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ABSTRACT

This profile is designed to be a recording sheet for monitoring an individual student's progress throughout the school year. Seventh grade assessment materials and the Strategies for Instruction in Mathematics suggest tasks and questions that can be used for on-going and summative assessment. Directions for use and descriptions of the four levels of performance are presented. It is suggested that teachers record an evaluation (performance level) for each objective that is taught during a particular grading period. 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. (ASK)

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Mathematics Seventh 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. The *Strategies for Instruction in Mathematics* suggests tasks and questions that can be used for on-going and summative assessment.

Directions for use:

The four main mathematical goals and the specific objectives from the North Carolina *Standard Course of Study* are clustered on this profile according to "big ideas." There are six boxes 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 will use only the boxes needed. The hexagon beside each "big idea" is for the teacher's summative evaluation and will be filled in at the end of the year.

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.

Public Schools of North Carolina
State Board of Education
Department of Public Instruction

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

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

Number Sense, Numeration, and Numerical Operations - Spatial Sense, Measurement, and Geometry - Patterns, Relationships, and Functions - Data, Probability, and Statistics

Descriptions of levels of Performance

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

Using the real numbers

1.01 Write whole numbers in scientific notation; convert scientific notation to standard form; investigate the uses of scientific notation.

1.02 Compare and order rational numbers.

1.07 Use geometric models to develop the meaning of the square of a number and its positive square root; investigate and estimate square root, checking the results with a calculator.

Computing

1.03 Model addition, subtraction, multiplication, and division of integers; record.

1.04 Compute with integers.

Using proportional reasoning

1.05 Write and solve proportions.

1.06 Estimate and solve problems using ratio, proportion and percent including discounts, taxes, commissions, and simple interest.

2.11 Use proportions to express relationships between corresponding parts of similar figures.

Applying geometric concepts

2.01 Construct perpendicular and parallel lines.

2.02 Identify the congruent and supplementary relationships of the angles formed by cutting parallel lines by a transversal.

2.03 Locate, give the coordinates of, and graph plane figures which are the results of translations or reflections in all quadrants of the coordinate plane.

2.04 Use models to investigate the concept of the Pythagorean Theorem.

2.05 Build models of three-dimensional figures given end, side and top views.

2.06 Draw end, side and top views of three-dimensional figures given models; use appropriate technology.

2.07 Use models to find the surface area of rectangular solids and cylinders.

2.08 Use models to find the volume of prisms and cylinders.

2.09 Calculate the volume of rectangular solids.

2.10 Recognize the effect on the area and perimeter when one or two dimensions of a plane figure are changed.

Using algebraic reasoning

1.08 Analyze and select appropriate operations, models, strategies and methods to solve a variety of multi-step problems using positive rational numbers, integers, and their inverses. Use calculators and computers where appropriate.

3.01 Evaluate algebraic expressions.

3.02 Model and solve simple equations and inequalities and graph their solutions; use appropriate technology.

3.03 Write or model a simple linear equation or inequality to solve a given problem; use appropriate technology.

3.04 Write a problem given a simple linear equation or inequality.

3.05 Describe, extend, analyze and create a wide variety of patterns to investigate relationships and solve problems; use appropriate technology.

Using statistical methods

4.01 Interpret and construct histograms.

4.02 Compare and relate bar graphs and histograms.

4.03 Construct circle graphs using ratios, proportions, and percents.

4.04 Create, compare, contrast, and evaluate both orally and in writing, different graphic representations of the same data.

4.05 Identify appropriate uses of different measures of central tendency.

4.06 Recognize and identify misuses of statistical and numerical data.

Determining probabilities

4.07 Find all possible outcomes of simple experiments using such methods as lists, tree diagrams, frequency distribution tables, and the Fundamental Counting Principle.

4.08 Compute and apply simple permutations and combinations.

4.09 Find the probability of independent events.

4.10 Identify/explain the relationship between experimental results and theoretical probability.

NAME _____

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