

# PRE-K MATH

## High-Quality Instructional Materials Review Rubric

Grade Range: Pre-K

Evaluator		Rating Committee	
Publisher			
Title of Textbook Series/Instructional Program			
Copyright Date		Revision Date	

Pre-kindergarten programs use research-based and evidence-based math curriculum that is designed to prepare children to be ready for kindergarten. The curriculum has an emphasis in both math and early literacy, and it is aligned with the [Early Learning Standards for Classrooms Serving Infants through Four-Year- Old Children](#). Mississippi Code Annotated § 27-103-159 defines “evidence-based program” as “a program or practice that has had multiple site random controlled trials across heterogeneous populations demonstrating that the program is effective for the population.” Additionally, the curriculum contains trajectories of activities and ideas designed to provide children the opportunities and experiences needed to master all the performance standards in the Early Learning Standards for Classrooms Serving Infants through Four-Year-Old Children. This rubric details the desired components of an early childhood math curriculum for three and four-year-olds. The evaluation rubric includes key considerations for high-quality instructional materials and outlines three **Gateways** for consideration when evaluating materials. Within each Gateway, **Criterion** and related **Indicators** are provided along with **Guiding/Key Questions**.



The evaluation rubric is designed to allow reviewers to determine a threshold for quality for each gateway. Remember to focus on what is present in the instructional materials and any supplemental resources rather than what might be inferred. All scores should be based on evidence observed from the instructional materials themselves.

### Scoring Protocol and Criteria:

- **No evidence (0):** No correlation between the standards and lessons, a logical sequence of content cannot be identified and/or there appear to be significant content inaccuracies, essential understandings, knowledge, or skills are not addressed, and opportunities to practice essential skills are not included.
- **Limited (1, 2, or 3):** Limited connections between the standards and the lessons are noted, content appears to contain some inaccuracies or is not always clear, essential understandings, knowledge, or skills are not sufficiently addressed, and there is limited opportunity for students to practice essential skills.
- **Adequate (2, 4, or 6):** Lessons are aligned with the standards, content appears accurate clear, and in sequential order, most of the essential understandings, knowledge, and skills are supported, and many opportunities are provided for students to practice essential skills.

### The High-Quality Instructional Materials Review Rubric is comprised of three sections:

**Gateway 1:** Alignment to Standards - **This is a requirement for submission.**

→ Advance to Gateway 2 only if Gateway 1 has a score of at least 18 points.

**Gateway 2:** Instructional Support - **This is a requirement for submission.**

→ Advance to Gateway 3 only if Gateway 2 has a score of at least 7 points.

**Gateway 3:** Parental Supports

# GATEWAY 1

**Alignment to Standards - This is a requirement for submission.**

High-quality instructional materials are coherent and aligned to the instruction of pre-kindergarten mathematics. To determine the Gateway rating, educators use evidence gathered from the instructional materials to score indicators related to each criterion.

- Criterion 1.1 (1a – 1b): Research- and Evidence-Based Math Curriculum**  
 Materials are part of a research- and evidence-based curriculum.
- Criterion 1.2 (1c): Content within the Parameters of the Standards**  
 Materials and activities are consistent with the Mississippi [Early Learning Standards for Classrooms Serving Infants through Four-Year- Old Children](#) (pages 47-49: 3-year-olds and pages 80-82: 4-year-olds).
- Criterion 1.3 (1d – 1h): Appropriateness of Curriculum Materials and Activities**  
 Curriculum contains trajectories of activities and ideas designed to provide children the opportunities and experiences needed to master the performance standards in the Mississippi [Early Learning Standards for Classrooms Serving Infants through Four-Year- Old Children](#) (pages 47-49: 3-year-olds and pages 80-82: 4-year-olds).
- Criterion 1.4 (1i – 1l): Quality of Curriculum Materials and Activities**  
 Materials offer assessment opportunities that genuinely measure progress and elicit direct, observable evidence of the degree to which students can independently demonstrate the assessed standards by setting learning goals for children that are challenging but achievable with help, balancing group activities and instruction guided by the teacher with activities children choose themselves, providing enough time for children to get deeply involved in activities and learning, and paying attention to and supporting children’s interest, skills, and knowledge.

Criterion 1.1: ALIGNMENT TO STANDARDS			
CRITERIA	INDICATORS OF SUPERIOR QUALITY	Guiding/Key Questions	SCORE
<b>Materials are part of a research- and evidence-based curriculum.</b>  <b>6 possible points</b>	<b>1a. Valid Research:</b> The curriculum model has a clear detailed description of how it is grounded in theory in all written materials, how it is supported by current child development research, and has an extensive bibliography. (2 points)	Curriculum has proven to be both evidence based and research based.  Yes ___ No ___	0 1 2

	<b>1b. Valid Evaluation Studies:</b> The curriculum model has been evaluated through two or more studies, including at least one with over five years of longitudinal data, to demonstrate the curriculum model's positive effects of child outcomes. (4 points)		0 2 4
<b>TOTAL SCORE CRITERION 1.1</b> [6 possible points]			
<b>Criterion 1.2: CONTENT WITHIN THE PARAMETERS OF THE STANDARDS</b>			
CRITERIA	INDICATORS OF SUPERIOR QUALITY	Guiding/Key Questions	SCORE
<b>Materials and activities are consistent with the Mississippi Early Learning Standards for Classrooms Serving Infants through Four-Year- Old Children.</b>  <b>10 possible points</b>	<b>1c.</b> A large majority of materials and activities provide substantial opportunities and experiences for children to meet the Mississippi Early Learning Standards Serving Infants through Four-Year-Old. (10 points)	Materials should address each of the following domains: <ul style="list-style-type: none"> <li>• Number and Operations (NO)</li> <li>• Geometry (G)</li> <li>• Measurement (M)</li> <li>• Patterns and Algebra (PA)</li> <li>• Data Analysis and Classification (DAC)</li> </ul>	 0 1 2  0 1 2  0 1 2  0 1 2  0 1 2
<b>TOTAL SCORE CRITERION 1.2</b> [10 possible points]			

**Criterion 1.3: APPROPRIATENESS OF CURRICULUM MATERIALS AND ACTIVITIES**

CRITERIA	INDICATORS OF SUPERIOR QUALITY	Guiding/Key Questions	SCORE
<p><b>Curriculum contains trajectories of activities and ideas designed to provide children the opportunities and experiences needed to master the performance standards in the Mississippi Early Learning Standards for Classrooms Serving Infants through Four-Year- Old Children.</b></p> <p><b>10 possible points</b></p>	<p><b>1d.</b> Materials and activities are provided through both teacher- directed and child-initiated experiences (e.g., children given substantial opportunities to choose interest areas/learning centers and activities within each). <b>(2 points)</b></p>		0 1 2
	<p><b>1e.</b> Materials and activities allow substantial opportunities for frequent practice of skills using interactive and hands-on approaches (i.e., does not typically support practice with worksheets, etc.) <b>(2 points)</b></p>	<p>Examples of interactive and hands-on approaches include but not limited to children’s bodies, manipulatives, computers, books, and children’s drawings through learning trajectories.</p>	0 1 2
	<p><b>1f.</b> Materials and activities are included that are culturally sensitive. <b>(2 points)</b></p>		0 1 2
	<p><b>1g.</b> Materials and activities are incorporated throughout a variety of settings, including whole group time, centers/activity or interest areas, small group and individualized attention. However, instructional delivery shall be organized primarily using reflecting and a variety of learning centers. <b>(2 points)</b></p>		0 1 2
	<p><b>1h.</b> Materials and activities are appropriate for the domain and skill(s) they are intended to address. <b>(2 points)</b></p>		0 1 2
<p><b>TOTAL SCORE CRITERION 1.3</b> <b>[10 possible points]</b></p>			

## Criterion 1.4: QUALITY OF CURRICULUM MATERIALS AND ACTIVITIES

CRITERIA	INDICATORS OF SUPERIOR QUALITY	Guiding/Key Questions	SCORE
<p><b>Materials offer assessment opportunities that genuinely measure progress and elicit direct, observable evidence of the degree to which students can independently demonstrate the assessed standards by setting learning goals for children that are challenging but achievable with help, balancing group activities and instruction guided by the teacher with activities children choose themselves, providing enough time for children to get deeply involved in activities and learning, and paying attention to and supporting children’s interest, skills, and knowledge.</b></p> <p><b>8 possible points</b></p>	<p><b>1i.</b> The curriculum is emphasized through learning trajectories with materials and activities that integrate multiple domains so that learning happens in meaningful context; <b>(2 points)</b></p>	<ul style="list-style-type: none"> <li>Number Counting Example: Count objects in a line to 5 to count how many.</li> </ul>	<p>0 1 2</p>
	<p><b>1j.</b> promotes children’s acquisition and use of the domain’s language and vocabulary. <b>(2 points)</b></p>	<ul style="list-style-type: none"> <li>Comparing and Ordering Numbers Example: A child begins to compare groups of 1-6 by matching.</li> </ul>	<p>0 1 2</p>
	<p><b>1k.</b> engages children in active learning cognitively, physically, socially, and artistically; <b>(2 points)</b></p>	<ul style="list-style-type: none"> <li>Recognizing Numbers and Subitizing Examples: A child recognizes a number of objects quickly, such as 5 cars without counting.</li> </ul>	<p>0 1 2</p>
	<p><b>1l.</b> and supports all mathematical domains: NO, G, M, PA, DAC. <b>(2 points)</b></p>	<ul style="list-style-type: none"> <li>Composing Examples: A child using two different sets of objects (2 cars and 2 trucks) to determine how many vehicles altogether.</li> <li>Adding and Subtracting Examples: A child finds the sum. The child counts 2 cars and is given 2 more cars. When asked how many in all, the child will count 1, 2, 3, 4.</li> <li>Multiplying and Dividing Examples: A child may share equally 4 cars by giving one to himself and one to a friend until there are no more cars to be given.</li> </ul>	<p>0 1 2</p>

<b>TOTAL SCORE CRITERION 1.4</b> <b>[8 possible points]</b>
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Gateway 1 Points AVAILABLE	Gateway 1 Points ACHIEVED	GATEWAY 1 RATING
<b>34</b>	Sum of points from Criterion 1.1, 1.2, 1.3, and 1.4	<input type="checkbox"/> <b>Meets</b> (score of 27-34 points) <b>PROCEED TO GATEWAY 2</b> <input type="checkbox"/> <b>Partially Meets</b> (score of 18-26 points) <b>PROCEED TO GATEWAY 2</b> <input type="checkbox"/> <b>Does Not Meet</b> (score of 0-17 points) <b>STOP REVIEW</b>
<b>GATEWAY COMMENTS</b>		

# GATEWAY 2

**Instructional Support - This is a requirement for submission.**

Gateway 2 examines the way materials support teachers to fully utilize the curriculum and understand the skills and learning of their students. To determine the Gateway rating, educators use evidence gathered from the instructional materials to score indicators related to each criterion.

- Criterion 2.1 (2a – 2b): Implementation Format of Materials and Activities**  
 Materials and activities reflect a wide range of experiences for skill development.
- Criterion 2.2 (2c – 2d): Scaffolding and Support**  
 Materials and activities provide all children with opportunities and support to meet the standards.
- Criterion 2.3 (2e – 2f): Assessment**  
 Materials offer assessment opportunities that accurately and appropriately measure progress.

Criterion 2.1: IMPLEMENTATION FORMAT OF MATERIALS AND ACTIVITIES			
CRITERIA	INDICATORS OF SUPERIOR QUALITY	Guiding/Key Questions	SCORE
<b>Materials and activities reflect a wide range of experiences for skill development.</b>  <b>4 possible points</b>	<b>2a.</b> Materials are available in different formats (e.g., print and non-print such as manipulatives, read alouds, art, music, charts, pictures, etc.). <b>(2 points)</b>		0 1 2
	<b>2b.</b> Additional/supplemental materials and activities are suggested that appeal to children’s interests in order to deepen motivation, enjoyment and learning. <b>(2 points)</b>		0 1 2
<b>TOTAL SCORE CRITERION 2.1</b> <b>[4 possible points]</b>			



## Criterion 2.2: SCAFFOLDING AND SUPPORT

CRITERIA	INDICATORS OF SUPERIOR QUALITY	Guiding/Key Questions	SCORE
<b>Materials and activities provide all children with opportunities and support to meet the standards.</b>  <b>4 possible points</b>	<b>2c.</b> Appropriate suggestions and clear instructions are provided to support the varying needs of children (e.g., for English language learners, children with special needs, etc.). <b>(2 points)</b>	Examples may include additional, alternate, or modified activities or materials.	0 1 2
	<b>2d.</b> Schedule or time for activities appears to be flexible and would allow for adjustments according to children's needs/interests. <b>(2 points)</b>		0 1 2
<b>TOTAL SCORE CRITERION 2.2</b> <b>[4 possible points]</b>			

## Criterion 2.3: ASSESSMENT

CRITERIA	INDICATORS OF SUPERIOR QUALITY	Guiding/Key Questions	SCORE
<b>Materials offer assessment opportunities that accurately and appropriately measure progress.</b>  <b>12 possible points</b>	<b>2e.</b> Assessments consistent with the Mississippi Early Learning Guidelines Serving Infants through Four-Year-Old are provided through a variety of appropriate methods (e.g., progress monitoring, anecdotal observations/notes, photographs, checklists, and work samples). <b>(6 points)</b>		0 3 6
	<b>2f.</b> Methods to assess children's learning are embedded throughout activities (e.g., whole group, small group, centers/activity times, transitions, etc.) within the daily schedule. <b>(6 points)</b>		0 3 6

<b>TOTAL SCORE CRITERION 2.3</b> [12 possible points]
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Gateway 2 Points AVAILABLE	Gateway 2 Points ACHIEVED	GATEWAY 2 RATING
<b>20</b>	Sum of points from Criterion 2.1, 2.2, and 2.3	<input type="checkbox"/> <b>Meets</b> (score of 14-20 points) <b>PROCEED TO GATEWAY 3</b> <input type="checkbox"/> <b>Partially Meets</b> (score of 7-13 points) <b>PROCEED TO GATEWAY 3</b> <input type="checkbox"/> <b>Does Not Meet</b> (score of 0-6 points) <b>STOP REVIEW</b>
<b>GATEWAY COMMENTS</b>		

TOTAL SCORE (Gateway 1 and 2)		
GATEWAY 1	GATEWAY 2	GRAND TOTAL
of 34 points	of 20 points	of 54 points
RATING	RATING	

# GATEWAY 3

## Parental Support

Schools can use resources to encourage parental participation. To determine the Gateway rating, educators use evidence gathered from the instructional materials to score indicators related to each criterion.

- Criterion 3.1 (3a): Activities and Materials Supporting Parental Participation**  
 Materials include resources for teachers to effectively plan and implement materials with integrity and to further develop their partnership with families by showing respect for each family; and its language and culture, including opportunities for families to share their goals and concerns for their children.

Criterion 3.1: ACTIVITIES AND MATERIALS SUPPORTING PARENTAL PARTICIPATION			
CRITERIA	INDICATORS OF SUPERIOR QUALITY	Guiding/Key Questions	SCORE
<b>Materials include resources for teachers to effectively plan and implement materials with integrity and to further develop their partnership with families by showing respect for each family; and its language and culture, including opportunities for families to share their goals and concerns for their children.</b>  <b>4 possible points</b>	<b>3a.</b> Provides a variety of activities to extend learning from the classroom into the home. <b>(4 points)</b>		0 2 4
<b>TOTAL SCORE CRITERION 3.1</b> <b>[4 possible points]</b>			

Gateway 3 Points AVAILABLE	Gateway 3 Points ACHIEVED	GATEWAY 3 RATING
<b>4</b>	Sum of Criterion 3.1	<input type="checkbox"/> <b>Meets</b> (score of 4 points) <input type="checkbox"/> <b>Partially Meets</b> (score of 2-3 points) <input type="checkbox"/> <b>Does Not Meet</b> (score of 0-1 point)
<b>GATEWAY COMMENTS</b>		

TOTAL SCORE (Gateway 1, 2, and 3)				
GATEWAY 1	GATEWAY 2	GATEWAY 3	EXTRA POINTS	GRAND TOTAL
of 34 points	of 20 points	of 4 points	Math Curriculum is a stand-alone and not combined with other math programs or products to be purchased such as software.  <b>0 or 10 points</b>	of 58-68 points
RATING	RATING	RATING		

ADDITIONAL NOTES