

Performance Stations

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Performance stations allow students to either discover or revisit concepts. In discovery stations, students are presented with a problem or a question where they need to decide on strategies to solve the problem. Students discover patterns, relationships or mathematical understandings. In activity stations designed to revisit concepts, student's practise skills or use alternate strategies to review concepts.

Performance stations can also be worded in such a way that students can be assessed on their knowledge of concepts and their ability to use what they know in new situations. Performance testing allows students to use strategies that cater to their learning styles. Manipulatives are provided for the hands-on learner. Teachers can follow each students thinking process by carefully wording questions that enable students to explain their work and to reflect upon what they know and what they have learned.

What is performance assessment?

It is assessment based on students' demonstration of their ability to use the skills they have learned and the conceptual understanding they have developed in the context of real-world application or of complex problems.

Advantages:

Students

- * can display all their ability, not just speed and accuracy
- * can be more creative
- * do their own organising and thinking
- * realise that mathematics is not memorisation but a process
- * are more easily motivated with real tasks
- * experience the usefulness and power of mathematics

Teachers

- * meld assessment within instruction
- * can better assess strengths and weaknesses of student understanding of the instructional process
- * collect more complete information for planning and programming
- * allow for investigations and long-term problems
- * incorporate manipulatives in the assessment process

Parents

- * see examples of real performance
- * can be provided with comprehensive evaluation of student ability
- * understand more clearly the evaluation of the math program
- * see evidence that students are learning to think
- * make connections between school and real life
- * are presented a broader picture of a rich curriculum

Criteria for performance tasks

The task must

- * reflect the curriculum.
- * use appropriate processes of learning.
- * lead to other problems, raise other questions and possibilities.
- * be thought-provoking and foster perseverance.
- * allow for the student to be the worker and the decision maker.
- * provides opportunity for interaction and the deepening of meaning and understanding.
- * be safe, developmentally appropriate and can be done at school or at home.
- * develop thinking in a variety of styles and contribute to positive attitudes.
- * have more than one answer and provide opportunity for multiple approaches for accomplishing it.

Developing tasks

Ideas for tasks can be

- * found in textbook and resource materials
- * developed from newspapers, etc.
- * teacher created
- * homework

Management

You can organize the performance tasks

- * as one centre in the classroom and students take turns at the centre throughout the day
- * to last throughout an afternoon (1 1/2 hours - 2 hours) where students rotate from one centre to the other
- * as cooperative learning groups
- * as group work or as individual tasks
- * as research projects or homework

Assessment techniques (teacher and self-evaluation)

Assessment is accomplished through

- * observation and questioning
- * portfolio and journal writing (with the help of rubrics)
- * presentations and projects

Adapted from:

Assessment in Mathematics: Myths, Models, Good Questions and Practical Ideas.

This is an NCTM publication written in 1991. This book can be ordered from the Book Bureau (#6745) for \$11.00. The video that accompanies this book can be ordered through the NCTM. (Also see other references listed in the curriculum guide.)