

# Measuring Quality in Early Care and Education: Updated Tool Comparison (CLASS & ECERS-3)

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# CLASS & ECERS-3 Crosswalk

## Introduction:

The purpose of this document is to provide an updated content analysis of the Early Childhood Environment Rating Scale (ECERS-3; Harms, Clifford, & Cryer, 2014) with the Classroom Assessment Scoring System (CLASS; Pianta, LaParo, & Hamre, 2008). Improving on its predecessor, the ECERS-R (Revised Edition, Harms, Clifford, & Cryer, 2005), the ECERS-3 now puts more emphasis on the role of the teacher in creating an environment conducive to developmental gains.

In comparing these two measures, the ECERS-3 focuses on very specific and tightly defined components of teaching and children's experiences in the center itself, whereas the CLASS was designed to measure interactions between teachers and children in the classroom, and is more broadly aimed at concepts that lead to high-quality instruction. The CLASS does not measure the physical environment or provision of materials, such as high-quality physical facilities, well-established and robust health and safety practices, and use of a varied, well-developed curriculum. Theoretically and empirically, the structural components of the classroom would provide teachers with the materials needed to optimally interact with students. Therefore, the CLASS and ECERS have historically complemented one another – with the elements assessed with the CLASS building on the elements assessed with the ECERS.

A previous content comparison<sup>1</sup> suggests the ECERS-R had a modest overlap with the CLASS, however results of our updated comparison show there is now a much larger overlap between the tools. Of the total 42 items on the CLASS measure, nearly three quarters (71%) are rated as “somewhat represented” or “clearly represented” in ECERS-3. The clusters “Positive Climate”, “Teacher Sensitivity”, and “Regard for Student Perspectives”, are especially well matched in ECER-3. As a result, the ECERS-3 clearly represents a significant improvement over the ECERS-R in assessment of quality teacher-child interaction.

While this improvement is promising, empirical studies of children's outcomes that include measurement of the environment with both the CLASS and ECERS-3 are needed. Further, the revision of the Infant Toddler Environmental Rating Scale (ITERS-3) has become available since our review, and future research should consider an ITERS-3/Infant and Toddler CLASS comparison.

## Crosswalk Methods:

Items in the CLASS represent a concept of high quality instruction that could be applied or recognized in a variety of situations. In addition to the overall concept title, each individual item consists of 3-5 sub areas that are components, and further descriptors of that item. For example, “Punitive Control” is made up of 1) yelling, 2) threats, 3) physical control, and 4) harsh punishment. In addition to a narrative-style grading matrix, a small side bar description on each page gives a more concrete sense of what that item meant to measure on what different levels of adherence or presence might look like in-person.

When rating each CLASS item's fit within ECERS-3, we considered two things:

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<sup>1</sup> McKelvey, L. M., Chapin-Critz, M., Johnson, L., Bokony, P.A., Conners-Burrow, N.A., Whiteside-Mansell, L. (2010). *Better Beginnings: Evaluating Arkansas' path to better child outcomes*. University of Arkansas for Medical Sciences. Funded by and prepared for the Arkansas Department of Human Services' Division of Child Care and Early Childhood Education.

1. The total number of times a CLASS item matched well with any ECERS-3 item
2. The percentage of each CLASS item's sub-areas that were involved in those matches

For example, some CLASS items like Punitive Control have a small number of overall matches (5) but still received the highest match rating ("clearly represented"). This was because the existing matches were such a clear fit and nearly all of the CLASS item's sub-areas were represented in that match. Continuing in this fashion, each CLASS item was reviewed line-by-line through each ECERS-3 component and matches were compiled and rated as being "not or rarely represented", "somewhat represented", or "clearly represented" in ECERS-3.

After the initial ratings were complete, all areas of uncertainty were reviewed by a curriculum content expert<sup>2</sup>. In addition, the entire crosswalk has subsequently been reviewed by a second outside content expert at Arkansas State University<sup>3</sup>. Final results are displayed in brief on pages 4-5, with detailed appendices beginning on page 6.

### **Overview of the CLASS:**

The CLASS dimensions are based on development theory and research suggesting that interactions between students and adults are the primary mechanism of student development and learning (Greenberg, Domitrovich, & Bumbarger, 2001; Hamre & Pianta, 2007; Morrison & Connor, 2002; Pianta, 2006; Rutter & Maughan, 2002). The CLASS dimensions are based on interactions between and among teachers and students in classrooms; scoring for the dimensions is not determined by the presence of materials, the physical environment or safety, or the adoption of a specific curriculum. In the CLASS, the focus is on what teachers do with the materials they have and on the interactions the teachers have with the students. CLASS contains 42 items organized into 10 clusters. At the broadest level, these clusters are grouped into 3 domains: Emotional support, classroom organization, and instructional support

### **Overview of ECERS-3:**

ECERS is perhaps the most commonly used measure of quality in early childhood education classrooms today, and has been repeatedly validated over time (e.g., Aboud & Hossain, 2011; Burchinal, Kainz & Cai, 2011; Burchinal, Peisner-Feinberg, Pianta, & Howes, 2002; Cryer et al., 1999; Whitebook, Howes, & Phillips, 1989). It examines materials, physical facilities, schedule, curriculum, etc. as well as the quality of teacher-child interactions.

The ECERS-3 is an updated version of the ECERS-R that has been revised to include a greater focus on the quality of teacher-child interactions. ECERS-3 contains 35 items and is organized into 6 clusters: Space and furnishings, personal care routines, Language and literacy, learning activities, interaction, and program structure.

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<sup>2</sup> <http://curriculaconcepts.com/about/>; Jamie Morrison Ward, President, Curricula Concepts

<sup>3</sup> [http://asuchildhoodservices.org/#!staff\\_directory](http://asuchildhoodservices.org/#!staff_directory); Janice Carter, Program Coordinator, Arkansas State University Childhood Services

## Crosswalk Table:

CLASS Items	CLASS Elements Represented in ECERS-3?		
	<i>Item not or rarely represented</i>	<i>Item somewhat represented</i>	<i>Item clearly represented</i>
<b>Positive Climate</b>			
1. Relationships			13
2. Positive Affect		4	
3. Positive Communication		9	
4. Respect			7
<b>Negative Climate</b>			
5. Negative Affect			7
6. Punitive Control			5
7. Sarcasm/Disrespect	1		
8. Severe Negativity	2		
<b>Teacher Sensitivity</b>			
9. Awareness			7
10. Responsiveness			10
11. Address Problems			5
12. Student Comfort	2		
<b>Regard for Student Perspectives</b>			
13. Flexibility and Student Focus			16
14. Support for Autonomy and Leadership			22
15. Student Expression		10	
16. Restriction of Movement		6	
<b>Behavior Management</b>			
17. Clear Behavior Expectations			7
18. Proactive		8	
19. Redirection of Misbehavior		7	
20. Student Behavior		5	
<b>Productivity</b>			
21. Maximizing Learning Time		5	
22. Routines		4	
23. Transitions		8	
24. Preparation	3		
<b>Instructional Learning Formats</b>			
25. Effective Facilitation	4		
26. Variety of Modalities and Materials		41*	
27. Student Interests		8	
28. Clarity of Learning Objectives	0		
<b>Concept Development</b>			

### Table Guide:

This table shows the overall number of matches between each CLASS item and the ECERS-3, along with the overall level of similarity between the two.

See Appendix A for a more detailed breakdown of each match.

29. Analysis and Reasoning		3	
30. Creating		8	
31. Integration		6	
32. Connections to the Real World			19
<b>Quality of Feedback</b>			
33. Scaffolding	3		
34. Feedback Loops	0		
35. Prompting Thought Processes	1		
36. Providing Information	0		
37. Encouragement and Affirmation		9	
<b>Language Modeling</b>			
38. Frequent Conversations			15
39. Open-Ended Questions			7
40. Repetition and Extension	0		
41. Self- and Parallel Talk	2		
42. Advanced Language			8
<b>10 Subscales, 42 Items</b>	<i>Item not or rarely represented</i>	<i>Item somewhat represented</i>	<i>Item clearly represented</i>
	<b>12 of 42 Items (29%)</b>	<b>16 of 42 Items (38%)</b>	<b>14 of 42 Items (33%)</b>

\*Although there is a very large number of matches for this area, the content of the matches does not fit well within the spirit of CLASS’s description. CLASS describes this area as the teacher using a variety of materials and modalities to actively and creatively engage students and keep their attention during a lesson. However, the matching items in ECERS-3 only require the variety of materials are available at all, or specifically reference availability during free play or center time. There are also very few matches that reference the use of multiple modalities. Therefore, this item has been scored as “somewhat represented”.

(See next page for a breakdown of each match)

## Appendix A: List of ECERS-3 Items

ECERS-3 Items	
Space and Furnishings	Interaction
E1. Indoor space	E28. Supervision of gross motor
E2. Furniture for routine care, play and learning	E29. Individualized teaching and learning
E3. Room arrangement for play and learning	E30. Staff-child interactions
E4. Space for privacy	E31. Peer interactions
E5. Child-related display	E32. Discipline
E6. Space for gross motor play	
E7. Gross motor equipment	
Personal Care Routines	Program Structure
E8. Meals/snacks	E33. Transitions and wait times
E9. Toileting/diapering	E34. Free play
E10. Health practices	E35. Whole group activities for play and learning
E11. Safety practices	
Language and Literacy	6 Subscales, 35 Items
E12. Helping children expand vocabulary	
E13. Encouraging children to use language	
E14. Staff use of books with children	
E15. Encouraging children's use of books	
E16. Becoming familiar with print	
Learning Activities	
E17. Fine motor	
E18. Art	
E19. Music/movement	
E20. Blocks	
E21. Dramatic play	
E22. Nature/science	
E23. Math materials and activities	
E24. Math in daily events	
E25. Understanding written numbers	
E26. Promoting acceptance of diversity	
E27. Appropriate use of technology	

## Appendix B: Description of Matches

Below is each individual match between CLASS items and ECERS-3, as well as a description that justifies that match. The outline can be read as follows: **CLASS item** (CLASS item sub-areas); E13 = ECERS item 13; 1.2 = ECERS sub-item 1.2.

- 1 **Relationships:** (Physical proximity, shared activities, peer assistance, matched affect, social conversation)
  - a. E13
    - i. 1.2 = Indication of cold or oppositional relationship between teacher and child
    - ii. 1.5 = Restriction or absence of social conversation
    - iii. 5.3 = Warm and encouraging attitude by teacher
    - iv. 7.3 = Warm and encouraging attitude by teacher. Social conversation
  - b. E18
    - i. 5.3 = Warm and encouraging attitude by teacher
  - c. E21
    - i. 5.3 = Social conversation and warm interest in child
  - d. E30
    - i. 1.1 = Indication of cold or oppositional relationship between teacher and child
    - ii. 1.2 = Indication of cold or oppositional relationship between teacher and child
    - iii. 3.3 = Warm and encouraging attitude by teacher
    - iv. 5.3 = Warm and encouraging attitude by teacher. Physical proximity.
    - v. 7.1 = Warm and encouraging attitude by teacher
  - e. E31
    - i. 1.3 = Restriction or absence of social conversation and shared activities.
    - ii. 5.3 = Warm and positive relationships among students
- 2 **Positive Affect** (Smiling, laughter, enthusiasm)
  - a. E14
    - i. 1.3 = Lack of affect while reading to children
    - ii. 5.4 = Use of positive affect while reading to children
  - b. E23
    - i. 5.2 = Show of enthusiasm
  - c. E30
    - i. 5.1 = Smiling
- 3 **Positive Communication** (Verbal affection, physical affection, positive expectations)
  - a. E13
    - i. 1.2 = Indication of cold or oppositional communications
    - ii. 5.3 = Indication of positive communication
  - b. E30
    - i. 1.1 = Lack of verbal or physical affection or bonding
    - ii. 1.2 = Lack of positive communication
    - iii. 5.3 = Physical affection
  - c. E32
    - i. 1.3 = Lack of positive expectations
    - ii. 1.4 = Negative communication
    - iii. 5.4 = Absence of negative communication



- d. E34
    - i. 5.2 = Positive communication
- 4 **Respect** (Eye contact, warm & calm voice, respectful language, cooperation and/or sharing)
  - a. E13
    - i. 5.4 = Encouraging sharing and cooperation
  - b. E26
    - i. 1.3 = Staff demonstrate prejudice
    - ii. 7.2 = Respectful discussion of difference
  - c. E30
    - i. 5.1 = Eye contact and shared interests
    - ii. 7.1 = Staff demonstrate respect for children
  - d. E31
    - i. 3.3 = Modeling respectful behavior
  - e. E32
    - i. 3.4 = Staff treat children with respect while disciplining
- 5 **Negative Affect** (Irritability, anger, harsh voice, peer aggression, disconnected or escalating negativity)
  - a. E9
    - i. 1.3 = Anger and harsh voice
  - b. E13
    - i. 1.2 = Irritable and/or negative affect
  - c. E24
    - i. 1.3 Irritable and/or negative affect
  - d. E28
    - i. 1.2 = Irritable or angry
  - e. E31
    - i. 1.3 = Peer aggression
  - f. E32
    - i. 1.1 = Anger, harsh voice
    - ii. 1.4 = Anger
- 6 **Punitive control** (Yelling, threats, physical control, harsh punishment)
  - a. E9
    - i. 1.3 = Yelling
  - b. E24
    - i. 1.2 = Verbal threatening
  - c. E28
    - i. 1.2 = Punitive environment
  - d. E30
    - i. 1.3 = Physical control
  - e. E32
    - i. 1.1 = Physical control, yelling
- 7 **Sarcasm/Disrespect** (Sarcastic voice/statement, teasing, humiliation)
  - a. E26
    - i. 1.3 = Disrespect

- 8 **Severe Negativity** (Victimization, bullying, physical punishment)
- a. E31
    - i. 1.3 = Bullying
  - b. E32
    - i. 1.1 = Physical punishment
- 9 **Awareness** (Anticipates problems and plans appropriately, notices lack of understanding and/or difficulties)
- a. E11
    - i. 7.3 Anticipates problems and plans appropriately, aware of students who need extra support, assistance, or attention.
  - b. E12
    - i. 5.4 Aware of students who need extra support, assistance, or attention
  - c. E14
    - i. 5.2 Aware of students who need extra support, assistance, or attention
  - d. E30
    - i. 7.1 = Aware of students who need extra support, assistance, or attention
    - ii. 7.2 = Aware of students who need extra support, assistance, or attention
    - iii. 7.3 = Aware of students who need extra support, assistance, or attention, anticipates problems and plans appropriately
  - e. E35
    - i. 5.2 = Aware of students who need extra support, assistance, or attention, anticipates problems and plans appropriately
- 10 **Responsiveness** (Acknowledges emotions, provides comfort and assistance, provides individualized support)
- a. E9
    - i. 7.3 = Acknowledges emotions, provides individualized support
  - b. E12
    - i. 5.4 Provides individualized support
  - c. E14
    - i. 5.4 Provides individualized support
  - d. E29
    - i. 1.1 = Lack of individualized support or opportunities
    - ii. 1.3 = Lack of individualized support or opportunities
    - iii. 3.1 = Some individualized support or opportunities
    - iv. 3.3 = Some individualized support or opportunities
    - v. 5.2 = Individualized support or opportunities
    - vi. 7.1 = Individualized support or opportunities
    - vii. 7.2 = Individualized support or opportunities
  - e. E30
    - i. 7.1 = Acknowledges emotions, provides comfort and assistance
    - ii. 7.2 = Acknowledges emotions, provides comfort and assistance
    - iii. 7.3 = Acknowledges emotions, provides comfort and assistance
  - f. E35
    - i. 5.2 = Provides individualized support

- 11 Addresses Problems** (Helps in an effective and timely manner, helps resolve problems)
- a. E31
    - i. 1.2 = Lack of effective problem resolution
    - ii. 1.3 = Lack of effective problem resolution
    - iii. 3.2 = Some effective problem resolution
    - iv. 5.2 = Effective problem resolution
  - b. E32
    - i. 7.3 = Effective problem resolution
- 12 Student Comfort** (Seeks support and guidance, freely participates, takes risks)
- a. E28
    - i. 5.2 = Freely participates
  - b. E35
    - i. 7.3 = Freely participates
- 13 Flexibility and Student Focus** (Shows flexibility, incorporates student's ideas, follows lead)
- a. E4
    - i. 1.1 = Lack of flexibility or student-lead focus
    - ii. 3.1 = Flexibility, student-lead focus
    - iii. 7.2 = Flexibility, student-lead focus
  - b. E9
    - i. 5.1 = Flexibility, student-lead focus
    - ii. 7.3 = Flexibility, student-lead focus
  - c. E29
    - i. 1.1 = Lack of flexibility or student-lead focus
    - ii. 1.2 = Lack of flexibility or student-lead focus
    - iii. 1.3 = Lack of flexibility or student-lead focus
    - iv. 3.1 = Some flexibility or student-lead focus
    - v. 3.2 = Some flexibility or student-lead focus
    - vi. 3.3 = Some flexibility or student-lead focus
    - vii. 5.1 = Flexibility, student-lead focus
    - viii. 5.2 = Flexibility, student-lead focus
    - ix. 7.1 = Flexibility, student-lead focus
    - x. 7.2 = Flexibility, student-lead focus
  - d. E35
    - i. 5.1 = Flexibility, student-lead focus
- 14 Support for Autonomy and Leadership** (Allows choice, allows students to lead lessons, gives students responsibilities)
- a. E4
    - i. 1.1 = Lack of choice or student-lead focus
    - ii. 3.1 = Availability of choice, student-lead focus
    - iii. 7.2 = Availability of choice, student-lead focus
  - b. E18
    - i. 1.2 = Lack of choice or student-lead focus
    - ii. 5.2 = Availability of choice, student-lead focus
  - c. E19
    - i. 7.1 = Availability of choice, student-lead focus

- d. E21
  - i. 5.3 = Availability of choice, student-lead focus
- e. E29
  - i. 1.1 = Lack of choice or student-lead focus
  - ii. 1.2 = Lack of choice or student-lead focus
  - iii. 1.3 = Lack of choice or student-lead focus
  - iv. 3.1 = Some choice or student-lead focus
  - v. 3.2 = Some choice or student-lead focus
  - vi. 3.3 = Some choice or student-lead focus
  - vii. 5.1 = Availability of choice, student-lead focus
  - viii. 5.2 = Availability of choice, student-lead focus
  - ix. 7.1 = Availability of choice, student-lead focus
  - x. 7.2 = Availability of choice, student-lead focus
- f. E31
  - i. 1.1 = Lack of choice
  - ii. 3.1 = Some choice
- g. E32
  - i. 7.3 = Student-lead focus, gives students responsibilities
- h. E33
  - i. 7.1 = = Availability of choice, student-lead focus
- i. E35
  - i. 7.3 = Availability of choice, student-lead focus

**15 Student Expression** (Encourages student talk, elicits ideas and/or perspectives)

- a. E13
  - i. 1.1 = No solicitation of student ideas/perspectives
  - ii. 1.2 = Discourages expression
  - iii. 1.3 = Discourages expression
  - iv. 1.4 = Discourages expression
  - v. 3.4 = Some encouragement of expression
  - vi. 5.1 = Solicitation of student ideas/perspectives
  - vii. 5.3 = Solicitation of student ideas/perspectives
  - viii. 7.1 = Solicitation of student ideas/perspectives
- b. E20
  - i. 5.5 = Solicitation of student ideas/perspectives
- c. E23
  - i. 7.2 = Solicitation of student ideas/perspectives

**16 Restriction of Movement** (Allows movement, is not rigid)

- a. E4
  - i. 1.1 = Restriction of movement
  - ii. 3.1 = Freedom of movement
- b. E6
  - i. 1.1 = Restriction of movement
  - ii. 3.1 = Allowance for movement
  - iii. 5.1 = Allowance for movement
- c. E33
  - i. 7.1 = Freedom of movement

**17 Clear Behavior Expectations** (Clear expectations, consistency, clarity of rules)

- a. E4
  - i. 5.3 = Clear expectations/clarity of rules
  - ii. 7.2 = Clear expectations/clarity of rules
- b. E31
  - i. 3.2 = Consistency, clear expectations
- c. E32
  - i. 1.2 = Lack of consistency
  - ii. 5.1 = Clarity of rules, clear expectations
- d. E33
  - i. 5.1 = Clear expectations
- e. E34
  - i. 5.4 = Clarity of rules, clear expectations, consistency

**18 Proactive** (Anticipates problem behavior or escalation, low reactivity, monitors)

- a. E4
  - i. 5.3 = Anticipates problem behavior or escalation, monitors
  - ii. 7.2 = Anticipates problem behavior or escalation
- b. E11
  - i. 5.3 = Monitors
- c. E30
  - i. 7.1 = Low reactivity
- d. E31
  - i. 3.2 = Anticipates escalation
  - ii. 7.2 = Anticipates problem behavior or escalation
- e. E32
  - i. 7.2 = Highly proactive, anticipates problem behavior or escalations
- f. E33
  - i. 5.3 = Monitors, Anticipates problem behavior

**19 Redirection of Misbehavior** (Effective reduction of misbehavior, attention to the positive, uses subtle cues to redirect, efficient redirection)

- a. E8
  - i. 1.3 = Focus on the negative, ineffective redirection
- b. E16
  - i. 1.2 = Ineffective redirection
- c. E30
  - i. 7.1 = Attention to the positive
- d. E31
  - i. 5.2 = Efficient redirection, effective reduction of misbehavior
  - ii. 7.1 = Focus on positive
  - iii. 7.2 = Efficient redirection
- e. E32
  - i. 7.3 = Effective reduction of misbehavior, attention to the positive, efficient redirection)

**20 Student Behavior** (Frequent compliance, little aggression and defiance)

- a. E32
    - i. 3.2 = Little/some compliance
    - ii. 5.1 = General compliance
  - b. E33
    - i. 1.1 = Lack of compliance
    - ii. 3.3 = General compliance
    - iii. 5.1 = General compliance
- 21 **Maximizing Learning Time** (Provision of activities, choice when finished, few disruptions, effective completion of managerial tasks, pacing)
- a. E19
    - i. 7.1 = Choice when finished
  - b. E29
    - i. 3.2 = Some provision of activities
    - ii. 5.1 = Provision of activities
  - c. E34
    - i. 3.3 = Choice when finished
  - d. E35
    - i. 7.3 = Choice when finished
- 22 **Routines** (Students know what to do, clear instructions, little wandering)
- a. E32
    - i. 5.1 = Students know what to do
  - b. E33
    - i. 1.1 = Child wandering
    - ii. 5.1 = Students know what to do, clear instructions, little wandering
  - c. E34
    - i. 5.4 = Students know what to do, clear instructions
- 23 **Transitions** (Brief, explicit follow-through, learning opportunities within)
- a. E8
    - i. 1.3 = Long transition
  - b. E32
    - i. Frequent, long transitions
  - c. E33
    - i. 1.1 = Long transitions
    - ii. 1.3 = Lack of follow-through
    - iii. 1.4 = Long transition
    - iv. 3.3 = Adequate transition
    - v. 5.1 = Good transition
    - vi. 7.1 = Brief transition
- 24 **Preparation** (Materials ready and accessible, knows lessons)
- a. E33
    - i. 1.2 = Lack of preparation
    - ii. 3.2 = Sometimes prepared
    - iii. 5.2 = Almost always prepared

- 25 **Effective Facilitation** (Teacher involvement, effective questioning, expanding children's involvement)
- a. E13
    - i. 7.1 = Effective questioning
  - b. E23
    - i. 7.2 = Effective questioning
  - c. E24
    - i. 7.2 = Effective questioning
  - d. E27
    - i. 7.2 = Expanding children's involvement
- 26 **Variety of Modalities and Materials** (Range of auditory, visual, and movement opportunities, interesting and creative materials, hands-on opportunities)
- a. E14
    - i. 1.1 = Lack of variety of materials
    - ii. 3.1 = Some variety of materials
    - iii. 5.1 = Variety of materials
    - iv. 7.3 = Variety of materials
    - v. 7.4 = Variety of materials
  - b. E16
    - i. 3.1 = Some variety of materials, some variety of modalities
    - ii. 5.1 = Variety of materials, variety of modalities
    - iii. 7.4 = Variety of materials, variety of modalities
  - c. E17
    - i. 3.4 = Variety of materials
    - ii. 5.1 = Variety of materials
  - d. E18
    - i. 1.1 = Lack of variety of materials
    - ii. 3.1 = Some variety of materials
    - iii. 5.1 = Variety of materials
    - iv. 7.1 = Variety of materials
  - e. E19
    - i. 1.1 = Lack of variety of materials
    - ii. 3.1 = Variety of materials
    - iii. 5.1 = Variety of materials
    - iv. 5.3 = Variety of materials; movement opportunity
  - f. E20
    - i. 1.1 = Lack of variety of materials
    - ii. 3.1 = Some variety of materials
    - iii. 5.1 = Variety of materials
    - iv. 7.1 = Variety of materials
  - g. E21
    - i. 1.1 = Lack of variety of materials
    - ii. 3.1 = Some variety of materials
    - iii. 5.1 = Variety of materials
  - h. E22
    - i. 1.1 = Lack of variety of materials
    - ii. 3.1 = Some variety of materials
    - iii. 3.3 = Variety of materials

- iv. 5.1 = Variety of materials
      - v. 7.1 = Interesting and creative materials
      - vi. 7.2 = Interesting and creative materials
    - i. E23
      - i. 1.1 = Lack of variety of materials
      - ii. 3.1 = Some variety of materials
      - iii. 5.1 = Variety of materials
    - j. E25
      - i. 1.1 = Lack of variety of materials
      - ii. 3.1 = Some variety of materials
      - iii. 3.2 = Some variety of materials
      - iv. 5.1 = Variety of materials
      - v. 7.1 = Variety of materials
    - k. E27
      - i. 5.3 = Variety of materials
      - ii. 7.1 = Variety of materials, movement opportunity
- 27 Student Interest** (Active participation, listening, focused attention)
- a. E14
    - i. 3.3 = Listening, focused attention
    - ii. 5.3 = Focused attention, active participation
  - b. E23
    - i. 3.3 = Focused attention, active participation
  - c. E27
    - i. 5.1 = Active participation
    - ii. 7.1 = Active participation
  - d. E35
    - i. 1.3 = Lack of active participation
    - ii. 3.3 = Some active participation
    - iii. 7.1 = Active participation
- 28 Clarity of Learning Objectives** (Advanced organizers, summaries, reorientation statements)
- a. None found
- 29 Analysis and Reasoning** (Why and/or how questions, problem solving, prediction/experimentation, classification/comparison, evaluation)
- a. E23
    - i. 7.2 = Why and/or how questions, prediction/experimentation
  - b. E24
    - i. 7.2 = Why and/or how questions
  - c. E27
    - i. 5.1 = Problem solving
- 30 Creating** (Brainstorming, planning, producing)
- a. E18
    - i. 1.2 = Creativity not encouraged
    - ii. 3.2 = Creativity allowed
    - iii. 5.2 = Creativity allowed



- b. E27
  - i. 7.1 = Creativity encouraged
- c. E29
  - i. 1.2 = Creativity not encouraged
  - ii. 3.2 = Some creativity allowed
  - iii. 5.1 = Creativity allowed
  - iv. 7.1 = Creativity allowed

**31 Integration** (Connect concepts, integrates with previous knowledge)

- a. E20
  - i. 7.3 = Connect concepts
- b. E21
  - i. 7.2 = Connect concepts
- c. E24
  - i. 3.2 = Connect concepts
  - ii. 5.2 = Connect concepts
  - iii. 7.2 = Connect concepts
- d. E27
  - i. 7.2 = Connect concepts, integrates with previous knowledge

**32 Connection to the Real World** (Real-world applications, related to students' lives)

- a. E12
  - i. 1.2 = Not related to students' lives
  - ii. 1.3 = Not related to students' lives
  - iii. 3.1 = Related to students' lives
  - iv. 3.2 = Related to students' lives
  - v. 3.3 = Related to students' lives
  - vi. 5.3 = Related to students' lives
- b. E16
  - i. 1.3 = Not related to students' lives
  - ii. 5.2 = Related to students' lives
- c. E18
  - i. 7.2 = Related to students' lives
- d. E21
  - i. 7.2 = Related to students' lives
- e. E22
  - i. 7.2 = Related to students' lives
- f. E23
  - i. 7.1 = Related to students' lives
- g. E24
  - i. 1.1 = Not related to students' lives
  - ii. 3.1 = Sometimes related to students' lives
  - iii. 3.3 = Related to students' lives
  - iv. 5.1 = Related to students' lives
  - v. 7.1 = Related to students' lives
  - vi. 7.3 = Related to students' lives
- h. E34
  - i. 7.1 = Related to students' lives

- i. E35
    - i. 5.3 = Related to students' lives
- 33 **Scaffolding** (Hints, assistance)
  - a. E10
    - i. 5.1 = Assistance
  - b. E12
    - i. 5.2 = Builds on existing knowledge to explain unfamiliar words
  - c. E17
    - i. 7.3 = Builds on existing knowledge to explain unfamiliar words and concepts
- 34 **Feedback Loops** (Back-and-forth exchanges, persistence by teacher, follow-up questions)
  - a. None found
- 35 **Prompting thought processes** (Asks students to explain thinking, queries responses and actions)
  - a. E24
    - i. 7.2 = Asks student to explain thinking
- 36 **Providing information** (Expansion, clarifications, specific feedback)
  - a. None found
- 37 **Encouragement and Affirmation** (Recognition, reinforcement, student persistence)
  - a. E9
    - i. 1.3 = Inattention/Discouragement
    - ii. 5.3 = Encouragement
  - b. E10
    - i. 1.1 = Inattention/Discouragement
    - ii. 3.3 = Encouragement
  - c. E13
    - i. 3.5 = Encouragement
  - d. E19
    - i. 5.4 = Encouragement
    - ii. 7.3 = Encouragement
  - e. E20
    - i. 3.4 = Recognition and reinforcement
    - ii. 5.5 = Recognition and reinforcement
  - f. E21
    - i. 5.3 = Encouragement
- 38 **Frequent Conversations** (Back-and-forth exchanges, contingent responding, peer conversations)
  - a. E5
    - i. 1.3 = No conversation/restriction of conversation
    - ii. 7.2 = Encourages conversation
  - b. E8
    - i. 7.2 = Many conversations present
  - c. E13
    - i. 1.2 = No conversation/restriction of conversation
    - ii. 1.3 = Little to no back-and-forth or contingent responding

- iii. 1.5 = No conversation/restriction of conversation
- iv. 3.3 = Some back-and-forth or contingent responding
- v. 5.2 = Frequent back-and-forth or contingent responding
- vi. 5.3 = Back-and-forth, contingent responding
- vii. 5.4 = Assisted peer conversations
- viii. 7.1 = Many conversations present
- ix. 7.2 = Many conversations present
- d. E20
  - i. 5.3 = Many conversations present, Back-and-forth, contingent responding
- e. E21
  - i. 5.3 = Many conversations present, Back-and-forth, contingent responding
- f. E24
  - i. 5.2 = Many conversations present

**39 Open-Ended Questions** (Questions require more than a one-word response, students respond)

- a. E13
  - i. 1.1 = Rote response questions often used
  - ii. 3.1 = Some rote response questions used
  - iii. 7.1 = Open-ended questions frequently used
- b. E18
  - i. 5.3 = Open-ended questions frequently used
- c. E20
  - i. 5.3 = Open-ended questions used
- d. D23
  - i. 7.2 = Open-ended questions used
- e. D24
  - i. 7.2 = Open-ended questions used

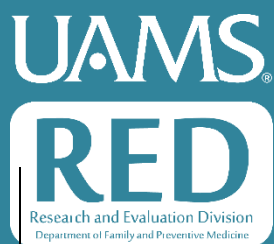
**40 Repetition and Extension** (Repeats, extends/elaborates): None found

**41 Self- and Parallel Talk** (Maps own actions with language, maps student action with language)

- a. E12
  - i. 3.2 = Maps student action with language
- b. E32
  - i. 7.1 = Maps student action with language

**42 Advanced Language** (Variety of words, connected to familiar words and/or ideas)

- a. E12
  - i. 1.1 = Simple/restricted word variety
  - ii. 3.2 = Some connection to familiar words and/or ideas
  - iii. 5.2 = Some connection to familiar words and/or ideas
  - iv. 7.1 = Variety of words
  - v. 7.2 = Variety of words
  - vi. 7.3 = Connection to familiar words and/or ideas
- b. E17
  - i. 7.3 = Connection to familiar words and/or ideas
- c. E34
  - i. 7.2 = Variety of words



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