

What is CGI?

- Cognitively Guided Instruction (CGI) is an approach to teaching mathematics that uses students' own mathematical thinking, through questioning techniques, as the foundation for instruction. The teacher's role is to build upon students' prior knowledge so that they may make connections between situational experiences and the abstract mathematical symbols. The method is the result of research conducted by Elizabeth Fennema and Thomas P. Carpenter from the University of Wisconsin - Madison in the late 80's and early 90's (Wistrom, 2011).



What is CGI?

- Students are encouraged to use and develop a variety of self-selected strategies and models to solve problems. They are also held accountable for explaining exactly how they solved the problem. The teacher then uses this information to guide the student learning and identify any breakdown in understanding that might occur.



What does CGI look like in the classroom?

- *Word Problems*
- *Math Wall*



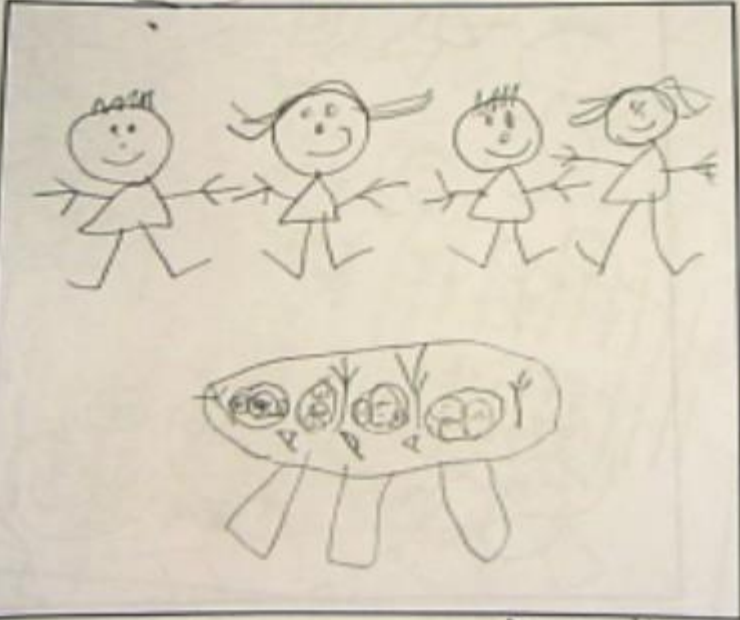
Student Sample

Name: Jaytee

CG&I Problem-Solving

4 friends came to breakfast. Each friend ate 3 pancakes. How many pancakes did the friends eat altogether?

(4, 3) (10, 2) (12, 0)



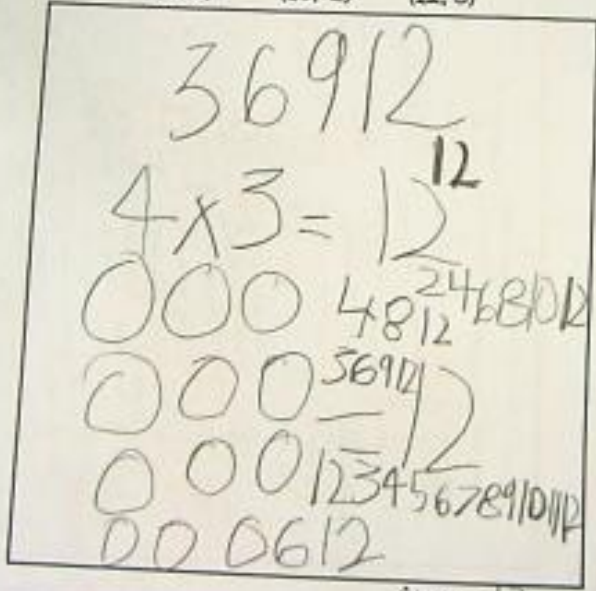
Answer: 12

Name: Max

CG&I Problem-Solving

4 friends came to breakfast. Each friend ate 3 pancakes. How many pancakes did the friends eat altogether?

(4, 3) (10, 2) (12, 0)



Answer: 12



Components Necessary to Make CGI Successful

- *100% Teacher Buy-in*
- *Teacher Training, including observations*
- *Extensive Collaboration Time*

