Owl Eyes

It is night and the owls are watching in the trees. If I see 12 eyes, how many owls will I find and how many pairs of eyes do I see?

Grade Levels Pre-K-2

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Context

We had been doing an interdisciplinary unit on owls. This problem allows the student to investigate counting by twos and shows their understanding of pairs of objects and number sense. The student work samples were taken from a first grade class.

What This Task Accomplishes

This task provides a concrete example of counting by twos using pairs of eyes. The work will demonstrate the student's understanding of pairs and ability to apply concepts of counting by twos and use problem-solving strategies.

What the Student Will Do

In solving this problem, each student was provided with 12-gummed reinforcers. They colored them yellow to represent the eyes of owls. The directions also focused on the word "trees" being plural so they should have drawn more than one tree.

Time Required for Task

40 minutes

Interdisciplinary Links

This problem was integrated into a science theme about owls through the month of October. The children had the opportunity to investigate six different species of owls and observe a real Screech Owl. The students also compared and contrasted the habits of geese and owls in the fall. Pairs of wings and pairs of feet could also be incorporated into problem-solving activities.

Teaching Tips

Students had many experiences during the week problem solving with pairs of children's eyes, pairs of hands, feet, shoes and Unifix cubes. Errors may be related to an inaccurate understanding of counting by twos and pairs of objects. This task also introduced the concept of even and odd numbers. Time was set aside to have the whole group share solutions and strategies.

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Suggested Materials

- Using real life examples (eyes, hands, ears, feet, shoes)
- Observing a real owl
- Posters or owl puppets (to place pennies or math manipulatives on the eyes)

Possible Solutions

There are six owls and six pairs of eyes.

Benchmark Descriptors

Novice
Inappropriate procedures were used in labeling the pairs of eyes. The strategy of using numbers did not solve the problem. The explanation could not be understood.

Apprentice
Used numbers as a strategy with a lot of labeling, but inaccurate solution and understanding of pairs. Some explanation was given.

Practitioner
The solution shows a more clear understanding of the task. This solution does not show a lot of labeling, but the picture representation is very clear. The child took risks to write on his/her own and shows an accurate understanding of pairs of eyes and number of owls in the trees.

Expert
The solution indicates an excellent understanding of the concept of pairs of eyes through the drawing and labeling with dictation from the child. There is an appropriate use of number strategies and more detailed explanation of the problem-solving activity.