress of their schools in defining, teaching and assessing 21st century skills. This hands-on tool helps schools integrate 21st century skills with basic skills for a stronger, more effective curriculum that successfully prepares today's students for tomorrow's workplace.

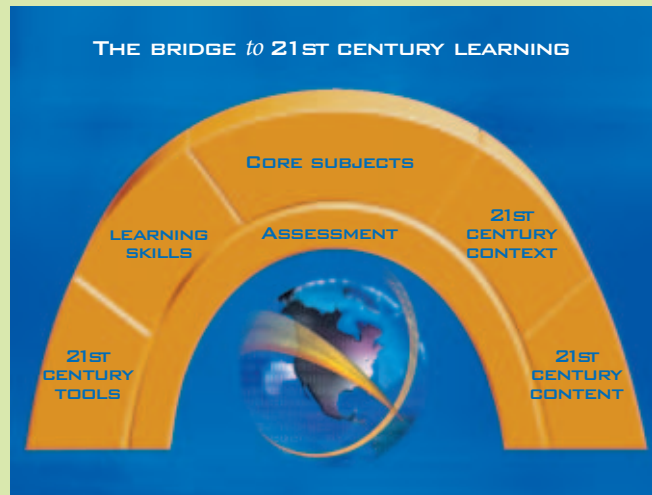
The 21st Century Skills MILE Guide can help your district:

- **SET BENCHMARKS AND GOALS.** The MILE Guide allows administrators and teachers to identify current profiles, establish goals and measure their progress.
- **APPLY FOR GRANTS.** The MILE Guide helps schools identify objectives as they seek funding and apply for grants.
- **DETERMINE FUNDING PRIORITIES.** Education leaders also can use the MILE Guide to determine where to allocate funds to fill gaps and improve their overall progress towards a 21st century model of learning.
- **CREATE ASSESSMENT TOOLS.**

The MILE Guide was designed for use by states, districts and schools. It enables teachers and administrators to assess where their schools stand in implementing 21st century skills, and to identify specific strategies for improvement. The flexibility and adaptability of the guide is the key to its success, allowing states to adapt the Guide and set policy standards.

### **WHY USE THE GUIDE?**

States, districts, schools and education leaders must continue to focus on adopting a new model of learning for the 21st century. We must build on the current framework of core subjects and assessment to create an effective overall education strategy that equips students with the 21st century skills they will need to succeed in the modern workplace.



## **NINE STEPS** *to build momentum*

- **EMBRACE A POWERFUL VISION OF PUBLIC EDUCATION THAT INCLUDES 21ST CENTURY SKILLS.**
- **ALIGN LEADERSHIP, MANAGEMENT AND RESOURCES WITH EDUCATIONAL GOALS.**
- **USE THIS TOOL TO ASSESS WHERE SCHOOLS ARE NOW.**
- **DEVELOP PRIORITIES FOR 21ST CENTURY SKILLS.**
- **DEVELOP A PROFESSIONAL DEVELOPMENT PLAN FOR 21ST CENTURY SKILLS.**
- **MAKE SURE STUDENTS HAVE EQUITABLE ACCESS TO A 21ST CENTURY EDUCATION.**
- **BEGIN DEVELOPING ASSESSMENTS TO MEASURE STUDENT PROGRESS IN 21ST CENTURY SKILLS.**
- **COLLABORATE WITH OUTSIDE PARTNERS.**
- **PLAN COLLECTIVELY AND STRATEGICALLY FOR THE FUTURE.**

## How to use the MILE GUIDE

The Partnership for 21st Century Skills' MILE Guide is a tool to help gauge a school's effectiveness in integrating 21st century skills into the learning process. Your school may fall within one category based on certain indicators and in another based on others. Such mixed readings are expected because every school is unique. The MILE Guide allows any school, district, or state, no matter what its budget, priorities or current technology profile, to better understand where it is today and to better plan for its future goals.

**1** Focus on each of the categories across the top of the guide: Learning & Teaching, Leading & Managing, or Partnering, and the categories beneath them.

**2** Under the selected category, find the level (early stage, transitional or 21st century) that best describes your school's efforts. (It's possible that your school may fall between two levels.)

**3** After finding where your school falls, compare your school's program components with those in the 21st century level, which describes the ideal scenario.

**4** Use your findings to start discussions with staff, administrators, technology directors, school board members and community leaders about improving your school's plans for 21st century skills.

## MILE GUIDE

### Glossary of terms

- **BASIC SKILLS:** the skills of reading, writing and numeracy; the traditional goal of education.
- **CORE SUBJECTS:** core academic subject matter. Which subjects are viewed as core is generally left to the determination of states or local districts. No Child Left Behind identifies the following subjects as core subjects: English, reading or language arts, math, science, foreign language, civics, government, economics, arts, history and geography.
- **INFORMATION AND COMMUNICATION TECHNOLOGIES (ICT) LITERACY:** competency in enacting learning skills via the application of 21st century learning tools.
- **LEARNING SKILLS:** process-oriented cognitive skills, here defined as the combination of information/ communication, thinking/ problem solving and interpersonal /self-direction skills.
- **LITERACY:** the integration of a knowledge base (e.g. a core subject) and the appropriate cognitive and technical skills, that, when acquired, enable an individual to function effectively in a specific context.
- **TRADITIONAL LEARNING TOOLS:** the tools traditionally employed in the teaching of basic skills and core subjects (e.g., chalkboards, pencils, typewriters, books, xerographic machines).
- **21ST CENTURY CONTENT:** additional subject matter knowledge required to function effectively in the personal, community and workplace environments of the 21st century.
- **21ST CENTURY CONTEXT:** teaching through the use of relevant real-world examples, applications and settings to frame academic content for students, enabling them to see the connection between their studies and the world in which they live.
- **21ST CENTURY SKILLS:** the full integration of core subjects with learning skills, learning tools and 21st century content as taught in 21st century contexts.
- **21ST CENTURY LEARNING TOOLS:** information and communications technologies, such as computers, networking and other digital and non-digital computing technologies, as well as audio, video and other media tools.

## SIX ELEMENTS of 21st century learning

- **EMPHASIZE CORE SUBJECTS.**
- **EMPHASIZE LEARNING SKILLS.**
- **USE 21ST CENTURY TOOLS TO DEVELOP LEARNING SKILLS.**
- **TEACH AND LEARN IN A 21ST CENTURY CONTEXT.**
- **TEACH AND LEARN NEW 21ST CENTURY CONTENT.**
- **USE 21ST CENTURY ASSESSMENTS THAT MEASURE CORE SUBJECTS AND 21ST CENTURY SKILLS.**

— 21ST CENTURY SKILLS —

CORE SUBJECTS	21ST CENTURY CONTEXT	21ST CENTURY CONTENT	LEARNING SKILLS	LEARNING TOOLS
<p>Students master core subjects.</p>	<p>Instruction includes some content in a contemporary context.</p>	<p>There is little content available outside traditional core subject areas.</p>	<p>Learning skills, which include higher order thinking, communication skills, self-direction, collaboration, initiative and creative thinking, are occasionally included in educational objectives primarily through curriculum and teaching strategies.</p> <p>Learning skills are occasionally integrated into content.</p>	<p>Students regularly use traditional tools.</p> <p>100% of students have access to traditional tools.</p> <p>10% or more of teachers use 21st century tools.</p>
<p>Students master core subjects with some 21st century content and context.</p>	<p>Instruction includes a significant amount of content in a contemporary context.</p>	<p>There is some content available and used outside traditional core subject areas, including global awareness and civic and business literacy.</p>	<p>Learning skills often are included in educational objectives and teaching strategies.</p> <p>Learning skills often are integrated into content.</p>	<p>Students occasionally use 21st century tools.</p> <p>50% or more of students have access to 21st century tools.</p> <p>50% or more of teachers use 21st century tools.</p>
<p>Students master core subjects in a contemporary context.</p> <p>Instruction always includes content in a contemporary context through the incorporation of relevant examples, applications and settings.</p> <p>Extensive contemporary content is available and used by students, including global awareness, civic and business literacy.</p> <p>Where applicable, schools create 21st century content that is relevant to the economic needs of their region, such as biotechnology, manufacturing or agricultural technology.</p>			<p>Educational objectives and teaching strategies emphasize the integration of learning skills and 21st century tools, which comprises information, communication and technology (ICT) literacy.</p> <p>Learning skills and 21st century tools are used together to enable students to effectively build content knowledge.</p> <p>Through integrating learning skills and 21st century tools, students are able to do such things as access and communicate information, manage complexity, solve problems and think critically and creatively.</p> <p>100% of students have access to 21st century tools.</p>	
<p>Students can fully integrate core subjects and 21st century skills. Students can use learning skills and 21st century tools to fully understand material in a current context. That allows them to function effectively in personal, community and workplace environments. Students have a solid foundation in content with the ability to apply it in interdisciplinary studies. Students have the skills to learn how to learn and to apply learning skills continually. Students also have an ability to use the traditional and 21st century tools available and know how to use 21st century content in a 21st century context. Students also have the ability to integrate 21st century content into substantive areas.</p>				

<h2>ASSESSMENT</h2>	<h2>PEDAGOGY</h2>	<h2>PROFESSIONAL DEVELOPMENT</h2>	<h2>VISION</h2>	<h2>EQUITABLE EDUCATIONAL OPPORTUNITY</h2>
<p>Academic success is focused on the mastery of core subject content.</p> <p>Teaching focuses on student mastery of core subject knowledge and improving student performance.</p> <p>Students, teachers and parents rarely collaborate to monitor student progress.</p> <p>Assessments are pencil-and-paper-based and few assessments use technology.</p>	<p>The teacher acts as a provider of knowledge, a subject matter expert and a role model for teaching.</p> <p>Teachers occasionally use adaptable and flexible teaching strategies.</p> <p>Teachers occasionally integrate learning skills when teaching content.</p> <p>10% or more of teachers integrate the use of 21st century tools into their curriculum.</p>	<p>Professional development primarily supports content knowledge and administrative processes.</p> <p>Professional development occasionally integrates the application of learning skills into teaching strategies.</p> <p>10% or more of professional development is accessed through the use of technology.</p> <p>Some teachers use professional development to build a high level of competency in their content area.</p>	<p>Administrators create visions for student achievement that focus on the mastery of content.</p> <p>Administrators emphasize the importance of learning skills as a successful strategy to demonstrate proficiency in content areas.</p> <p>Few administrators promote a vision that incorporates the integration of 21st century tools into the curriculum.</p>	<p>Most schools and districts have technology plans that provide access to 21st century tools.</p>
<p>Students begin to be assessed on their understanding and application of learning skills.</p> <p>Assessment is more frequent.</p> <p>Most teachers use classroom assessments to measure the effective application and integration of learning skills and 21st century tools.</p> <p>Teachers begin to use student assessment results to improve teaching efficacy.</p> <p>Students, teachers and parents often collaborate to monitor student progress in achieving learning goals and use assessment to evaluate long-term student progress.</p> <p>Some assessments use technology but most assessments continue to be pencil-and-paper-based.</p>	<p>The teacher acts as a subject matter expert, a facilitator for information and a role model for both teaching and learning.</p> <p>Teachers often use adaptable and flexible teaching strategies that integrate 21st century skills.</p> <p>Teachers frequently integrate learning skills when teaching content.</p> <p>50% or more of teachers integrate the use of 21st century tools into their curriculum.</p>	<p>Professional development often integrates the application of learning skills into teaching strategies.</p> <p>Professional development occasionally integrates the application of contemporary context and content into teaching strategies.</p> <p>50% or more of professional development is accessed through the use of 21st century tools.</p> <p>Most teachers use 21st century skills to work on advanced certifications or credentialing.</p>	<p>Some administrators include the integration of 21st century skills as part of their overall vision for student achievement.</p> <p>Some administrators facilitate and direct the programs and creation of assessment, professional development and work environments that encourage the integration of 21st century skills into the curriculum.</p>	<p>All schools and districts have implemented 21st century tools and have started to integrate 21st century skills.</p> <p>50% or more of students have access to environments that advance 21st century skills.</p>
<p>All assessment is learner-centered, formative, context-specific, ongoing and rooted in teaching strategies.</p> <p>All teachers use classroom assessments that demonstrate evidence of student performance in core subjects and 21st century skills.</p> <p>All teachers share with parents and students the information needed to monitor student progress in achieving learning goals.</p> <p>Students, teachers and parents always collaborate to monitor student progress in achieving learning goals and use assessment to evaluate long-term student progress.</p> <p>Most assessments use technology and record student performance as a means of tracking information over time.</p>	<p>Teachers act as facilitators, resources and partners for teaching and learning.</p> <p>All teachers use adaptable and flexible teaching and learning strategies that integrate 21st century skills.</p> <p>All teachers act as role models in the application and use of 21st century skills.</p> <p>Professional development supports the application of 21st century skills in teaching and learning strategies and classroom management practices.</p> <p>All teachers access professional development through 21st century tools when applicable.</p> <p>All teachers use professional development to reinforce their content competency and integrate 21st century skills.</p>	<p>All administrators include the integration of 21st century skills as part of their overall vision for student achievement and act as role models for such integration.</p> <p>All administrators promote, facilitate and direct stakeholders to develop broad and inclusive plans for curriculum, resources and operations that integrate 21st century skills into every aspect of learning, teaching and administrating.</p>	<p>Educational goals, teaching strategies and assessments reflect all of the needs of a diverse student population.</p> <p>21st century tools are equitably distributed and there is access through homes, community centers, libraries and after-school programs.</p> <p>100% of students have access to environments that advance 21st century skills.</p>	

# —Leading & Managing—

## PLANNING & ALLOCATING RESOURCES

Technology planning primarily addresses infrastructure and equipment requirements.

Resource planning rarely addresses educational objectives.

Educational and administrative planning requirements are not aligned with technology planning.

Few student and teacher performance metrics are linked to resource management decisions.

## INFRASTRUCTURE & SYSTEM INTEGRATION

System planning is focused on the acquisition of technology and traditional tools.

Few services or operations are connected and there is significant overlap in workload.

Few teachers and administrators plan for technology use to supplement classroom resources.

Technology support is erratic and takes several weeks for requests to be met.

Technology is rarely updated and individual technology needs are not consistently met.

## KNOWLEDGE & SKILLS

Administrators demonstrate effective use of traditional management techniques and traditional tools.

Administrators rarely demonstrate effective use of technology in management of their schools or districts or use data-driven decision-making.

Few administrators are proficient in their use of technology in the application of creating curriculum, assessment and alignment of standards.

## POLICYMAKING

Educational policymaking focuses on content mastery and administrative processes.

Funding allocation supports and encourages content mastery.

Some curriculum and educational objectives, including state standards, are aligned with assessment.

Some educational objectives are focused on content mastery and include learning skills.

Licensure of educators and accreditation of teacher education institutions focus on pedagogy and mastery of content areas.

## ACCOUNTABILITY

Schools and districts are evaluated on student achievement in core subjects.

Administrators are evaluated based on their administrative abilities, including creating effective policies and procedures that meet district goals, needs and budgets.

Some districts are evaluated on their professional development programs and the creation of effective support processes for teachers and staff.

Educational planning and overall enterprise planning are occasionally aligned with technology planning.

Resource planning adequately and substantively addresses and funds educational objectives.

Resource allocation and management planning frequently incorporate student and teacher performance metrics.

System planning has some focus on the integration of 21st century tools into educational strategies.

Some services and operations are connected and there is minimal overlap in workload.

Some teachers and administrators integrate the use of 21st century tools to supplement classroom resources.

Technology support is available on a regular basis and problems are handled within a few days.

Technology is refreshed every five to seven years.

Administrators begin to use innovative management techniques and 21st century tools.

Many administrators are proficient in the use of 21st century tools in the application of creating curriculum, assessment and alignment of standards.

Administrators occasionally demonstrate effective use of 21st century tools in the management of their school or district or use data-driven decision-making.

Policymaking focuses on the integration of learning skills and 21st century tools into content.

Funding allocation supports and encourages the integration of learning skills and 21st century tools into content.

Many curriculum and educational objectives, including assessment, are aligned with state standards.

Many educational objectives include 21st century skills.

Licensure of educators and accreditation of teacher education institutions focus on newer teaching strategies, learning skills and 21st century tools.

Many districts are evaluated on student achievement through the integration of learning skills and 21st century tools into core subjects.

Administrators are evaluated on their administrative effectiveness and begin to be evaluated on the incorporation of 21st century skills into district curricula, the effectiveness and the streamlining of administrative processes and the development of long-term planning.

Many states and districts are evaluated on their professional development programs and the creation of effective support processes for teachers and staff.

District resource allocation and infrastructure plans are structured to provide students, parents, teachers and administrators with seamless access to 21st century tools and technology in school, at home and any other place where learning activities are envisioned.

There is a process for handling technology support, problems are addressed within 24 hours and technology is refreshed every three to four years.

All district services and operations are connected and there is seamless integration of departments.

Administrators regularly use innovative management techniques, data-driven decision making and 21st century tools, and continually participate in professional development.

All administrators are proficient in the use of 21st century tools in the application of creating curriculum, assessment and alignment of standards.

Administrators always demonstrate effective use of 21st century learning tools in management and act as role models in the usage.

Policymaking focuses on the integration of 21st century skills into content mastery.

Funding allocation supports and encourages the integration of 21st century skills into content.

All curriculum and educational objectives, including state standards, are aligned with assessment.

All curriculum and educational objectives, including standards, include 21st century skills.

Licensure of educators and accreditation of teacher education institutions focus on the most effective research-based teaching strategies, learning strategies and 21st century skills.

All schools and districts are evaluated on student achievement of 21st century skills in every aspect of teaching and learning.

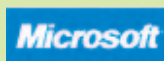
All administrators, schools and districts are evaluated based on the systemic incorporation of 21st century skills and the efficiency and productivity of educational programs.

All districts are evaluated on their professional development programs, which include 21st century skills and the creation of effective support processes for teachers and staff.

# — Partnering —

PARENTS	COMMUNITY	HIGHER EDUCATION & TEACHER PREPARATION	CONTENT PROVIDERS	BUSINESS
<p>Parents are apprised of their child's mastery of core subjects and occasionally meet with teachers to evaluate their child's progress.</p> <p>Schools and districts use traditional tools, such as newsletters and meetings, to facilitate dialogue among parents and teachers.</p>	<p>Community groups, youth organizations, community service providers and local public agencies provide resources, facilities and opportunities that benefit both students and the community.</p> <p>Schools and districts occasionally work together with community and youth organizations.</p> <p>Some students participate in community programs that help them apply 21st century tools to their own learning.</p> <p>Some schools provide students with after-school access to technology.</p>	<p>K–12 and higher education occasionally work together to prepare students for success in higher education but rarely include 21st century skills.</p> <p>Research is focused on teaching and learning and is rarely shared with K–12 stakeholders.</p> <p>Schools of education focus on preparing future teachers who demonstrate content competency in their subject areas.</p> <p>10% or more of students in schools of education have ongoing mentoring with experienced K–12 classroom teachers and administrators.</p>	<p>Content providers support core subject mastery and K–12 leaders look to them as a source for traditional learning tools.</p> <p>Educators look to content providers to align primary and supplementary resources to core academic standards.</p> <p>Educators look to content providers to correlate resources to standards as required by state and local education agencies.</p>	<p>K–12 and private sector partners rarely work together to address student preparation for success in the workplace and higher education.</p> <p>Few K–12 students are mentored in the development of workplace skills or have access to internships and other programs that provide 21st century context.</p> <p>Businesses support education and encourage programs that implement technology.</p>
<p>Parents work with teachers to evaluate their child's progress and to help demonstrate the implementation of learning skills and 21st century tools.</p> <p>Some schools and districts use 21st century tools to facilitate dialogue among parents, teachers and students and have ongoing systems in place for parent-school dialogue.</p> <p>Parents, with support of the school system and community programs, occasionally work toward their own mastery of 21st century tools.</p>	<p>Formal relationships between schools and community organizations begin to extend the school into the community and the community into the school.</p> <p>Community programs incorporate learning skills and 21st century tools as part of student development, leadership and learning initiatives.</p> <p>Many students participate in community programs that help them master 21st century skills.</p> <p>Many schools provide the students with after-school access to 21st century tools.</p>	<p>K–12 schools and higher education programs often work together to address student preparation for success in higher education and includes the application of 21st century skills.</p> <p>Research is focused on 21st century skills and results are occasionally shared with K–12 schools.</p> <p>Many teacher preparation programs have partnerships to promote the alignment of curriculum and standards to K–12 education strategies and assessments.</p> <p>Schools of education begin to focus on preparing future teachers who are proficient in 21st century skills.</p> <p>50% or more of students in the schools of education have ongoing mentoring with experienced K–12 classroom teachers, and the mentoring programs include a focus on 21st century skills.</p>	<p>Content providers work with K–12 leaders to design 21st century tools.</p> <p>Content providers create some content and resources that include learning skills and incorporate 21st century tools.</p> <p>Content providers work with K–12 leaders to embed 21st century skills into all new content and resources.</p>	<p>K–12 and private sector partners occasionally work together to address student preparation for the workplace and higher education, including a mastery of 21st century skills.</p> <p>Some K–12 students are mentored in the development of workplace skills and/or have access to internships and other programs that provide interaction with business.</p> <p>Businesses support education and begin to encourage programs that promote 21st century skills.</p>
<p>Parents, students and teachers collaborate to enable each child to obtain an education that includes the mastery of core subjects and 21st century skills.</p> <p>Schools and districts frequently use 21st century tools to facilitate dialogue among parents, teachers and students.</p> <p>Most parents have a mastery of 21st century tools and work towards improving their skills with support of the school system, community programs and business.</p>	<p>Community programs support learner mastery of 21st century skills and coordinate with schools to reinforce 21st century skills.</p> <p>Schools provide students and the community with after-school opportunities to develop 21st century skills.</p>	<p>K–12 schools and higher education programs regularly work together to prepare students for college, including the integration of content and 21st century skills.</p> <p>Research focuses on teaching and learning with the integration of 21st century skills and results are always shared with K–12 schools.</p> <p>All teacher preparation programs work to promote the alignment of their programs to K–12 education strategies with 21st century skills.</p> <p>All teacher preparation programs graduate teachers who are proficient in their content area and 21st century skills.</p> <p>100% of students in teacher preparation programs have ongoing mentoring with experienced K–12 classroom teachers and administrators, and programs integrate 21st century skills.</p>	<p>Content providers create content and resources that include standards with 21st century skills.</p> <p>Education leaders work with content providers to develop aligned resources, assessments and curriculum integrated with the appropriate 21st century tools and educational systems.</p>	<p>K–12 and private-sector partners regularly work together to ensure student preparation for the workplace and the mastery of 21st century skills.</p> <p>Most K–12 students are mentored in the development of workplace skills and have access to internships and other programs that provide interaction with business.</p> <p>Businesses regularly support educational programs that promote 21st century skills.</p> <p>Businesses, community and education leaders regularly discuss the skills needed for workplace and higher education success.</p>

# ABOUT THE PARTNERSHIP *for* 21ST CENTURY SKILLS



The Partnership for 21st Century Skills is a unique public-private organization formed in 2002 to create a successful model of learning for this millennium that incorporates 21st century skills into our system of education.

## MEMBERS

AOLTW Foundation  
Apple Computer, Inc.  
Cable in the Classroom  
Cisco Systems, Inc.  
Dell Computer Corporation  
Microsoft Corporation  
National Education Association  
SAP

## KEY PARTNERS

U.S. Department of Education  
Appalachian Technology in  
Education Consortium

## STRATEGIC PARTNERS

Consortium for School Networking  
ISTE  
SETDA  
Tech Corps



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