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 mathmatical 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%
