Dear Teacher,

As you know, we are committed to improving our math program by emphasizing the importance of problem solving. We have made it one of our school-wide foci. The Problem of the Month is a school-wide program that we can all participate in to encourage and teach our students to be strong problem solvers.

Our first Problem of the Month is titled “Cutting a Cube.” It has five levels of complexity. Although all of our students should start at level A and work through the problem, some of our primary students will not be able to go much beyond the first level. That is okay; what is most important is the process and that students are stretched to go as far as their understanding and skills take them. At the same time we must encourage the students to struggle and persevere to develop their problem-solving skills.

As a facilitator of Problems of the Month, you must be careful not to lead or guide, but rather to pose clarifying questions and questions that require the students to reflect on their work. A good method is to have students from time to time share various processes they have tried. Be careful not to emphasize one solution method over another as students share their ideas. Don’t have students share complete solutions until the conclusion and the summary presentations.

Many students might benefit from hands-on experience in exploring the attributes of the cube or the process of actually cutting a cube apart. Paper cubes can be constructed with masking tape along the edges, and students can use plastic knives to cut cubes into nets. When students are trying to determine which nets work and whether they have them all, a class might share a few examples of nets they have found, and the teacher might pose a question like: *How might we classify the nets we found? How might we know when we have them all?*

You are encouraged to have your students follow the Problem of the Month write-up. This provides a common format for examining student work with your colleagues. Processing the solutions and methods with your students is important in developing their skills.

Thank you for supporting your students in their development as math problem solvers.

Sincerely,