



Planning to Teach a CMP Unit

Getting To Know the Unit

- It is important to understand the mathematics and how it is being developed.

Read the *Overview*, *The Mathematics in* (the unit), *Summary of Investigations*, *Connections to Other Units*, and *Goals*

Read the *Mathematical Reflections* —they tell the story of the mathematics that is being developed in the unit.

Look over the Assessment pieces.

Work all of the problems and ACE for each investigation.

- Make use of the help provided in the student and teacher books for teaching.

Use the launch-explore-summarize (LES) as a guide for teaching each problem.

Keep notes on important ideas or suggestions for the next time you teach the unit.

Use the mathematical reflections as benchmarks for your students' understanding.

- Reevaluate where you and your students are each day—teacher reflections are an important part in becoming a more effective teacher.
- Use the following questions as you plan to teach the unit, each investigation or each problem.





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Questions to Think About Unit by Unit

- What are the big mathematical ideas of this unit?
- What do I want kids to know when this unit is finished?
- What mathematical vocabulary does this unit bring out?
- What might be conceptually difficult?
- What are important connections to other units?





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Questions to Think About Investigation by Investigation

- What part of the mathematical goal is being developed? How does each problem in the investigation contribute to the development?
- What level of sophistication do I expect my students to achieve in answering the questions?
- Will their responses show the development in their understanding the goals of the unit?
- What ideas will need emphasis?
- What are the connections among the problems, investigations and with other units?
- How can I structure the writing assignment for the Mathematical Reflections to get the most from it?
- What ACE questions are appropriate for my students to do after the 1st problem, 2nd problem, etc. in this investigation?
- How long will this investigation take?
- What can I do to assure the time spent in class matches the size of the problems and the goals of the investigation?





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Questions to Think About

Problem by Problem

Launch

- How will I launch this problems?
- What prior knowledge do my students need?
- What do the students need to know to understand the story and the challenge of the problem?
- What advantages or difficulties can I foresee?
- How can I keep from giving away too much of the problem?
- Is there a challenge for the students?
- How can I make it personal to them?

Explore

- How will I organize the students to explore this problem? (Individual? Pair? Group? Whole class?)
- What materials will students need?
- What are different strategies I anticipate them using?
- What kinds of questions can I ask:
 - to prompt their thinking if the level of frustration is too high?
 - to make them probe further into the problem if initial question is “answered”?
 - to encourage student-to-student conversation, thinking, learning, etc.?

Summary

- How can I help the students make sense and appreciate the variety of methods that may occur?
- How can I orchestrate the discussion so students summarize the thinking in the problem?
 - What mathematics and processes need to be drawn out?
 - What needs to be emphasized?
 - What ideas do not need closure at this time?
 - What do we need to generalize?
- How can we go beyond or what new questions might arise?
- What will I do to follow-up, practice, or apply the ideas after the summary?



