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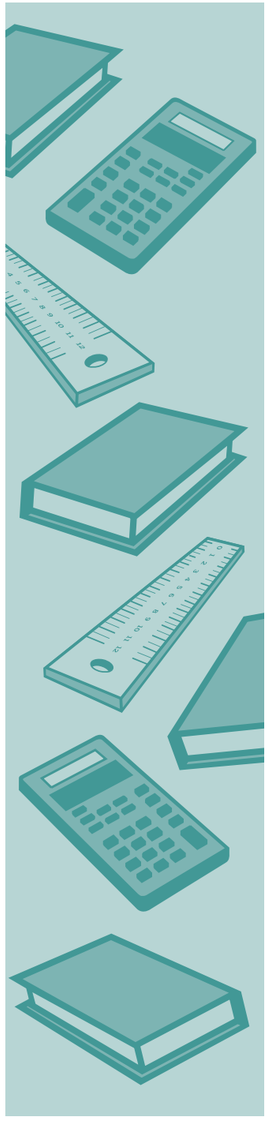
4

MATHEMATICS

Fourth Grade Observation Profile

for On-Going Assessment and End of the Year Evaluation



This profile is designed as a recording sheet for monitoring an individual student's progress throughout the school year. Fourth grade Indicators and the Strategies for Instruction in Mathematics suggest tasks and questions that can be used for on-going and summative assessment.

Directions for use:

The five mathematical goals and the specific objectives from the state of North Carolina Standard Course of Study are listed on this profile chart. Six boxes are provided for recording a student's performance level (1,2,3, or 4) at each grading period as some school systems have six grading periods, while others have four grading periods. Teachers have additional space to comment on student progress.

It is suggested that teachers record an evaluation (performance level) for each objective that is taught during a particular grading period; it is not necessary to record an evaluation for objectives that have not been addressed. Student work, conversations with the student, and observations provide evidence for the evaluation of performance. Evaluations are based on the student's abilities to explain, model, and apply learning. Student work folders (or portfolios) will support the evaluation.

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Student Name _____ ID # _____ Teacher's Name _____ School _____ Year _____

Fourth Grade Observation Profile for On-Going Assessment and End of the Year Evaluation

• Number and Operations

1.01 Develop number sense for rational numbers 0.01 through 99,999.

a) Connect model, number word, and number using a variety of representations.

b) Build understanding of place value (hundredths through ten thousands).

c) Compare and order rational numbers.

d) Make estimates of rational numbers in appropriate situations.

1.02 Develop fluency with multiplication and division:

a) Two-digit by two-digit multiplication (larger numbers with calculator).

b) Up to three-digit by two-digit division (larger numbers with calculator).

c) Strategies for multiplying and dividing numbers.

d) Estimation of products and quotients in appropriate situations.

e) Relationships between operations.

1.03 Solve problems using models, diagrams, and reasoning about fractions and relationships among fractions involving halves, fourths, eighths, thirds, sixths, twelfths, fifths, tenths, hundredths, and mixed numbers.

1.04 Develop fluency with addition and subtraction of non-negative rational numbers with like denominators, including decimal fractions through hundredths.

a) Develop and analyze strategies for adding and subtracting numbers.

b) Estimate sums and differences.

c) Judge the reasonableness of solutions.

1.05 Develop flexibility in solving problems by selecting strategies and using mental computation, estimation, calculators or computers, and paper and pencil.

• Measurement

2.01 Develop strategies to determine the area of rectangles and the perimeter of plane figures.

2.02 Solve problems involving perimeter of plane figures and areas of rectangles.

• Geometry

3.01 Use the coordinate system to describe the location and relative position of points and draw figures in the first quadrant.

3.02 Describe the relative position of lines using concepts of parallelism and perpendicularity.

3.03 Identify, predict, and describe the results of transformations of plane figures.

a) Reflections.

b) Translations.

c) Rotations.

• Data Analysis & Probability

4.01 Collect, organize, analyze, and display data (including line graphs and bar graphs) to solve problems.

4.02 Describe the distribution of data using median, range and mode.

4.03 Solve problems by comparing two sets of related data.

4.04 Design experiments and list all possible outcomes and probabilities for an event.

• Algebra

5.01 Identify, describe, and generalize relationships in which:

a) Quantities change proportionally.

b) Change in one quantity relates to change in a second quantity.

5.02 Translate among symbolic, numeric, verbal, and pictorial representations of number relationships.

5.03 Verify mathematical relationships using:

a) Models, words, and numbers.

b) Order of operations and the identity, commutative, associative, and distributive properties.

NAME

Level IV (Exceeds expectations)

- consistent performance beyond grade level
- works independently
- understands advanced concepts
- applies strategies creatively
- analyzes and synthesizes
- shows confidence and initiative
- justifies and elaborates responses
- makes critical judgements
- makes applications and extensions beyond grade level; applies Level III competencies in more challenging situations

Level III (Proficient)

- **exhibits consistent performance**
- **shows conceptual understanding**
- **applies strategies in most situations**
- **responds with appropriate answer or procedure**
- **completes tasks accurately**
- **needs minimal assistance**
- **exhibits fluency and applies learning**
- **shows some flexibility in thinking**
- **works with confidence**
- **recognizes cause and effect relationships**
- **applies, models, and explains concepts**

Level II (Not yet proficient)

- exhibits inconsistent performance and misunderstandings at times
- shows some evidence of conceptual understanding
- has difficulty applying strategies or completing tasks in unfamiliar situations
- responds with appropriate answer or procedure sometimes
- requires teacher guidance frequently
- needs additional time, opportunities
- demonstrates some Level III competencies but is inconsistent

Level I (Limited performance)

- exhibits minimal performance
- shows very limited evidence of conceptual understanding and use of strategies
- responds with inappropriate answer and/or procedure frequently
- very often displays misunderstandings
- completes task appropriately and accurately infrequently
- needs assistance, guidance and modified instruction