Problem Solving Project Implementation Steps

Expectations:

- Year long problem solving experience
- 3-5 experiences or problem solving cycles; 10-14 days long
- At least 15 mins each day for 5 days
- FOCUS: learn what it means to problem solve: (be Reflective and Persistent)
- All work was done in school to ensure fidelity

Steps:

- Created the project goals
- Created a bank of problems/tasks
- Students viewed “Developing Problem Solving Strategies” videos prior to starting process
- Students filled out video reflection forms and chose their top 3 videos
- Emphasized focus/objectives to students:
    - This project is not about answer getting and Not about getting a good grade
    - It’s about learning what it means to problem solve;
    - Developing critical thinking skills and
    - How to develop reflective and persistent problem solving behaviors
    - Understanding what it means to think like a mathematician.
- Students illustrated “what a mathematician looks like?” and explained “who is a mathematician?”
- Then problem/task was introduced
- Students worked on task independently for at least 15 minutes
- Teacher facilitated and answered questions when asked (no prompting)
- Student creativity highly encouraged
- Students solve problem using strategy/method of choice
- They could use words, models, illustrations, manipulatives etc
- After 2 cycles, students did a 2nd illustration of a mathematician and updated their thinking of “who is a mathematician.”

Student Directions

- Students were given problem solving journals to record all their work.
- Recorded brief notes next to their work about their ideas and thinking.
- Not allowed to erase in order to keep track of thinking
- They worked independently for the 1st couple of days then shared out ideas with a peer
- Completed a reflection form for each problem task.
- Students shared strategies of what went well for them and why