



EARLY LEARNING SCALE

Preschool Assessment



✓ *Authentic*

- Observation-based assessment
- Easy to integrate into everyday classroom activities

✓ *Flexible*

- Aligns with any preschool curriculum
- Appropriate for all students

✓ *Manageable*

- Practical for teachers of all experience
- Data collection is meaningful and simple

✓ *Reliable*

- Based on the latest research
- Reliability-tested

NATIONAL INSTITUTE FOR EARLY EDUCATION RESEARCH



Developed in conjunction with
THE CENTER
Resources for Teaching and Learning

Published by

Lakeshore®

NIEER

About NIEER

An affiliate of Rutgers, the State University of New Jersey, the *National Institute for Early Education Research (NIEER)* conducts and communicates research to support high-quality, early childhood education. In addition, *NIEER* offers professional development as well as independent research-based advice and other technical assistance throughout the United States.



About THE CENTER

Nationally recognized for its many contributions to education from early through adult learning, *The Center: Resources for Teaching & Learning* provides a wide range of professional development services and instructional resources for educators. In addition, *The Center* specializes in the development of technology systems designed to automate data collection & reporting with the goal of improving academic outcomes for all learners.

About Lakeshore

A leading manufacturer of educational materials for 58 years, Lakeshore's goal in publishing the ELS is to support *NIEER* and *The Center* in their efforts to provide early learning programs with the most effective and practical assessment tools available.



The ELS & Assessment

*Assessment doesn't have
to be overwhelming.*

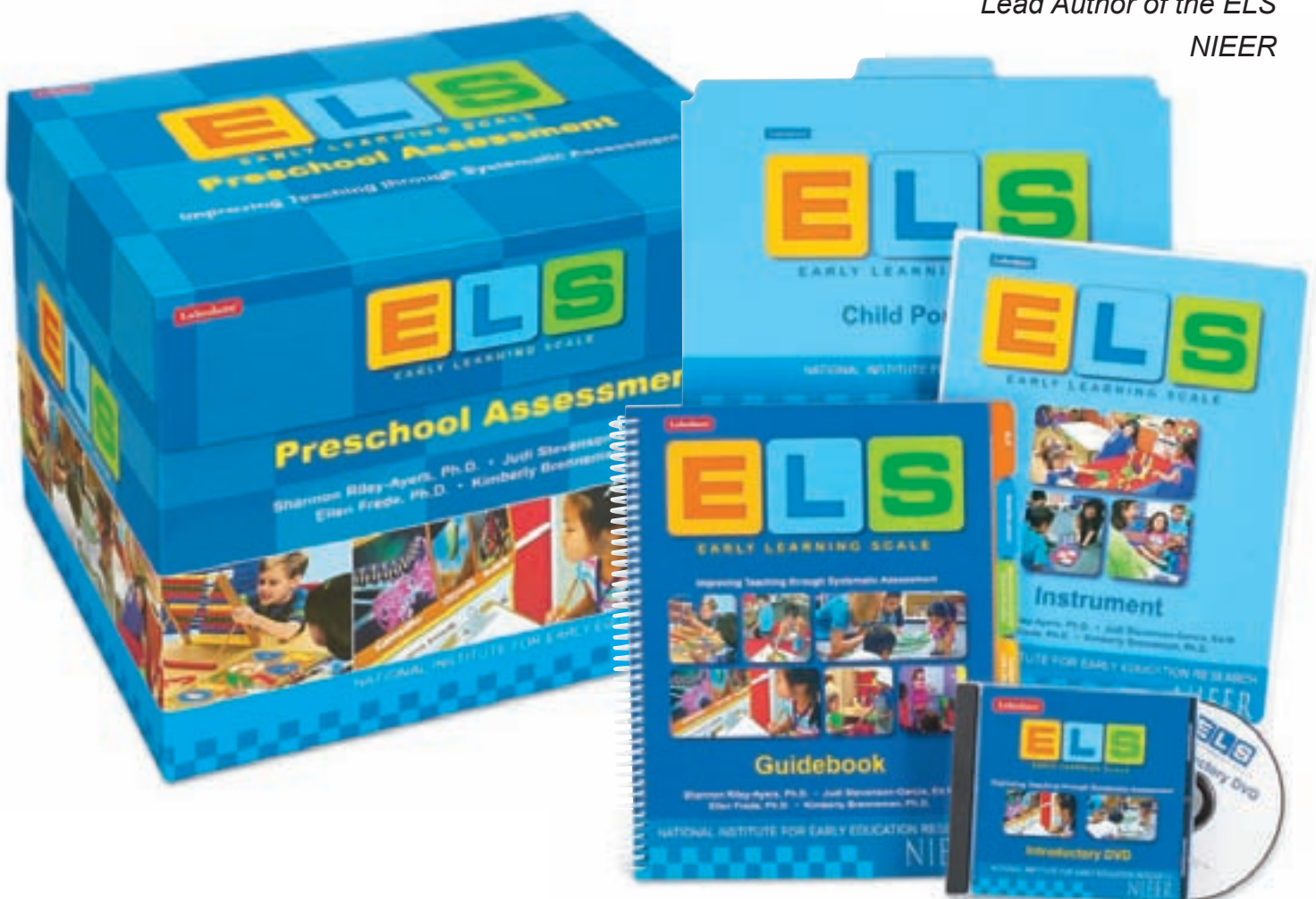
Introducing the ELS.

In this era of standards and accountability, we understand the anxiety educators feel when they hear the word “assessment.” But by focusing on key aspects of learning, assessment can be a practical tool for understanding a child’s development and informing instruction. As the following pages will show, the ELS (Early Learning Scale) provides teachers & administrators with the tools they need to assess *all* students—in a concise, manageable manner that uses rich data to improve learning and quality of instruction at the same time.

Shannon Riley-Ayers, Ph.D.

Lead Author of the ELS

NIEER



Why Choose the ELS?

✓ *It's Authentic*

The ELS is an informal, observation-based assessment that measures children's performance over time and in the context of typical, daily activities.

By assessing performance in real classroom situations over three scoring cycles annually, the ELS makes it possible for educators to effectively:

- Assess progress toward early learning standards
- Inform teaching and plan instruction
- Communicate with parents & caregivers



✓ *It's Flexible*

The ELS is not specific to any curriculum—making it a great fit for almost any early learning program designed for 3- to 5-year-olds. So, who is the ELS for?

- Typically developing children
- Children with special needs
- Advanced children
- English language learners



✓ *It's Manageable*

Designed specifically for teachers of all levels of experience, the ELS measures 10 key items across three domains.

The domains of the ELS are Math/Science, Social-Emotional/Social Studies, and Language and Literacy. The items within each domain (see pages 10-11) have been carefully selected based on the following criteria:

- They are measurable
- They develop on a continuum
- They are critical to present and future learning

The ELS also includes the Arts & Physical Development in the collection of data, but does not score on a continuum for these domains.



✓ *It's Reliable*

As documented in the research, the ELS is a reliable assessment system. With an inter-rater reliability of 76%, it is one of the most effective assessments available.

For complete information on the ELS's inter-rater reliability and concurrent validity, **view the full technical report at www.nieer.org.**



The Research

The ELS

Drawing on extensive early childhood research and longitudinal studies from over 75 authors and experts in the field, the ELS is a systematic assessment used to assess children's progress toward learning standards and expectations, including the *Head Start Child Development and Early Learning Framework*.

Rationales

The ELS guides instruction along a developmental continuum

A primary function of assessment is to guide instructional decisions in the classroom—a component of any high-quality early childhood program (*National Association for the Education of Young Children and National Association of Early Childhood Specialists in State Departments of Education*, 2009).

The ELS is a systematic assessment that measures progress over time

Effective assessment requires teachers to observe children over time and in varied situations—in which educators interact with students while simultaneously observing their behavior to assess what each child is capable of doing (Jablon, Dombro, and Dichtelmiller, 2007).

The ELS is an authentic, observation-based assessment

Performance-based assessments are important for young children in particular because performance can vary widely from one day to the next. As such, performance-based assessments are able to capture children's skills and knowledge in real experiences over time. This manner of assessment compares children to themselves, focusing on their strengths and interests (Riley-Ayers, Stevenson-Garcia, Frede, and Brennemann, 2011).

The ELS helps educators evaluate program effectiveness

The data for individual children can be aggregated to examine the needs of a program or center as a whole (National Research Council, 2008). Professional development interventions, materials or other supports can then be put into place based on these findings.

Reliability

Teacher reliability was examined with 125 educators trained in the use of the ELS. Inter-rater agreement was determined by comparing participants' scores on data to the true scores agreed upon by experts in the field. The average inter-rater reliability for this sample was 76%, which is above that or comparable to other highly regarded performance-based assessments.

Validity

The statistical measure of Cronbach's alpha demonstrated high internal consistency at .91 for the ELS. Concurrent validity was examined using the *Early Literacy Skills Assessment* (DeBruin-Parecki, 2005) and the *Child Math Assessment* (Klein & Starkey, 2006). Appropriate levels of correlation were found between these measures and the ELS for the 285 children assessed.

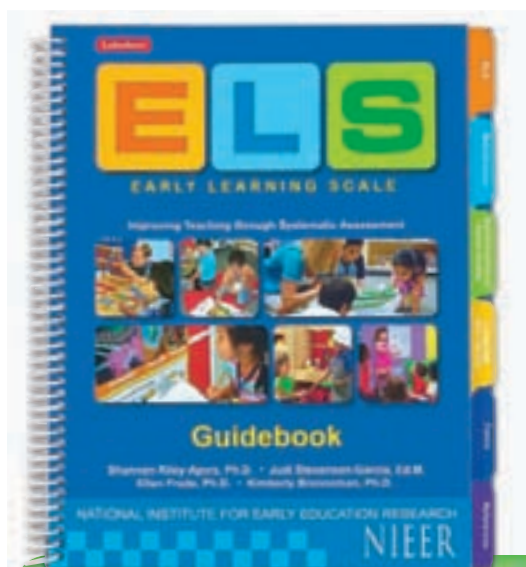
The Assessment Process

Assessment and instruction are truly interrelated and connected.



The ELS makes it easy to collect rich data that can be used to make accurate evaluations and inform teaching.

Components of the ELS



The Early Learning Scale Poster

- At-a-glance reference for teachers
- Includes each domain's items and strands

Math/Science					
1. Number and Numerical Operations					
• Functional Counting					
• Numerical Operations					
• Written Numbers					
2. Classification and Algebraic Thinking					
• Classification					
• Algebraic Thinking					
3. Geometry and Measurement					
• Identifying and Using Shapes					
• Measurement					
4. Scientific Inquiry					
• Observation and Reporting					
• Prediction					
• Investigation					
Social-Emotional/Social Studies					
5. Self-Regulation					
• Independent Behavior					
• Regulation of Emotions and Behavior					
• Prosocial Behavior					
• Social Problem Solving					
6. Play					
• Quality and Attributes of Engagement and Exploration					
• Quality and Attributes of Cooperative Play					
• Quality and Attributes of Sociodramatic Play					

The Guidebook

- Provides system overview and research base
- Includes detailed continuum descriptors
- Support for teachers

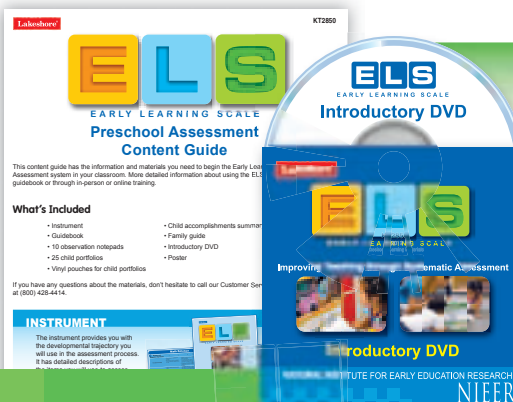
Math/Science					
1. Number and Numerical Operations					
Functional Counting	1	2	3	4	5
	• Shows interest in numbers and counting.	• Recognizes numbers in form, but not always accurately.	• Counts items accurately up to 10.	• Knows the number words and can extend the decade pattern beyond 20.	
	• May be able to use the numbers 1, 2, or 3 to label the number of items in a set.	• Knows the words for numbers 1 to 10 and begins to use the sequence for numbers 11 to 10.	• Recognizes that the last number named is the number of items in the set.		
Numerical Operations	1	2	3	4	5
	• Plays with adding and taking away items.	• Understands that there are more when items are combined and that there are less when items are taken away.	• Makes and/or counts out items when items are combined and/or taken away.	• Uses strategies to add or subtract from numbers 1 to 10.	
Written Numbers	1	2	3	4	5
	• Notices and identifies written numbers.	• Understands that numbers represent some quantity.	• Knows and writes some numbers and understands that they represent quantity.		
2. Classification and Algebraic Thinking					
Classification	1	2	3	4	5
	• Notices similar attributes.	• Sorts items based on similar attributes.	• Determines how to classify a group of items and labels the group using familiar vocabulary.		
Algebraic Thinking	1	2	3	4	5
	• Recognizes a simple pattern.	• Notices missing parts of a simple pattern.	• Finds patterns and extends simple patterns.		
3. Geometry and Measurement					
Identifying and Using Shapes	1	2	3	4	5
	• Identifies circles and squares.	• Identifies common shapes.	• Identifies additional shapes and finds their names.		
Measurement	1	2	3	4	5
	• Notices large differences in size.	• Makes direct comparisons of the length, weight, volume, height, or area of two objects or groups.	• Uses standard and/or nonstandard tools to measure length, weight, volume, or height.		
4. Scientific Inquiry					
Observation and Reporting	1	2	3	4	5
	• May provide simple comments about observed objects and phenomena.	• Gives informative descriptions about observed phenomena, but does not generate explanations for observed events.	• Elaborates on what is observed by comparing and contrasting objects and events.		
Prediction	1	2	3	4	5
	• Provides no predictions during scientific exploration.	• Provides no predictions, but does not provide support or give any logical reasons.	• Gives simple predictions about observed phenomena and provides logical support for predictions.		
Investigation	1	2	3	4	5
	• May comment on phenomena, but does not ask meaning questions.	• Generates questions, but does not provide a plan for investigation.	• Investigates specific questions through methods in the using tools, the record, and/or research techniques.		

Social-Emotional/Social Studies					
5. Self-Regulation					
Independent Behavior	1	2	3	4	5
	• Needs teacher support to move through the discussion.	• Needs reminders to move through the discussion.	• Moves through the discussion without reminders.		
Regulation of Emotions and Behavior	1	2	3	4	5
	• Does not regulate behavior or emotions and acts out on impulse.	• Needs reminders and redirection to control behavior.	• Expresses needs and feelings verbally without loss of expression and may request support.		
Prosocial Behavior	1	2	3	4	5
	• Does not take turns or share materials with others.	• Needs reminders from the teacher to share and take turns.	• Shows turns in play and conversation.		
Social Problem Solving	1	2	3	4	5
	• Does not recognize others' feelings, but does not take turns from others or her own feelings.	• Has some understanding of others' feelings, but does not take turns from others or her own feelings.	• Expresses needs and feelings verbally without loss of expression and may request support.		
6. Play					
Quality and Attributes of Engagement and Exploration	1	2	3	4	5
	• Does not engage with materials independently.	• Chooses materials, but needs support to engage and extend play.	• Engages in purposeful activity for most of the time while moving independently from one activity to another.		
Quality and Attributes of Cooperative Play	1	2	3	4	5
	• Usually plays alone.	• Engages in associative play (grouping in separate activities, but interests in sharing toys or commenting on each other's play).	• Expresses ideas for activities and acknowledges others' and nonverbal needs.		
Quality and Attributes of Sociodramatic Play	1	2	3	4	5
	• Engages in social play with others.	• Pretend play is simple.	• Play has defined roles and story lines, such as teacher, student, family, and community roles.		

Language and Literacy					
7. Oral Language					
Speaking	1	2	3	4	5
	• Uses gestures to communicate.	• Responds using simple sentences.	• Uses complex sentences and stringing sentences.		
Storytelling	1	2	3	4	5
	• Tells simple stories using pictures, but with little connection to the actual story line.	• Tells simple stories with some connections, but may offer some facts.	• Tells simple stories with some connections and details.		
8. Phonological Awareness					
Language Manipulation	1	2	3	4	5
	• Responds to rhymes and music.	• Recognizes parts of rhymes and words.	• Understands concept of rhyming and is able to choose at least one rhyming word.		
Print Awareness	1	2	3	4	5
	• Identifies few letters, if any.	• Identifies some letters.	• Identifies many letters and may connect about letters in the environment.		
9. Alphabetic Awareness					
Print Knowledge	1	2	3	4	5
	• Does not recognize that print carries meaning.	• Recognizes that print has meaning and connects about letters in the environment.	• Understands that print is used for different functions.		
Writing	1	2	3	4	5
	• May identify something as "writing" or "reading."	• Writes letters own "writing" or "reading."	• Writes symbols for a purposeful message (information or tell a story).		
10. Composing					
Production	1	2	3	4	5
	• Does not write.	• Writes letters own "writing" or "reading."	• Writes symbols for a purposeful message (information or tell a story).		

The ELS Instrument

- Includes domains, items, strands & indicators
- Provides a developmental trajectory with a 5-point scoring continuum



Content Guide and DVD

- Summary of the ELS
- Examples of use in the classroom
- Expert opinion



25 Child Portfolios

- Stores work samples
- Organizes observation notes by score period
- Includes score record form for complete scoring cycle



10 Observation Notepads

- Record anecdotal observations
- Connect anecdotes to domains & items observed
- Sized to fit in pockets for easy access



100 Child Accomplishments Summaries

- Summarizes development and learning
- Ideal for sharing with parents, caregivers and peers
- Provides next steps plus suggestions for home



25 English/Spanish Family Guides

- Describes the ELS in parent-friendly terms
- Stresses importance of play as method of learning
- Includes activities for supporting learning goals at home

The Early Learning Scale

The goal of the ELS is to improve teaching and learning in a practical way. That's why the authors at NIEER chose to cover three domains and ten items most critical to future learning. Each item is divided into strands based on current early learning standards and expectations. Plus, each strand features observable indicators scored on a 5-point continuum—so it's easy to assess progress and plan instruction quickly and efficiently.

Math/Science						
1	Number and Numerical Operations	1	2	3	4	5
ITEM	Counting	<ul style="list-style-type: none">Shows interest in numbers and countingMay be able to use the numbers 1, 2, or 3 to label the number of items in a set	<ul style="list-style-type: none">Assigns numbers to items, but not always accuratelyKnows the words for numbers 1 to 10 and begins to learn the sequence for numbers 11 to 19Recognizes that the last number counted is the number of items in the group	<ul style="list-style-type: none">Counts items accurately up to 15Knows the number words and can extend the decade pattern beyond 29		
	Numerical Operations	<ul style="list-style-type: none">Plays by adding and taking away itemsDepends on visual cues to determine which of two sets has more or less	<ul style="list-style-type: none">Understands that there are more when items are combined and less when some items are taken awayCan solve "put together" or "take away" problems with sets ≤ 5	<ul style="list-style-type: none">Matches and/or counts small sets to determine which has moreUses strategies to add to or subtract from numbers ≤ 8		
	Written Numbers	<ul style="list-style-type: none">Not able to identify written numerals	<ul style="list-style-type: none">Distinguishes numerals from letters or identifies some numeralsAttempts to write some numerals	<ul style="list-style-type: none">Identifies and writes some numerals and understands that they represent quantity		
2	Classification and Algebraic Thinking	1	2	3	4	5
STRAND	Classification	<ul style="list-style-type: none">Notices similar attributes	<ul style="list-style-type: none">Sorts items based on similar attributes	<ul style="list-style-type: none">Determines how to classify a group of items and tells about the group using relevant vocabulary		
	Algebraic Thinking	<ul style="list-style-type: none">Recognizes a simple pattern	<ul style="list-style-type: none">Identifies missing parts of a simple patternReplicates and extends simple patterns	<ul style="list-style-type: none">Replicates and extends longer and more complex patterns		
3	Geometry and Measurement	1	2	3	4	5
	Identifying and Using Shapes	<ul style="list-style-type: none">Identifies circle and squareTakes objects apart and fits objects together	<ul style="list-style-type: none">Identifies common shapesTurns and flips shapes intentionally to determine congruency or solve a puzzle	<ul style="list-style-type: none">Identifies additional shapes and irregular shapesCompares 2- and/or 3-dimensional shapes by attributeUses knowledge of shape properties to solve problems		
	Measurement	<ul style="list-style-type: none">Notices large differences in size	<ul style="list-style-type: none">Makes direct comparisons of the length, weight, volume, height, or area of materials or objects	<ul style="list-style-type: none">Uses standard and/or nonstandard tools to measure length, height, volume, or weightUses a common base when comparing length or height		
4	Scientific Inquiry	1	2			5
	Observation and Reporting	<ul style="list-style-type: none">May provide simple comments about observed objects and phenomena	<ul style="list-style-type: none">Gives simple descriptions of what is observed by using words and simple drawingsDoes not generate explanations for observed events	<ul style="list-style-type: none">Generates simple explanations for what is observed by using words and simple drawingsDraws simple conclusions about cause-and-effect relationships during informal or teacher-led	<ul style="list-style-type: none">Observes and contrasts objects and events	<ul style="list-style-type: none">Observes and contrasts objects and events
INDICATOR						

Domains

Math/Science

Item 1: Number and Numerical Operations

Item 2: Classification and Algebraic Thinking

Item 3: Geometry and Measurement

Item 4: Scientific Inquiry

From basic counting and measurement to identifying shapes and observing the natural world, the strands within these items target those math and science skills that are the true building blocks of future learning and academic success.

Social-Emotional/Social Studies

Item 5: Self-Regulation

Item 6: Play

Current research indicates that unless children achieve a degree of social competence by the age of 6, they have a high probability of being at risk throughout their lives. By focusing on skills related to self-regulation, prosocial behavior and cooperative play among others, the ELS provides teachers with an accurate and appropriate measure of each child's social development.

Language and Literacy

Item 7: Oral Language

Item 8: Phonological Awareness

Item 9: Print Awareness

Item 10: Writing

Given the pivotal role teachers play in supporting early language development, the authors of the ELS focused on those items that support core aspects of later literacy and language competence.

Speaking in sentences of varying complexity, retelling familiar stories, identifying letters as well as writing them—the ELS uses pragmatic indicators like these to help teachers make valid assessments of each child.

The Arts and Physical Development

While not scored on the ELS, a research base and data collection are provided for these two domains.

The Arts

Even at the preschool level, standards often indicate that children should explore the arts in an appropriate capacity. While this is cognitively and emotionally beneficial, progress is difficult to document objectively, and not conducive to placement on a continuum such as the ELS.

Physical Development

Physical development—especially at a young age—is best assessed through direct testing of skills using a checklist format rather than a continuum.

Support for Teachers

Sample Anecdotes

In addition to a comprehensive introduction to the ELS as well as its domains, the Guidebook features sample observational anecdotes as exemplars for teachers.

Outside

The students find an unusual rock while on a walk in the neighborhood. Suraj asks to take it back to the classroom so he can observe it with a magnifier. While he looks at it with the magnifier, he asks the teacher what kind of rock it is. She says she doesn't know, but she wonders if he has any ideas how they could find out. Suraj suggests looking in a book about rocks.

Maria and Bryan are digging next to the fence. They are very excited to discover a worm. Maria asks if she can pick it up and move it so she can watch how it moves. She observes carefully, saying, "It wiggles and wiggles like this. Except it doesn't have legs like me!" She starts dancing and wiggling. Then she says, "Hey, guys, do the worm dance with me! Wiggle like this!" Bryan and other classmates join Maria's dance, giggling.

Discovery Center

The teacher asks, "Which side of the scale do you think will go down if I put the heavy cylinder in this bucket?" Sabrina responds, "Oh, this side, with the heavy one, because it's heavy."

The class has been growing bean seeds. Kadejah is recording the plants' growth in her science journal. She says, "I need green 'cause it's green." When her drawing is complete, she makes some linear marks and says, "See? I wrote the name right there."

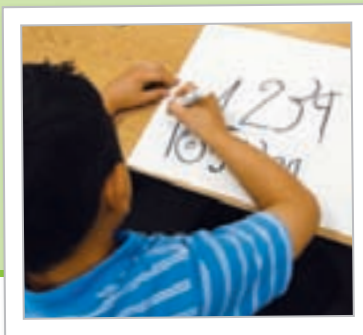
Block Area

Jose says, "I can put these shapes on the slides and see what comes first. Look, this one will win." The teacher asks him why that one will win, and he says, "Because that one is really round, like a ball. So it will come first. The other one is not so round, so it will lose."

Manipulatives

Jared is playing with the balance scale and beads. He puts all the small beads on one side and the large beads on the other side. When the side with the large beads goes down, Jared says, "Hmm...how come that side is down?" He looks at the side with the small beads, saying, "There's more beads in here."

- Use children's natural interests in numbers to decide which materials and activities to provide for them. Many materials should be available that encourage counting and are easy for children to count. There should also be many materials that present number symbols in various ways, and children should be encouraged to write number symbols in ways that are purposeful.
- Assist children in counting activities and encourage them to compare and contrast groups of objects. Note children's counting errors.
- Ask open-ended or thought-provoking follow-up questions to children's experiences with manipulatives, in order to discover how they are thinking informally about quantity or numerical operations.



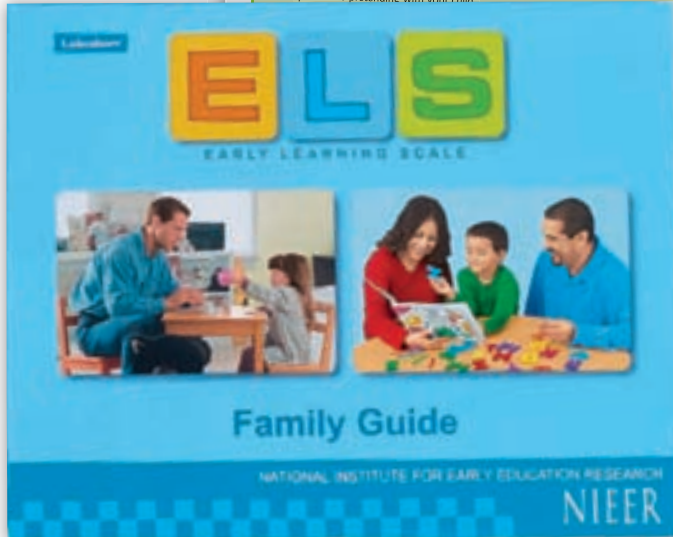
Ideas for Teaching and Documenting

The Guidebook also provides teaching tips & activities that target each item of the ELS—plus it includes lists of published resources that are easy to read and accessible to all teachers.

Support for Families

Social-Emotional/Social Studies

- Provide choices and encourage your child to make decisions. For example, "Would you like to wear your blue shirt or your white shirt today?"
- Invite your child to take responsibility for some tasks, such as putting empty cans into the recycling bin.
- After reading a story, discuss the characters' feelings and motives. Why did they do what they did?
- Read books about friends cooperating and working together to achieve a goal.
- Help your child identify and talk about his feelings. For example, "I can tell you feel angry by the way you're standing. Let's take some deep breaths, and then we'll talk about why you're angry and what we can do about it."
- Tell your child about your own feelings. You might say, "I'm upset because it's raining and we can't go to the park like we wanted to. You probably feel upset, too. But I think we can have a good time drawing pictures instead."
- Watch your child as she plays with other children. Note how she handles problems that arise. Talk about it later.
- Spend time pretending with your child.



Connecting with Parents

A primary goal of the ELS is to help parents and caregivers become active partners in their child's education. The English/Spanish Family Guides come complete with:

- An introductory letter for families
- An overview of the ELS
- Tips for creating a successful teacher/parent partnership
- Practical activities for the home that correspond to the domains of the ELS

Sharing Progress & Data

Child Accomplishments Summaries provide a narrative of each child's development and help educators plan instruction based on the collected data. Plus, they provide teachers with a practical way to discuss child performance with parents and caregivers.

Use at formal parent/teacher conferences to:

- Guide discussion
- Pinpoint areas for reinforcement at home
- Give parents an opportunity to share observations about their child

Child Accomplishments Summary	
Child's Name: <u>Jaclyn</u> Teachers: <u>Ms. Smith</u> School: <u>Mulberry</u> Score Period: <u>Winter</u>	
Math/Science	
Jaclyn counts items accurately to five, understands there are more when items are combined, and writes numbers in her play area. She is able to sort items and tell about the groups (such as when she sorted the foods for the refrigerator and freezer). She is able to extend a simple pattern and identify several common shapes. In science, she is able to report observations, offer predictions, and investigate specific questions (as shown when she was exploring the snow in the water table). We will explore more science concepts throughout the year and encourage Jaclyn to expand her reporting and observing and offer support for her predictions. Hands-on work with numbers and counting will extend her counting accurately beyond five and enhance her concept of numbers.	
Social-Emotional/Social Studies	
Jaclyn moves through the classroom routines with minimal teacher direction, and she expresses her needs and feelings verbally without aggression. We will continue to take turns in play to practice sharing and working with friends in conflict. Jaclyn's play is well developed in that she explores and experiments with a wide variety of materials in her classroom, successfully enters play, and has defined roles and story lines in her play. She is often drawn to the play area, where she plays with friends to act out a mom caring for her sick babies or shopping.	
Language and Literacy	
The Arts	
Physical Development	
Additional Comments	

The ELS Online

My ELS Online

For preschool programs that are online-capable, the ELS is also available in a paperless format over the Internet.

At myelsonline.com, the online version of the ELS scores just like the print version—only the data is available for immediate analysis. The website also features narrated, step-by-step videos that instruct teachers on how to use myelsonline.com—from adding student information to scoring and reporting.

In addition to other valuable features, myelsonline.com allows users to record demographic information and compare data by student, across the class or across the entire program.



Handheld Capabilities

Recording off-line anecdotal observations is fast, efficient...and saves valuable time in the classroom.

Using a smart phone or tablet, teachers can record observations in real time, then upload them to myelsonline.com—where observations will be automatically linked to items on the ELS! No pen, no paper and no delay in planning or assessment.

At present, handheld capabilities require a Wi-Fi connection and the use of an iPad®, iPhone®, iPod touch® or devices running the Android™ OS with the Google Chrome™ browser.

Training and Support

In-Person Training

Flexible, live training offers an in-depth experience that provides insight into the role of assessment—and verifies the effectiveness of the ELS in the classroom.

From a one-day, live kick-off session supported by online professional development to five days of intensive, in-person training, we will customize training to fit your needs and your budget. Just tell us what you need—and we'll make it happen.



Online Training

This interactive option is self-paced so teachers can complete their ELS training in a time frame that's convenient for them.

Along with covering the same material as the live training, this version allows participants to review their online training sessions at any time for a brief refresher course.



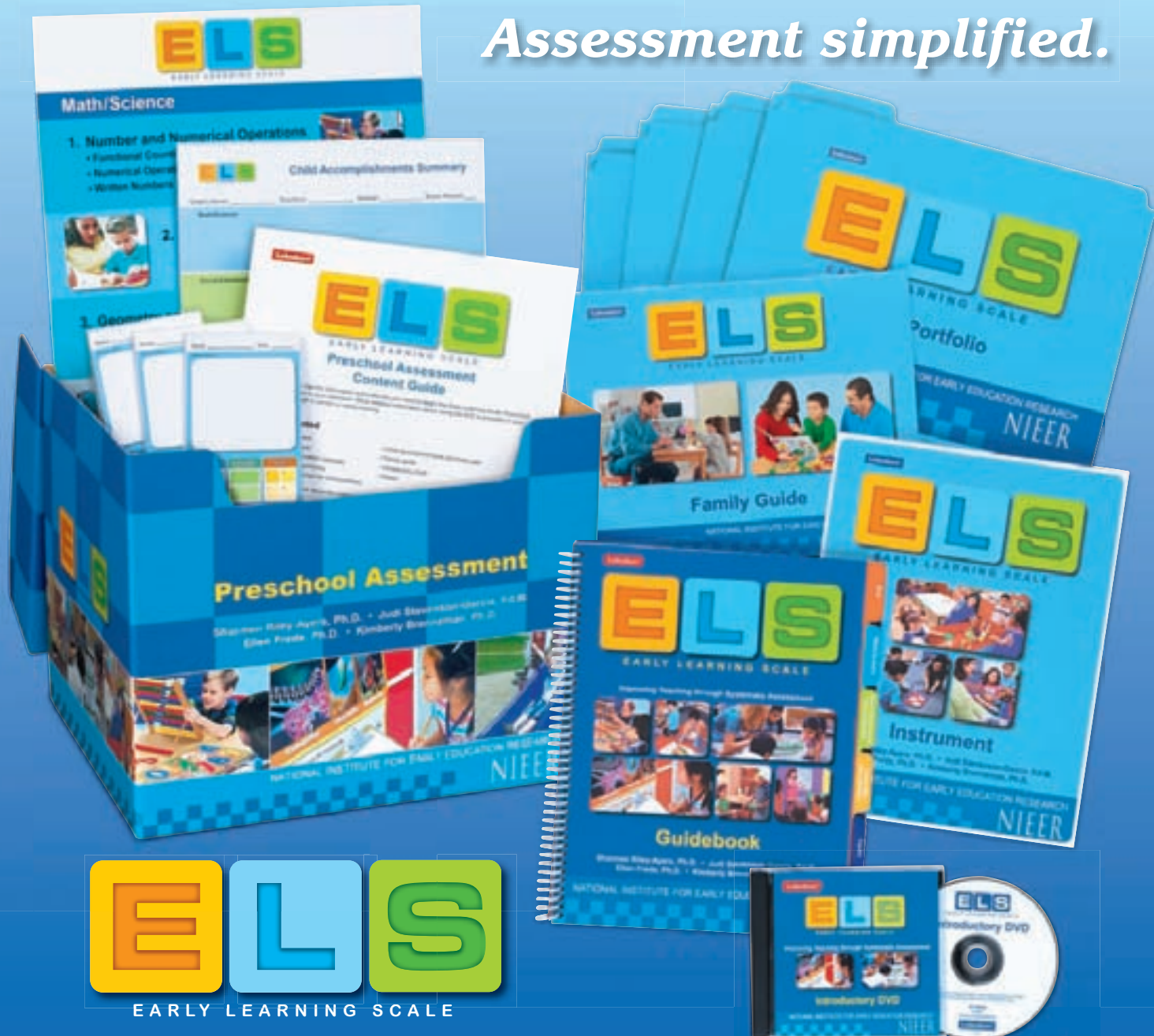
Reliability Certification

The final step in live or online training.

Essential to the effective, long-term use of the ELS, online certification is available to all participants who complete the training.

The Early Learning Scale

Assessment simplified.



"The ELS extends credibility to pre-k teaching. It provides a comprehensive framework that offers integrity within our field of expertise...and has the potential to drive excellence across a variety of learning environments."

Melissa Workman
Associate Director/Pre-K Teacher
West Virginia University Preschool

Published by

Lakeshore®

(800) 421-5354

To learn more about the ELS, contact us
at your convenience.