



***EARLY CHILDHOOD ASSESSMENT
FOR CHILDREN FROM
BIRTH TO AGE 8 (Grade 3)***

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I. INTRODUCTION

Developmental assessments are a process which allows one to understand a child's competencies and to design learning environments which will help a child grow to his or her developmental potential whether this is from birth to age 8 or third grade. Assessments that are implemented in the classroom and aligned with Pennsylvania's standards for learning (birth to age 8 or third grade) will help inform teachers about designing a curriculum that provides multiple learning opportunities that best suits how each child learns.

A two step process occurred to provide guidance to early childhood programs and school districts for the alignment of assessment and curriculum to the Pennsylvania standards for learning for children birth to age 8. First, a workgroup consistently mostly of members of the original Early Learning Standards Taskforce was formed. This workgroup developed a report, *Final Report and Guidelines on Assessment and Curriculum* (2005) to address the linkages of assessment and curriculum that would assist in the adherence to the Early Learning Standards for Pre-Kindergarten children. An important workgroup goal was to help make program personnel aware of available materials that encourage teachers to rely on authentic measures of early learning and development that link directly to program content and goals, as well as Pennsylvania's standards for learning, and that sample skills in natural, active learning environments, rather than contrived circumstances.

The second step in the process to provide guidance for Pennsylvania's standards for learning was to convene a second work group comprised of individuals from the Pennsylvania Department of Education, school districts, universities, early childhood, and early intervention to examine the original document developed by the Early Learning Standards Taskforce. The intent of the meeting was to examine the report and to determine how to modify it so that the report emphasized that assessment and curriculum are part of a continuum that begins at birth and extends through Kindergarten to third grade. The information provided in this document incorporates information from the original report and it also emphasizes the importance of viewing assessment and curriculum development as a continuous process from birth to age 8. Therefore, the current assessment guidance document meets the needs of both the Early Learning Standards and the Kindergarten Standards.

This report offers information about the extent to which several assessment tools and curriculum materials align with Pennsylvania's standards for learning (birth to age 8). It is not the Department of Education's intention to make specific recommendations with regard to the items on the lists provided herein (see Tables

1-3), rather, the Department wishes to provide guidelines for decision making that would best adhere to the Pennsylvania standards for learning (birth to age 8). Given the many resources available on the market, both workgroups limited the list of assessment tools to those that are evidence-based and have demonstrated technological adequacy for the preschool and elementary school age groups.

The list of assessment tools also focuses specifically on assessment for the purpose of informing instruction; thus, the measures are all appropriate and feasible for administration by teachers and other classroom personnel. It is important to realize that there are many purposes of assessment, such as for diagnostic purposes, for program evaluation, for determining school readiness, and for screening developmental delays or learning difficulties. These other purposes are not as relevant for adhering to the Pennsylvania standards for learning (birth to age 8) and so the focus of this report is on using assessment to inform instruction.

Summary of Tables: There is a brief overview of critical features (see Tables 1 through 3) for each instrument. These tables are appropriate for both the Early Learning Standards and the Kindergarten standards and the instruments are marked accordingly. Next, we offer an overview of the coverage (i.e., alignment) of the Key Learning Areas of the Early Learning Standards for Pre-Kindergarten for each of the measures (see Tables 4 and 5). Blank cells in the table represent the Key Learning Areas that are not covered by that instrument. An “X” indicates that there is *at least minimal* coverage of that key learning area. An overview for the Kindergarten Standards will be added in the future. For more specific details within each of the Key Learning Areas, one needs to refer to the extensive matrices in which items from each of the instruments are correlated with the Standards at the Indicator level. Table 6 provides an overview of the coverage of curriculum materials for each of the Key Learning Areas in the Early Learning Standards. Curriculum materials are currently under review for the Kindergarten standards and will be added in the future.

II. MEASURING CHILDREN’S DEVELOPMENT AND LEARNING

Background

The overall purpose of assessment, regardless of age, is to help teachers make appropriate instructional decisions about how to best teach children. The principles and philosophy of assessment that we often apply to young children are part of a continuum that begins at birth and extends through Kindergarten to third grade. Measurement, both assessment and evaluation, of the skills learned by young children must rely upon practices that fit expected learning skills and behavior and then change, as appropriate, to support children as they grow and develop. For example, young children learn and exhibit their learning in different ways than older children. Young children learn by doing rather than just listening and may best exhibit what they know in actions rather than in speech or writing.

Because growth is more rapid in the period from birth to age eight than at other periods of development it becomes challenging to capture children's skills and abilities, particularly at any one point in time (Zaslow, Calkins, & Halle, 2000).

The varying developmental changes make the needs for assessment of young children very different from those for older children or adults. In many instances, professionals both teach and test young children using downward extensions of methods used with older individuals, often to the detriment of children. Too often, childhood testing results in the "mismeasure" of young children.

Assessment methods of children need to support children's developmental changes along a continuum to gather reliable data (Zaslow, Calkins, & Halle, 2000; Neisworth & Bagnato, 2004).

A common reaction from the field with regard to assessment is nervousness about the inappropriateness of "testing" children and fear about high-stakes decision-making. Certainly, the use of assessment tools that are inappropriate for children should be avoided, whether they are in preschool or of elementary school-age. Early childhood assessment should never be high-stakes. However, the benefits of assessment procedures for children birth to age 8 need to be more widely recognized. Integrating assessment with curriculum and standards offers an opportunity to elevate the level of professionalism in the field of early education (birth to age 8), similar to that of other more evidence-based fields.

Recommended practices in assessment of young children (birth to age 8) are guided by specific professional standards and position statements established by major national organizations, including the National Association for the Education of Young Children (NAEYC); Division for Early Childhood (DEC) of the Council for Exceptional Children; the Head Start Program Performance Standards; American Educational Research Association (AERA); and the National Association for School Psychologists. These practices have been set and revised regularly through a rigorous process of social validation by experts and practitioners in the fields. Many of the standards have a research evidence base (Dunst, Trivette, & Bagnato, 2001). Generally, the position statements and guidance reflect the concepts that assessment of young children (birth to age 8) is appropriate, beneficial, and useful, if used as intended.

Measurement Considerations

Several principles exist that are important when measuring the development and learning of children birth to age 8 or third grade. These principles direct programs in determining which assessment instrument best meets the needs of the children, as well as the needs of the program (both early childhood and school-age).

1. **Purpose:** Assessment results can identify both the well-developed and least well-developed skills of children so that beneficial learning experiences and teaching can be individually planned and carried out. Assessment on children

birth to age 8 years is not conducted primarily for diagnostic purposes, that is, to determine whether the child has comparative deficits or delays in reference to peers his/her age. Rather, assessment of children presumes that assessment provides the information needed to plan programs and curriculum that will promote each child's progress. Assessments are conducted to:

- Find out what children are interested in,
- Find out children's strengths and areas of difficulty,
- Make informed decisions about interventions,
- Discover how children change over time,
- Learn what children know in particular areas, such as reading,
- Link with instruction, making sure instruction is responsive and appropriate, matching what children can and cannot do, and
- Serve as a basis to report to parents.

Assessment is NOT conducted to classify the child's "readiness" for inclusion in an educational setting and assessment is DEFINITELY NOT conducted to exclude the child from preschool or Kindergarten because of an erroneously presumed lack of readiness. It IS conducted to plan beneficial opportunities for each child.

Many different purposes exist for assessment so instruments are usually designed to address only one specific purpose. Potential misuses of testing with children may occur when measures intended for one purpose are used inappropriately for other purposes (Hirsh-Pasek, Kochanoff, Newcombe & de Villiers, 2005). An example of this is to use results from a screening test to determine the cause of a child's developmental delay. A diagnostic tool is more appropriate for this purpose.

Keep in mind that the focus of this report's guidelines is on the process of assessment for the purpose of informing teaching. The measures reviewed here are limited to those most appropriate for this purpose. Teaching and learning are reciprocal processes that influence each other and only through assessment can it be determined how well the teacher is teaching and how well the student/child is learning (Kellough & Kellough, 1999). Recently, assessments, particularly in elementary school, have focused on determining a child's achievement level, rather than to "identify" a child's intervention needs or to ascertain appropriate instructional strategies.

One particular purpose of assessment often causes confusion and this is the use of screening instruments or "screeners." The criteria for developmental screening instruments are generically defined by the characteristic of being brief, cursory, objectively scored, reliable, and valid (Meisels, with Atkins-Burnett, 1994). Brief instruments, for reasons of feasibility, are often used when large groups of children need to be evaluated. The results generated from this type of procedure tend to be used for purposes that are beyond the

classroom level or for informing teaching. Although it may be useful to teachers to view and be aware of results from a screening procedure, most commonly, results are used by schools/programs in order to identify those few children who may need to receive more extensive (diagnostic) assessment for determining developmental delays or special needs. A screener, though brief, is usually effective in catching the most severe cases of children who would need follow-up evaluation.

More recently, screening instruments are used to assess whether a child is developmentally ready to attend an educational program or to determine a child's school readiness. Screeners are often inappropriately used as readiness tests for children. School districts are not permitted to deny children entry to Kindergarten based on the results of a readiness test. However, the assessment results from pre-Kindergarten settings are important because the information can inform Kindergarten teachers about children's developmental status. This information, in conjunction with assessment results conducted near the beginning of the Kindergarten school-year, can aid in the development of a plan that best suits each child. A supportive transition between preschool and Kindergarten will occur when childcare teachers understand and have knowledge of the Pennsylvania standards for learning and communicate with school district teachers, and equally, school district teachers understand children's early learning environments, what they have already learned, and what kinds of supports the children have received. Assessing children as they enter Kindergarten is particularly important to help determine the child's areas of strengths and needs so the teacher can adapt the learning environment and activities to the needs of all the children in the classroom. "When [assessment] information is used by the classroom teacher to design the child's learning environment, [the child's] success in school is enhanced, and a more stimulating, exciting learning environment is facilitated (Niemeyer & Scott-Little, 2001, p 2). However, the measures often used at the start of Kindergarten are usually too brief to be appropriate for evaluating children's status and ongoing progress in a way that informs instructional planning that will align with Pennsylvania's standards for learning (birth to age 8).

2. **Method:** The ideal method of assessing children is through authentic, naturalistic observations that occur on an ongoing basis. The observations should occur during daily activities, teaching, and care routines to describe the development and learning of children. The assessment is not a one-time event since it is difficult to gather valid and reliable indicators of development from this type of information (NAEYC/NAECS/SDE, 2003). Methods of engaging in ongoing assessment include portfolios, observations, anecdotal notes, and checklists, to name a few.

As children move into Kindergarten and the early grades of elementary school these types of assessments become more difficult to implement, but are not

impossible. More norm-referenced testing, or testing to get a score, becomes more common place as children become older because of the need to assess large groups of children more quickly and to produce a score that can indicate progress or lack thereof. As children progress through the grades, there are fewer opportunities to engage in ongoing, authentic assessments. Classrooms become more structured and there is an increased focus on instruction and content. Overall, there are fewer authentic-based instruments available for the older age group. However, research has demonstrated that elementary school children enrolled in classrooms that use a curriculum-embedded assessment instrument showed greater gains in reading on a conventional test of academic accountability than those students who were not in such classrooms (Meisels, Atkins-Burnett, Xue, Bickel, Son, 2003).

To provide a little background information on types of assessment, there are generally two types of assessment: formal and informal. Formal assessments are defined as highly valid and reliable (.8 or above), standardized (administered similarly each time), and have standards of comparison (norm-referenced, standards referenced, and criterion-referenced) to make sense of the results (see definitions). These instruments are usually published by a national company. Informal assessments, on the other hand, do not follow standard conditions or use standard materials, they often do not have documented reliability (.5 to .6 are acceptable) and validity, and they may be published, but they can also be teacher or program developed (i.e., classroom checklist). Ongoing, authentic assessments tend to fall under the definition of informal assessments and are usually considered to be criterion-referenced (the comparison is based on a students' own knowledge and skill rather than a norm group).

For a comprehensive explanation of the terms related to methods of assessment, please see the "definition" section in the back of this report.

3. **Context:** As stated above under Method, the best way to assess children is through naturalistic observations of children on an on-going basis. Evidence of children's developmental abilities comes from ongoing structured observations of naturally occurring behavior in natural, everyday settings and routines (home, preschool, community) by teachers and other caregivers (parents, psychologists, aides, and other team members). Structured observation schedules and ratings formats, as well as other teachable moments and informal interactions with the child, enable educators to capture real-life examples of each child's problem-solving, language, literacy, math, motor, social, and self-skills. Measures which sample real-life behavior in real-life settings are called *authentic assessment* measures. These types of measures can examine the whole child in their natural learning environment.

"Table-top testing" and/or "pencil-and-paper standardized tests" are discouraged for children birth to age 8 for a variety of reasons. For example,

young children and children in Kindergarten may not be able to use a pencil effectively to demonstrate their knowledge. A test of this type does not capture some of the skills that are critical to success in school (i.e., social and emotional development; approaches to learning) (Scott-Little & Niemeyer, 2001). As children grow older and their skills broaden they are better able to demonstrate their knowledge and skill. Again, assessment of children follows a continuum similar to children's developmental changes. Younger children need naturalistic opportunities to demonstrate their skills while this need begins to change as children grow older where they can more easily demonstrate their knowledge in a traditional test format. However, the more natural the setting for assessment the more likely a thorough and accurate assessment of children's skills and abilities will occur.

4. **Process:** Caregivers and/or teachers are committed to compiling ongoing observation data for every child several times (at least 3 times) each year during his/her education. Assessment is not a one-time event; rather, it is conducted serially over time to document progress and growth during the child's participation in high-quality care and education programs, including both preschool and elementary school. It is not primarily comparative, but rather individualized so that each child's previous performance is viewed as the reference point to make individual comparisons about progress and gains due to the program and/or curriculum being implemented (i.e., criterion-referenced). Ongoing, authentic assessments become more challenging as children enter elementary school, but they are not impossible. Anecdotal notes and record-keeping, whether this is documented through mastery tasks; checklists, questionnaires, and rating scales; portfolios; and observations are a sure-fire method of documenting children's progress and learning of the curriculum. It is best not to use "one shot" assessment information to modify the curriculum because children can change so dramatically through the school-year.
5. **Standards-based:** Best practice emphasizes that assessment is NOT conducted separate from the child's program and/or curriculum. Assessment is an integral part of each child's educational program and it drives the curriculum and instruction that is developed. Early childhood assessment (birth to age 8 or third grade) has content that links or aligns with the Pennsylvania standards for learning and the best practices of the professional organizations (e.g., NAEYC, DEC, Head Start). Measures which are authentic and sample content contained in the standards or the program are called *curriculum-consistent* measures.
6. **Parents as Partners:** One critical part of assessment is the role of the parent. To fully understand a child's development a family-centered focus is important (National Association of School Psychologists, 2005). Parents and educators should work together as a team. Parents witness their children's functioning and behavior in a wide variety of contexts, and their input is

valued as part of the child's overall assessment. Many parents lack an understanding of the processes of assessment and what is expected and appropriate. An emphasis should be placed on explaining the importance of ongoing assessment to parents and how their role is critical to the process. Families need to understand how their child is being assessed and what the findings mean to them and to their child. The more that parents are included in the assessment process the greater their ability to make fully-informed decisions in addition to the likelihood of their cooperation with the education planning for their child.

Summary

There are a number of guiding principles for assessment that are summarized in the following bullets (Scott-Little, 2001; Scott-Little & Niemeyer, 2001; NAEYC & NAECS/SDE, 2003):

- Ethical principles guide assessment practices,
- Assessments benefit all children,
- Assessment instruments are used for their intended purpose and the purpose is clear,
- Assessment is ongoing and regular throughout the school year,
- Assessments are sensitive to cultural and language differences,
- Instruments are age appropriate (sufficiently measures above and below age targeted),
- A range of indicators is assessed,
- Multiple sources and types of information are used,
- Evidence is gathered from realistic settings and situations that reflect children's actual performance, and
- Instruments are reliable and valid.

Three Types of Measures

The measures profiled in tables 1 through 3 included in this report were chosen based on their technical qualities and their match with the above philosophy about developmentally-appropriate early childhood assessment for children birth to age 8 (third grade). Three types of measures are profiled in 3 separate tables and there is a column that distinguishes if the instrument is appropriate for the Early Learning or Kindergarten Standards:

- **Authentic Curriculum-based Measures:** These measures are best used by teachers, professionals, and other caregivers in the early childhood program or elementary schools. They best fulfill the philosophy of professional organizations and best match the content of most curricula and Pennsylvania's standards for learning.
- **Specific Early Learning Skills Measures:** These measures provide more in depth probes into specific skill areas including literacy, math, language, and other pre-academic competencies and are to be used in

cases when more in-depth understanding of a particular area of development is needed. Assessment using these measures does not need to be conducted if the authentic curriculum-based measures used adequately cover the domains of interest. There are many in-depth single-domain instruments; the guidelines provided here are limited to those instruments that can easily be used by classroom personnel.

- **Disability-Sensitive Measures:** These measures accommodate best the various sensory-motor, language, cognitive, social-behavioral, and cultural needs of children with developmental disabilities. The instruments in this third category are also appropriate for use by teacher or classroom personnel and can be used before, and independent of, a formal referral process that may take place regarding special education services.

Steps to Conduct Assessment

Supervisory support for assessment by program administrators is critical to maintain ethical standards, recommended practices, as well as the reliability and validity of the instrument being used. Assessment instruments and methods change as children develop from birth to age 8 or third grade. In the early years, authentic measures are emphasized because of the developmental capabilities of the children. As children enter elementary school in Kindergarten, authentic assessment methods begin to decrease because there are fewer opportunities to engage in this type of assessment and more formal assessments increase as children gain the developmental skills necessary to demonstrate their knowledge. Please note that conducting authentic, curriculum-consistent assessments will provide the richest information about the whole child. The following steps present the ideal assessment process. However, implementing any of the steps is a plus for any education program working with children birth to age 8.

1. Use only authentic curriculum-based scales to the greatest extent possible as the first stage in evaluating the early learning skills of children while they are participating in the educational settings.
2. Compile ongoing observation data for every child at least 2 times (preferably 3 times) per year, for example, September and May or September, January, and May to document the child's progress over time. The frequency of monitoring is dependent on the progress the child is making.
3. Gather information from teachers, aides, parents, and other caregivers who know the child well and observe daily children's naturally occurring thinking, language, social, motor, and self-control skills.
4. Watch, observe, and record each child's strong and weak skills through daily/weekly observations.

5. Use a specific measure of early learning skills to probe further into areas that may require more in depth evaluation such as early literacy, reading, math, and general knowledge.
6. For children with developmental disabilities, use only measures that have been designed and field-validated for use with children having specific needs as the primary measurement tool.
7. Collect information on all children individually and as classroom groups to note changes overtime.
8. Incorporate information collected into teaching strategies, classroom activities and curricula materials at each time-point. Constructing the environment to encourage particular activities is an appropriate method of collecting data.
9. Use the information collected over time as records of the performance and progress of children to share with parents and for transition building with principals, the teacher's of the following school year (i.e., kindergarten teachers or first grade teachers), and others.

Teachers and other professionals are obligated to write reports that are understandable and useful to families. Many families have little background understanding of assessment information or may have low-literacy skills and these issues should be kept in mind when the report is being written. Families need adequate time to review reports, ask questions or express concerns before any information about the child is used for decision-making.

Culture and Language Fairness in Assessment

Children from minority groups can vary from mainstream American children in many ways. For example, ethnically diverse children differ in their styles of interaction, such as speaking only when one is spoken too, being more passive participants and preferring more cooperative learning than competitiveness with other children. They have difficulties with the way information is conveyed in group situations compared to their interactions in the home. Further, children with limited English proficiency are unable to process information in the classroom and can become inattentive and distractible. These types of differences could be mistaken for lack of motivation, lack of school readiness, or even developmental delay. Indeed, children from culturally and linguistically different backgrounds are over-identified as mentally retarded and their ability to learn is too often underestimated.

It is necessary to determine skill and fluency in the language or combination of languages that a child uses. Difficulty in communication can be due to limited

English skills, the process of second language acquisition, or a communication disorder. Assessing children's non-English language competency is important because age-appropriate skills in the child's home language would eliminate concern for a communication disorder.

Authentic assessment methods are advocated for all children; however, this is especially important for children whose culture and language are different from the mainstream. Dynamic and active learning measures are preferred to standardized measures which could decrease assessment bias against minority children. These assessments are usually conducted in comfortable, familiar settings that are of interest to the child and rely far less on children's language abilities compared to most conventional tests. Again, authentic assessments are achievable in elementary grades, and may be of particular importance to ethnically diverse children to ascertain their developmental difficulties. Although these children will have to participate in the more standardized assessments expected in many school districts, the supplement of authentic observational methods is ideal.

III. CURRICULUM

Background

Curricula for children birth to age 8 fall along a continuum where learning activities change with the developmental needs of the child. In the early learning years, there is more use of concrete materials and hands-on activities than of the more structured curriculum experiences in first through third grade, and to a lesser extent, Kindergarten. Because what young children are capable of learning and doing is so dependent on their development, instructional decisions must take into account each individual's developmental level or placement along the continuum. The instructional strategies also must take into account how to keep the child moving along the continuum of learning and development during the school year. Further, in addition to being developmentally appropriate, the curriculum needs to be research-based and culturally and linguistically responsive, supporting educational equity for children who are learning English or who are from minority backgrounds.

With regard to a specific definition, the curriculum for children birth to age 8 should be research-based, multi-dimensional, and include more than one prepackaged product available through a publisher. No one commercial program will be able to address the needs of all learners. Any published program and materials are merely tools that help teachers do their teaching. The Pennsylvania standards for learning (birth to age 8) are the guide for teacher's day to day teaching.

The curriculum includes content, methods of implementation (i.e., teaching strategies, schedule, materials), alignment with the Pennsylvania standards for

learning (birth to age 8), appropriate environments, individual assessment results, all developmental domains, and parent involvement. A curriculum defines the scope and sequence of what is taught with goals in each content area. All materials should be selected in view of how they will support the curriculum.

Children with special needs follow an Individualized Educational Program (IEP), which has individual goals, schedules for assessment, and adaptations that include materials and strategies that may not necessarily be tied to the curriculum, but can be implemented within the curriculum.

Children require both a foundation of factual knowledge and skills, as well as a conceptual understanding that allows facts to become “usable” knowledge (National Research Council, 2001, p.185). Ideally, the goals and framework of a curriculum that is linked to standards will lead to a coherent set of activities and teaching practices that build this foundation for learning. Teachers need to decide how activities can fit together to benefit children’s growth and development, as well as how to modify activities so that they are part of a continuum that is responsive to children’s development.

Appropriate curriculum promotes a balance between planned experiences that help children progress toward defined goals, the experiences that emerge from children’s interests, and unexpected events that are “incorporated into the program in ways that comply with standards and curriculum goals” (NAEYC & NAECSSDE, 2003, p. 8). Many teaching strategies are effective for achieving this balance. Both instructional teaching and child-initiated instruction, teaching through play, teaching through structured activities, engagement with older peers and with computers, are all effective methods of instruction (National Research Council, 2001, p. 231). In addition, balancing different types of instruction, including individual and group instruction such as large, small, flexible, and whole groupings are important methods of teaching. These strategies are tools which serve different ends; thus, it is important to recognize that none can be expected to be most effective for all purposes.

Developing or selecting a curriculum and curriculum materials is only the first step, however. The effectiveness of any curriculum will depend on its implementation. Once a particular curriculum is adopted, it should be tracked to see whether it is being implemented as intended and aligned with best practice in early childhood education (birth to age 8). “Standards [particularly Pennsylvania’s standards for learning] and curriculum can give greater focus to activities, helping teachers decide how these activities may fit together to benefit children’s growth” (NAEYC/NAECSSDE, 2003, p. 8).

Effective Curriculum

The National Association for the Education of Young Children (NAEYC) and the National Association of Early Childhood Specialists in State Departments of

Education (NAESC/SDE) developed a position statement for building effective accountability systems in programs and for children birth to age 8 (NAEYC & NAESC/SDE, 2003). The position statement covers curriculum, assessment, and program evaluation. Critical to this report are the elements for effective curriculum and assessment (listed earlier). The following is a list of indicators of effective curriculum:

- Children are active and engaged.
- Goals are clear and shared by all.
- Curriculum is evidence-based.
- Valued content is learned through investigation and focused, intentional teaching.
- Curriculum builds on prior learning and experiences.
- Curriculum is comprehensive.
- Professional standards validate the curriculum's subject-matter content [including the Pennsylvania standards for learning].
- The curriculum is likely to benefit children, if implemented as intended.

Table of Curriculum Resources

The list of resources that support curriculum was chosen based on comprehensiveness, an evidence-base and quality. In addition to the abbreviated coverage table included in this report (Table 6 for the Early Learning Standards), a more extensive matrix of coverage exists for each of the products, which outlines the extent to which each product aligns with the Standards at the indicator level. Some curriculum products are accompanied by a specifically designed assessment tool. In these cases, the correlations at the indicator level are shown together in a matrix for both the curriculum product and its assessment tool. Curriculum materials that focus on specific Key Learning Areas should supplement a larger curriculum framework that encompasses all Key Learning Areas of the Early Learning Standards. The multitude of resources available for each domain of development prevents us from being able to offer guidelines for each. However, a list of more commonly used products is provided.

Curriculum resources for the Kindergarten Standards will be added in the future.

IV. LINKING ASSESSMENT AND CURRICULUM

When developing a curriculum and instructional strategies it is important to identify the goals one has for children's learning. The goals should align with the standards and describe the expectations for what students should know and be able to do according to those standards. Goals that are aligned with standards will lead to a set of activities and experiences that form the building blocks of learning.

Assessments are one method of determining if the goals identified for children are linked to activities that will be interesting and match the abilities and needs of children who participate in education programs. Assessment information is a starting point for curriculum development. The use of ongoing assessment provides the tools to re-align the curriculum to keep children moving along the continuum of learning.

“Ongoing assessment of children’s progress in relation to the curriculum goals gives staff a sense of how their approach may need to be altered for the whole group or for individual children” (NAEYC & NAECSSDE, 2003, p. 9).

V. CONCLUSION

The guidelines provided in this report for assessment measures and curriculum materials offer a foundation for complying with the Pennsylvania standards for learning for children birth to age 8 by making effective decisions about how to assess children and how to incorporate assessment into curriculum and classroom activities. The guidelines are not recommendations for specific actions, measures, methods, or products. Thoughtful planning based upon the principles in these guidelines can lead to assessment systems and curriculum plans that meet schools’ needs, comply with the Pennsylvania standards for learning, and benefit children, teachers, and parents in the process.

VI. RESOURCES FOR MEASURING CLASSROOM ENVIRONMENTS

Although it goes beyond the scope of the current guidelines with regard to aligning assessment and curriculum with the Pennsylvania standards for learning, quality classroom environment is another important component of compliance with the Pennsylvania standards for learning and ensuring program quality. The descriptions of classroom quality available through standardized classroom observation systems would provide a standard way of measuring and noting teachers’ strengths and weaknesses and evaluating whether policy initiatives or professional development activities are actually helping improve classroom interactions (Pianta, in press). The instruments that are frequently used are listed below for both preschool and elementary school classrooms. More information with regard to the measurement of classroom environments will be provided in the future.

Instrument	Classroom	
	Pre-K	K to 3 rd grade
Classroom Assessment Scoring System (CLASS) (Pianta & La Paro, 2003)	X	X
Early Childhood Environmental Rating Scale (ECERS-R) (Harms, Clifford & Cryer, 1998)	X	
Early Childhood Classroom Observation Measure (ECCOM) (Stipek, 1996)	X	
The Early Language and Literacy Classroom Observation Tool (ELLCO) (Smith, Dickinson, Sangeorge & Anastasopoulos, 2002)	X	X
Supports for Early Literacy Assessment (SELA) (Smith, Davidson, Weisenfeld, & Katsaros, 2001)	X	

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VIII. ASSESSMENT TOOLS

How to Read the Tables

The assessment instruments are grouped into three tables. Table 1 lists the instruments which are multi-domain developmental measures. The list represents technically adequate instruments that are feasible for use by classroom personnel to administer on an ongoing/repeated testing basis such that they are embedded into the program's curriculum planning. Though not all of the listed instruments were designed as "authentic" measures, many can be used in an observational or "authentic fashion". Authentic methods are strongly encouraged whenever possible. Assessments of pre-academic skills and social-emotional skills are listed in Table 1 because they are essential for alignment with the state standards but are often omitted from multi-domain instruments.

Table 2 represents the instruments which are designed for specific developmental domains. These measures can be used in instances when more detailed information is desired with regard to a child's learning or functioning in a particular domain.

Table 3 represents a list of measures that apply especially well to children experiencing special needs or developmental delays. Note that some of the multi-domain developmental assessments listed in Table 1 may also be used with special needs children. By the same token, some of the instruments listed in Table 3 may be appropriate to use with typically developing children. Instruments listed in Table 3 are recommended for teachers to inform their teaching and can be used separate from and/or along with any assessment process related to special education placement.

Tables 4 and 5 provide a shorthand overview of how extensively the assessment tools cover the Key Learning Areas of the Early Learning Standards. In the future, tables will provide an overview of how the assessment tools cover the Kindergarten Standards.

Table 6 provides a quick glance at curriculum and the Pennsylvania Early Learning Standards for Pre-Kindergarten.

Column Categories

Age range	Refers to the age range for which the measure has been developed.
Standards the Early	Marks off which assessment tool is appropriate for either Learning Standards, Kindergarten Standards, or both.
Type definitions).	Norm-referenced or Criterion-referenced (see
Method of Administration	Refers to the way data on child outcomes are collected. Assessment can be administered to individual children, or through ongoing observations by teachers or other adults which are reported on check sheets/report forms, notes, portfolios, etc.
Time to administer	Refers to an estimated amount of time required to administer the measure or a subtest of the measure.
Reliability	Refers to one aspect of the technical adequacy of the measure. A range is reported in order to include information on sub-scores and total scores, as well as multiple informants. Internal consistency, test-retest, inter-rater, split-half are some of the types of reliability coefficients reported. A reliability of .8 or higher is preferred.
Comments	Brief descriptions of unique features.

Table 1: Authentic, Curriculum-Consistent Measures

Multi-domain Developmental Assessments	Age range	Standard		Type	Method	Time to administer	Reliability	Comments
		Early Learning	Kindergarten					
Ages and Stages Questionnaire (ASQ)	6 mo to 5 yrs	X	X	Norm-ref	Parent and teacher observation	10-30 min.	.44 to .58	
*Battelle Developmental Inventory (BDI), 2 nd Ed	0 to 8 yrs	X	X	Norm-ref	Individually administered	45-90 min. 10-30 min. for screener	.90 to .99	<i>Requires supervised training. Parental input for social areas.</i>
*Child Observation Record (COR) (High/Scope)	2.5 to 8 yrs	X	X	Criterion-ref	Teacher observation	Ongoing/Varies with classroom and child	.80 to .93	Training required. Parent report form.
Developmental Assessment of Young Children (DAYC)	0 to 6	X	X	Norm-ref	Teacher observation	10-20 min. per subtest	.94 to .99	
*Developmental Continuum (Creative Curriculum)	3 to 5 yrs	X		Criterion-ref	Teacher observation	Ongoing	.87 to .97	
Developmental Observation Checklist System (DOCS)	0 to 6 yrs	X	X	Norm-ref	Parent/teacher observation	30 min to complete 15-20 to score	.85 to .94	Instructions for use with special needs children.
*Early Screening Profiles Revised (ESP-R)	3.5 to 7 yrs	X	X	Norm-ref	Individually administered	15-30 min.	.66 to .91	Can be used for children with special needs. Cultural sensitivity not addressed. Home survey included.
Learning Accomplishment Profile-3 (LAP-3)	4 to 6 yrs	X	X	Criterion-ref	Individually administered	45 to 90 min.		
*Work Sampling System – 4 th Ed.	3 to 10 yrs	X	X	Criterion-ref	Teacher/parent observation	15 min for checklists	.87 to .94	Data collected through portfolios. Question and answer sheet for families.

Note: Though not all of the listed instruments were designed as “authentic” measures, many can be used in an observational or “authentic fashion”. Authentic methods are strongly encouraged whenever possible.

*Alignment at the indicator level was performed by the publisher rather than by an independent specialist.

Table 1 continued: Authentic, Curriculum-Consistent Measures

Assessments of Pre-academic Skills	Age range	Standard		Type	Method	Time to administer	Reliability	Comments
		Early Learning	Kindergarten					
Basic School Skills Inventory (BSSI-3)	4 to 7 yrs	X	X	Norm-ref	Teacher observation	5-8 min. per domain	.91 to .98	
Young Children’s Achievement Test (YCAT)	4 to 8	X	X	Norm-referenced	Individually administered	25 to 45 min.	.83 to .99	
Boehm Test of Basic Concepts (Boehm-R)	K to 7 yrs		X	Norm-referenced	Individually administered	45 min.	.55 to .87	
*Bracken Basic Concepts Scale - Rev. (BBCS-R)	2.5 to 8 yrs	X	X	Norm-ref	Individually administered	30 to 45 min.	.88 to .94	<i>Requires extensive training. Criterion referenced Spanish version. Shorter school readiness composite version.</i>
*Brigance Comprehensive Inventory of Basic Skills (CIBS-K)	0 to 5.5 yrs	X	X	Norm-ref & Criterion-ref	Individually administered	30 to 40 min.	.70 to .99	<i>Requires extensive training. Cultural sensitivity not specified. Computer scoring available. Shorter Screener version available.</i>
*Kaufman Survey of Early Academic and Language Skills (K-SEALS)	3 to 7 yrs	X	X	Norm-ref	Individually administered	15 to 20 min.	.88 to .94	

Note: Though not all of the listed instruments were designed as “authentic” measures, many can be used in an observational or "authentic fashion". Authentic methods are strongly encouraged whenever possible.

*Alignment at the indicator level was performed by the publisher rather than by an independent specialist.

Table 1 continued: Authentic, Curriculum-Consistent Measures

Social Emotional Instruments	Age range	Standard		Type	Method	Time to administer	Reliability	Comments
		Early Learning	Kindergarten					
Ages and Stages Questionnaire-Social/Emotional	6 to 60 months	X	X	Curriculum Based/ Criterion-Ref	Group/ Individual	10-15 min.	.82 to .94	Can be used in conjunction with other developmental screening tools
*Devereux Early Childhood Assessment Program (DECA)	2 to 5 years	X		Norm-ref	Teacher observation	~ 10 min.	.55 to .94	Includes curricular materials and classroom strategies. Spanish version available.
Preschool and Kindergarten Behavior Scales (PKBS-2)	3 to 6 yrs	X	X	Norm-ref	Teacher observation	8-12 min.	.81 to .97	Separate score conversion tables are available for home-based and school-based raters. Record forms available in Spanish.
Social Competence and Behavior Evaluation (SCBE)	2.5 to 6.5 yrs	X	X	Norm-ref	Teacher observation	~15 min.	.72 to .91	Teacher and Parent report. Spec. needs included. Interpretation requires clinical training. Available in Spanish & French. Reliable abbreviated version.
Social Skills Rating System (SSRS)	PreK form: 3 to 6 yrs Elem form: K to 6 grd	X	X	Norm-ref	Teacher observation	10-25 min.	.57 to .91	Parent observations. Training in psychological testing needed. Computer scoring available.
*Vineland Social-Emotional Early Childhood Scales (SEEC)	0 to 6 yrs	X	X	Norm-ref	Interview	15 to 25 min.	.71 to .79	Parent report. Interview conducted by trained interviewer.

Note: Though not all of the listed instruments were designed as “authentic” measures, many can be used in an observational or "authentic fashion". Authentic methods are strongly encouraged whenever possible.

*Alignment at the indicator level was performed by the publisher rather than by an independent specialist.

Table 2: Specific Early Learning Skills Measures

Reading/Pre-academics	Age range	Standard		Type	Method	Time to administer	Reliability	Comments
		Early Learning	Kindergarten					
Comprehensive Test of Phonological and Print Processing (CTOPP)	5 to 24 yrs		X	Norm-Ref	Individually administered	30 min	.70 to .92	
Pre-Comprehensive Test of Phonological and Print Processing (Pre-CTOPP) (under development)	3 to 6 yrs	X		Norm-Ref	Individually administered			Under Development
Dynamic Indicators of Basic Emergent Literacy Skills (DIBELS)	K to 3 rd grade		X		Individually administered	Screener 1-5 min.	.72 to .97	Designed to be short (one minute) fluency measure used to regularly monitor the development of pre-reading and early reading skills.
Early Literacy Skills Assessment (ESLA)	3 to 5 yrs	X	X	Criterion-Ref	Individually administered	30 min	.64 to .86	Conducted in the format of a storybook, stopping where indicated to ask questions
Get Ready To Read!	3.5 to 5 yrs	X			Individually administered	Screener 10-15 min.	.78	Validated Spanish version.
*Phonological Awareness Literacy Screening (PALS-PreK)	4 year olds	X		Criterion-Ref	Individually administered	20-25 min.	.75 to .94	Manual includes instructional interpretations of results. Internet data entry.
Phonological Awareness Literacy Screening (PALS-K)	5 to 6 yrs		X	Criterion-Ref	Individually administered	30 min.	.71 to .94	
Phonological Awareness Literacy Screening (PALS-1-3)	1 st to 3 rd grade		X	Criterion-Ref	Individually administered	30 min.	.86 to .92	
Test of Early Reading Ability, 3 rd Ed. (TERA-3)	3.5 to 8.5 yrs	X	X	Norm-ref diagnostic measure	Individually administered		.88 to .98	

Note: These instruments could be used in addition to the instruments in Table 1 for cases in which more detailed assessment of a specific developmental domain is warranted or desired.

*Alignment at the indicator level was performed by the publisher rather than by an independent specialist.

Table 2 Continued: Specific Early Learning Skills Measures

Language	Age range	Standard		Type	Method	Time to administer	Reliability	Comments
		Early Learning	Kindergarten					
Diagnostic Evaluation of Language Variation (DELV)	4 to 12 yrs		X	Criterion-ref	Individually administered	Screener: 10-15 min. Diagnostic: 45 min.	Not available yet.	Scores 1) degree of language variation & 2) risk for disorder. Sensitive to variations from mainstream English.
Preschool Language Scale - 4 rd Ed. (PLS-4)	0 to 7 yrs	X	X	Norm-ref	Individually administered	20-45 min.	.82 to .98	Validated and normed Spanish version.
Test of Early Language Development (TELD-3)	2 to 8 yrs	X	X	Norm-ref	Clinician administered	15 to 45 min		
Oral Written and Language Scales (OWLS)	3 to 22 yrs	X	X	Norm-ref	Individually administered	20 to 30 min. per subscale	.80 to .89	
Mathematics								
Test of Early Mathematics Ability-3 rd Ed. (TEMA-3)	3 to 9 yrs	X	X	Norm-ref or can be used as a diagnostic instrument	Individually administered	40 min	.80 to .94	A separate <i>Probes</i> guide provides a series of follow-up questions to be used after the standard testing to examine children's methods of solution

Table 3: Disability-Sensitive Measures

Name of Instrument	Age range	Standards		Type	Method	Time to administer	Reliability	Comments
		Early Learning	Kindergarten					
Adaptive Behavior Assessment Scale II (ABAS)	Birth to adulthood	X	X	Norm-ref/ Criterion Ref	Individually administered	15 min	.80 to .90	
Ages and Stages Questionnaire-Developmental (ASQ)	4 to 60 months	X	X	Curriculum-Based/ Criterion Ref	Group admin.	10-30 min.	.44 to .94	Evaluations at 4-month intervals.
Ages and Stages Questionnaire-Social/Emotional	6 to 60 months	X	X	Curriculum-Based/Criterion Ref	Group/ Individual	10-15 min.	.82 to .94	Can be used in conjunction with other developmental screening tools
Assessment, Evaluation, and Programming System (AEPS)	Birth to 6 yrs	X	X	Curriculum-Based/ Criterion Ref	Individually administered			It is useful and effective for close monitoring and individualized instruction
Carolina Curriculum for Preschoolers with Special Needs	24 to 60 months	X		Curriculum-Based/ Criterion Ref	Group/ Individual			
Communication and Symbolic Behavior Scale-Developmental Profile	8 months to 6 years	X	X	Curriculum-Based/ Criterion Ref	Individually administered	5-30 min.		
Every Move Counts	Young children with severe disabilities	X		Curriculum-Based/ Criterion Ref	Individually administered			
Pediatric Evaluation of Disability Inventory (PEDI)	8 mos to 6 yrs	X	X	Curriculum-Based/ Criterion Ref	Individually administered	45-60 min.	.79 to .99	
Project Oregon Curriculum for Blind and Visually Impaired Preschool Children	Birth to 6.0 years	X	X	Curriculum-Based/ Criterion ref	Individually administered			
Temperament and Atypical Behavior Scales (TABS)	11 to 71 months	X	X	Norm-ref/ Criterion Ref	Individually administered	5-15 min.	.84 to .95	

Table 4: Quick Glance of Coverage of Early Learning Standards for Pre-Kindergarten by the Curriculum-Consistent Measures

Name of Instrument	Approach To Learn	Exp Lang	Recept Lang	Compr-hension	Literacy	Logical Math	Personal Social	Physical Motor	Science	Social Studies	Creative Arts	Program Partners
Basic School Skills Inv (BSSI-3)	X	X	X	X	X	X	X					
*Battelle Dev. Inv. 2nd Ed. (BDI-2)	X	X	X	X	X	X	X	X	X	X	X	X
*Bracken Basic Concepts Scale - Rev. (BBCS-R)					X	X	X		X			
*Brigance (IED-2)		X	X	X	X	X	X	X				
*Kaufman Survey of Early Acad. and Language Skills (K-SEALS)	X	x	X		X	x						
*Child Observation Record (COR)	X	X	X	X	X	X	X	X			X	X
Dev. Assessment of Young Children (DAYC)	X	X	X	X	X	X	X	X				
*Dev. Continuum (Creative Curric.)	X	X	X	X	X	X	X	X	X	X	X	X
Dev. Obs. Checklist System (DOCS)	X	X	X	X	X	X	X	X				X
Early Screening Profiles (ESP-R)		X	X					X				
*Work Sampling System – 4 th Ed.		X	X	X	X	X	X	X	X	X	X	X
Young Children’s Achiev. Test (YCAT)		X			X	X						

Note that an “X” indicates coverage even if just at a *minimal* extent.

*Alignment at the indicator level was performed by the publisher rather than by an independent specialist.

Table 5: Quick Glance of Coverage of Early Learning Standards for Pre-Kindergarten by the Disability-Sensitive Measures

Name of Instrument	Approach To Learn	Exp Lang	Recept Lang	Compr-hension	Literacy	Logical Math	Personal Social	Physical Motor	Science	Social Studies	Creative Arts	Program Partners
Adaptive Behavior Assessment Scale II (ABAS)	X	X	X		X	X	X	X				
Ages and Stages Questionnaire-Devel.	X	X	X	X		X	X	X			X	
Ages and Stages Questionnaire-S/E	X	X	X				X				X	
Assessment, Evaluation, and Programming System (AEPS)	X	X	X		X	X	X	X			X	
Carolina Curriculum for Preschoolers with Special Needs	X	X	X		X	X	X	X			X	
Communication and Symbolic Behavior Scale-Developmental Profile	X	X	X		X	X	X				X	
Every Move Counts		X	X				X				X	
Pediatric Evaluation of Disability Inventory (PEDI)	X	X	X				X	X			X	
Project Oregon Curriculum for Blind and Visually Impaired Preschool Children	X	X	X		X	X	X	X			X	
Temperament and Atypical Behavior Scales (TABS)	X	X	X				X				X	

IX. CURRICULUM RESOURCES

Table 6 provides a shorthand overview of how extensively the curriculum products cover the Key Learning Areas of the Early Learning Standards. Note that an “X” indicates coverage even if just at a *minimal* extent.

Table 6: Quick Glance of Coverage of the Early Learning Standards by Early Childhood Curriculum Resources

Name of Curriculum Resource	Approach To Learn	Exp Lang	Recept Lang	Compr-hension	Literacy	Logical Math	Personal Social	Physical Motor	Science	Social Studies	Creative Arts	Parent Partners
Active Learning Series for 3s and 4s	X	X	X	X	X	X	X	X	X		X	
*Creative Curriculum	X	X	X	X	X	X	X	X	X	X	X	X
*High/Scope	X	X	X	X	X	X	X	X	X	X	X	X
*Innovations Comprehensive Preschool Curricula	X	X	X	X	X	X	X	X	X	X	X	X
*Opening the World of Learning (OWL)	X	X	X	X	X	X	X	X	X	X	X	

Forthcoming Comprehensive Curriculum materials for review include

- Houghton Mifflin Pre-K Curriculum
- Spark Curriculum for Early Childhood
- Developmental Learning Materials – DLM Childhood Express

Curriculum Materials for Specific Early Childhood Learning Standards Key Learning Areas

Literacy and Language

- Children’s Literacy Initiative Blueprint Curriculum
- Doors to Discovery
- Language for Learning
- Learning Language and Loving It
- Phonological Awareness in Young Children
- Preschool Ladders to Literacy
- Read Together, Talk Together
- Sing, Spell, Read & Write

Mathematics

- Big Math for Little Kids
- Building Blocks—Foundations for Mathematical Thinking, Pre-K to 2: Research-based Materials Development
- Distar Math 1 and 2
- Everyday Mathematics

Science

- Discovery Science: Exploration for the Early Years
- Worms, Shadows, and Whirlpools: Science in The Early Childhood Classroom

Social Skills

- Second Step Preschool/Kindergarten
- Peaceful Kids Conflict Resolution Program
- Preschool PATHS (Providing Alternative Thinking Strategies) Curriculum

X. WORKGROUP MEMBERS

Early Learning Standards Task Force’s Workgroup on Assessment and Curriculum and the Kindergarten Assessment Work Group

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XII. DEFINITIONS

Achievement test: Tests that examine skills that the child has already acquired.

Alignment: The process of linking content and performance standards to assessment, instruction and learning in classrooms.

Assessment: Not a “test”, rather a systematic procedure/process for obtaining information from observation, interviews, portfolios, projects, tests, and other sources that can be used to make judgments about children’s characteristics. There are many purposes of assessment. Tools designed for one purpose are in most cases inappropriate to use for a purpose other than that which they were intended.

Criterion-referenced: An assessment in which a student’s response(s) is compared to a level of performance in an area of knowledge or skill, rather than to a group of children or normative group. Results are typically reported as levels of proficiency, such as emerging skill or mastery.

Curriculum: A body of material that defines the content to be taught and the methods to be used. Information organized on a specific topic; a set of topic specific information created for a defined group.

Developmentally appropriate: Decisions about the well-being and education of children based on at least three important kinds of information or knowledge: what is known about child development and learning, what is know about the strengths, interests, and needs of each individual child in the group, and knowledge of the social and cultural context in which children live (Bredenkamp & Copple, 1997).

Documentation: The process of keeping track of and preserving children’s work as evidence of their progress.

Early Learning Standards: Statements that describe expectations for the learning and development of young children 3 to 5 years of age.

Field tested: The use of an instrument in realistic settings that leads to the validation and reliability of its use.

Formative assessment: Assessments that examine student learning for the purpose of improving the quality of teaching and student learning and not for evaluating individual students. These types of assessments are often conducted at the beginning of the year and are ongoing.

Guidelines: A description of suggested elements aimed to accomplish a defined activity.

Implementation: The process of taking a planned curriculum, assessment system or evaluation design and making it happen in ways that are consistent with the plan and desired results.

Norm-referenced: A standardized testing instrument by which the person's performance is interpreted in relation to the performance of a group of peers who have previously taken the same test – a “norming” group.

Observational assessment: Assessment based on teachers' systematic recordings and analysis of children's behavior in real-life situations.

Outcomes: Desired results for young children's learning and development across multiple domains.

Performance: Behaviors exhibited while putting into action specific skills.

Reliability: The consistency of an assessment tool (being free of error); important for generalizing about children's learning and development. Reliability is represented by a figure between .00 and 1.0, such that values closer to 1.0 indicate better reliability.

Screening: The use of a brief procedure or instrument designed to identify, from within a large population of children, those children who may need further assessment to verify developmental and/or health risks.

Skills: The ability of students to use knowledge effectively and readily in performance, the ability to transform knowledge into action.

Standardized: An assessment with clearly specified administration and scoring procedures and normative data.

Standards-based assessment: A process through which the criteria for assessment are derived directly from content and/or performance standards.

Standards-based instruction: Instructional practices designed to help every child achieve the standards.

Summative assessment: Assessment that summarizes student learning to gauge if students have met program goals and objectives. Most standardized tests are summative and are not designed to provide feedback during the learning process. These types of assessments are usually conducted at the end of the school year.

Validity: The extent to which a measure or assessment tool measures what it was designed to measure. This is represented by a figure between .00 and 1.0, such that values closer to 1.0 indicate better validity.

*Definitions based largely on the work of the *National Association for the Education of Young Children (NAEYC)* and the *National Association of Early Childhood Specialists in State Departments of Education*. Other definitions can be found at “The words we use: A glossary of terms for Early Childhood Education Standards and Assessments,” developed by the *State Collaborative on Assessment and Student Standards (SCASS)*. Online at http://www.ccsso.org/projects/SCASS/projects/early_childhood_education_assessment_consortium/publications_and_products/2838.cfm