



HOW TO SELECT AN EARLY MATHEMATICS CURRICULUM

A well-designed and carefully implemented curriculum helps programs deliver more effective and efficient instruction. Teachers can better support young children's learning when they use a research-based math curriculum that identifies key mathematical concepts and skills and carefully sequenced instructional activities (Clements, 2007). Published mathematics curricula vary in their content in terms of the breadth and depth of the mathematics topics covered and the nature of accompanying activities. Here are some key issues to consider when selecting an early mathematics curriculum for your program.

The curriculum should cover all five domain elements of Mathematics Knowledge & Skills in the Head Start Child Development and Early Learning Framework (HSCDEL).

- Does the curriculum include all five domain elements of math learning?
- How does it align with the HSCDEL?

The curriculum should be based on rigorous research (peer-reviewed research articles, endorsed by professional organizations) that has been shown to be effective:

- Do the authors have extensive expertise in the field?
- Has any published research confirmed the curriculum's effectiveness?
- Has the curriculum been field-tested or implemented successfully by similar programs or centers?

The curriculum follows a clearly articulated, developmentally appropriate scope and sequence that links to a teaching plan with learning activities.

- Does the scope and sequence match solid child development principles about how children grow and learn?

The curriculum has specific learning goals and well-defined learning objectives.

- Does the curriculum have realistic and attainable expectations?
- Does the curriculum support children in learning math concepts and developing math skills?

The curriculum offers additional training or resources for teachers on how to use the curriculum and develop and plan teaching activities.

- Is any professional development support available?
- Are the learning activities linked to specific learning goals and objectives?
- Does the curriculum have clear guidelines for planning and implementing activities?
- Does the curriculum permit flexibility and provide strategies for individualizing instruction?

The curriculum has an empirical assessment tool of curriculum implementation and teaching outcomes.

- Does the curriculum include an assessment tool that is directly linked to its learning goals and objectives?

The curriculum provides an ongoing assessment tool for children’s math competency and progress.

- Does the curriculum include an ongoing assessment system of child learning?
- Does the curriculum offer procedures for documenting and reviewing children’s learning progress?

The curriculum is culturally and linguistically responsive.

- Does the curriculum provide opportunities for children to engage in learning activities using their family and cultural knowledge and experiences?
- Does the curriculum provide guidance to teachers in supporting language development in children who are learning English?

REFERENCES AND RESOURCES

Clements, D. H. (2007). Curriculum research: Toward a framework for “research-based curricula.” *Journal for Research in Mathematics Education*, 38(1), 35–70. Retrieved from http://gse.buffalo.edu/fas/clements/files/clements_crf.pdf

National Center on Quality Teaching and Learning. (2010). Choosing a preschool curriculum. Retrieved from <https://eclkc.ohs.acf.hhs.gov/hslc/tta-system/teaching/docs/preschool-curriculum.pdf>

National Center on Quality Teaching and Learning. (2011). Curriculum, assessment and the Head Start framework: An alignment review tool. Retrieved from <http://eclkc.ohs.acf.hhs.gov/hslc/tta-system/teaching/docs/alignment-guide.pdf>



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