

Standards-Aligned System

Clear Standards

Pennsylvania Standards describe what students should know and be able to do; they increase in complexity and sophistication as students' progress through school. The Assessment Anchors clarify the standards assessed on the Pennsylvania System of School Assessment (PSSA) and can be used by educators to help prepare their students for the PSSA. We use the metaphor of an anchor because we want to signal that the Assessment Anchors anchor both the state assessment system and the curriculum/instructional practices in schools. Assessment Anchors are further elaborated with Eligible Content. Eligible Content identifies how deeply an Anchor should be covered and specifies the range of the content to best prepare students for the PSSA. Not all of the Eligible Content is assessed on the PSSA, but it shows the range of knowledge from which we design the test.

Fair Assessments

Fair assessment is a process used by teachers and students before, during, and after instruction to provide feedback and adjust ongoing teaching and learning to improve student achievement. In Pennsylvania the four types of assessment are summative, formative, benchmark, and diagnostic.

Summative Assessment: seeks to make an overall judgment of progress made at the end of a defined period of instruction. They occur at the end of a school level, grade, or course, or are administered at certain grades for purposes of state or local accountability. These are considered high-stakes assessments and the results are often used in conjunction with No Child Left Behind (NCLB) and Adequate Yearly Progress (AYP). They are designed to produce clear data on the student's accomplishments at key points in his or her academic career.

Scores on these assessments usually become part of the student's permanent record and are statements as to whether or not the student has fallen short of, met, or exceeded the expected standards. Whereas the results of formative assessments are primarily of interest to students and teachers, the results of summative assessments are also of great interest to parents, the faculty as a whole, the central administration, the press and the public at large. It is the data from summative assessments on which public accountability systems are based.

If the results of these assessments are reported with reference to standards and individual students, they can be used as diagnostic tools by teachers to plan instruction and guide the leadership team in developing strategies that help improve student achievement.

Examples of summative assessment are *PSSA* and *Terra Nova*.

Formative Assessment: Used by teachers and students during instruction to provide feedback to adjust ongoing teaching and learning to improve students' achievement of intended instructional outcomes.

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The Council of Chief State School Officers (CCSSO 2008) contextualizes formative assessment as follows:

Formative assessment is a process used by teachers and students during instruction that provides feedback to adjust ongoing teaching and learning to improve students' achievement of intended instructional outcomes.

The primary purpose of the formative assessment process, as conceived in this definition, is to provide evidence that is used by teachers and students to inform instruction and learning during the teaching/learning process. Effective formative assessment involves collecting evidence about how student learning is progressing during the course of instruction so that necessary instructional adjustments can be made to close the gap between students' current understanding and the desired goals. Formative assessment is not an adjunct to teaching but, rather, integrated into instruction and learning with teachers and students receiving frequent feedback.

One key feature of this definition is its requirement that formative assessment be regarded as a process rather than a particular kind of assessment. In other words, there is no such thing as "a formative test." Instead, there are a number of formative assessment strategies that can be implemented during classroom instruction. These range from informal observations and conversations to purposefully planned instructionally embedded techniques designed to elicit evidence of student learning to inform and adjust instruction.

A second important part of the definition is its unequivocal requirement that the formative assessment process involve both teachers and students. The students must be actively involved in the systematic process intended to improve their learning. The process requires the teacher to share learning goals with students and provide opportunities for students to monitor their ongoing progress.

In Pennsylvania we are defining formative assessment as classroom based assessment that allows teachers to monitor and adjust their instructional practice in order to meet the individual needs of their students. Formative assessment can consist of formal instruments or informal observations.

The key is how the results are used. Results should be used to shape teaching and learning. Black and William (1998) define formative assessment broadly to include instructional formats that teachers utilize in order to get information that when used diagnostically alter instructional practices and have a direct impact student learning and achievement. Under this definition, formative assessment encompasses questioning strategies, active engagement check-ins, (such as response cards, white boards, random selection, think-pair-share, popsicle sticks for open-ended questions, and numbered heads) and analysis of student work based on set rubrics and standards including homework and tests. Assessments are formative when the information is used to adapt instructional practices to meet individual student needs as well as providing individual students corrective feedback that allows them to "reach" set goals and targets. Ongoing formative assessment is an integral part of effective instructional

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routines that provide teachers with the information they need to differentiate and make adjustments to instructional practice in order to meet the needs of individual students.

When teachers know how students are progressing and where they are having trouble, they can use this information to make necessary instructional adjustments, such as re-teaching, trying alternative instructional approaches, or offering more opportunities for practice. The use of ongoing formative classroom assessment data is an imperative. Effective teachers seamlessly integrate formative assessment strategies into their daily instructional routines.

Benchmark Assessment: Designed to provide feedback to both the teacher and the student about how the student is progressing towards demonstrating proficiency on grade level standards. Well-designed benchmark assessments and standards-based assessments measure the degree to which a student has mastered a given concept; measure concepts, skills, and/or applications; reported by referencing the standards, not other students' performance; serve as a test to which teachers want to teach; and measure performance regularly, not only at a single moment in time.

Examples of benchmark assessments are Pennsylvania's benchmark assessment - *4Sight*, *Acuity* and *Assess2Know*.

Diagnostic Assessment: Ascertain, prior to instruction, each student's strengths, weaknesses, knowledge, and skills. Establishing these permits the instructor to remediate students and adjust the curriculum to meet pupils' unique needs.

Examples of diagnostic assessments are DRAs, running records, *GRADE*, *GMADE*.

Curriculum Framework

A curriculum framework specifies what is to be taught for each subject in the curriculum. In Pennsylvania, curriculum frameworks include big ideas, concepts, competencies, essential questions, academic vocabulary, and exemplars aligned to standards and anchors and, where appropriate, eligible content.

Curriculum Framework Defined:

- **Big Ideas:** Declarative statements that describe concepts that transcend grade levels. *Big Ideas* are essential to provide focus on specific content for all students.
- **Concepts:** Describe what students should know, key knowledge, as a result of this instruction, specific to grade level.
- **Competencies:** Describe what students should be able to do, key skills, as a result of this instruction, specific to grade level.
- **Essential Questions:** Questions connected to the SAS framework and are specifically linked to the *big ideas*. They should frame student inquiry and promote critical thinking. They should assist in learning transfer.
- **Vocabulary:** key terminology linked to the *standards*, *big ideas*, concepts and competencies in a specific content area and grade level.

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- *Exemplars*: Performance tasks that can be used for assessment and instruction as well as professional development. Exemplars provide educators with a concrete example of assessing students' understanding of the *big ideas*, concepts and competencies.

Instruction

Aligned instruction comprises the following activities:

- Teaching topics that are aligned with the standards.
- Ensuring the right level of challenge.
- Focusing teaching based on the learning needs of each student.
- Implementing instructional strategies to increase student achievement.

Materials & Resources

Materials and resources include Voluntary Model Curriculum (VMC), incorporating learning progressions, units, lesson plans, and content resources aligned to the Pennsylvania standards in curriculum frameworks for the four major content areas (mathematics, science, social studies, reading-writing-speaking-listening).

Learning progressions span grades K-12 and include what all students should know and be able to do as a result of successfully moving through grades K-8 and by taking specific courses in grades 9-12.

The 9-12 courses are Algebra I, Algebra II, Geometry, Biology, Chemistry, Physics, World History (1450 – present), US History (1890 – present), Civics and Government, English Composition and Literature (foundation works of American and World Literature).

Interventions

The purpose of interventions is to ensure students are provided with the standards based supports they need to meet/exceed grade level standards. A comprehensive system of interventions involves a graduated set of safety nets aligned to specific student needs and standards.

Active Teacher Instruction

Direct and Explicit Standards Aligned Instruction: The teacher uses carefully designed lessons that focus on learning new skills, content, and strategies in a step-by-step fashion. The teacher presents a portion of the lesson, engages students in a guided practice, provides formative feedback to the students and monitors students as they practice the task independently.

Modeling Instruction (Think Alouds): The teacher shows the students how to use or perform the strategy being taught. The teacher shares his/her thoughts and questions aloud with the students, while the students approach and process the task.

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Guided Instruction: The teacher leads an activity that allows the students to demonstrate their understanding of the skill or concept introduced. Students receive immediate feedback from the teacher. The teacher provides immediate intervention based on the student's understanding or misunderstanding of the concept. Guided practice may involve the use of slates or an all-student response system viewed by the teacher.

Scaffolding Instruction: The teacher provides temporary support/guidance to students during initial learning to reduce the complexity of the task. Gradual and planned removal of the scaffolds occurs as the student becomes more successful and independent at task completion. Examples may include: guided notes, verbal prompting, graphic organizers, physical prompting. Scaffolding can also be used as an up and down intervention tool.

Scaffolding Language: The teacher provides different levels of language support for students (e.g., English language learners, students with low language and vocabulary skills and gifted students). For example, predict, compare and analyze content related materials. *Where appropriate, digital tools should be applied.*

Multisensory Nonlinguistic Representations: The teachers may demonstrate or ask the students to represent learning/content by: creating mental images, drawing pictures, constructing/completing graphic organizers, making/showing physical models, etc. *Where appropriate, digital tools should be applied.*

Tiered Assignments: The teacher plans and utilizes activities/assignments that focus on the essential understandings and skills but at different levels of complexity, abstractness and open-endedness. *Where appropriate, digital tools should be applied.*

Instructional Rigor

Instructional-Level Rigor: The teacher engages students in tasks, activities and discussions that promote complex, analytical thinking (versus simple/literal thinking). Tasks at an evaluative level require students to make judgments based on criteria and standards through checking and critiquing. Tasks at a creative level require students to put elements together to form a coherent or functional whole, reorganizing elements into a new pattern or structure through generating, planning, or producing. *Where appropriate, digital tools should be applied.*

Student-Level Rigor: The students are engaged in meta-cognitive tasks. Students might be observed using a set of rules to create a summary, asking questions when something is confusing or unclear, clarifying questions, and making predictions about what might happen next (e.g., making inferences). Guided notes are often used to help students monitor understanding. Think alouds are also used by students to demonstrate their understanding of why and how standards aligned comprehension strategies work. *Where appropriate, digital tools should be applied.*

Active Student Engagement

All-student response system: The students provide feedback to the teacher regarding their comprehension such as thumbs-up, total physical response (TPR), displaying answers on whiteboards or choral responding (responding as a group). *Where appropriate, digital tools should be applied.*

Active Student Engagement:

80-100% - All/most of the students are participating in the assigned activity/task or providing feedback/answer to the teacher on cue. *Where appropriate, digital tools should be applied.*

60-79% - Most of the students are participating in the assigned activity/task or most students are responding to the teacher's cue.

40-59% - About half of the students are participating in the assigned activity/task. About half of the students are working directly with the teacher while the remaining students work independently or with a partner/small group of students.

20-39% - Less than half of the students are participating in the assigned activity/task. Less than half of the students are working directly with the teacher while the remaining students work independently.

Less than 20% - Most students are not participating in the assigned activity/task or individual students are called upon to provide feedback to the teacher on cue.

21st Century Skills

Digital-Age Literacy

Visual and Informational and Global Literacy: The ability to interpret, use, appreciate, and create images and video using either conventional or 21st century media in ways that advance thinking, decision-making, communication, and learning.

Scientific Literacy: Knowledge and understanding of the scientific concepts and processes required for personal decision making, participation in civic and cultural affairs, and economic productivity.

Economic Literacy: The ability to identify economic problems, alternatives, costs, and benefits; analyze the incentives at work in economic situations; examine the consequences of changes in economic conditions and public policies; collect and organize economic evidence; and weigh costs against benefits.

Technological Literacy: Knowledge about what technology is, how it works, what purposes it can serve, and how it can be used efficiently and effectively to achieve specific goals.

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Multicultural Literacy: The ability to understand and appreciate the similarities and differences in the customs, values, and beliefs of one's own culture and the cultures of others.

Global Awareness: The recognition and understanding of interrelationships among international organizations, nation-states, public and private economic entities, socio-cultural groups, and individuals across the globe.

Effective Communication

Personal, Social and Civic Responsibility: The students learn to promote the public good, protect society, sustain the environment, and protect democratic ideals (social responsibility). They also develop depth and currency of knowledge about legal and ethical issues, combined with an ability to apply this knowledge to achieve balance, integrity, and quality of life as citizens, family and community members, learners, and workers (personal responsibility).

Interactive Communication Skills: The students should communicate using any of a broad range of contemporary tools including world languages, such as, but not limited to e-mail, online chats, video or audio conferencing, web meetings, blogs, phones, or any Web 2.0 technology aimed at promoting communication.

Inventive Thinking

Adaptability, Managing Complexity: The ability to modify one's thinking, attitude, or behavior to be better suited to current or future environments, as well as the ability to handle multiple goals, tasks, and inputs, while understanding and adhering to constraints of time, resources, and systems (e.g., organizational, technological).

Self Direction: The ability to set goals related to learning, plan for the achievement of those goals, independently manage time and effort, and independently assess the quality of learning and any products that result from the learning experience.

Curiosity: The desire to know or a spark of interest that leads to inquiry.

Creativity: The act of bringing something into existence that is genuinely new and original, whether personally (original only to the individual) or culturally (where the work adds significantly to a domain of culture as recognized by experts).

Risk-taking: The willingness to make mistakes, advocate unconventional or unpopular positions, or tackle extremely challenging problems without obvious solutions, such that one's personal growth, integrity, or accomplishments are enhanced.

Higher Order Thinking and Sound Reasoning: The ability of students to operate at the higher levels of "Bloom's Taxonomy". Includes the cognitive processes of analysis, comparison, inference/interpretation, evaluation, and synthesis applied to a range of academic domains and problem-solving contexts".

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High Productivity

Prioritize, Plan, and Manage for Results: The students learn to efficiently achieve the goals of specific projects or problems, in class work and through student organizations.

Effective Use of Real World Tools: The students learn how to use real-world tools (i.e. the hardware, software, networking, and peripheral devices used by Information Technology (IT) workers to accomplish 21st century work) to communicate, collaborate, solve problems, and accomplish tasks.

Relevant, High-Quality Products: The students understand of the concept of "quality" and strive for high levels of it. Since digital tools allow students the ability to produce high quality products, students learn to have pride in what they have produced. They are totally involved in producing excellence.

Resiliency**

The teacher applies and integrates the resiliency framework to foster and nurture resiliency in students to enhance student achievement. Resiliency is the ability to spring back from and successfully adapt to adversity. The six most important factors in building resiliency in students are:

- *Unconditional Support*
- *High Expectations*
- *Meaningful Engagement*
- *Connectiveness and Bonding*
- *Clear and Consistent Boundaries, and,*
- *Development of Life Skills.*

References

*Adapted from: NCREL/Metiri Group. (2003). *enGauge 21st Century Skills for 21st Century Learners*. Retrieved November 4, 2009, from <http://www.metiri.com/features.html>

**Henderson, N. (N.D.). *What is Resiliency?*. Retrieved November 4, 2009, from <http://www.resiliency.com/htm/whatisresiliency.htm>