Principles of Learning

Organizing for Effort
- Clear and high expectations.
- Fair and credible evaluations.
- Recognition of accomplishment.
- Curriculum geared to standards.

Clear Expectations
- Standards available and discussed.
- Models of student work.
- Students judge their own and others' work.
- Intermediate expectations specified.
- Families and community informed.

Fair and Credible Evaluations
- Exams referenced to standards.
- Curriculum and assessments aligned.
- Grading against absolute standards, not curve.
- Reporting system makes clear how students are progressing toward expected standards.
- Public accountability systems and instructional assessments aligned.

Recognition of Accomplishment
- Frequent recognition of student work.
- Recognition for 'real' accomplishment.
- Clearly demarcated progress points.
- Celebration with family and community.
- Employers and colleges recognize accomplishments.

Academic Rigor in a Thinking Curriculum
- Commitment to a Knowledge Core
  - An articulated curriculum that avoids needless repetition and progressively deepens understanding of core concepts.
  - Curriculum and instruction organized around major concepts.
  - Teaching and assessment focus on mastery of core concepts.
- High Thinking Demand
  - Students expected to raise questions, to solve problems, to reason.
  - Challenging assignments in every subject.
  - Extended projects.
  - Explanations and justification expected.
  - Reflection on learning strategies.
- Active Use of Knowledge
  - Synthesize several sources of information
  - Apply prior knowledge.
  - Interpret texts and construct solutions.

Accountable Talk Practices
- Accountability to the Learning Community
  - Students actively participate in classroom talk.
  - Listen attentively.
  - Elaborate and build on each other's ideas.
  - Work to clarify or expand a proposition.
- Accountability to Knowledge
  - Specific and accurate knowledge.
  - Appropriate evidence for claims and arguments.
  - Commitment to getting it right.
- Accountability to Rigorous Thinking
  - Synthesize several sources of information.
  - Construct explanations and test understanding of concepts.
  - Formulate conjectures and hypotheses.
  - Employ generally accepted standards of reasoning.
  - Challenge the quality of evidence and reasoning.

Socializing Intelligence
- Beliefs
  - I have the right and obligation to understand and make things work.
  - Problems can be analyzed and I am capable of that analysis.
- Skills
  - A toolkit of problem-analysis skills (meta-cognitive strategies) and good intuition about when to use them.
  - Knowing how to ask questions, seek help, and get enough information to solve problems.
- Dispositions
  - Habits of mind.
  - Tendency to try actively to analyze problems, ask questions, get information.

Self-management of Learning

Self-management of Learning
- Meta-cognitive strategies explicitly modeled, identified, discussed, and practiced.
- Students play active role in monitoring and managing the quality of their learning.
- Teachers scaffold student performance during initial learning, gradually remove supports.
- Students become agents of their own learning.

Learning as Apprenticeship
- Students create authentic products and performances for interested critical audiences.
- Experts critique and guide student work.
- Finished work meets public standards of quality.
- Learning strategies are modeled.
Organizing for Effort
(a Principle of Learning)

Everything is organized to support effort. Direct effort can yield high achievement for all students.

High standards are set and assessments are geared to the standards. All students are taught a rigorous curriculum that is matched to the standards. Sufficient time and expert instruction is given as needed to meet or exceed expectations.

Clear Expectations
(a Principle of Learning)

We need to define explicitly and communicate clearly what we expect all of our students to learn. Descriptive criteria and models of work that meet standards should be publicly displayed.

With visible accomplishment targets to aim toward, students can participate in evaluating their own work and setting goals for their own effort.
Report Card

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**Fair and Credible Evaluations**

(a Principle of Learning)

We need to use assessments that students find fair, and that parents, community, and employers find credible. Fair evaluations are ones that students can prepare for -- tests, exams and classroom assessments -- as well as the curriculum -- must be aligned to the standards.

Assessments that meet these criteria provide parents, colleges, and employers with credible evaluations.

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**Recognition of Accomplishment**

(a Principle of Learning)

Recognition of Accomplishment are celebrations of work that meet standards or achieve intermediate progress benchmarks en route to the standards.

These recognitions are opportunities to participate in events that matter to teachers, students and their families.
**Academic Rigor in a Thinking Curriculum**
(a Principle of Learning)

Thinking and problem solving will be the "new basics" of the 21st Century. Knowledge and thinking are connected. Teaching must engage students in active reasoning of various concepts.

**Accountable Talk**
(a Principle of Learning)

Talking with others about ideas and work is fundamental to learning.

For classroom talk to promote learning it must be accountable. Accountable Talk seriously responds to and develops what others in the group have said.
Socializing Intelligence
(a Principle of Learning)

Intelligence is problem-solving and reasoning capabilities that make sense of the world and figures things out over time.

Intelligent habits of mind are learned through the daily expectations placed on the learner.

Self-Management of Learning
(a Principle of Learning)

The learning environment is designed to model and encourage the regular use of self-monitoring and self-management strategies.

Students are encouraged to pause and contemplate when they do not understand something. They are shown steps to take to remedy the situation. Good learners use these strategies spontaneously. Students work as a team, giving and receiving feedback.
Learning as Apprenticeship
(a Principle of Learning)

For many centuries most people learned by working alongside an expert who modeled skilled practice and guided novices as they created authentic products.

Teachers organize the classroom learning environment, model and discuss, and provide coaching to their students. The students undertake and extend projects.