

TeachME Professional Development

Enriching Math Skills in the Lower Grades

1. The average preschool spends approximately how many seconds per day on math instruction?

- A. 58
 - B. 109
 - C. 12
 - D. 62
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2. If a child is able to rattle off the numbers from 1-100, what does this necessarily show?

- A. Numeric awareness
 - B. Pattern recognition
 - C. Mathematical competency
 - D. Memorization skills
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3. A young student looks at a group of four apples and informs you, without counting from one to four, that there are four apples present. What skill is the student demonstrating?

- A. Subtracting
 - B. Synthesizing
 - C. Subitizing
 - D. Summing
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4. When you use fun, recognizable objects such as stuffed toys in order to help children visualize the counting and operations problems you ask, what are you helping them do?

- A. Become more interested in the process of mathematics
 - B. Connect the phonological idea of the name of a number to the number of objects they visually see
 - C. Incorporate a memorable visual that can help them remember your lesson
 - D. Provide motivation for getting the question right, as you'll give them the toy afterward
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5. According to some experts, which of the following is potentially a better choice for introductory math activities than counting drills?

- A. Measurement
 - B. Music
 - C. Dancing in a group
 - D. Drawing with shapes
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6. One professor of child development noted that mathematics is the language of what higher-order brand of knowledge?

- A. Statistics
 - B. Logic
 - C. Scientific knowledge
 - D. Categorizing
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7. Each of us, 'math people' or not, operates with subconscious mastery of numeracy in our lives. Which one of these everyday actions is an example of numeracy in action?

- A. We can recognize numerical counts in songs we haven't heard in years
 - B. We can recognize mathematical concepts in the spoken word
 - C. We can make a delicious recipe without using measurements
 - D. We can populate missing segments of patterns
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8. Brain scans of children who were doing simple math problems showed that many parts of the brain lit up during this activity, including which of the following?

- A. The right and left areas of the frontal lobe
 - B. The vision and movement parts of the brain
 - C. The brain stem
 - D. The frontonasal zygmus
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9. Which attribute of commonly-accepted structures for literacy development are modern scholars positing that we should extrapolate to numeracy development?

- A. Repetition
 - B. Creation
 - C. Composition
 - D. Comprehension
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10. When young students observe their caretakers move around their environments, talk about their schedules, or manage multiple children during preschool activities, what numeracy skill are they subconsciously learning?

- A. Phonological awareness
 - B. Pattern repetition
 - C. Representation
 - D. Spatial problem-solving
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11. Which of these is the most beneficial reason that a young child's gameplay is similar to early math problems?

- A. Both are repetitive
 - B. Both are more effective when done with others
 - C. Both involve interpreting and executing basic tasks
 - D. Both involve higher level logic
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12. Activities like hopscotch, blocks, quilting or origami can help with numeracy development. Why?

- A. They involve counting
 - B. They help a child strengthen visual-spatial awareness
 - C. They involve repetition
 - D. They emphasize pattern development
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13. Why does it help when teachers use visual aids during math lessons?

- A. It helps appeal to many learning modalities
 - B. It helps the presentation be more dynamic
 - C. It gives the lesson a real-life feel
 - D. It helps kids who are artistic pay attention
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14. Rote counting is a

- A. Good way to teach young students about numbers
 - B. Good memorization drill
 - C. Good substitute for subitization
 - D. Good substitute for early addition
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15. Experts propose that an effective numeracy educator:

- A. Incorporates math into activities throughout the day
 - B. Models different numeracy strategies for students
 - C. Has patience with struggling math learners
 - D. Uses creative strategies to engage students in math
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16. Several students have decided to play by pretending to be pirates. You have decided to help give their game an educational spin by asking them to draw a map to buried treasure. What skill have you helped your students strengthen?

- A. Their ability to recognize symbols and patterns
 - B. Their imagination
 - C. Their visual-spatial reasoning
 - D. Their performance skills
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17. Which of the following attributes about a student's classmates might be best to keep track of over time in order to learn measuring and graphing skills?

- A. Measuring height
 - B. Graphing eye color among classmates
 - C. Measuring shoe size
 - D. Graphing hair color differences
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18. When is likely the first time that a young student becomes aware of numbers?

- A. Through rote counting drills in school
 - B. Through numeracy indicators in the home environment
 - C. Through playing with blocks and other toys
 - D. When they are read books that incorporate numbers
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19. Research has shown that working to make math more of three specific qualities will make it more accessible and interesting for children. What are those qualities?

- A. Accessible, engaging, entertaining
 - B. Easy, breezy, beautiful
 - C. Strategic, sensible, silly
 - D. Beautiful, useful, understandable
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20. On a recent national math assessment, what percent of fourth-grade students achieved a proficient score?

- A. 40%
 - B. 60%
 - C. 30%
 - D. 55%
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