

Owl Academy: Nifty Numbers & MathMasters

This project combines several elements that appeal to the majority of 10-to-12-year-olds: playing computer games; having the teacher's attention in a small group setting; and teaching their classmates. The value is the improvement of their math skills and the opportunity to share what they know.

Curriculum/State Standard

(Georgia) 5.23 Problem Solving;
5.34 Whole Number Computation;
4.20, 4.21, 4.22 Problem Solving;
4.33 Whole Number Computation

Overview

Students in groups of 12 learned math skills software and, in turn, taught the software to their classmates. They completed two 6-week cycles and learned software that included a wide range of math skills adaptable to a wide range of abilities. The "each one teach one" approach allowed the entire 4th and 5th grades to use the software and, thus, have the opportunity to improve their math skills.

Objectives

- The student will solve simple and multi-step math problems requiring recall of basic facts.
- The student will correctly use all math operations through four digits.
- The student will properly apply math properties.

Materials

Computers, Lost in Space Math Adventures software, Mathville software, print cartridges

Readiness Activity

Students completed an Owl Academy application that includes narrative of interest in math, parent commitment form, and an overview of software in calendar form.

Strategies/Activities

Owl Academy is an after school program that uses small group instruction to assist students in going beyond classroom experiences in basic subjects. Teachers volunteer their time as instructors, and each course is scheduled for a 6-week cycle. Students submit a written application and are accepted on a first come, first served basis; parents sign a commitment card. Nifty Numbers and MathMasters are sequential courses in basic math.

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4-5

GRADE LEVEL



ARTS



LANGUAGE



MATH

Misc

MISCELLANEOUS



SCIENCE



HISTORY



SOCIAL STUDIES

12

WEEKS

\$930

TOTAL BUDGET



THIS WINNING LESSON PLAN WAS SUBMITTED BY:

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“Owl Academy” project continued...

Nifty Numbers is computer-based instruction initially serving 12 fifth graders who, upon completion of the course, will take the accompanying software back to their classrooms and teach others the program. Nifty Numbers is a prerequisite to MathMasters, the second 6-week course that uses the computer to extend basic math skills into data collecting, estimating and problem solving. Nifty Numbers will then begin again with 12 fourth graders and replicate the activities. Using this “each one, teach one” approach allowed us to teach all 4th and 5th graders in one school year.

STEPS:

Choose an operation with which to begin Nifty Numbers (Lost in Space software)

- work through four sequential levels of competency over a 4-week period
- maintain the activities on his highest level of competency for two weeks
- role-play teaching others how to drill/practice basic math skills
- develop, publish, and implement a written plan to share Nifty Numbers skills with classmates
- finalize and submit application to participate in MathMasters (Mathville software)

Choose an operation with which to begin MathMasters activities

- work through four sequential levels of competency over a 4-week period
- maintain the activities on his highest level of competency for two weeks

- role-play teaching others how to solve simple problems by recalling basic facts
- develop, publish and implement a written plan to share MathMasters skills with classmates

Culminating Activity

Final activities included teaching classmates to use the Lost in Space and Mathville software.

Also, students were requested to give teachers an opportunity to review the software and ask questions.

Evaluation

Immediate evaluation: 6-week math grades and parent/teacher/student feedback

Long range evaluation: Stanford Achievement Test math scores