

Part 2

- Scripted Problem Solving

This section of the book contains a step by step script to get you started on the first 30 days* of math modeling. Each lesson should take about 10-15 minutes. If you are limited in supplies then all of the instruction can take place on your chalk/dry erase board. If you have access to scrap paper or you can use the back side of student's papers then they can record the problems while you do. It's a good idea to get students to record their work at least once a week so they have practice recording and making meaning for themselves. It is also a good conversation piece to have students take the papers home and tell their parents about the story problems they completed.

The format is the same every day. Students fold their paper in half and then half again (fourths). Open up the sheet and trace over the cross down the center to create four work boxes. Students will complete a different kind of problem in each box. Since you continually change the types of problems you will avoid having students get bored or disinterested. You will learn quickly which types of problems students enjoy most and they will eagerly move from box to box in hopes that the next problem might be one of their favorites.

Three to four days a week of this problem solving practice will provide plenty of opportunities for your students to practice their problem solving skills. Take time on the fifth day to participate in some other fun activity (e.g. read about Classroom Created Graphs - page 26, or use the overhead problems found in Part 3).

The text boxes will direct you. The words written in bold are the things that you will do. The words written in regular script are the words you will say. The chalkboards above each text box show what it will look like after you follow the bold directions. Students will often discover more than one way to problem solve which is strongly encouraged. I tell my students that each one of us has to determine which way is the easiest method for him/herself.

$$3^7 + 2^9 = 5^4 + 8^6 = 6^5 + 3^9 = 7^5 + 4^8 = 4^3 + 2^7 = 8^1 = 9^3$$

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Use your judgment - you know your kids best. There are times when you will find it necessary to simplify or enhance some of these problems. Always keep the level high enough to challenge your advanced children. Remember that the whole point of these lessons is not to challenge students to get the right answer but to teach them how to become better problem solvers.

***Note** –The scripted problems for the first 3 days are very simple and easy. This is intentional so you can spend time getting students used to the concept and format of this type of problem solving.*

*Since this is a new kind of problem solving for your students you might want to take the problems for one day and reteach the same problems the next day using different amounts. This gives students additional time to see the problems modeled before moving on to a new concept. It also extends your scripted and organized lessons into sixty rather than thirty days.