4-Square Problem Solving: Logical Reasoning

We are working on becoming problem-solvers! There are many ways (strategies) for solving a problem. We can draw a picture, act it out, make a table or a graph, look for a pattern, take a guess and check to see if it works, etc. The strategy that we are working with now is called "logical reasoning." This works well for the type of problem where we are given a set of clues and have to use all of them together in order to figure out a mystery.

The problems about the Heebie-Jeebies and the Dog Sitters are ones that we use to introduce the strategy because they guide us through step-by-step. They tell us exactly what questions to ask ourselves as we work through the problem. You'll notice that actually solving the problem is only one of 4 steps.

    a. Step 1 is to FIND OUT what we need to know before we can work on solving the problem. We need to identify the question that we are supposed to answer. We need to think about what information the clues give us, and what the clues mean.

    b. Step 2 is to CHOOSE A STRATEGY. This is the picture of the head. We use it to mean "logical reasoning" - using our head.

    c. Step 3 is SOLVE IT. This is when we look at each clue and figure out what the possibilities are, and/or which ones we can eliminate.

    d. Step 4 is LOOK BACK. We are not done yet. Once we have a solution, we have to go back and check each of the clues to see if it works.

4-Square Problem Solving: Cooperative Groups

This week we learned how to solve a "logical reasoning" problem while in a "cooperative group" of 4 people. Each person was given one of the four clues. They needed all 4 clues in order to solve the mystery, but they couldn't show each other their clues. They could only explain them.

A cooperative group activity is when the students must work together in order to accomplish a task. We put the 4 problem-solving steps onto a 4-Square to help them organize their work.

1. Find Out:	**2. Choose a Strategy**

→ Write down the question.
→ Make 4 bullets for the clues.
    •
    •
    •
    •
	Circle one symbol. Then write down what it is.

3. Solve it:	**4. Look Back:**
Begin with the first clue and determine what digits will work for each place in the number. Then look at clues 2, 3, and 4 and figure out which digits can be eliminated. ____ ____ ____	Write down your answer. Then make a check mark for each clue that works. ✓ ✓ ✓ ✓